

Curriculum Vitae

John A. Katzenellenbogen

Contact Information:

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Biographical Background:

Place of Birth: Poughkeepsie, New York
 Citizenship: USA

Educational Background:

B.A.	Chemistry (Summa cum laude)	Harvard College	1962-66
M.A.	Chemistry	Harvard University	1966-67
Ph.D.	Chemistry	Harvard University	1967-69
(Research Advisor: E. J. Corey)			

Professional Employment:

University of Illinois at Champaign-Urbana		
Assistant Professor of Chemistry		1969–1975
Associate Professor of Chemistry		1975–1979
Professor of Chemistry		1979–present
Beckman Institute Affiliate		1988–present
Roger Adams Professor of Chemistry		1992–1996
Swanlund Professor of Chemistry		1996-present
Professor of Bioengineering (joint appointment)		2001-present

Awards, Fellowships, Honors:

Award for Outstanding Achievement in Chemistry in Cancer Research, American Association for Cancer Research (2018)
 Medicinal Chemistry Hall of Fame, American Chemical Society (2018)
 The President's Award, Society for Radiopharmaceutical Sciences (2017)
 Fred Conrad Koch Lifetime Achievement Award, The Endocrine Society [with Benita Katzenellenbogen] (2016)
 Inaugural Philip Portoghese Lectureship in Medicinal Chemistry, American Chemical Society (2010)
 Royal Society of Chemistry Centenary Lectureship Award (2009)
 Leading Edge in Basic Science Award, Society of Toxicology (2010)
 Gustavus John Esselen Award for Chemistry in the Public Interest, Northeast Section, American Chemical Society (2008)
 E. B. Herschberg Award in Medicinal Chemistry, American Chemical Society (2007)
 The Roy Greep Lecture Award, The Endocrine Society [with Benita Katzenellenbogen] (2006)
 Cope Scholar Award, American Chemical Society (1999)
 Paul C. Aebersold Award, Society of Nuclear Medicine (1995)
 Fellow, American Academy of Arts and Sciences (Elected 1992; Midwest Committee 2000-2012; Chair 2007-2012; National Council, Vice-Chair 2005-2013)
 Fellow, American Association for the Advancement of Science (Elected 1989)
 University Scholar Award (1987-90)
 NIH-INSERM Fellowship for Cancer Research in Marseille and Paris, France (1983)
 John Simon Guggenheim Foundation Fellowship (Sabbatical, 1977-78)
 Camille and Henry Dreyfus Teacher Scholar Award (1974-79)
 Alfred P. Sloan Foundation Fellowship (1974-76)
 University of Illinois Center for Advanced Study, Fellow (Spring 1973), Associate (Fall, 1980)
 Eli Lilly Grant Awardee (1969-71)

Other Distinctions:

NIH MERIT Award Status (PHS 5R37 DK15556: 1987-1995; 1995-2003; 2003-2008; 2008-2013, and CA25836: 1999-2003; 2003-2006)
 Raymond Counsell Lecturer, University of Michigan (2019)
 Distinguished Lecturer, NIEHS, Research Triangle Park (2019)

Plenary Speaker, Society of Radiopharmaceutical Sciences (2011)
Plenary Speaker, 2nd Great Lakes Nuclear Receptor Meeting (2005)
Plenary Speaker, International Isotope Society National Meeting (2003)
Plenary Speaker, 13th Winter Fluorine Conference, ACS (1997)
Plenary Speaker, 1st Winter Symposium on Medicinal and Bio-Organic Chemistry (1995)
Alfred Burger Lecturer, University of Virginia (1994)
Distinguished Lecturer, Scripps Research Institute (1993)
Harvard University Chemistry Department Teaching Award (1968)
National Science Foundation Graduate Fellowship (1966-69)
Woodrow Wilson Fellowship (1966)

Society Memberships:

American Association for Cancer Research
American Chemical Society
The Royal Society of Chemistry
American Association for the Advancement of Science
American Society of Biochemistry and Molecular Biology
Society for Nuclear Medicine and Molecular Imaging
International Isotope Society
Endocrine Society
Society for Molecular Imaging
Society of Radiopharmaceutical Sciences

Professional Activities:

Editorial Board of Biochemistry (1982-1985)
Editorial Board of Journal of Medicinal Chemistry (1986-1989)
Editorial Board of the Journal of Receptor and Signal Transduction Research (1980-2010)
Editorial Board of Bioconjugate Chemistry (1990-present)
Editorial Board of Steroids (1993-1996)
Editor Steroids (1996-2019)
Editorial Board of the Journal of Organic Chemistry (1994-98)
Editorial Board of the Journal of Korean Medicinal Chemistry (1988-1992)
Editorial Board of Molecular Endocrinology (2004-2006)
Editorial Board of Journal of Nuclear Medicine (2004-present); Associate Editor (2011-2016)
Advisory Committee for DOE Consortium Project – Harvard Medical School-MIT (1980-1988)
Advisory Committee for Radiation Sciences Program – Washington University Medical School (1983-present)
NIH Bioorganic and Natural Products Chemistry Study Section (1987-1991; chairman 1989-1991)
NIH Clinical Molecular Imaging and Probe Development Study Section (often ad hoc member – present)
AUI-Brookhaven National Laboratory Visiting Committee, Chemistry Department (1986-1990)
Consulting: Eli Lilly, Abbott, Pharmaco, Corvas International, Berlex, Anabonix, Ligand, X-Ceptor, Exelixis, Radius Health, Mountain View Pharmaceuticals

Areas of Research Experience:

Nuclear receptor structure, function, and engineering. Structurally novel ligand synthesis to probe conformation, dynamics and interaction, and the action of receptor subtypes, and to uncover novel, selective biological activities. Mechanism of action of estrogens, androgen, progestins, thyroid hormones, and PPAR ligands. Many active collaborations with cell, molecular, and structural biologists.

Design and development of radiopharmaceuticals for PET and SPECT imaging imaging of nuclear receptors and defining nuclear receptor function in breast and prostate cancer. Exploration of the fundamental chemistry of radiohalogens and radiometals, especially technetium and rhenium. Active, long-standing collaborations with Washington University Medical School in clinical PET imaging in breast and prostate cancer.

Novel high throughput assay development based on fluorescence and protein microarrays and nanoparticles. Study of comparative cellular and in vivo imaging of receptor targets using small molecules vs. nanoparticles. Discovery of novel regulators of nuclear receptor function through inhibition of protein-protein (receptor-coregulator) interaction and induction of receptor degradation.

Current and Prior Teaching and Research Activities:

Organic Chemistry: Basic, synthesis and synthetic methods, spectroscopy. Lecture and laboratory. Graduate seminar.

Isotope Sciences: Stable and radioisotope handling, safety, synthesis and analysis; lecture and laboratory.

Chemical Biology: Introductory tutorial and graduate seminar.

Supervise Graduate and Undergraduate Students and Postdoctoral Fellows: Organic synthesis methods, total synthesis, ligand design and synthesis, pharmaceutical and radiopharmaceutical agent synthesis, discovery and development. Inorganic chemistry and radiochemistry. Provide integrated research experience in chemistry, pharmacology, cell and structural biology, imaging sciences, and translational biomedical research activities.

Research Tainees:

Ph.D. 0 current, 105 conferred
M.A. 10 conferred
B.S. 33 conferred
Post-doctoral/Visiting Scientists:
1 current, 56 former

Research Support:

Breast Cancer Research Foundation

Antiestrogens for Metastatic Breast Cancers Driven by Estrogen Receptors with Activating Mutations

Oct.2016-Oct. 2019

Examination of Estrogen Receptor (Beta) as a Therapeutic Target in Triple-Negative Breast Cancer

Oct.2019-Oct. 2020

National Institutes of Health

Stereospecific Synthesis of Isoprenes (GMS):

Sept. 1969-Sept. 1972 Sept. 1973-Sept. 1976

Molecular Probes for the Estrogen Receptors (DK):

Sept. 1971-Sept. 1974 Sept. 1974-Sept. 1977 Sept. 1977-Sept. 1982

Sept. 1982-Sept. 1987 Sept. 1987-Sept. 1992 (MERIT Award)

Sept. 1992-Sept. 1995 (MERIT Award Extension)

Sept. 1995-Sept. 2000 (MERIT Award)

Sept. 2000-Sept. 2003 (MERIT Award Extension)

Sept. 2003-Sept. 2008 (MERIT Award)

Sept. 2008-Sept. 2013 (MERIT Award Extension)

Sept. 2013-Sept. 2019

Rational Design of Breast Tumor Imaging Agents (CA):

July 1979-Dec. 1983 Dec. 1983-Dec. 1988 Dec. 1988-Dec. 1993

Dec. 1993-Dec. 1998 Dec. 1998-Dec. 2003 (MERIT Award)

Dec. 2003-July. 2007 (MERIT Award Extension)

July 2007-June 2013

July 2013-June 2020

Chemical, structural and molecular rules for fully antagonizing the estrogen receptor (CA):

July 2018-June 2023

Enzyme-Activated Irreversible Inhibitors of Proteases (AM):

August 1980-August 1983 August 1983-August 1986 August 1987-August 1992

Phytoestrogens and Aging: Dose, Timing, and Targets Target Tissues (AG, P01 W. Helferich,

Director; JAK Project 4 Leader, "Phytoestrogen Action through Estrogen Receptors Alpha and Beta") September 2005-September 2010

Department of Energy

Fluorine-18 Substituted Androgens and Progestins:

February 1986-February 1989 February 1989-February 1992 February 1992-February 1995

February 1995-May 1998 May 1998-May 2001 May 2001- May 2005

May 2005- May 2006 [grants program terminated]

Novel Strategies for Ultrahigh Specific Activity Targeted Nanoparticles

September 2008-September 2011 through Washington University Medical School, Michael J. Welch, P.I.

Integrated Research Training Program of Excellence in Radiochemistry

April 2010 – April 2013, Joint with Washington University Medical School, Michael J. Welch

Expedited Synthesis of Fluorine-18 Labeled Phenols: A Missing Link in PET Radiochemistry

September 2010 – August 2013, Joint with Washington University Medical School, Michael J. Welch; John Katzenellenbogen, PI

US Army Medical Research Command

Development of mechanistically distinct androgen receptor antagonists and degraders for the treatment of advanced castration resistant prostate cancer

Oct. 2015 – Oct. 2019

Identification and Analysis of Androgen Receptor Coactivator Binding Inhibitors

Synergistic Ideal Development Award with Duke University

April 2010-April 2013

Combinatorial Synthesis for the Expedited Discovery of Novel Selective Antiestrogens for Breast Cancer Prevention and Therapy

September 1997-September 2000

Novel Coactivator-Binding Inhibitors for Blocking Estrogen Action in Breast Cancer

September 2000-September 2003

Identification and Analysis of Androgen Receptor Coactivator-Binding Inhibitors

April 2010 – April 2013

National Science Foundation

Chemically Reactive Juvenile Hormone Analogs:

June 1973-June 1976 June 1976-June 1979 June 1981-June 1984

American Cancer Society

Rational Design of Breast Tumor Imaging Agents:

June 1976-June 1979

American Health Assistance Foundation

Imaging Hippocampal Corticosteroid Receptors:

April 1988-March 1990 April 1990-September 1993

Participant in NIH Training Grants

Chemistry and Biology Interface Training (to University of Illinois. Dr. W. van der Donk, Director)
Endocrine, Developmental, and Reproductive Toxicology (to University of Illinois, Dr. S. Schantz, Director)

Radiation Oncology (to University of Illinois – Dr. W. D. O'Brien, Jr., Director)

Cell and Molecular Biology (to University of Illinois, Dr. J. Morrissey, Director)

Reproductive Biology (to University of Illinois)

Other:

Support from:

American Chemical Society Petroleum Research Fund

University of Illinois Research Board

University of Illinois Biomedical Science Support Grant

Eli Lilly Co. (Research Fellowship; Research Grant)

Du Pont Co. (Research Fellowship)

Upjohn Co.

A. P. Sloan Foundation (Research Fellowship)

Camille and Henry Dreyfus Foundation (Research Fellowship)

Eli Lilly Co. (Research Grant - Modeling Bioactive Conformers of Substance P)

Eli Lilly Co. (Research Grant - Acidic Estrogens)

Radiotracer Inc. (Research Grant – Technetium Labeled Neuroceptor Ligands)

Editorial and Review Activities:

NIH Study Section - Bioorganic and Natural Products (1987-1991) Chairman (1998-91)
Editorial Board of Biochemistry 1982-1985
Editorial Board of Journal of Medicinal Chemistry 1986-1990
Editorial Board of Journal of Receptor Research 1979-
Editorial Board of Journal of Organic Chemistry 1994-1998
Editorial Board of Steroids 1989-1996
Editor, Steroids 1996-2019
Associate Editor, Journal of Nuclear Medicine 2003-present
Editorial Board of Bioconjugate Chemistry 1991-2006
Editorial Board of Korean Journal of Medicinal Chemistry 1998-2002
Editorial Board of Journal of Labeled Compounds and Radiopharmaceutical Chemistry 1999-present
Review of grants: NIH Bio-Organic and Natural Products Study Section (ad hoc member of Special Study Sections for external review; Program Project Panel Review)
NIH Medical Imaging Study Section (often ad hoc member)
DOE (member of many ad hoc panels)
NSF
Research Corporation
American Chemical Society Petroleum Research Fund
U. S. Army Medical Research Command
Review of Manuscripts for numerous chemical, biochemical and biomedical journals
Review of grant applications from numerous national and international foundations and research programs.

Administrative Activities: (Selected):

Curriculum Committee (1971-1975; 1988)
Faculty Advisor to Radioisotope Laboratory (1983-1997)
Teaching Evaluation and Awards Committee (1975)
American Chemical Society Local Section (Secretary-1978; Chairman-1983)
Zeta Corporation of Alpha Chi Sigma (Secretary-Treasurer 1975-86; President 1986-1988)
Ad Hoc Committee to Evaluate the Mass Spectrometry Facility (1978)
Affirmative Action Committee (Chairman, 1978-1985)
Admissions Committee (1981-1984)
Freshman Chemistry Committee (1976-1978)
Miller Endowment Committee (1980-1982)
Ad Hoc Committee to Review Director of School of Chemical Sciences (1983)
Ad Hoc Committee to Adjudicate Conflicts Over NMR Services (1983)
Ad Hoc Committee to Reorganize NMR Services (1983)
Research Board (1983-1987)
Faculty Advisor to Molecular Spectroscopy Lab (1985-1988)
University Scholars Awards Committee (1985-1986)
Ad Hoc Committee on the Future of Biophysics (1988)
Chancellor's Minority Fellowship Selection Committee (1988)
Search Committee for the Head of Biochemistry (1988)
Organic Area Budget and Operations Officer (1988-1994)
School of Chemical Sciences Executive Committee (1988-1990)
Department of Chemistry Staff Committee (1988-1991, 1992-1998, 1999-2000, 2002-2005, 2007-2011, 2012-2013) (Chairman 1992-1994; 1997-1998, 1999-2000))
Radiation Safety Committee (1995-2011)
Search Committee for Associate Vice Chancellor for Research (1995)
Ad Hoc Graduate Program Review Committee (1995-1996)
Advisory Committee on the Biotechnology Center (Chairman, 1997-)
Ad Hoc Advisory Committee on Biotechnology Policy (Chairman, 1997)
Ad Hoc Committee on Chemistry and Chemical Engineering (1997)
Ad Hoc Committee on Chemical Sciences Departmental Relationships (1997)
Biotechnology Council (1999-2000) Hiring Advisory Committee (Head, 1999-2000)

Search Committee for Department of Nuclear Engineering (1999-2000)
Environmental Toxicology, Strategic Planning Committee (1999-)
Medical Scholars Steering Committee (2000-2011)
Search Committee for Head of Bioengineering (2000-2002)
Science Center Faculty Working Group, Chair (2000-2002)
Lauterbur Symposium Planning Committee (2004)
NIH/HHMI Biomedical Imaging Initiative Committee (2005)
Campus Translational Translational Research Advisory Committee (2005-2006)
Seach Committee for the Head of Chemistry (2012-2013)

Invited Lectures and Presentations:

1970:	Eli Lilly and Company	Indianapolis, IN	July
1971:	Eli Lilly and Company	Indianapolis, IN	October
1972:	Jackson State University	Jackson, MI	November
1973:	University of Illinois	Chicago, IL	February
	University of Illinois College of Medicine	Chicago, IL	March
	Upjohn Company	Kalamazoo, MI	May
	Workshop on Organic Synthesis	Bend, OR	August
	Eli Lilly and Company	Indianapolis, IN	October
	Indiana University	Bloomington, IN	October
1974:	Abbott Laboratories	Chicago, IL	January
	Chicago Section ACS	Chicago, IL	January
	State University of New York (Pharmacology)	Stony Brook, NY	March
	University of Wisconsin	Madison, WI	April
	University of Wisconsin (Biochemistry)	Madison, WI	May
	Jackson State University	Jackson, MI	October
	DePauw University	Greencastle, IN	October
	Wabash College	Crawfordsville, IN	October
	Wayne State Medical School	Detroit, MI	November
	Johns Hopkins University	Baltimore, MD	December
	Brown University	Providence, RI	December
1975:	Syva Corp.	Palo Alto, CA	February
	University of California	Berkeley, CA	February
	University of Missouri	St. Louis, MO	March
	St. Louis ACS Section	St. Louis, MO	March
	Johns Hopkins Medical School	Baltimore, MD	April
	NSF Workshop on Organic Synthesis	Gatlingburg, TN	August
	ACS Regional Meeting (Symposium on Anionic Reagents)	Carbondale, IL	October
	Hormone Symposium	Jefferson, AR	November
1976:	Searle Laboratories	Chicago, IL	February
	Hormone Lab INSERM	Paris, France	February
	Dahlem Conference on Antihormones	Berlin, Germany	February
	Fifth International Congress of Endocrinology	Hamburg, Germany	July
	Cornell University	Ithaca, NY	September
	1 st Int. Symp. on Radiopharmaceutical Chemistry	Brookhaven, NY	September
	Massachusetts Institute of Technology	Cambridge, MA	November
	Northern Kentucky University	Cincinnati, OH	November
	Northern Kentucky ACS Section	Cincinnati, OH	November
1977:	IMC Chemical Corp.	Terre Haute, IN	January
	Gordon Research Conference on Hormone Action	Santa Barbara, CA	February
	Georgia Institute of the American Chemical Socie 173 rd ACS Meeting (Symposium on Affinity Labeling and Irreversible Enzyme Inhibition)	New Orleans, LA	March

	FASEB Meeting (Symposium on Steroid Hormone Receptors)	Chicago, IL	April
	Symposium on New Approaches to Steroid Synthesis and Receptor Interactions, Medical Foundation of Buffalo	Buffalo, NY	April
	Harvard Medical School (Pharmacology)	Boston, MA	April
	Philadelphia Organic Chemists Club	Philadelphia, PA	April
	Rohm and Haas	Philadelphia, PA	April
	National Institutes of Health Workshop on Steroid Linked Anticancer Drugs	Bethesda, MD	July
	Shell Research and Development	Modesto, CA	November
	University of California (Biochemistry)	Berkeley, CA	November
	University of California (Reproductive Biology)	San Francisco, CA	November
	University of Utah	Salt Lake City, UT	November
	Vanderbilt University (Population Center)	Nashville, TN	December
1978:	University of California	Davis, CA	February
	University of California (Entomology)	Riverside, CA	February
	University of California (Chemistry)	Riverside, CA	March
	University of Rochester	Rochester, NY	March
	Symposium on Radiopharmaceutical Development, Society of Nuclear Medicine	Anaheim, CA	June
	University of Iowa	Iowa City, IA	October
	University of Indiana Medical Center (Pharmacology)	Indianapolis, IN	November
1979:	Tougaloo College	Tougaloo, MI	January
	Washington University	St. Louis, MO	February
	Kent State University	Kent, OH	February
	Symposium on Affinity Labeling, ASBC Meeting	Dallas, TX	April
	University of Illinois (Biochemistry)	Urbana, IL	April
	University of Illinois College of Medicine	Chicago, IL	May
	Wellcome Laboratories	Res. Triangle Park, NC	May
	New York Academy of Sciences Conference "Applications of Photo-chemistry to Probe Biological Targets"	New York, NY	May
	NIEHS Conference "Estrogens in the Environment"	Durham, NC	September
	Workshop on Estrogens as Carriers of Cytotoxic Agents in Hormone Responsive Tumors	Diepenbeek, Belgium	September
1980:	University of Cincinnati (Chemistry)	Cincinnati, OH	February
	Harvard University Medical School (Nuclear Medicine)	Boston, MA	March
	Symposium on Radiopharmaceuticals: Structure-Activity Relationships, University of Connecticut	Hartford, CT	March
	Johns Hopkins Medical School (Nuclear Medicine)	Baltimore, MD	February
	Workshop on Receptor-Binding Radiopharmaceuticals, George Washington University Medical School	Washington, DC	May
	Merck	Rahway, NJ	May
	Sandoz	East Hanover, NJ	May
	Breast Cancer Task Force NIH	Bethesda, MD	July
	2 nd International Congress of North America (ACS)	Las Vegas, NV	August
	University of Virginia, Chemistry	Charlottesville, VA	October
	Worcester Foundation	Shrewsbury, MA	October
	SE Regional Society of Nuclear Medicine	Nashville, TN	October
	Roswell Park Cancer Center	Buffalo, NY	November
1981:	Northwestern University	Evanston, IL	February

	Northern Illinois University	DeKalb, IL	February
	Diamond Shamrock	Cleveland, OH	March
	National Prostate Center Workshop	Buffalo, NY	March
	Harvard Medical School (Toxicology)	Boston, MA	April
	Univeristy of Michigan (Pharmacy)	Ann Arbor, MI	April
	Society of Nuclear Medicine, National Meeting	Las Vegas, NV	June
	2 nd International Symposium on Radiopharmacology	Chicago, IL	September
	Harvard School of Public Health	Boston, MA	September
	Princeton University	Princeton, NJ	October
	State University of New York	Stony Brook, NY	October
1982:	University of Minnesota	Minneapolis, MN	February
	ICI Americas	Wilmington, DE	February
	Lederle Labs	Pearl River, NY	February
	Purdue Univeristy	West Lafayette, IN	February
	UCLA Symposium on Evolution of Hormone Receptors	Squaw Valley, CA	March
	University of Kansas Medicinal Chemistry	Lawrence, KS	April
	Johns Hopkins Medical School	Baltimore, MD	April
	George Washington University Medical School	Washington, DC	April
	Cornell University	Ithaca, NY	April
	Lexington Hormone Research Conference	Lexington, KY	April
	Miles Laboratory	Elkhart, IN	May
	Scandinavian Breast Cancer Symposium	Aarhus, Denmark	June
	64 th Annual Meeting of the Endocrine Society	San Francisco, CA	June
	Gordon Conference on Natural Products	New Hampton, NH	July
	Univeristy of Illinois (Biochemistry)	Urbana, IL	October
1983:	P. F. Medicament Co.	Castres, France	June
	A. B. Leo Co.	Helsingborg, Sweden	June
	Gordon Conference Hormone Action	Meriden, NJ	August
	Breast Cancer Task Force NIH	Bethesda, MD	September
	Abbott Laboratory	Chicago, IL	November
	University of Chicago Medical School	Chicago, IL	November
	Univeristy of Puerto Rico	San Juan, PR	December
1984:	IMC Corp.	Terre Haute, IN	February
	Nichols Symposium on Molec. Cell. Endocrinol.	Riverside, CA	March
	187 th Meeting of the ACS (Medicinal Chemistry)	St. Louis, MO	April
	George Washington University Medical Sana Medical School		Gary, IN
	May		
	State Univ. of New York (Pharmacology)	Stony Brook, NY	May
	Smith, Kline, Beckman (Radio and Medicinal Chem.)	Philadelphia, PA	May
	Medicinal Chemistry Symposium	Buffalo, NY	June
	Symposium on Antiestrogens	Madison, WI	June
	Danish Cancer Society	Copenhagen, DK	September
	Monsanto Corp.	St. Louis, MO	December
1985:	Society of Nuclear Medicine	Las Vegas, NV	January
	NIH Workshop on Elastase	Bethesda, MD	June
	Endocrine Society	Baltimore, MD	June
	3 rd SCI-RSC Medicinal Chemistry Symp.	Cambridge, England	September
	Proctor & Gamble	Cincinnati, OH	October
	ACS - local section	Cincinnati, OH	October
	National Institute of Health	Bethesda, MD	November

	Rensselaer Polytechnical Institute	Troy, NY	November
	Sterling Winthrop Research Institute	Rensselaer, NY	November
	Ortho Pharmaceuticals Corp.	Raritan, NY	December
	FMC Corporation	Princeton, NY	December
1986:	Washington University - Workshop on Computer-Aided Drug Design	St. Louis, MO	February
	U of I at Chicago, Chem. Dept.	Chicago, IL	March
	6 th International Symposium on Radiopharmaceutical Chemistry	Boston, MA	June
	Mid Atlantic Region-ACS Meeting	Baltimore, MD	September
	7 th International Congress on Hormonal Steroids	Madrid, Spain	September
	Washington Univeristy Medical School, Dept. of Surgery	St. Louis, MO	October
	Cincinnati Breast Cancer Symposium	Cincinnati, OH	November
	Warner Lambert	Ann Arbor, MI	December
	Mayo Clinic, Pharmacology	Rochester, MN	December
1987:	Syntex Corp.	Palo Alto, CA	February
	University of California, Chemistry	Davis, CA	February
	Bristol-Meyers	Terre Haute, IN	May
	Washington University, Chem. Dept.	St. Louis, MO	August
	Biochemical Society Meeting	Dublin, Ireland	September
	ICI Pharmaceuticals	Manchester, England	September
	Organon Corp.	Oss, The Netherlands	September
	Monsanto-Wash. U. Symposium	St. Louis, MO	November
1988:	St. Louis ACS Section, Awards Symposium	St. Louis, MO	April
	University of Iowa, Medical Chem.	Iowa City, IA	May
	7 th International Symposium on Radiopharmaceutical Chemistry	Groningen, NL	July
	International Endocrine Society	Kyoto, Japan	July
	12 th International Symposium on Fluorine Chemistry	Santa Cruz, CA	August
	Searle	Chicago, IL	September
	ACS Regional Meeting	Iowa City, IO	November
1989:	American Health Assistance Foundation Workshop on Alzheimer's Disease	Tucson, AZ	February
	NIEHS	Research Triangle, NC	February
	Purdue, School of Pharmacy	West Lafayette	February
	Berlex Laboratories	Cedar Knolls, NJ	February
	Washington University Medical School	St. Louis, MO	April
	Workshop on Antagonists	Tittisee, Germany	April
	MIKI Meeting	St. Paul, MN	April
	Eli Lilly, Agricultural Research	Greenfield, IN	May
	Society of Nuclear Medicine	St. Louis, MO	June
	ACS Regional Meeting	Albany, NY	June
	Abbott Laboratories	Chicago, IL	August
	Univesity of Pittsburgh	Pittsburgh, PA	November
	Pacificchem '89 Symposium	Honolulu, HI	December
1990:	Proctor and Gamble	Cincinnati, OH	March
	University of Michigan	Ann Arbor, MI	April
	ACS National Meeting	Boston, MA	April
	Johns Hopkins	Baltimore, MD	May
	Nutrasweet	Mt. Prospect, IL	May

	8 th Intl. Symp. Radiopharm.Chem. University of Kansas, Med. Chem	Princeton, NJ Lawrence, KA	June December
1991:	FMC Corp Merck Co. Dow Chemical Intern. Symp. Prostate Radiopharm. University of Pennsylvania, Pharm. University of Waterloo ACS Regional Meeting Beckman Institute - Drug Design Internal. Congr. Horm. Cancer Indiana University Welch Symposium Indiana Purdue University Soc. Basic Urol Research - Mayo Purdue University	Princeton, NJ Rahway, NJ Midland, MI Athens, GREECE Philadelphia, PA Waterloo, CANADA Indianapolis, IN Urbana, IL Amsterdam, NL Bloomington, IN Houston, TX Indianapolis, IN Rochester, MN West Lafayette, IN	January January February April May May May June September October October October November December
1992:	Univ. of Pennsylvania, Chemistry Salk Institute UC Berkeley Lilly Research Labs Marion Merrell Dow Univ. Illinois, Chicago Glaxo Research Labs 3 rd Int. Symp. Radiohalogenation Ligand Pharmaceuticals Univ. Illinois, Biochemistry	Philadelphia, PA La Jolla, CA Berkeley, CA Indianapolis, IN Cincinnati, OH Chicago, IL Research Triangle, NC Banff, Alberta, Canada San Diego, CA Urbana, IL	January February February March March April June September October November
1993:	University of Texas Southern Methodist University The Scripps Research Institute Int. Isotope Soc. (6 th Central Mtg) 9 th Noordwijkerhout Symposium Gordon Conference Medicinal Chem 10 th Int. Symp. Radiopharmaceuticals Univ. Missouri, Chemistry	Dallas, TX Dallas, TX La Jolla, CA Ann Arbor, MI Noordwijkerhout, NL New London, NH Kyoto, Japan Columbia, MO	April April May May May August October December
1994:	NCI Workshop on Tumor Imaging Univ. Illinois, Beckman Institute Univ. North Carolina, Pharmacy Washington Univ. Med. Pharmacol. Duke University, Chemistry Univ. Virginia, Chemistry ACS National Meeting, Ranbaxy Pharmaceuticals Central Drug Research Institute	Bethesda, MD Urbana, IL Chapel Hill, NC St. Louis, MO Durham, NC Charlottesville, VA Washington, DC New Delhi, India Lucknow, India	February March March March April April August December December
1995:	Winter Symposium on Medicinal and Bio-Organic Chemistry ACS Meeting 12 th International Symposium on the Journal of Steroid Biochemistry American Society for Photobiology R. W. Johnson Research Labs	Steamboat Springs, CO Anaheim, CA Berlin, Germany Washington, DC Raritan, NJ	January April May June June

	11 th International Symposium on Radiopharmaceutical Chemistry	Vancouver, BC, Canada	August
	ACS Meeting, Medicinal Chemistry Symposium	Chicago, IL	August
	SmithKline-Beecham, Medicinal Chemistry	Philadelphia, PA	September
	Cornell University, Chemistry	Ithaca, NY	October
	Sankyo Pharmaceuticals	Tokyo, Japan	November
1996:	Harvard University, Chemistry	Cambridge, MA	February
	University of Texas	Austin, TX	April
	Johns Hopkins University Medical School	Baltimore, MD	May
	Abbott Laboratory	Chicago, IL	November
1997:	Int. Soc. Reg. Toxicol. & Pharmacol.	Research Triangle, NC	January
	13 th Winter Fluorine Conference (Plenary)	St. Petersburg, FL	January
	Medicinal Chemistry, Gordon Conference	New London, NH	August
	Monsanto Health Sciences	St. Louis, MO	December
1998:	5 th Intl. Symp. on Technetium and Nuclear Medicine	Bressanone, Italy	September
	Symposium on Estrogens and Human Health	Urbana, Illinois	September
	Merck	Rahway, NJ	October
	Bristol Meyers Squibb	Princeton, NJ	November
1999:	Quantitative In Vivo Imaging in Oncology	Alexandria, VA	January
	Breast Cancer Think Tank	St. Thomas, VI	January
	Keystone Conference on Endocrine Disrupters	Lake Tahoe, CA	January
	Eastern Illinois University	Charleston, IL	February
	American Chemical Society	Anaheim, CA	March
	Department of Energy Workshop	San Diego, CA	June
	International Symposium on Radiopharmacology	St. Louis, MO	June
	American Chemical Society, Cope Scholar	New Orleans, LA	August
	International Symp. Fluorinated Bioactive Compounds	Brussels, Belgium	September
	Wyeth-Ayerst, Women's Health Institute	Radnor, PA	October
	Berlex Biosciences	Richmond, DA	October
	Illinois Wesleyan University	Bloomington, IL	October
	Tulane Univ., Conference on Environmental Estrogens	New Orleans	October
	R. W. Johnson	Raritan, NJ	December
	R. W. Johnson	Springhouse, NJ	December
2000:	UT Southwestern Medical School	Dallas, TX	February
	Baylor University	Waco, TX	February
	University of California, San Francisco,	San Francisco, CA	March
	Microcide Pharmaceuticals	Mountain View, CA	March
	Mountain View Pharmaceuticals	Menlo Park, CA	March
	Institute for Molecular Diversity & Drug Design (IMD3)	Louisville, KY	March
	Pennsylvania State University, Chemistry	College Station, PA	April
	University of Pittsburgh, Imaging Center	Pittsburgh, PA	April
	Frontiers of Estrogen Action, Wyeth Ayerst	Palm Beach, FL	April
	Burgenstock Conference	Bürgenstock, Switzerland	April
	X-CEPTOR Pharmaceuticals	San Diego, CA	May
	Ligand Pharmaceuticals	San Diego, CA	May
	Era of Hope, US Army Breast Cancer Program	Atlanta, GA	June
	UIUC College of Medicine	Peoria, IL	July
	International Isotope Society, Central Chapter	Chicago, IL	September
	Scripps Resarch Institute	La Jolla, CA	September
	UIC/UIUC Biomaterials Conference	Matteson, IL	October

	DOE Grantees Workshop Southern Illinois University	Williamsburg, VA Carbondale, IL	October December
2001:	Medicinal and Bioorganic Chemistry Workshop University of Delaware DuPont Pharmaceuticals Northeastern University Serono Inha University [cancelled for security reasons] Korean Chemistry Society [cancelled for security reasons] University of Minnesota (Calvin Lecturer) Wyeth-Ayerst (Named Lectureship) Columbia University (Named Lectureship)	Steamboat Springs, CO Newark, DE Wilmington, DE Boston, MA Boston, MA Incheon, Korea Seoul, Korea Minneapolis Pearl River, NY New York, NY	January February February March March October October November November November
2002:	AACR Symposium on Imaging in Cancer DOE Workshop on Imaging Gene Expression American Oil Chemists Society, 93 rd Meeting University of Tokyo IUPAC/SCOPE Environmental Endocrine Substances (2) Sankyo Pharmaceuticals	Orlando, FL Boston, MA Montreal, Canada Tokyo, Japan Tokyo, Japan Tokyo, Japan	January January May November November November
2003:	13 th Breast Cancer Think Tank DOE Workshop on Receptor Radiotracers Washington University, Radiation Sciences International Isotope Society (Plenary) Elwood Jensen Symposium	Aruba, Netherland Antilles La Jolla, CA St. Louis, MO Boston, MA Cincinnati, OH	January February April June December
2004:	14 th Breast Cancer Think Tank American Chemical Society Imaging Symposium American Chemical Society SERM Symposium Pfizer, Inc. (Robertson Achievement Awards Symp.) Workshop on Toxicology of Polychlorinated Biphenyls 36 th Central Region ACS Meeting Polychlorinated Biphenyl Workshop National Medicinal Chemistry Symposium FASEB Workshop on Rapid Action of Steroids ACS Robertson Memorial Symposium Lauderbur MRI Symposium, University of Illinois	St. Kitts Anaheim, CA Anaheim, CA Ann Arbor, MI Urbana, IL Indianapolis, IN Urbana, IL Madison, WI Tucson, AZ Philadelphia, PA Urbana, IL	January March March May June June June June July August November
2005:	15 th Breast Cancer Think Tank Memorial Sloan Kettering Cancer Center NYU Medical School Georgia Institute of Technology Korea Chemical Society National Meeting Korea Research Institute of Chemical Technology Samsung Medical Center Targeted Therapies in Breast Cancer Scripps Research Institute Keystone Conference on SERMs Invitrogen/Panvera 2 nd Great Lakes Nuclear Receptor Meeting Carle Foundation Hospital Cancer Center	Curacao, Netherland Antilles New York, NY New York, NY Atlanta, GA Incheon, Korea Daejeon, Korea Seoul, Korea Dana Point, CA Jupiter, Florida Breckenridge, CO Madison, WI Madison, WI Urbana, IL	January February February February April April April June July September October October November
2006:	16 th Breast Cancer Think Tank Genome Institute of Singapore	Grand Cayman Singapore	January February

	Schering Symposium on Estrogens	Berlin, Germany	February
	Pharmaceutical Society of Japan	Sendai, Japan	March
	Sankyo Tokyo	Tokyo, Japan	March
	Wyeth Frontiers in Nuclear Receptor Action	Ft. Meyers, FL	April
	Center for Nanoscale Science & Technology Workshop	Urbana, IL	May
	PET Research Division, Schering	Berlin, Germany	May
	International Congress on Hormonal Steroids	Athens, Greece	September
2007:	17 th Breast Cancer Think Tank	Cancun, Mexico	January
	University of Colorado	Boulder, CO	March
	University of Colorado, Medical School	Aurora, CO	March
	Denver University	Denver, CO	March
	University of Washington, Medical School	Seattle, WA	March
	Schering Symposium on Progestins	Berlin, Germany	March
	American Chemical Society Herschberg Award Lecture	Chicago, IL	March
	International Symposium on Radiopharmaceuticals	Aachen, Germany	April
	Emory University Medical School	Atlanta, GA	July
	Rapid Actions of Steroid Hormones International Mtg	Dublin, Ireland	September
	University of Zurich	Zurich Switzerland	November
2008:	18 th Breast Cancer Think Tank	Kona, Hawaii	January
	Purdue University	West Lafayette, IN	March
	Keystone Meeting on Steroid Hormones	Whistler, British Columbia, CA	March
	Wyeth Frontiers in Nuclear Receptor Action	[to be announced]	April
	Gustavus John Esselen Award Lecture	Harvard, MA	April
	Pfizer	St. Louis, MO	July
	FASEB – Non-Genomic Action	Phoenix, AZ	July
	American Chemical Society	Philadelphia, PA	August
	Nobel Symposium	Stockholm, Sweden	September
	University of Washington, Chemistry	Seattle, WA	October
	Department of Energy Workshop on Radiolabeling`	Washington DC	November
	Fred Hutchinson Cancer Research Center	Seattle, WA	November
2009:	19 th Breast Cancer Think Tank	Costa Rica	January
	Society of Toxicology	Baltimore	March
	Estrogens, SERMs, and TSECs Meeting	Fort Meyers, FL	March
	NIH Workshop on Nuclear Receptors	Bethesda, MD	April
	Aileron Therapeutics	Cambridge, MA	May
	Worcester Foundation Eliahu Caspi Lecture	Worcester, MA	May
	Shanghai Institute of Organic Chemistry	Shanghai, China	October
	Chinese Medicinal Chemistry Symposium 2009	Wuhan, China	October
	Huazhong University PET Center	Wuhan, China	October
	University of Wuhan College of Pharmacy	Wuhan, China	October
	Shutter Lecturer, Oregon Health Science University	Portland, OR	November
	Open University	Milton Keynes, UK	December
	University of Nottingham	Nottingham, UK	December
	University of Leeds	Leeds, UK	December
	University of York	York, UK	December
	St Andrews University	Leuchars, UK	December
	University of Southampton	Southampton, UK	December
2010:	20 th Breast Cancer Think Tank	Barbados	January
	American Chemical Society	San Francisco	March
	Estrogens, SERMs, TSECs Meeting (Pfizer)	Philadelphia	April
	Webster-Sibilsky Lectureship in Medicinal Chemistry	UIC, Chicago	April

	Frontier Medical Instruments Symposium	Seoul, Korea	May
	Sogang University	Seoul, Korea	May
	American Chemical Society, Portoghese Award	Boston, MA	August
	University of Arizona	Tucson, AZ	September
	Emory University	Atlanta, GA	October
2011:	21 th Breast Cancer Think Tank	Jamacia	January
	Washington University	St. Louis, MO	February
	Congress on Steroid Research	Chicago, IL	March
	European Medicinal Chemistry Society	Saarbrucken, Germany	March
	Department of Energy Workshop	Washington, DC	April
	Estrogen Receptor Beta Symposium	Stockholm, Sweden	May
	The Endocrine Society	Boston, MA	June
	Seattle Genetics	Bothell, Washington	July
	Society of Radiopharmaceutical Sciences	Amsterdam, NL	September
	Eidgenossische Technische Hochschule (ETH)	Zurich, SW	September
	University of Wisconsin, McArdle Lecturer	Madison, WI	October
	University of Miami, Sylvester Cancer Center	Miami, FL	November
2012:	Breast Cancer Think Tank 22	Mayan Riviera, Mexico	January
	Northwestern University Medical School	Chicago, IL	February
	University of Texas Southwestern Medical School	Dallas, TX	February
	National Institutes of Health	Bethesda, MS	March
	Cancer Community @ Illinois Symposium	Urbana, IL	April
	Harvard University	Cambridge, MA	May
	National Institutes of Environmental Sciences	Research Triangle Park, NC	September
	Wuhan University (2 talks)	Wuhan, China	November
2013:	Breast Cancer Think Tank 23	Punta Cana, Dominican Republic	January
	World Molecular Imaging Conference	Savannah, GA	September
	Michael J. Welch Lectureship	Washington University, MO	September
2014:	Laura Evans Memorial Breast Cancer Symposium	Sun Valley, ID	March
	Society of Nuclear Medicine	St. Louis MO	June
	American Chemical Society	San Francisco	July
	Endocrine Society of Australia	Melbourne, Australia	August
	Nuclear Receptors in Breast Cancer Research Group	Melbourne, Australia	August
	Massachusetts General Hospital, PET Imaging	Boston, MA	October
	Radiation Sciences Research, Washington Univ Med	St. Louis, MO	October
2015:	Breast Cancer Think Tank 25	Grand Cayman	January
	American Association for Cancer Research	Philadelphia, PA	April
	FASEB Meeting on Genomic & Non-genomic Signaling	Big Sky, MT	August
2016:	Keystone Symposium, Nuclear Receptors Full Throttle	Snowbird, UT	January
	INSERM Cancer Institute	Toulouse, France	June
2017:	Breast Cancer Think Tank 27	St. Lucia	January
	Endocrine Society	Orlando, FL	April
2018:	Breast Cancer Think Tank 28	Curacao	January
	American Association for Cancer Research	Chicago, IL	April
	Illinois Ignite	Chicago, IL	September
2019:	Breast Cancer Think Tank 29	Riviera Maya, Mexico	January

	Baylor College of Medicine	Houston, TX	April
	NIEHS	Research Triangle, NC	May
	University of North Carolina, College of Pharmacy	Research Triangle, NC	May
	Engage Illinois – University of Illinois	Urbana, IL	September
	University of Michigan – Radiology	Ann Arbor, MI	October
	University of Michigan – Medicinal Chemistry	Ann Arbor, MI	October
2020:	St. Louis University*	St. Louis, MO	May
	FASEB Rapid Signaling of Steroid Hormones*	West Palm Beach, FL	July
	World Molecular Imaging Conference	Prague, CR	October
	*postponed		
2021:	Gordon Research Conference on Natural Products	New Hampshire	July

PUBLICATIONS (IN THREE PARTS)

A. Refereed Articles [Part 1 of 3]

1. E. J. Corey, J. A. Katzenellenbogen, and G. H. Posner. A New Stereospecific Synthesis of Trisubstituted Olefins. Stereospecific Synthesis of Farnesol. *J. Am. Chem. Soc.* **1967**, *89*, 4245-4247.
2. E. J. Corey, J. A. Katzenellenbogen, N. W. Gilman, S. A. Roman, and B. W. Erickson. Stereospecific Total Synthesis of the *dl*-C₁₈ Cecropia Juvenile Hormone. *J. Am. Chem. Soc.* **1968**, *90*, 5618-5620.
3. E. J. Corey and J. A. Katzenellenbogen. A New Stereospecific Synthesis of Trisubstituted and Tetrasubstituted Olefins. The Conjugate Addition of Dialkylcopper-Lithium Reagents to α,β -Acetylenic Esters. *J. Am. Chem. Soc.* **1969**, *91*, 1851-1852.
4. E. J. Corey, K. Achiwa, and J. A. Katzenellenbogen. Total Synthesis of *dl*-Sirenin. *J. Am. Chem. Soc.* **1969**, *91*, 4318-4320.
5. E. J. Corey, H. A. Kirst, and J. A. Katzenellenbogen. A Stereospecific Total Synthesis of α -Santalol. *J. Am. Chem. Soc.* **1970**, *92*, 6314-6319.
6. E. J. Corey, J. A. Katzenellenbogen, S. A. Roman, and N. W. Gilman. Stereospecific Synthesis of a Biologically Active Dehydro Derivative of the C₁₈-Juvenile Hormone of Cecropia. New Routes to a Key C₁₂-Intermediate. *Tetrahedron Lett.* **1971**, 1821-1824.
7. J. A. Katzenellenbogen and R. S. Lenox. A Selective, Allylic Cross-Coupling Reaction. The Generation of Allyllithium Reagents by Reduction of Allyl Mesitoates. *Tetrahedron Lett.* **1972**, 1471-1474.
8. J. A. Katzenellenbogen and T. Utawanit. The Reductive Rearrangement of Cyclopropylcarbinyl Mesitoates. *Tetrahedron Lett.* **1972**, 1475-1476.
9. J. A. Katzenellenbogen and E. J. Corey. A Novel Cyclization Mediated by Organocopper Reagents. *J. Org. Chem.* **1972**, *37*, 1441-1442.
10. T. S. Ruh, B. S. Katzenellenbogen, J. A. Katzenellenbogen, and J. Gorski. Estrone Interaction with the Rat Uterus: *In Vitro* Response and Nuclear Uptake. *Endocrinology* **1973**, *92*, 125-134.
11. J. A. Katzenellenbogen and R. S. Lenox. The Generation of Allyllithium Reagents by Lithium-Tetrahydrofuran Reduction of Allylic Mesitoates. A New Procedure for Selective Allylic Cross Coupling and Allylcarbinol Synthesis. *J. Org. Chem.* **1973**, *38*, 326-335.
12. J. A. Katzenellenbogen and S. B. Bowlus. Stereoselectivity in the Reduction of Aliphatic α -Ketols with Aluminum Hydride Reagents. *J. Org. Chem.* **1973**, *38*, 627-632.
13. R. S. Lenox and J. A. Katzenellenbogen. A Stereoselective Method for the Synthesis of Both Olefinic Isomers from a Single Precursor. The Conjugate Reduction of α,β -Unsaturated Epoxides. *J. Am. Chem. Soc.* **1973**, *95*, 957-959.
14. C. H. Miller, J. A. Katzenellenbogen, and S. B. Bowlus. A Short, Stereospecific Synthesis of an Insect Defense Secretion, Gyrinidal. *Tetrahedron Lett.* **1973**, *14*, 285-288.
15. S. B. Bowlus and J. A. Katzenellenbogen. A Highly Stereoselective Synthesis of (2Z,6E)-7-Methyl-3-propyl-2,6-decadien-1-ol. A Proposed Revision in the Stereochemistry of a Tetrahomoterpene Isolated from Codling Moth. *Tetrahedron Lett.* **1973**, *14*, 1277-1280.
16. S. B. Bowlus and J. A. Katzenellenbogen. Synthesis of the Natural Isomer of a Tetrahomoterpene Alcohol Obtained from the Codling Moth. *J. Org. Chem.* **1973**, *38*, 2733-2734.
17. K. R. Solomon, S. B. Bowlus, R. L. Metcalf, and J. A. Katzenellenbogen. Effect of Piperonyl Butoxide and Triorthocresyl Phosphate on the Activity of Juvenile Hormone Mimics and their Sulphur Isosteres in *Tenebrio Molitor* L. and *Oncopeltus Fasciatus* (Dallas). *Life Science* **1973**, *13*, 733-742.
18. B. S. Katzenellenbogen and J. A. Katzenellenbogen. Antiestrogens: Studies Using an *In Vitro* Estrogen-Responsive Uterine System. *Biochem. Biophys. Res. Commun.* **1973**, *50*, 1152-1159.
19. J. A. Katzenellenbogen, H. N. Myers, and H. J. Johnson, Jr. Reagents for Photoaffinity Labeling of Estrogen Binding Proteins. Synthesis of Some Azide and Diazo Derivatives of Estradiol, Estrone, and Hexestrol. *J. Org. Chem.* **1973**, *38*, 3525-3533.
20. J. A. Katzenellenbogen, H. J. Johnson, Jr., and H. N. Myers. Photoaffinity Labels for Estrogen Binding Proteins of Rat Uterus. *Biochemistry* **1973**, *12*, 4085-4092.

21. J. A. Katzenellenbogen, H. J. Johnson, Jr., and K. E. Carlson. Studies on the Uterine, Cytoplasmic Estrogen Binding Protein. Thermal Stability and Ligand Dissociation Rate. An Assay of Empty and Filled Sites by Exchange. *Biochemistry* **1973**, *12*, 4092-4099.
22. S. B. Bowlus and J. A. Katzenellenbogen. An Efficient, General Synthesis of the Alkylsulfinytoluidides. *Synth. Commun.* **1974**, *4*, 137-141.
23. R. G. Riley, R. M. Silverstein, R. S. Lenox, and J. A. Katzenellenbogen. Improved Synthesis of 2-Methyl-6-methylene-2,7-octadien-4-ol, a Pheromone of *Ips Paraconfusus* and an Alternative Synthesis of the Intermediate, 2-Bromomethyl-1,3-butadiene. *J. Org. Chem.* **1974**, *39*, 1957-1958.
24. J. A. Katzenellenbogen, H. J. Johnson, Jr., K. E. Carlson, and H. N. Myers. The Photoreactivity of Some Light-Sensitive Estrogen Derivatives. The Use of an Exchange Assay to Determine Their Photointeraction with the Rat Uterine Estrogen Binding Protein. *Biochemistry* **1974**, *13*, 2986-2994.
25. S. B. Bowlus and J. A. Katzenellenbogen. Aluminum Hydride Reduction of α -Ketols II. Additional Evidence of Conformational Flexibility in the Transition State. *J. Org. Chem.* **1974**, *39*, 3309-3315.
26. J. A. Katzenellenbogen and K. J. Christy. Stereoselectivity of the Rearrangement of Allyl Siloxyvinyl Ethers. A Highly Stereoselective Synthesis of a Diol Found in the Pheromonal Secretion of the Queen Butterfly. *J. Org. Chem.* **1974**, *39*, 3315-3318.
27. J. A. Katzenellenbogen and A. L. Crumrine. Regioselectivity in the Alkylation of Lithium and Copper Ester Dienolates. An Allylic Transposition Associated with γ -Alkylation of Copper Dienolates. *J. Am. Chem. Soc.* **1974**, *96*, 5662-5663.
28. J. A. Katzenellenbogen and T. Utawanit. A Highly Stereoselective and Completely Regiospecific Method for the Dehydration of β -Hydroxy Esters via β -Alanoxy Enolates. Application to the Synthesis of Trisubstituted Olefins and Two Ant Mandibular Gland Secretions. *J. Am. Chem. Soc.* **1974**, *96*, 6153-6158.
29. J. A. Katzenellenbogen and H. M. Hsiung. Iodohesterols. I. Synthesis and Photoreactivity of Iodinated Hexestrol Derivatives. *Biochemistry* **1975**, *14*, 1736-1741.
30. J. A. Katzenellenbogen, H. M. Hsiung, K. E. Carlson, W. L. McGuire, R. J. Kraay, and B. S. Katzenellenbogen. Iodohesterols. II. Characterization of the Binding and Estrogenic Activity of Iodinated Hexestrol Derivatives, in Vitro and in Vivo. *Biochemistry* **1975**, *14*, 1742-1750.
31. J. A. Katzenellenbogen, T. S. Ruh, K. E. Carlson, H. S. Iwamoto, and J. Gorski. Ultraviolet Photosensitivity of the Estrogen Binding Protein from Rat Uterus. Wavelength and Ligand Dependence. Photocovalent Attachment of Estrogens to Protein. *Biochemistry* **1975**, *14*, 2310-2316.
32. J. A. Katzenellenbogen and T. Utawanit. Allyl and Benzyl Ethynyl Ethers: Unusually Facile Claisen-Type Rearrangements. *Tetrahedron Lett.* **1975**, *16*, 3275-3278.
33. J. A. Katzenellenbogen and A. L. Crumrine. Selective γ Alkylation of Dienolate Anions Derived from α,β -Unsaturated Acids. Applications to the Synthesis of Isoprenoid Olefins. *J. Am. Chem. Soc.* **1976**, *98*, 4925-4935.
34. R. A. Amos and J. A. Katzenellenbogen. Reaction of Lithium Dialkylcuprates with Acetoxy Epoxides. Assessment of a Method for Nucleophilic α -Alkylation of Ketones. *J. Org. Chem.* **1977**, *42*, 2537-2545.
35. J. A. Katzenellenbogen, H. N. Myers, H. J. Johnson, Jr., R. J. Kempton, and K. E. Carlson. Estrogen Photoaffinity Labels. 1. Chemical and Radiochemical Synthesis of Hexestrol Diazoketone and Azide Derivatives; Photochemical Studies in Solution. *Biochemistry* **1977**, *16*, 1964-1970.
36. J. A. Katzenellenbogen, K. E. Carlson, H. J. Johnson, Jr., and H. N. Myers. Estrogen Photoaffinity Labels. 2. Reversible Binding and Covalent Attachment of Photosensitive Hexestrol Derivatives to the Uterine Estrogen Receptor. *Biochemistry* **1977**, *16*, 1970-1976.
37. R. C. Peterson, M. F. Reich, P. E. Dunn, J. H. Law, and J. A. Katzenellenbogen. Binding Specificity of the Juvenile Hormone Carrier Protein from the Hemolymph of the Tobacco Hornworm *Manduca Sexta* Johannson (Lepidoptera: Sphingidae). *Biochemistry* **1977**, *16*, 2305-2311.
38. K. E. Carlson, L.-H. K. Sun, and J. A. Katzenellenbogen. Characterization of Trypsin-Treated Forms of the Estrogen Receptor From Rat and Lamb Uterus. *Biochemistry* **1977**, *16*, 4288-4296.
39. B. S. Katzenellenbogen, H. S. Iwamoto, D. F. Heiman, N. C. Lan, and J. A. Katzenellenbogen. Stilbestrols and Stilbestrol Derivatives: Estrogenic Potency and Temporal Relationships Between Estrogen Receptor Binding and Uterine Growth. *Mol. Cell. Endocrinol.* **1978**, *10*, 103-113.

40. R. A. Amos and J. A. Katzenellenbogen. Reaction of Copper Enolates of Esters with Propargylic Systems. Facile Preparation of 3,4-Dienoic Esters, Stereoselective Rearrangement to (2*E*,4*Z*)- and (2*E*,4*E*)-Dienoic Esters, and Stereoselective Synthesis of a Fragrance from the Bartlett Pear. *J. Org. Chem.* **1978**, *43*, 555-560.
41. R. A. Amos and J. A. Katzenellenbogen. An Efficient Synthesis of γ -Methylene- γ -butyrolactone (α' -Angelicalactone). Application to the Synthesis of Deoxyobtusilactone and Deoxyisoobtusilactone. *J. Org. Chem.* **1978**, *43*, 560-564.
42. B. S. Katzenellenbogen, J. A. Katzenellenbogen, E. F. Ferguson, and N. Krauthammer. Anti-estrogen Interaction with Uterine Estrogen Receptors: Studies with a Radiolabeled Anti-estrogen (CI-628). *J. Biol. Chem.* **1978**, *253*, 697-707.
43. J. A. Katzenellenbogen. Comparative Binding Affinities of Estrogen Derivatives. *Cancer Treatment Reports* **1978**, *62*, 1243-1249.
44. B. S. Katzenellenbogen, J. A. Katzenellenbogen, and D. Mordecai. Zearalenones: Characterization of the Estrogenic Potencies and Receptor Interactions of a Series of Fungal β -Resorcylic Acid Lactones. *Endocrinology* **1979**, *105*, 33-40.
45. D. W. Payne and J. A. Katzenellenbogen. Binding Specificity of Rat α -Fetoprotein for a Series of Estrogen Derivatives: Studies Using Equilibrium and Nonequilibrium Binding Techniques. *Endocrinology* **1979**, *105*, 743-753.
46. D. B. Kohn, M. J. Weber, P. L. Carl, J. A. Katzenellenbogen, and P. K. Chakravarty. A Peptidyl Derivative of [³H]Aniline as a Sensitive, Stable, Protease Substrate. *Anal. Biochem.* **1979**, *97*, 269-276.
47. T. Tatee, K. E. Carlson, J. A. Katzenellenbogen, D. W. Robertson, and B. S. Katzenellenbogen. Antiestrogens and Antiestrogen Metabolites: Preparation of Tritium-Labeled (\pm)-*cis*-3-[*p*-(1,2,3,4-Tetrahydro-6-methoxy-2-phenyl-1-naphthyl)phenoxy]-1,2-propanediol (U-23469) and Characterization and Synthesis of a Biologically Important Metabolite. *J. Med. Chem.* **1979**, *22*, 1509-1517.
48. D. W. Payne and J. A. Katzenellenbogen. Differential Effects of Estrogens in Tissues: A Comparison of Estrogen Receptor in Rabbit Uterus and Vagina. *Endocrinology* **1980**, *106*, 1345-1352.
49. J. A. Katzenellenbogen, K. E. Carlson, D. F. Heiman, and R. Goswami. Receptor-Binding Radiopharmaceuticals for Imaging Breast Tumors: Estrogen-Receptor Interactions and Selectivity of Tissue Uptake of Halogenated Estrogen Analogs. *J. Nucl. Med.* **1980**, *21*, 550-558.
50. D. F. Heiman, S. G. Senderoff, J. A. Katzenellenbogen, and R. J. Neeley. Estrogen Receptor Based Imaging Agents. 1. Synthesis and Receptor Binding Affinity of Some Aromatic and D-Ring Halogenated Estrogens. *J. Med. Chem.* **1980**, *23*, 994-1002.
51. R. Goswami, S. G. Harsy, D. F. Heiman, and J. A. Katzenellenbogen. Estrogen Receptor Based Imaging Agents. 2. Synthesis and Receptor Binding Affinity of Side-Chain Halogenated Hexestrol Derivatives. *J. Med. Chem.* **1980**, *23*, 1002-1008.
52. P. L. Carl, P. K. Chakravarty, J. A. Katzenellenbogen, and M. J. Weber. Protease-Activated "Prodrugs" for Cancer Chemotherapy. *Proc. Natl. Acad. Sci. USA* **1980**, *77*, 2224-2228.
53. D. W. Payne, J. A. Katzenellenbogen, and K. E. Carlson. Photoaffinity Labeling of Rat α -Fetoprotein. *J. Biol. Chem.* **1980**, *255*, 10359-10367.
54. J. A. Katzenellenbogen, S. G. Senderoff, K. D. McElvany, H. A. O'Brien, Jr., and M. J. Welch. 16 α -[⁷⁷Br] Bromoestradiol-17 β : A High Specific-Activity, Gamma-Emitting Tracer with Uptake in Rat Uterus and Induced Mammary Tumors. *J. Nucl. Med.* **1981**, *22*, 42-47.
55. S. W. Landvatter and J. A. Katzenellenbogen. Stereochemical Considerations in the Binding of Nonsteroidal Estrogens to the Estrogen Receptor. *Molec. Pharmacol.* **1981**, *20*, 43-51.
56. J. R. Hayes, E. A. Rorke, D. W. Robertson, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Biological Potency and Uterine Estrogen Receptor Interactions of the Metabolites of the Antiestrogens CI-628 and U23,469. *Endocrinology* **1981**, *108*, 164-172.
57. W. DeBoer, A. C. Notides, B. S. Katzenellenbogen, J. R. Hayes, and J. A. Katzenellenbogen. The Capacity of the Antiestrogen CI-628 to Activate the Estrogen Receptor *In Vitro*. *Endocrinology* **1981**, *108*, 206-212.
58. P. M. Savu and J. A. Katzenellenbogen. Selective γ -Alkylation of Copper Enoates Derived from α,β -Unsaturated Acids: Factors Affecting Scope and Regio- and Stereoselectivity. *J. Org. Chem.* **1981**, *46*, 239-250.

59. M. R. Kilbourn, A. J. Arduengo, J. T. Park, and J. A. Katzenellenbogen. Conformational Analysis of Nonsteroidal Estrogens: The Effect of Conformer Populations on the Binding Affinity of *meso*- and *dl*-Hexestrol to the Estrogen Receptor. *Molec. Pharmacol.* **1981**, *19*, 388-398.
60. D. Maron, J. A. Katzenellenbogen, and B. N. Ames. Compatibility of Organic Solvents with the Salmonella/Microsome Test. *Mutation Research* **1981**, *88*, 343-350.
61. J. A. Katzenellenbogen, R. J. McGorin, T. Tatee, R. J. Kempton, K. E. Carlson, and D. H. Kinder. Chemically Reactive Estrogens: Synthesis and Estrogen Receptor Interactions of Hexestrol Ether Derivatives and 4-Substituted Deoxyhexestrol Derivatives Bearing Alkylating Functions. *J. Med. Chem.* **1981**, *24*, 435-450.
62. P. L. Carl, P. K. Chakravarty, and J. A. Katzenellenbogen. A Novel Connector Linkage Applicable in Prodrug Design. *J. Med. Chem.* **1981**, *24*, 479-480.
63. K. D. McElvany, M. J. Welch, J. A. Katzenellenbogen, S. G. Senderoff, G. E. Bentley, and P. M. Grant. Scope and Limitations of a Rapid Radiobromination Technique. *Int. J. Appl. Radiat. Isotop.* **1981**, *32*, 411-416.
64. R. Goswami, M. R. Kilbourn, and J. A. Katzenellenbogen. 1-Dehydrohexestrol. Synthesis of a Precursor for the Preparation of Tritium-Labeled Hexestrol Derivatives and its use in a New, Convenient Synthesis of Tritium-Labeled *o*-Azidohexestrol. *J. Label. Cmps. Radiopharm.* **1981**, *18*, 407-418.
65. G. A. Krafft, M. F. Reich, and J. A. Katzenellenbogen. Synthesis of ¹⁴C-Labeled 10,11-Epoxyfarnesyl Diazoacetate, A Potential Photoaffinity Labeling Reagent for Insect Juvenile Hormone Binding Protein. *J. Labeled. Compd. Radiopharm.* **1981**, *9*, 591-596.
66. J. A. Katzenellenbogen, T. Tatee, and D. W. Robertson. Preparation of Tritium-Labeled 4-Hydroxy- α -[p-(2-(N-pyrrolidinyloxy)phenyl)- α' -nitrostilbene (CN-928), a Biologically-Important Metabolite of the Antiestrogen CI-628. *J. Labeled Comp. Radiopharm.* **1981**, *18*, 865-879.
67. D. W. Robertson, L. L. Wei, J. R. Hayes, K. E. Carlson, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Tamoxifen Aziridines: Effective Inactivators of the Estrogen Receptor. *Endocrinology* **1981**, *109*, 1298-1300.
68. B. S. Katzenellenbogen, E. J. Pavlik, D. W. Robertson, and J. A. Katzenellenbogen. Interaction of a High Affinity Antiestrogen (α -[4-Pyrrolidinoethoxy]phenyl-4-hydroxy- α' -nitrostilbene, CI-628M) with Uterine Estrogen Receptors. *J. Biol. Chem.* **1981**, *256*, 2908-2915.
69. J. S. Ng, J. A. Katzenellenbogen, and M. R. Kilbourn. Aromatic Fluorinations Suitable for Fluorine-18 Labeling of Estrogens. *J. Org. Chem.* **1981**, *46*, 2520-2528.
70. S. W. Rollinson, R. A. Amos, and J. A. Katzenellenbogen. The Total Synthesis of Lauraceae Lactones: Obtusilactones, Litsenolides and Mahubanolides. *J. Am. Chem. Soc.* **1981**, *103*, 4114-4125.
71. G. A. Krafft and J. A. Katzenellenbogen. Synthesis of Halo Enol Lactones. Mechanism-Based Inactivators of Serine Proteases. *J. Am. Chem. Soc.* **1981**, *103*, 5459-5466.
72. D. W. Robertson, J. A. Katzenellenbogen, D. J. Long, E. A. Rorke, and B. S. Katzenellenbogen. Tamoxifen Antiestrogens. A Comparison of the Activity, Pharmacokinetics, and Metabolic Activation of the *Cis* and *Trans* Isomers of Tamoxifen. *J. Ster. Biochemistry* **1982**, *16*, 1-13.
73. D. W. Robertson, J. A. Katzenellenbogen, J. R. Hayes, and B. S. Katzenellenbogen. Antiestrogen Basicity-Activity Relationships: A Comparison of the Estrogen Receptor Binding and Antiuterotrophic Potencies of Several Analogues of (Z)-1,2-Diphenyl-1-[4-[2-(dimethylamino)ethoxy]phenyl]-1-butene (Tamoxifen, Nolvadex) Having Altered Basicity. *J. Med. Chem.* **1982**, *25*, 167-171.
74. J. A. Katzenellenbogen, K. D. McElvany, S. G. Senderoff, K. E. Carlson, S. W. Landvatter, and M. J. Welch. 16α -[⁷⁷Br]Bromo- 11β -methoxyestradiol- 17β : A Gamma-Emitting Estrogen Imaging Agent with High Uptake and Retention by Target Organs. *J. Nucl. Med.* **1982**, *23*, 411-419.
75. K. D. McElvany, K. E. Carlson, M. J. Welch, S. G. Senderoff, and J. A. Katzenellenbogen. In Vivo Comparison of 16α -[⁷⁷Br]Bromoestradiol- 17β and 16α -[¹²⁵I]Iodoestradiol- 17β . *J. Nucl. Med.* **1982**, *23*, 420-424.
76. K. D. McElvany, J. A. Katzenellenbogen, K. E. Shafer, B. A. Siegel, S. G. Senderoff, and M. J. Welch. 16α -[⁷⁷Br]Bromoestradiol- 17β : Dosimetry and Preliminary Clinical Studies. *J. Nucl. Med.* **1982**, *23*, 425-430.

77. P. K. Chakravarty, G. A. Krafft, and J. A. Katzenellenbogen. Haloenol Lactones: Enzyme-activated Irreversible Inactivators for Serine Proteases. Inactivation of α -Chymotrypsin. *J. Biol. Chem.* **1982**, *257*, 610-612.
78. P. Albaugh-Robertson and J. A. Katzenellenbogen. Silicon-Directed Selective Gamma Substitution of an α,β -Unsaturated Ester. *Tetrahedron Lett.* **1982**, *23*, 723-726.
79. S. G. Senderoff, K. D. McElvany, K. E. Carlson, D. F. Heiman, J. A. Katzenellenbogen, and M. J. Welch. Methodology for the Synthesis and Specific Activity Determination of 16α -[^{77}Br]Bromoestradiol- 17β and 16α -[^{77}Br]1 β -methoxyestradiol- 17β , Two Estrogen Receptor-Binding Radiopharmaceuticals. *Int. J. Appl. Rad. Isotop.* **1982**, *33*, 545-551.
80. J. A. Katzenellenbogen and B. S. Katzenellenbogen. Considerations in the Design and Evaluation of Cytotoxic Estrogens. *Breast Cancer Research and Treatment* **1982**, *2*, 347-353.
81. D. W. Robertson and J. A. Katzenellenbogen. The Synthesis of the *E* and *Z* Isomers of the Antiestrogen Tamoxifen and Its Metabolite, Hydroxytamoxifen, in Tritium-Labeled Form. *J. Org. Chem.* **1982**, *47*, 2387-2392.
82. S. W. Landvatter and J. A. Katzenellenbogen. Nonsteroidal Estrogens: Synthesis and Estrogen Receptor Binding Affinity of Derivatives of (3*R**,4*S**)-3,4-Bis(4-hydroxyphenyl)hexane (Hexestrol) and (2*R**,3*S**)-2,3-Bis(4-hydroxyphenyl)pentane (Norhexestrol) Functionalized on the Side Chain. *J. Med. Chem.* **1982**, *25*, 1300-1307.
83. S. W. Landvatter, J. A. Katzenellenbogen, K. D. McElvany, and M. J. Welch. (2*R**,3*S**)-1-[^{125}I]Iodo-2,3-bis(4-hydroxyphenyl)pentane ([^{125}I]Iodonorhexestrol) and (2*R**,3*S**)-1-[^{77}Br]Bromo-2,3-bis(4-hydroxyphenyl)pentane ([^{77}Br]Bromonorhexestrol), Two γ -Emitting Estrogens That Show Receptor-Mediated Uptake by Target Tissues In Vivo. *J. Med. Chem.* **1982**, *25*, 1307-1312.
84. P. K. Chakravarty, P. L. Carl, J. A. Katzenellenbogen, and M. J. Weber. Plasmin-Activated Prodrugs for Cancer Chemotherapy. 1. Synthesis and Biological Activity of Peptidylacivicin and Peptidylphenylenediamine Mustard. *J. Med. Chem.* **1983**, *26*, 633-638.
85. P. K. Chakravarty, P. L. Carl, M. J. Weber, and J. A. Katzenellenbogen. Plasmin-Activated Prodrugs for Cancer Chemotherapy. 2. Synthesis and Biological Activity of Peptidyl Derivatives of Doxorubicin. *J. Med. Chem.* **1983**, *26*, 638-644.
86. K. D. McElvany, K. E. Carlson, J. A. Katzenellenbogen, and M. J. Welch. Factors Affecting the Target Site Uptake Selectivity of Estrogen Radiopharmaceuticals: Serum Binding and Endogenous Estrogens. *J. Steroid Biochem.* **1983**, *18*, 635-641.
87. J. A. Katzenellenbogen, K. E. Carlson, D. F. Heiman, D. W. Robertson, L. L. Wei, and B. S. Katzenellenbogen. Efficient and Highly Selective Covalent Labeling of the Estrogen Receptor with [^3H]-Tamoxifen Aziridine. *J. Biol. Chem.* **1983**, *258*, 3487-3495.
88. S. W. Landvatter, D. O. Kiesewetter, M. R. Kilbourn, J. A. Katzenellenbogen, and M. J. Welch. (2*R**,3*S**)-1-[^{18}F] Fluoro-2,3-bis(4-hydroxyphenyl)pentane ([^{18}F] fluoronorhexestrol), a Positron-Emitting Estrogen that Shows Highly-Selective, Receptor-Mediated Uptake by Target Tissues In Vivo. *Life Sciences* **1983**, *33*, 1933-1938.
89. M. J. Sofia, P. K. Chakravarty, and J. A. Katzenellenbogen. Synthesis of 5-Membered Halo Enol Lactone Analogs of α -Amino Acids: Potential Protease Suicide Substrates. *J. Org. Chem.* **1983**, *48*, 3318-3325.
90. P. Martin, H. Magdelenat, B. Benyahia, O. Rigaud, and J. A. Katzenellenbogen. New Approach for Visualizing Estrogen Receptors in Target Cells Using Inherently Fluorescent Ligands and Image Intensification. *Cancer Research* **1983**, *43*, 4956-4965.
91. P. Albaugh-Robertson and J. A. Katzenellenbogen. Selective γ -Substitution of α,β -Unsaturated Esters via α -Trimethylsilyl β,γ -Unsaturated Esters. *J. Org. Chem.* **1983**, *48*, 5288-5302.
92. S. B. Daniels, E. Cooney, M. J. Sofia, P. K. Chakravarty, and J. A. Katzenellenbogen. Haloenol Lactones: Potent Enzyme-Activated Irreversible Inhibitors for α -Chymotrypsin. *J. Biol. Chem.* **1983**, *258*, 15046-15053.
93. F. J. Monsma, Jr., B. S. Katzenellenbogen, M. A. Miller, Y. S. Ziegler, and J. A. Katzenellenbogen. Characterization of the Estrogen Receptor and its Dynamics in MCF-7 Human Breast Cancer Cells Using a Covalently Attaching Antiestrogen. *Endocrinology* **1984**, *115*, 143-153.
94. R. Mohan and J. A. Katzenellenbogen. Silicon-Mediated Synthesis of Bibenzyl Systems: Synthesis of Ring and Side-Chain Functionalized Hexestrol Derivatives. *J. Org. Chem.* **1984**, *49*, 1238-1246.

95. D. O. Kiesewetter, M. R. Kilbourn, S. W. Landvatter, D. F. Heiman, J. A. Katzenellenbogen, and M. J. Welch. Preparation of Four Fluorine-18-Labeled Estrogens and Their Selective Uptakes in Target Tissues of Immature Rats. *J. Nucl. Med.* **1984**, *25*, 1212-1221.
96. G. C. A. Reiner, B. S. Katzenellenbogen, R. D. Bindal, and J. A. Katzenellenbogen. Biological Activity and Receptor Binding of a Strongly Interacting Estrogen in Human Breast Cancer Cells. *Cancer Research* **1984**, *44*, 2302-2308.
97. D. O. Kiesewetter, J. A. Katzenellenbogen, M. R. Kilbourn, and M. J. Welch. Synthesis of 16-Fluoroestrogens by Unusually Facile Fluoride Ion Displacement Reactions: Prospects for the Preparation of Fluorine-18 Labeled Estrogens. *J. Org. Chem.* **1984**, *49*, 4900-4905.
98. J. A. Katzenellenbogen, K. E. Carlson, B. S. Katzenellenbogen. Facile Geometric Isomerization of Phenolic Non-Steroidal Estrogens and Antiestrogens: Limitations to the Interpretation of Experiments Characterizing the Activity of Individual Isomers. *J. Steroid Biochem.* **1985**, *22*, 589-596.
99. R. D. Bindal and J. A. Katzenellenbogen. 1,2-Diaryl-3,4-dihydronaphthalenes: Photofluorogenic Ligands for the Estrogen Receptor. *J. Steroid Biochem.* **1985**, *23*, 929-937.
100. D. H. Kinder and J. A. Katzenellenbogen. Acylamido Boronic Acids and Difluoroborane Analogues of Amino Acids: Potent Inhibitors of Chymotrypsin and Elastase. *J. Med. Chem.* **1985**, *28*, 1917-1925.
101. M. J. Sofia and J. A. Katzenellenbogen. 3-(Acylamido)-4-phenyl-6(E)-(iodomethylidene)tetrahydro-2-pyranones. Synthesis of Novel Amino Acid Analogues. *J. Org. Chem.* **1985**, *50*, 2331-2336.
102. S. Naruto, I. Motoc, G. R. Marshall, S. B. Daniels, M. J. Sofia, and J. A. Katzenellenbogen. Analysis of the Interaction of Haloenol Lactone Suicide Substrates with α -Chymotrypsin Using Computer Graphics and Molecular Mechanics. *J. Am. Chem. Soc.* **1985**, *107*, 5262-5270.
103. L. L. Wei, B. S. Katzenellenbogen, D. W. Robertson, D. M. Simpson, and J. A. Katzenellenbogen. Nitrosourea and Nitrosocarbamate Derivatives of the Antiestrogen Tamoxifen as Potential Estrogen Receptor-Mediated Cytotoxic Agents in Human Breast Cancer Cells. *Breast Cancer Res. Treat.* **1986**, *7*, 77-90.
104. D. Y. Chi, D. O. Kiesewetter, J. A. Katzenellenbogen, M. R. Kilbourn and M. J. Welch. Halofluorination of Olefins: Elucidation of Reaction Characteristics and Applications in Labeling with the Positron-Emitting Radionuclide Fluorine-18. *J. Fluorine Chem.* **1986**, *31*, 99-113.
105. R. D. Bindal and J. A. Katzenellenbogen. 1,2-Bis(4-hydroxyphenyl)-3,4-dihydro-6-hydroxynaphthalene, a Photofluorogenic Ligand for the Estrogen Receptor. *Photochem. Photobiol.* **1986**, *43*, 121-126.
106. M. J. Sofia and J. A. Katzenellenbogen. Enol Lactone Inhibitors of Serine Proteases. The Effect of Regiochemistry on the Inactivation Behavior of Phenyl-Substituted (Halomethylene)tetra- and -dihydrofuranones and (Halomethylene)tetrahydropyranones Toward α -Chymotrypsin: Stable Acyl Enzyme Intermediate. *J. Med. Chem.* **1986**, *29*, 230-238.
107. J. W. Brodack, M. R. Kilbourn, M. J. Welch, and J. A. Katzenellenbogen. NCA 16 α -[¹⁸F]Fluoroestradiol-17 β : The Effect of Reaction Vessel on Fluorine-18 Resolubilization, Product Yield, and Effective Specific Activity. *Appl. Radiat. Isot.* **1986**, *37*, 217-221.
108. F. G. Salituro, K. E. Carlson, J. F. Elliston, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. [¹²⁵I]Iododesethyl Tamoxifen Aziridine: Synthesis and Covalent Labeling of the Estrogen Receptor with an Iodine-Labeled Affinity Label. *Steroids* **1986**, *48*, 287-313.
109. J. A. Katzenellenbogen, K. E. Carlson, R. D. Bindal, R. L. Neeley, P. M. Martin, and H. P. Magdelenat, Fluorescence-Based Assay of Estrogen Receptor Using 12-Oxo-9(11)-dehydroestradiol-17 β . *Analytical Biochem.* **1986**, *159*, 336-348.
110. M. J. Welch, D. Y. Chi, C. J. Mathias, M. R. Kilbourn, J. W. Brodack, and J. A. Katzenellenbogen. Biodistribution of N-Alkyl and N-Fluoroalkyl Derivatives of Spiroperidol; Radiopharmaceuticals for PET Studies of Dopamine Receptors. *Nucl. Med. Biol.* **1986**, *13*, 523-526.
111. J. W. Brodack, M. R. Kilbourn, M. J. Welch, and J. A. Katzenellenbogen. Application of Robotics to Radiopharmaceutical Preparation: Controlled Synthesis of Fluorine-18 16 α -Fluoroestradiol-17 β . *J. Nucl. Med.* **1986**, *27*, 714-721.
112. W. A. Boulanger and J. A. Katzenellenbogen. Structure-Activity Study of 6-Substituted 2-Pyranones as Inactivators of α -Chymotrypsin. *J. Med. Chem.* **1986**, *29*, 1159-1163.
113. W. A. Boulanger and J. A. Katzenellenbogen. 5-(Halomethyl)-2-pyranones as Irreversible Inhibitors of α -Chymotrypsin. *J. Med. Chem.* **1986**, *29*, 1483-1487.

114. D. Y. Chi, M. R. Kilbourn, J. A. Katzenellenbogen, J. W. Brodack, and M. J. Welch. Synthesis of No-Carrier-Added N-([¹⁸F]Fluoroalkyl)Spiperone Derivatives. *Int. J. Radiat. Appl. Instrum., Part A* **1986**, *37*, 1173-1180.
115. Y. Berthois, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Phenol Red in Tissue Culture Media is a Weak Estrogen: Implications Concerning the Study of Estrogen-Responsive Cells in Culture. *Proc. Natl. Acad. Sci. U.S.A.* **1986**, *83*, 2496-2500.
116. S. B. Daniels and J. A. Katzenellenbogen. Halo Enol Lactones: Studies on the Mechanism of Inactivation of α -Chymotrypsin. *Biochemistry* **1986**, *25*, 1436-1444.
117. S. C. Sondej and J. A. Katzenellenbogen. *gem*-Difluoro Compounds: A Convenient Preparation from Ketones and Aldehydes by Halogen Fluoride Treatment of 1,3-Dithiolanes. *J. Org. Chem.* **1986**, *51*, 3508-3513.
118. B. Goz, C. Ganguli, M. Troconis, S. Wyrick, K. S. Ishaq, and J. A. Katzenellenbogen. Compounds that Inhibit Chymotrypsin and Cell Replication. *Biochem. Pharmacol.* **1986**, *35*, 3587-3591.
119. J. A. Katzenellenbogen, A. Scheeline, A. Mullick, and B. S. Katzenellenbogen. Appendix: Derivation and Analysis of a Lag-Decay Model for Protein Turnover Involving a Biosynthetic Precursor. *J. Biol. Chem.* **1986**, *261*, 13244-13246.
120. C. J. Mathias, M. J. Welch, J. A. Katzenellenbogen, J. W. Brodack, M. R. Kilbourn, K. E. Carlson, and D. O. Kiesewetter. Characterization of the Uptake of 16 α -([¹⁸F]fluoro)-17 β -Estradiol in DMBA-induced Mammary Tumors. *Nucl. Med. Biol. Int. J. Rad. Appl. Instrum. Part B* **1987**, *14*, 15-25.
121. T. L. Fevig, J. E. Lloyd, J. A. Zablocki, and J. A. Katzenellenbogen. Preparation, Receptor Binding, and Fluorescence Properties of Hexestrol-Fluorophore Conjugates: Evaluation of Site of Attachment, Fluorophore Structure, and Fluorophore-Ligand Spacing. *J. Med. Chem.* **1987**, *30*, 156-165.
122. T. L. Fevig and J. A. Katzenellenbogen. A Short, Stereoselective Route to 16 α -(Substituted-Alkyl)Estradiol Derivatives. *J. Org. Chem* **1987**, *52*, 247-251.
123. D. M. Simpson, J. F. Elliston, and J. A. Katzenellenbogen. Desmethylnafoxidine Aziridine: An Electrophilic Affinity Label for the Estrogen Receptor with High Efficiency and Selectivity. *J. Steroid Biochem.* **1987**, *28*, 233-245.
124. R. D. Bindal, K. E. Carlson, G. C. A. Reiner, and J. A. Katzenellenbogen. 11 β -Chloromethyl [³H]estradiol-17 β : A Very High Affinity, Reversible Ligand for the Estrogen Receptor. *J. Steroid Biochem.* **1987**, *28*, 361-370.
125. S. J. Brandes and J. A. Katzenellenbogen. Fluorinated Androgens and Progestins: Molecular Probes for Androgen and Progesterone Receptors with Potential Use in Positron Emission Tomography. *Molec. Pharmacol.* **1987**, *32*, 391-403.
126. D. Y. Chi, M. R. Kilbourn, J. A. Katzenellenbogen, and M. J. Welch. Fluoroalkylation: A Rapid and Efficient Method for the Fluoroalkylation of Amines and Amides. Development of a Method Suitable for Incorporation of the Short-lived Positron Emitting Radionuclide Fluorine-18. *J. Org. Chem.* **1987**, *52*, 658-664.
127. J. F. Elliston, J. A. Zablocki, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Ketonestrol Aziridine, an Agonistic Estrogen Receptor Affinity Label: Study of its Bioactivity and Estrogen Receptor Covalent Labeling. *Endocrinology* **1987**, *121*, 667-676.
128. J. A. Zablocki, J. A. Katzenellenbogen, K. E. Carlson, M. J. Norman, and B. S. Katzenellenbogen. Estrogenic Affinity Labels: Synthesis, Irreversible Receptor Binding, and Bioactivity of Aziridine-Substituted Hexestrol Derivatives. *J. Med. Chem.* **1987**, *30*, 829-838.
129. R. D. Bindal and J. A. Katzenellenbogen. Steric Factors in Amide-Directed Metalations of *N,N*-Dialkyl-6-methoxynaphthalene-2-carboxamides: Synthesis of a Sterically Perturbed Acynaphthol. *J. Org. Chem.* **1987**, *52*, 3181-3185.
130. M. A. Mintun, M. J. Welch, B. A. Siegel, C. J. Mathias, J. W. Brodack, A. H. McGuire, and J. A. Katzenellenbogen. Breast Cancer: PET Imaging of Estrogen Receptors. *Radiology* **1988**, *169*, 45-48.
131. S. J. Brandes and J. A. Katzenellenbogen. Fundamental Considerations in the Design of Fluorine-18 Labeled Progestins and Androgens as Imaging Agents for Receptor-Positive Tumors of the Breast and Prostate. *Nucl. Med. Biol. (Int. J. Radiat. Appl. Instrum., Part B)* **1988**, *15*, 53-67.
132. M. J. Welch, J. A. Katzenellenbogen, C. J. Mathias, J. W. Brodack, K. E. Carlson, D. Y. Chi, C. S. Dence, M. R. Kilbourn, J. S. Perlmutter, M. E. Raichle, and M. M. Ter-Pogossian. N-(3-[¹⁸F]Fluoropropyl)-

- Spiperone: The Preferred ^{18}F Labeled Spiperone Analog for Positron Emission Tomographic Studies of the Dopamine Receptor. *Nucl. Med. Biol. (Int. J. Radiat. Appl. Instrum., Part B)* **1988**, *15*, 83-97.
133. R. D. Bindal, K. E. Carlson, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Lipophilic Impurities, Not Phenolsulfonphthalein, Account for the Estrogenic Activity in Commercial Preparations of Phenol Red. *J. Steroid Biochem.* **1988**, *31*, 287-293.
 134. T. L. Fevig, M. K. Mao, and J. A. Katzenellenbogen. Estrogen Receptor Binding Tolerance of 16α -Substituted Estradiol Derivatives. *Steroids* **1988**, *51*, 471-497.
 135. K. E. Carlson, S. J. Brandes, M. G. Pomper, and J. A. Katzenellenbogen. Uptake of Three ^3H Progestins by Target Tissues *In Vivo*: Implications for the Design of Diagnostic Imaging Agents. *Nucl. Med. Biol. (Int. J. Radiat. Appl. Instrum. B)* **1988**, *15*, 403-408.
 136. S. A. Haroutounian and J. A. Katzenellenbogen. Hydroxystilbazoles and Hydroxyazapentanthenes: Photocyclization and Fluorescence Studies. *Photochem. Photobiol.* **1988**, *47*, 503-516.
 137. G. M. Anstead, J. Altenbach, S. R. Wilson, and J. A. Katzenellenbogen. 2,3-Diarylindenes and 2,3-Diarylindenones: Synthesis, Molecular Structure, Photochemistry, Estrogen Receptor Binding Affinity, and Comparisons with Related Triarylethylenes. *J. Med. Chem.* **1988**, *31*, 1316-1326.
 138. M. G. Pomper, J. A. Katzenellenbogen, M. J. Welch, J. W. Brodack, and C. J. Mathias. 21 - ^{18}F Fluoro- 16α -ethyl- 19 -norprogesterone: Synthesis and Target Tissue Selective Uptake of a Progestin Receptor Based Radiotracer for Positron Emission Tomography. *J. Med. Chem.* **1988**, *31*, 1360-1363.
 139. R. D. Bindal and J. A. Katzenellenbogen. Bis(4-hydroxyphenyl)[2-(phenoxy sulfonyl)phenyl]methane: Isolation and Structure Elucidation of a Novel Estrogen from Commercial Preparations of Phenol Red (Phenolsulfonphthalein). *J. Med. Chem.* **1988**, *31*, 1978-1983.
 140. G. M. Anstead and J. A. Katzenellenbogen. Optimizing of 2,3-Diarylindenes as Fluorescent Estrogens: Variation of the Acceptor Group, Ortho Substitution of the 2-Ring, and C-1 Methylation. *J. Med. Chem.* **1988**, *31*, 1754-1761.
 141. G. M. Anstead and J. A. Katzenellenbogen. Fluorescence Properties of 2,3-Diarylindenes. *J. Phys. Chem.* **1988**, *92*, 6249-6258.
 142. K. E. Carlson, M. Coppey, H. Magdelenat, and J. A. Katzenellenbogen. Receptor Binding of NBD-Labeled Fluorescent Estrogens and Progestins in Whole Cells and Cell-Free Preparations. *J. Steroid Biochem.* **1989**, *32*, 345-355.
 143. S. Sasson and J. A. Katzenellenbogen. Reversible, Positive Cooperative Interaction of 11β -Chloromethyl- ^3H Estradiol- 17β with the Calf Uterine Estrogen Receptor. *J. Steroid Biochem.* **1989**, *33*, 859-865.
 144. G. M. Anstead, J. L. Ensign, C. S. Peterson, and J. A. Katzenellenbogen. 2-Arylindenes and 2-Arylindenones: Synthesis of Probes to Study the Binding Orientation of Unsymmetrical Nonsteroidal Ligands to the Estrogen Receptor. *J. Org. Chem.* **1989**, *54*, 1485-1491.
 145. G. M. Anstead, S. R. Wilson, and J. A. Katzenellenbogen. 2-Arylindenes and 2-Arylindenones: Molecular Structures and Considerations in the Binding Orientation of Unsymmetrical Non-Steroidal Ligands to the Estrogen Receptor. *J. Med. Chem.* **1989**, *32*, 2163-2171.
 146. G. M. Anstead, C. S. Peterson, and J. A. Katzenellenbogen. Hydroxylated 2,3-Diarylindenes: Synthesis, Estrogen Receptor Binding Affinity, and Binding Orientation Considerations. *J. Steroid Biochem.* **1989**, *33*, 877-887.
 147. W. Dai, R. Srinivasan, and J. A. Katzenellenbogen. Azophilic Addition of Alkyl lithium Reagents to Fluorenimines. The Synthesis of Secondary Amines. *J. Org. Chem.* **1989**, *54*, 2204-2208.
 148. D-J. Baek, S. B. Daniels, P. E. Reed, and J. A. Katzenellenbogen. Resolution and Determination of the Absolute Stereochemistry of α - and β -Aryl-Substituted γ -Methylenevalerolactones, Alternate Substrate Inhibitors for Serine Proteases. *J. Org. Chem.* **1989**, *54*, 3963-3972.
 149. K. W. Harlow, D. M. Smith, J. A. Katzenellenbogen, G. L. Greene, and B. S. Katzenellenbogen. Identification of Cysteine 530 as the Covalent Attachment Site of an Affinity-labeling Estrogen (Ketonestrol Aziridine) and Antiestrogen (Tamoxifen Aziridine) in the Human Estrogen Receptor. *J. Biol. Chem.* **1989**, *264*, 17476-17485.
 150. K. G. Pinney, K. E. Carlson, and J. A. Katzenellenbogen. ^3H DU41165: A High Affinity Ligand and Novel Photoaffinity Labeling Reagent for the Progesterone Receptor. *J. Steroid Biochem.* **1990**, *35*, 179-189.

151. S. S. Pochapsky, H. F. VanBrocklin, M. J. Welch, and J. A. Katzenellenbogen. Synthesis and Tissue Distribution of Fluorine-18 Labeled Trifluorohexadecanoic Acids. Considerations in the Development of Metabolically Blocked Myocardial Imaging Agents. *Bioconj. Chem.* **1990**, *1*, 231-244.
152. M. G. Pomper, K. G. Pinney, K. E. Carlson, H. F. Van Brocklin, C. J. Mathias, M. J. Welch, and J. A. Katzenellenbogen. Target Tissue Uptake Selectivity of Three Fluorine-substituted Progestins: Potential Imaging Agents for Receptor-positive Breast Tumors. *Nucl. Med. Biol.* **1990**, *17*, 309-319.
153. K. E. Carlson and J. A. Katzenellenbogen. A Comparative Study of the Selectivity and Efficiency of Target Tissue Uptake of Five-Tritium Labeled Androgens in the Rat. *J. Steroid Biochem.* **1990**, *36*, 549-561.
154. H. F. VanBrocklin, J. W. Brodack, C. J. Mathias, M. J. Welch, J. A. Katzenellenbogen, J. F. Keenan, and G. J. Mizejewski. Binding of 16 α -[¹⁸F]Fluoro-17 β -Estradiol to Alphafetoprotein in Sprague-Dawley Female Rats Affects Blood Levels. *Nuc. Med. Biol.* **1990**, *17*, 769-773.
155. G. M. Anstead and J. A. Katzenellenbogen. Design of Integrated Fluorescent Estrogens: The Second Donor Effect on the Absorption, Fluorescence, and Ground-State Molecular Orbital Properties of *trans*-4,4'-Methoxynitrostilbene Systems. *J. Phys. Chem.* **1990**, *94*, 1328-1334.
156. G. M. Anstead, C. S. Peterson, K. G. Pinney, S. R. Wilson, and J. A. Katzenellenbogen. Torsionally and Hydrophobically Modified 2,3-Diarylindenes as Estrogen Receptor Ligands. *J. Med. Chem.* **1990**, *33*, 2726-2734.
157. M. G. Pomper, H. VanBrocklin, A. M. Thieme, R. D. Thomas, D. O. Kiesewetter, K. E. Carlson, C. J. Mathias, M. J. Welch, and J. A. Katzenellenbogen. 11 β -Methoxy-, 11 β -Ethyl- and 17 α -Ethynyl-Substituted 16 α -Fluoroestradiols: Receptor-Based Imaging Agents with Enhanced Uptake Efficiency and Selectivity. *J. Med. Chem.* **1990**, *33*, 3143-3155.
158. D-J. Baek, P. E. Reed, S. B. Daniels, and J. A. Katzenellenbogen. Alternate Substrate Inhibitors of α -Chymotrypsin: Enantioselective Interaction of Aryl-Substituted Enol Lactones. *Biochemistry* **1990**, *29*, 4305-4311.
159. R. D. Bindal, J. T. Golab, and J. A. Katzenellenbogen. Ab Initio Calculations on N-Methylmethanesulfonamide and Methyl Methanesulfonate for the Development of Force Field Torsional Parameters and Their Use in the Conformational Analysis of Some Novel Estrogens. *J. Am. Chem. Soc.* **1990**, *112*, 7861-7868.
160. P. E. Reed and J. A. Katzenellenbogen. Proline-Valine Pseudo Peptide Enol Lactones. Effective and Selective Inhibitors of Chymotrypsin and Human Leukocyte Elastase. *J. Biol. Chem.* **1991**, *266*, 13-21.
161. A. Liu, J. A. Katzenellenbogen, H. F. VanBrocklin, C. J. Mathias, and M. J. Welch. 20-[¹⁸F]Fluoromibolerone, a Positron-Emitting Radiotracer for Androgen Receptors: Synthesis and Tissue Distribution Studies. *J. Nucl. Med.* **1991**, *32*, 81-88.
162. J. P. DiZio, R. Fiaschi, A. Davison, A. G. Jones, and J. A. Katzenellenbogen. Progestin-Rhenium Complexes: Metal-Labeled Steroids with High Receptor Binding Affinity, Potential Receptor-Directed Agents for Diagnostic Imaging or Therapy. *Bioconjugate Chem.* **1991**, *2*, 353-366.
163. P. E. Reed and J. A. Katzenellenbogen. β -Substituted β -Phenylpropionyl Chymotrypsins. Structural and Stereochemical Features in Stable Acyl Enzymes. *J. Med. Chem.* **1991**, *34*, 1162-1176.
164. D. J. Baek and J. A. Katzenellenbogen. Halo Enol Lactone Inhibitors of Chymotrypsin: Burst and Enantioselectivity of Inactivation, *Biochem. Biophys. Res. Commun.* **1991**, *178*, 1335-1342.
165. G. M. Anstead, R. Srinivasan, C. S. Peterson, S. R. Wilson, and J. A. Katzenellenbogen. 1,2-Diarylindano[*a*]indane: A Molecule with Skewed, Cofacially Disposed Aromatic Moieties and a Long C-C Single Bond. *J. Am. Chem. Soc.* **1991**, *113*, 1378-1385.
166. A. H. McGuire, F. Dehdashti, B. A. Siegel, A. P. Lyss, J. W. Brodack, C. J. Mathias, M. A. Mintun, J. A. Katzenellenbogen, and M. J. Welch. Positron Tomographic Assessment of 16 α -[¹⁸F]Fluoro-17 β -Estradiol Uptake in Metastatic Breast Carcinoma. *J. Nucl. Med.* **1991**, *32*, 1526-1531.
167. F. Dehdashti, A. H. McGuire, H. F. VanBrocklin, B. A. Siegel, D. P. Andriole, M. G. Pomper, J. A. Katzenellenbogen, and M. J. Welch. Assessment of 21-[¹⁸F]Fluoro-16 α -Ethyl-19-Norprogesterone as a Positron-Emitting Radiopharmaceutical for the Detection of Progestin Receptors in Human Breast Carcinomas. *J. Nucl. Med.* **1991**, *32*, 1532-1537.
168. K. G. Pinney, K. E. Carlson, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Efficient and Selective Photoaffinity Labeling of the Estrogen Receptor Using Two Nonsteroidal Ligands that Embody Aryl Azide or Tetrafluoroaryl Azide Photoreactive Functions. *Biochemistry* **1991**, *30*, 2421-2431.

169. P. E. Reed and J. A. Katzenellenbogen. Synthesis of Proline-Valine Pseudodipeptide Enol Lactones, Serine Protease Inhibitors. *J. Org. Chem.* **1991**, *56*, 2624-2634.
170. K. G. Pinney and J. A. Katzenellenbogen. Synthesis of a Tetrafluoro-Substituted Aryl Azide and Its Protio Analogue as Photoaffinity Labeling Reagents for the Estrogen Receptor. *J. Org. Chem.* **1991**, *56*, 3125-3133.
171. D. S. Vicini, G. K. Ogilvie, J. A. Katzenellenbogen, and K. Carlson. Measurement of Estrogen Receptors in Normal and Neoplastic Lymph Node Tissue from Dogs. *Am. J. Vet. Res.* **1991**, *52*, 2055-2059.
172. S. Lin, W. S. Struve, G. M. Anstead, and J. A. Katzenellenbogen. Time-Resolved Fluorescence Spectroscopy of Solvatochromic 2,3-Diaryllindenenes. *J. Phys. Chem.* **1991**, *95*, 3919-3923.
173. S. A. Haroutounian, J. P. DiZio, and J. A. Katzenellenbogen. Aromatic Fluorination by Silver-Ion Promoted Decomposition of Aryl Diazo Sulfides: Efficient Utilization of Substoichiometric Levels of Fluoride Ion. *J. Org. Chem.* **1991**, *56*, 4993-4996.
174. W. Dai and J. A. Katzenellenbogen. Stereoselective *Z*- and *E*-Bromo Enol Lactonization of Alkynoic Acids. *J. Org. Chem.* **1991**, *56*, 6893-6896.
175. K. G. Pinney, K. E. Carlson, and J. A. Katzenellenbogen. Nonsteroidal Estrogens Bearing Acyl Azide Functions: Potential Electrophilic and Photoaffinity Labeling Agents for the Estrogen Receptor. *Steroids* **1992**, *57*, 222-232.
176. H. F. VanBrocklin, M. G. Pomper, K. E. Carlson, M. J. Welch, and J. A. Katzenellenbogen. Preparation and Evaluation of 17-Ethynyl-substituted 16 α -[¹⁸F]Fluoroestradiols: Selective Receptor-based PET Imaging Agents. *Nucl. Med. Biol.* **1992**, *19*, 363-374.
177. J. P. DiZio, K. E. Carlson, C. J. Bannochie, M. J. Welch, E. von Angerer, and J. A. Katzenellenbogen. Estrogen Platinum-Diamine Complexes: Preparation of a Non-Steroidal Estrogen Platinum-Diamine Complex Labeled with Platinum-191 and a Study of Its Binding to the Estrogen Receptor *In Vitro* and its Tissue Distribution *In Vivo*. *J. Steroid Biochem. Molec. Biol.* **1992**, *42*, 363-373.
178. M. G. Pomper, M. J. Kochanny, A. M. Thieme, K. E. Carlson, H. F. VanBrocklin, C. J. Mathias, M. J. Welch, and J. A. Katzenellenbogen. Fluorine-substituted Corticosteroids: Synthesis and Evaluation as Potential Receptor-based Imaging Agents for Positron Emission Tomography of the Brain. *Nucl. Med. Biol.* **1992**, *19*, 461-480.
179. G. W. Bemis, G. Carlson-Golab, and J. A. Katzenellenbogen. A Molecular Dynamics Study of Chymotrypsin Acyl Enzymes. *J. Am. Chem. Soc.* **1992**, *114*, 570-578.
180. J. P. DiZio, C. J. Anderson, A. Davison, G. J. Ehrhardt, K. E. Carlson, M. J. Welch, and J. A. Katzenellenbogen. Technetium- and Rhenium-Labeled Progestins: Synthesis, Receptor Binding and *In Vivo* Distribution of 11 β -Substituted Progestin Labeled with Technetium-99 and Rhenium-186. *J. Nucl. Med.* **1992**, *33*, 558-569.
181. A. Liu, C. S. Dence, M. J. Welch, and J. A. Katzenellenbogen. Fluorine-18-Labeled Androgens: Radiochemical Synthesis and Tissue Distribution Studies on Six Fluorine-Substituted Androgens, Potential Imaging Agents for Prostatic Cancer. *J. Nucl. Med.* **1992**, *33*, 724-734.
182. K. J. Hwang, J. P. O'Neil, and J. A. Katzenellenbogen. 5,6,11,12-Tetrahydrochrysenes: Synthesis of Rigid Stilbene Systems Designed to be Fluorescent Ligands for the Estrogen Receptor. *J. Org. Chem.* **1992**, *57*, 1262-1271.
183. J. A. Katzenellenbogen, R. Rai, and W. Dai. Enol Lactone Derivatives as Inhibitors of Human Neutrophil Elastase and Trypsin-Like Proteases. *Bioorganic Medicinal Chem. Lett.* **1992**, *2*, 1399-1404.
184. A. Liu, K. E. Carlson, and J. A. Katzenellenbogen. Synthesis of High Affinity Fluorine-Substituted Ligands for the Androgen Receptor. Potential Agents for Imaging Prostatic Cancer by Positron Emission Tomography. *J. Med. Chem.* **1992**, *35*, 2113-2129.
185. R. Rai and J. A. Katzenellenbogen. Guanidino-Substituted Enol Lactones as Selective, Mechanism-Based Inhibitors of Trypsin-like Serine Proteases. *J. Med. Chem.* **1992**, *35*, 4150-4159.
186. R. Rai and J. A. Katzenellenbogen. Effect of Conformational Mobility and Hydrogen-Bonding Interactions on the Selectivity of Some Guanidino-Aryl Substituted Mechanism-Based Inhibitors of Trypsin-like Serine Proteases. *J. Med. Chem.* **1992**, *35*, 4297-4305.
187. K. J. Hwang, K. E. Carlson, G. M. Anstead, and J. A. Katzenellenbogen. Donor-Acceptor Tetrahydrochrysenes, Inherently Fluorescent, High-Affinity Ligands for the Estrogen Receptor: Binding

- and Fluorescence Characteristics, and Fluorometric Assay for Receptor. *Biochemistry* **1992**, *31*, 11536-11545.
188. A. N. French, E. Napolitano, H. F. VanBrocklin, R. N. Hanson, M. J. Welch, and J. A. Katzenellenbogen. Synthesis, Radiolabeling and Tissue Distribution of 11 β -Fluoroalkyl and 11 β -Fluoroalkoxy-substituted Estrogens: Target Tissue Uptake Selectivity and Defluorination of a Homologous Series of Fluorine-18-Labeled Estrogens. *Nucl. Med. Biol.* **1993**, *20*, 31-47.
 189. A. N. French, S. R. Wilson, M. J. Welch, and J. A. Katzenellenbogen. A Synthesis of 7 α -Substituted Estradiols: Synthesis and Biological Evaluation of a 7 α -Pentyl-Substituted BODIPY Fluorescent Conjugate and a Fluorine-18-labeled 7 α -Pentylestradiol Analog. *Steroids* **1993**, *58*, 157-169.
 190. G. M. Anstead, K. J. Hwang, and J. A. Katzenellenbogen. Characterization of the Spectroscopic Properties of a Tetrahydrochrysenes System Containing a Rigidified Hydroxynitrostilbene Chromophore: An Inherently Fluorescent Ligand Designed for the Estrogen Receptor. *Photochem. Photobiol.* **1993**, *57*, 616-628.
 191. J. A. Katzenellenbogen, C. J. Mathias, H. F. VanBrocklin, J. W. Brodack, and M. J. Welch. Titration of the *In Vivo* Uptake of 16 α -[¹⁸F]Fluoroestradiol by Target Tissues in the Rat: Competition by Tamoxifen, and Implications for Quantitating Estrogen Receptors *In Vivo* and the Use of Animal Models in Receptor-Binding Radiopharmaceutical Development. *Nucl. Med. Biol.* **1993**, *20*, 735-745.
 192. H. F. VanBrocklin, P. A. Rocque, H. V. Lee, K. E. Carlson, and J. A. Katzenellenbogen. 16 β -[¹⁸F]Fluoromoxestrol: A Potent, Metabolically Stable Positron Emission Tomography Imaging Agent for Estrogen Receptor Positive Human Breast Tumors. *Life Sciences* **1993**, *53*, 811-819.
 193. M. J. Kochanny, T. Härd, and J. A. Katzenellenbogen. Synthesis and NMR Spectrum of [¹³C₁₈]-meso-Hexestrol, a Fully Carbon-13 Substituted Ligand for NMR Studies of the Estrogen Receptor. *Magnetic Res. Chem.* **1993**, *31*, 977-986.
 194. P. R. Kym, K. E. Carlson, and J. A. Katzenellenbogen. Progestin 16 α ,17 α -Dioxolane Ketals as Molecular Probes for the Progesterone Receptor: Synthesis, Binding Affinity, and Photochemical Evaluation. *J. Med. Chem.* **1993**, *36*, 1111-1119.
 195. M. J. Kochanny, H. F. VanBrocklin, P. R. Kym, K. E. Carlson, J. P. O'Neil, T. A. Bonasera, M. J. Welch, and J. A. Katzenellenbogen. Fluorine-18-Labeled Progestin Ketals: Synthesis and Target Tissue Uptake Selectivity of Potential Imaging Agents for Receptor-Positive Breast Tumors. *J. Med. Chem.* **1993**, *36*, 1120-1127.
 196. H. F. VanBrocklin, K. E. Carlson, J. A. Katzenellenbogen, and M. J. Welch. 16 β -([¹⁸F]Fluoro)estrogens: Systematic Investigation of a New Series of Fluorine-18-Labeled Estrogens as Potential Imaging Agents for Estrogen-Receptor-Positive Breast Tumors. *J. Med. Chem.* **1993**, *36*, 1619-1629.
 197. Y. S. Choe and J. A. Katzenellenbogen. Tetrabutylammonium Fluoride-Induced Conversion of Tresylates to Mesylates. *Tetrahedron Lett.* **1993**, *34*, 1579-1580.
 198. W. Dai and John A. Katzenellenbogen. New Approaches to the Synthesis of Alkyl-Substituted Enol Lactone Systems, Inhibitors of the Serine Protease Elastase. *J. Org. Chem.* **1993**, *58*, 1900-1908.
 199. P. R. Kym, G. M. Anstead, K. G. Pinney, S. R. Wilson, and J. A. Katzenellenbogen. Molecular Structures, Conformational Analysis, and Preferential Modes of Binding of 3-Aroyl-2-arylbenzo[*b*]thiophene Estrogen Receptor Ligands: LY117018 and Aryl Azide Photoaffinity Labeling Analogs. *J. Med. Chem.* **1993**, *36*, 3910-3922.
 200. D. Y. Chi and J. A. Katzenellenbogen, Selective Formation of Heterodimeric Bis-Bidentate Amino-thiol-Oxometal Complexes of Rhenium(V). *J. Am. Chem. Soc.* **1993**, *115*, 7045-7046.
 201. R. A. Goldstein, J. A. Katzenellenbogen, Z. A. Luthey-Schulten, D. A. Seielstad, and P. G. Wolynes. Three-Dimensional Model for the Hormone Binding Domains of Steroid Receptors. *Proc. Natl. Acad. Sci. (USA)* **1993**, *90*, 9949-9953.
 202. K. E. Bergmann, S. W. Landvatter, P. G. Rocque, K. E. Carlson, M. J. Welch, and J. A. Katzenellenbogen. Oxohexestrol Derivatives Labeled with Fluorine-18. Synthesis, Receptor Binding, and *In Vivo* Distribution of Two Non-steroidal Estrogens as Potential Breast Tumor Imaging Agents. *Nucl. Med. Biol.* **1994**, *21*, 25-39.
 203. J. P. O'Neil, S. R. Wilson, and J. A. Katzenellenbogen. Preparation and Structural Characterization of Monoamine—Monamide Bis(thiol) Oxo Complexes of Technetium(V) and Rhenium(V). *Inorg. Chem.* **1994**, *33*, 319-323.

204. G. M. Anstead, K. E. Carlson, P. R. Kym, K.-J. Hwang, and J. A. Katzenellenbogen. The Effect of Acceptor Group Variation on the Solvatochromism of Donor-Acceptor Fluorophores. *Photochem. Photobiol.* **1994**, *58*, 785-794.
205. H. F. VanBrocklin, A. Liu, M. J. Welch, J. P. O'Neil, and J. A. Katzenellenbogen. The Synthesis of 7 α -Methyl-Substituted Estrogens Labeled with Fluorine-18: Potential Breast Tumor Imaging Agents. *Steroids* **1994**, *59*, 34-45.
206. S. Ray, A. Tandon, I. Dwivedy, S. R. Wilson, J. P. O'Neil, and J. A. Katzenellenbogen. An X-Ray Crystallographic Study of the Nonsteroidal Contraceptive Agent Centchroman. *J. Med. Chem.* **1994**, *37*, 696-700.
207. K. E. Bergmann, K. E. Carlson, and J. A. Katzenellenbogen. Hexestrol Diazirine Photoaffinity Labeling Reagent for the Estrogen Receptor. *Bioconj. Chem.* **1994**, *5*, 141-150.
208. D. Y. Chi, J. P. O'Neil, C. J. Anderson, M. J. Welch, and J. A. Katzenellenbogen. Homodimeric and Heterodimeric Bis(amino thiol) Oxometal Complexes with Rhenium(V) and Technetium(V). Control of Heterodimeric Complex Formation and an Approach to Metal Complexes that Mimic Steroid Hormones. *J. Med. Chem.* **1994**, *37*, 928-937.
209. P. R. Kym, S. R. Wilson, W. H. Gritton, and J. A. Katzenellenbogen. Novel Steroids from Cetyltrimethylammonium Permanganate-Initiated Oxidative Rearrangements of 16-Dehydroprogesterone. *Tetrahedron Lett.* **1994**, *35*, 2833-2836.
210. J. P. O'Neil, K. E. Carlson, C. J. Anderson, M. J. Welch, and J. A. Katzenellenbogen. Progestin Radiopharmaceuticals Labeled with Technetium and Rhenium: Synthesis, Binding Affinity and in Vivo Distribution of a New Progestin N₂S₂-Metal Conjugate. *Bioconj. Chem.* **1994**, *5*, 182-193.
211. K. E. Bergmann, C. H. Wooge, K. E. Carlson, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Bivalent Ligands as Probes of Estrogen Receptor Action. *J. Steroid Biochem. Mol. Biol.* **1994**, *49*, 139-152.
212. B. O. Buckman, H. F. VanBrocklin, C. S. Dence, S. R. Bergmann, M. J. Welch, and J. A. Katzenellenbogen. Synthesis and Tissue Biodistribution of [ω -¹¹C]Palmitic Acid. A Novel PET Imaging Agent for Cardiac Fatty Acid Metabolism. *J. Med. Chem.* **1994**, *37*, 2481-2485.
213. B. O. Buckman, T. A. Bonasera, K. S. Kirschbaum, M. J. Welch, and J. A. Katzenellenbogen. Fluorine-18-Labeled Progestin 16 α ,17 α -Dioxolanes: Development of High-Affinity Ligands for the Progesterone Receptor with High in Vivo Target Site Selectivity. *J. Med. Chem.* **1995**, *38*, 328-337.
214. P. R. Kym, K. E. Carlson, and J. A. Katzenellenbogen. Evaluation of a Highly Efficient Aryl Azide Photoaffinity Labeling Reagent for the Progesterone Receptor. *Bioconj. Chem.* **1995**, *6*, 115-122.
215. E. Napolitano, R. Fiaschi, K. E. Carlson, and J. A. Katzenellenbogen. 11 β -Substituted Estradiol Derivatives, Potential High-Affinity Carbon-11-Labeled Probes for the Estrogen Receptor: A Structure-Affinity Relationship Study. *J. Med. Chem.* **1995**, *38*, 429-434.
216. Y. S. Choe, P. J. Lidström, D. Y. Chi, T. A. Bonasera, M. J. Welch, and J. A. Katzenellenbogen. Synthesis of 11 β -[¹⁸F]Fluoro-5 α -dihydrotestosterone and 11 β -[¹⁸F]Fluoro-19-nor-5 α -dihydrotestosterone: Preparation via Halofluorination-Reduction, Receptor Binding, and Tissue Distribution. *J. Med. Chem.* **1995**, *38*, 816-825.
217. S. A. Haroutounian and J. A. Katzenellenbogen. 4'-Hydroxystyryldiazines: Synthesis and Fluorescence Properties. *Tetrahedron* **1995**, *51*, 1585-1598.
218. D. Y. Chi, S. R. Wilson, and J. A. Katzenellenbogen. Crystal Structure of a Bis(amido)bis(thiolato)oxorhenium(V) Complex That Forms a Methanol-Solvated Salt with Calcium Extracted from Silica Gel. *Inorg. Chem.* **1995**, *34*, 1624-1625.
219. D. Y. Chi, S. R. Wilson, and J. A. Katzenellenbogen. Crystal Structure of Doisyonic Acid and the Structure of Other Products Formed During its Synthesis. *Steroids* **1995**, *60*, 261-264.
220. D. Y. Chi, P. J. Lidström, Y. S. Choe, T. A. Bonasera, M. J. Welch, and J. A. Katzenellenbogen. Bromo[¹⁸F]fluorination of Cyclohexenes: A Method for the Preparation of [¹⁸F]Fluorocyclohexanes. *J. Fluor. Chem.* **1995**, *71*, 143-147.
221. R. J. Miksicek, K. E. Carlson, K.-J. Hwang, and J. A. Katzenellenbogen. Studies Using Fluorescent Tetrahydrochrysene Estrogens for *In Situ* Visualization of the Estrogen Receptor in Living Cells. *Molec. Endocrinol.* **1995**, *9*, 592-604.
222. Y. S. Choe and J. A. Katzenellenbogen. Synthesis of C-6 Fluoroandrogens: Evaluation of Ligands for Tumor Receptor Imaging. *Steroids* **1995**, *60*, 414-422.

223. D. A. Seielstad, K. E. Carlson, J. A. Katzenellenbogen, P. J. Kushner, and G. L. Greene. Molecular Characterization by Mass Spectrometry of the Human Estrogen Receptor Ligand-Binding Domain Expressed in *Escherichia coli*. *Mol. Endocrinol.* **1995**, *9*, 647-658.
224. M. Cushman, H.-M. He, J. A. Katzenellenbogen, C. M. Lin, and E. Hamel. Synthesis, Antitubulin and Antimitotic Activity, and Cytotoxicity of Analogs of 2-Methoxyestradiol, an Endogenous Mammalian Metabolite of Estradiol That Inhibits Tubulin Polymerization by Binding to the Colchicine Binding Site. *J. Med. Chem.* **1995**, *38*, 2041-2049.
225. E. Napolitano, R. Fiaschi, K. E. Carlson, and J. A. Katzenellenbogen. 11 β -Substituted Estradiol Derivatives. 2. Potential Carbon-11-and Iodine-Labeled Probes for the Estrogen Receptor. *J. Med. Chem.* **1995**, *38*, 2774-2779.
226. Y. S. Choe, T. A. Bonasera, D. Y. Chi, M. J. Welch, and J. A. Katzenellenbogen. 6 α -[¹⁸F]Fluoroprogestosterone: Synthesis via Halofluorination-Oxidation, Receptor Binding and Tissue Distribution. *Nucl. Med. Biol.* **1995**, *22*, 635-642.
227. S. A. Haroutounian, A. W. Scribner, and J. A. Katzenellenbogen. Derivatives of 4-Styrylpyridines: Synthesis, Estrogen Receptor Binding Affinity, and Photophysical Properties. *Steroids* **1995**, *60*, 636-645.
228. F. Dehdashti, J. E. Mortimer, B. A. Siegel, L. K. Griffeth, T. J. Bonasera, M. J. Fusselman, D. D. Detert, P. D. Cutler, J. A. Katzenellenbogen, and M. J. Welch. Positron Tomographic Assessment of Estrogen Receptors in Breast Cancer: Comparison with FDG-PET and In Vitro Receptor Assays. *J. Nucl. Med.* **1995**, *36*, 1766-1774.
229. D. A. Seielstad, K. E. Carlson, P. J. Kushner, G. L. Greene, and J. A. Katzenellenbogen. Analysis of the Structural Core of the Human Estrogen Receptor Ligand Binding Domain by Selective Proteolysis/Mass Spectrometric Analysis. *Biochemistry* **1995**, *34*, 12605-12615.
230. Y. Sugano and J. A. Katzenellenbogen. Synthesis of Tetradentate Bisamino-Bisthiol Complexes of Oxorhenium(V) as Structural Mimics of Steroids. *Bioorg. Med. Chem. Letters* **1996**, *6*, 361-366.
231. R. K. Hom, D. Y. Chi, and J. A. Katzenellenbogen. Heterodimeric Bis(amino thiol) Complexes of Oxorhenium(V) That Mimic the Structure of Steroid Hormones. Synthesis and Stereochemical Issues. *J. Org. Chem.* **1996**, *61*, 2624-2631.
232. T. A. Bonasera, J. P. O'Neil, M. Xu, J. A. Dobkin, P. D. Cutler, L. L. Lich, Y. S. Choe, J. A. Katzenellenbogen, and M. J. Welch. Preclinical Evaluation of Fluorine-18 Labeled Androgen Receptor Ligands in the Baboons. *J. Nucl. Med.* **1996**, *37*, 1009-1015.
233. C. S. Dence, E. Napolitano, J. A. Katzenellenbogen, and M. J. Welch. Carbon-11-Labeled Estrogens as Potential Imaging Agents for Breast Tumors. *Nucl. Med. Biol.* **1996**, *23*, 491-496.
234. R. Devraj, J. F. Barrett, J. A. Katzenellenbogen, and M. Cushman. Design, Synthesis, and Biological Evaluation of Ellipticine-Estradiol Conjugates. *J. Med. Chem.* **1996**, *39*, 3367-3374.
235. N. Srivastava, S. Ray, I. Dwivedy, S. R. Wilson, R. K. Hom, and J. A. Katzenellenbogen. Determination of the Absolute Configuration of the Nonsteroidal Contraceptive Agent Centchroman by X-Ray Crystallography on its *N*-Methyl Iodide Salt. *Bioorg. Med. Chem. Letters* **1996**, *6*, 1747-1752.
236. K. Ekena, K. E. Weis, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Identification of Amino Acids in the Hormone Binding Domain of the Human Estrogen Receptor Important in Estrogen Binding. *J. Biol. Chem.* **1996**, *271*, 20053-20059.
237. C. W. Derstine, D. N. Smith and J. A. Katzenellenbogen. Trifluoromethyl-Substituted Imidazolines: Novel Precursors of Trifluoromethyl Ketones Amenable to Peptide Synthesis. *J. Am. Chem. Soc.* **1996**, *118*, 8485-8486.
238. N. L. Allinger, K. Chen, J. A. Katzenellenbogen, S. R. Wilson, and G. M. Anstead. Hyperconjugative Effects on Carbon-Carbon Bond Lengths in Molecular Mechanics (MM4). *J. Computational Chem.* **1996**, *17*, 747-755.
239. P. R. Kym, K. L. Hummert, A. G. Nilsson, M. Lubin, and J. A. Katzenellenbogen. Bisphenolic Compounds That Enhance Cell Cation Transport Are Found in Commercial Phenol Red. *J. Med. Chem.* **1996**, *39*, 4897-4904.
240. N. Mukerjee, M. Dryjanski, W. Dai, J. A. Katzenellenbogen, and R. Pietruszko. Haloenol Lactones as Inactivators and Substrates of Aldehyde Dehydrogenase. *J. Protein Chem.* **1996**, *15*, 639-648.
241. J. E. Mortimer, F. Dehdashti, B. A. Siegel, J. A. Katzenellenbogen, P. Fracasso, and M. J. Welch. Positron Emission Tomography with 2-[¹⁸F]Fluoro-2-deoxy-D-glucose and 16 α -[¹⁸F]Fluoro-17 β -estradiol in Breast

- Cancer: Correlation with Estrogen Receptor Status and Response to Systemic Therapy. *Clin. Cancer Res.* **1996**, *2*, 933-939.
242. K. Ekena, K. E. Weis, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Different Residues of the Human Estrogen Receptor are Involved in the Recognition of Structurally Diverse Estrogens and Antiestrogens. *J. Biol. Chem.* **1997**, *272*, 5069-5075.
 243. A.W. Scribner, S. A. Haroutounian, K. E. Carlson, and J. A. Katzenellenbogen. 1-Aryl-2-pyridyl-3,4-dihydronaphthalenes: Photofluorogenic Ligands for the Estrogen Receptor. *J. Org. Chem.* **1997**, *62*, 1043-1057.
 244. A. W. Scribner, S. D. Jonson, M. J. Welch, and J. A. Katzenellenbogen. Synthesis, Estrogen Receptor Binding, and Tissue Distribution of [¹⁸F]Fluorodoisynolic Acids. *Nucl. Med. Biol.* **1997**, *24*, 209-224.
 245. C. W. Derstine, D. N. Smith, and J. A. Katzenellenbogen. Trifluoromethyl-Substituted Δ^3 -Imidazolines: Synthesis and Reactivity. *Tetrahedron Lett.* **1997**, *38*, 4359-4362.
 246. M. Cushman, H.-M. He, J. A. Katzenellenbogen, R. K. Varma, E. Hamel, C. M. Lin, S. Ram, and Y. P. Sachdeva. Synthesis of Analogs of 2-Methoxyestradiol with Enhanced Inhibitory Effects on Tubulin Polymerization and Cancer Cell Growth. *J. Med. Chem.* **1997**, *40*, 2323-2334.
 247. R. K. Hom and J. A. Katzenellenbogen. Synthesis of a Tetradentate Oxorhenium(V) Complex Mimic of a Steroidal Estrogen. *J. Org. Chem.* **1997**, *62*, 6290-6297.
 248. C. M. Bowen and J. A. Katzenellenbogen. Synthesis and Spectroscopic Characterization of Two Azatetrahydrochrysenes as Potential Fluorescent Ligands for the Estrogen Receptor. *J. Org. Chem.* **1997**, *62*, 7650-7657.
 249. R. Tedesco, J. A. Katzenellenbogen and E. Napolitano. $7\alpha,11\beta$ -Disubstituted Estrogens: Probes for the Shape of the Ligand Binding Pocket in the Estrogen Receptor. *Bioorg. Med. Chem. Lett.* **1997**, *7*, 2919-2924.
 250. R. Tedesco, J. A. Katzenellenbogen, and E. Napolitano. An Expedient Route To 7α -Substituted Estradiol Derivatives. *Tetrahedron Lett.* **1997**, *38*, 7997-8000.
 251. K. E. Carlson, I. Choi, A. Gee, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Altered Ligand Binding Properties and Enhanced Stability of a Constitutively Active Estrogen Receptor: Evidence That an Open Pocket Conformation Is Required for Ligand Interaction. *Biochemistry* **1997**, *36*, 14897-14905.
 252. T. A. Bonasera, S. D. Jonson, T. S. Pajean, J. A. Katzenellenbogen, and M. J. Welch. Retardation of 17-Oxidation of 16α -[¹⁸F]Fluoroestradiol-17 β by Substitution of Deuterium for Hydrogen in the 17 α Position(6). *Nucl. Med. Biol.* **1997**, *24*, 239-249.
 253. K. Ekena, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Determinants of Ligand Specificity of Estrogen Receptor- α : Estrogen versus Androgen Discrimination. *J. Biol. Chem.* **1998**, *273*, 693-699.
 254. E. D. Hostetler, S. Fallis, T. J. McCarthy, M. J. Welch, and J. A. Katzenellenbogen. Improved Methods for the Synthesis of [ω -¹¹C]Palmitic Acid. *J. Org. Chem.* **1998**, *63*, 1348-1351.
 255. T. W. Spradau and J. A. Katzenellenbogen. Preparation of Cyclopentadienyltricarboxylrhenium Complexes Using a Double Ligand-Transfer Reaction. *Organometallics* **1998**, *17*, 2009-2017.
 256. B. E. Fink, P. R. Kym, and J. A. Katzenellenbogen. Design, Synthesis, and Conformational Analysis of a Proposed Type I β -Turn Mimic. *J. Am. Chem. Soc.* **1998**, *120*, 4334-4344.
 257. F. Minutolo and J. A. Katzenellenbogen. A Convenient Three-Component Synthesis of Substituted Cyclopentadienyl Tricarbonyl Rhenium Complexes. *J. Am. Chem. Soc.* **1998**, *120*, 4514-4515.
 258. S. D. Jonson, D. A. d'Avignon, J. A. Katzenellenbogen, and M. J. Welch. Methyl Hypofluorite in the Synthesis of 16-Methoxyestradiol Stereoisomers. *Steroids* **1998**, *63*, 470-478.
 259. R. W. Chesnut, R. R. Cesati III, C. S. Cutler, S. L. Pluth and J. A. Katzenellenbogen. Four-Coordinate Dimethylgallium Compounds Vary in Stability Toward Hydrolysis. *Organometallics* **1998**, *17*, 4889-4896.
 260. T. W. Spradau and J. A. Katzenellenbogen. Protein and Peptide Labeling with (Cyclopentadienyl)tricarboxyl Rhenium and Technetium. *Bioconjugate Chem.* **1998**, *9*, 765-772.
 261. T. W. Spradau and J. A. Katzenellenbogen. Ligands for the Estrogen Receptor, Containing Cyclopentadienyltricarboxylrhenium Units. *Bioorg. Med. Chem. Lett.* **1998**, *8*, 3235-3240.

262. T. W. Spradau, W. B. Edwards, C. J. Anderson, M. J. Welch, and J. A. Katzenellenbogen. Synthesis and Biological Evaluation of Tc-99m-Cyclopentadienyltricarbonyltechnetium-Labeled Octreotide. *Nucl. Med. Biol.* **1998**, *26*, 1-7.
263. F. Minutolo and J. A. Katzenellenbogen. Boronic Acids in the Three-Component Synthesis of Carbon-Substituted Cyclopentadienyl Tricarbonyl Rhenium Complexes. *J. Am. Chem. Soc.* **1998**, *120*, 13264-13265.
264. M. J. Meyers, K. E. Carlson, and J. A. Katzenellenbogen. Facile Synthesis of High Affinity Styrylpyridine Systems as Inherently Fluorescent Ligands for the Estrogen Receptor. *Bioorg. Med. Chem. Lett.* **1998**, *8*, 3589-3594.
265. P. DeFigueiredo, D. Drecktrah, J. A. Katzenellenbogen, M. Strang, W. J. Brown. Evidence that Phospholipase A₂ Activity is Required for Golgi Complex and trans Golgi Network Membrane Tubulation. *Proc. Natl. Acad. Sci.* **1998**, *95*, 8642-8647.
266. F. Wüst, K. E. Carlson, J. A. Katzenellenbogen, H. Spies, and B. Johanssen. Synthesis and Binding Affinities of a New 17 α -Substituted Estradiol-Rhenium "n+1" Mixed-Ligand and Thioether-Carbonyl Complexes. *Steroids* **1998**, *63*, 665-671.
267. S. D. Jonson, T. A. Bonasera, F. Dehdashti, M. E. Cristel, J. A. Katzenellenbogen, and M. J. Welch. Comparative Breast Tumor Imaging and Comparative *in Vitro* Metabolism of 16 α -[¹⁸F]Fluoroestradiol-17 β and 16 β -[¹⁸F]Fluoromoxestrol in Isolated Hepatocytes. *Nucl. Med. Biol.* **1999**, *26*, 123-130.
268. E. D. Hostetler, S. D. Jonson, M. J. Welch, and J. A. Katzenellenbogen. Synthesis of 2-[¹⁸F]Fluoroestradiol, a Potential Diagnostic Imaging Agent for Breast Cancer: Strategies to Achieve Nucleophilic Substitution of an Electron-Rich Aromatic Ring with [¹⁸F]F⁻. *J. Org. Chem.* **1999**, *64*, 178-185.
269. M. B. Skaddan and J. A. Katzenellenbogen. Integrated "3+1" Oxorhenium(V) Complexes as Estrogen Mimics. *Bioconjugate Chem.* **1999**, *10*, 119-129.
270. F. Dehdashti, F. L. Flanagan, J. E. Mortimer, J. A. Katzenellenbogen, M. J. Welch, and B. A. Siegel. Positron Emission Tomographic Assessment of "Metabolic Flare" to Predict Response of Metastatic Breast Cancer to Antiestrogen Therapy. *Eur. J. Nucl. Med.* **1999**, *26*, 51-56.
271. J. Sun, M. J. Meyers, B. E. Fink, R. Rajendran, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Novel Ligands that Function as Selective Estrogens or Antiestrogens for Estrogen Receptor- α or Estrogen Receptor- β . *Endocrinology* **1999**, *140*, 800-804.
272. B. E. Fink, D. S. Mortensen, S. R. Stauffer, Z. D. Aron, and J. A. Katzenellenbogen. Novel Structural Templates for Estrogen-Receptor Ligands and Prospects for Combinatorial Synthesis of Estrogens. *Chem. Biol.* **1999**, *6*, 205-219.
273. J. A. Katzenellenbogen and F. Minutolo. A Polymer-Supported Phosphazine as a Stable and Practical Reagent in the Three-Component Synthesis of Substituted (Cyclopentadienyl)-tricarbonylrhenium Complexes. *Angew. Chem. Int. Ed.* **1999**, *38*, 1617-1620.
274. F. Minutolo and J. A. Katzenellenbogen. Three-Component Synthesis of Substituted η^5 -Cyclopentadienyltricarbonylrhenium Complexes: Scope, Limitations, and Mechanistic Interpretations. *Organometallics* **1999**, *18*, 2519-2530.
275. M. J. Meyers, J. Sun, K. E. Carlson, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Estrogen Receptor Subtype-Selective Ligands: Asymmetric Synthesis and Biological Evaluation of *cis*- and *trans*-5,11-Dialkyl-5,6,11,12-tetrahydrochrysenes. *J. Med. Chem.* **1999**, *42*, 2456-2468.
276. F. Minutolo, S.R. Wilson, and J. A. Katzenellenbogen. Crystallographic Evidence for the Electronic Distribution in (2,4-cyclopentadien-1-yl-idenehydrazano)triphenylphosphorane. *Acta. Cryst.* **1999**, *C55*, 1016-1019.
277. F. Wüst, M. B. Skaddan, P. Leibnitz, H. Spies, J. A. Katzenellenbogen, and B. Johanssen. Synthesis of Novel Progestin-Rhenium Conjugates as Potential Ligands for the Progesterone Receptor. *Bioorg. Med. Chem. Lett.* **1999**, *7*, 1827-1835.
278. A. C. Gee, K. E. Carlson, P. G. V. Martini, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Coactivator Peptides Have a Differential Stabilizing Effect on the Binding of Estrogens and Antiestrogens with the Estrogen Receptor. *Mol. Endocrinol.* **1999**, *13*, 1912-1923.
279. M. B. Skaddan, F. R. Wüst, and J. A. Katzenellenbogen. Synthesis and Binding Affinities of Novel Receptor-Containing 7 α -Substituted Estradiol Complexes: Models for Breast Cancer Imaging Agents. *J. Org. Chem.* **1999**, *64*, 8108-8121.

280. S. H. Kim and J. A. Katzenellenbogen. Triarylethylene Bisphenols with a Novel Cycle are Ligands for the Estrogen Receptor. *Bioorg. Med. Chem.* **1999**, *8*, 785-793.
281. M. B. Skaddan, F. R. Wüst, S. Jonson, R. Syhre, M. J. Welch, H. Spies, and J. A. Katzenellenbogen. Radiochemical Synthesis and Tissue Distribution of Tc-99m-Labeled 7 α -Substituted Estradiol Complexes. *Nucl. Med. Biol.* **2000**, *27*, 269-278.
282. S. R. Stauffer, J. Sun, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Acyclic Amides as Estrogen Receptor Ligands: Synthesis, Binding, Activity, and Receptor Interaction. *Bioorg. Med. Chem.* **2000**, *8*, 1293-1316.
283. S. R. Stauffer and J. A. Katzenellenbogen. Solid-Phase Synthesis of Tetra substituted Pyrazoles, Novel Ligands for the Estrogen Receptor. *J. Comb. Chem.* **2000**, *2*, 318-329.
284. Y. R. Huang and J. A. Katzenellenbogen. Regioselective Synthesis of 1,3,5-Triaryl-4-alkylpyrazoles: Novel Ligands for the Estrogen Receptor. *Org. Lett.* **2000**, *2*, 2833-2836.
285. A. K. Singh, B. D. Schultz, J. A. Katzenellenbogen, E. M. Price, R. J. Bridges, and N. A. Bradbury. Estrogen Inhibition of Cystic Fibrosis Transmembrane Conductance Regulator-Mediated Chloride Secretion. *J. Pharm Exp. Therap.* **2000**, *295*, 195-204.
286. D. M. Kraichley, J. Sun, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Conformational Changes and Coactivator Recruitment by Novel Ligands for Estrogen Receptor- α and Estrogen Receptor- β : Correlations with Biological Character and Distinct Differences Among SRC Coactivator Family Members. *Endocrinology* **2000**, *141*, 3534-3545.
287. S. R. Stauffer, C. J. Coletta, R. Tedesco, G. Nishiguchi, K. Carlson, J. Sun, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Pyrazole Ligands: Structure-Affinity/Activity Relationships and Estrogen Receptor- α -Selective Agonists. *J. Med. Chem.* **2000**, *43*, 4934-4947.
288. R. R. Cesati III and J. A. Katzenellenbogen. Preparation of Hexahydrobenzo[f]isoquinolines Using a Vinylogous Pictet-Spengler Cyclization. *Org. Lett.* **2000**, *2*, 3635-3638.
289. Y. H. Ju, K. E. Carlson, J. Sun, D. Pathak, B. S. Katzenellenbogen, J. A. Katzenellenbogen, and W. C. Helferich. Estrogenic Effects of Extracts from Cabbage, Fermented Cabbage, and Acidified Brussels Sprouts on Growth and Gene Expression of Estrogen-Dependent Human Breast Cancer (MCF-7) Cells. *J. Agric. Food Chem.* **2000**, *48*, 4628-4634.
290. S. R. Stauffer, Y. Huang, C. J. Coletta, R. Tedesco, and J. A. Katzenellenbogen. Estrogen Pyrazoles: Defining the Pyrazole Core Structure and the Orientation of Substituents in the Ligand Binding Pocket of the Estrogen Receptor. *Bioorg. Med. Chem.* **2001**, *9*, 141-150.
291. S. R. Stauffer, Y. R. Huang, Z. D. Aron, C. J. Coletta, J. Sun, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Triarylpyrazoles with Basic Side Chains: Development of Pyrazole-Based Estrogen Receptor Antagonists. *Bioorg. Med. Chem.* **2001**, *9*, 151-161.
292. S. Kousteni, T. Bellido, L. I. Plotkin, C. A. O'Brien, D. L. Bodenner, L. Han, K. Han, G. B. Digregorio, J. A. Katzenellenbogen, B. S. Katzenellenbogen, P. K. Roberson, R. S. Weinstein, R. L. Jilka, and S.C. Manolagas. Nongenotropic, Sex-Nonspecific Signaling through the Estrogen or Androgen Receptors: Dissociation from Transcriptional Activity. *Cell* **2001**, *104*, 719-730.
293. A. C. Gee and J. A. Katzenellenbogen. Probing Conformational Changes in the Estrogen Receptor: Evidence for a Partially Unfolded Intermediate Facilitating Ligand Binding and Release. *Mol. Endo.* **2001**, *15*, 421-428.
294. R. R. Cesati III and J. A. Katzenellenbogen. One-Pot Formation of Substituted Cyclopentadienyl and Indenyltricarbonyl Rhenium Complexes through in Situ Generation of Cyclopentadienyl- and Indenyltributylstannanes. *J. Am. Chem. Soc.* **2001**, *123*, 4093-4094.
295. R. Tedesco, J. A. Thomas, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. The Estrogen Receptor: A Structure-Based Approach to the Design of New Specific Hormone-Receptor Combinations. *Chem. Bio.* **2001**, *8*, 277-287.
296. S. H. Kim, S. D. Jonson, M. J. Welch, and J. A. Katzenellenbogen. Fluorine-Substituted Ligands for the Peroxisome Proliferator-Activated Receptor Gamma (PPAR γ): Potential Imaging Agents for Metastatic Tumors. *Bioconjugate Chem.* **2001**, *12*, 439-450.
297. J. E. Mortimer, F. Dehdashti, B. A. Siegel, K. Trinkaus, J. A. Katzenellenbogen, and M. J. Welch. Metabolic Flare: Indicator of Hormone Responsiveness in Advanced Breast Cancer. *J. Clin. Oncol.* **2001**, *19*, 2797-2803.

298. R. Tedesco, M. K. Youngman, S. R. Wilson, and J. A. Katzenellenbogen. Synthesis and Evaluation of Hexahydrochrysene and Tetrahydrobenzofluorene Ligands for the Estrogen Receptor. *Bioorg. Med. Chem. Lett.* **2001**, *11*, 1281-1284.
299. S. Nuedling, R. H. Karas, M. E. Mendelsohn, J. A. Katzenellenbogen, B. S. Katzenellenbogen, R. Meyer, H. Vetter, and C. Grohé. Activation of Estrogen Receptor β is a Prerequisite for Estrogen-Dependent Upregulation of Nitric Oxide Synthases in Neonatal Rat Cardiac Myocytes. *FEBS Lett.* **2001**, *502*, 103-108.
300. D. S. Mortensen, A. L. Rodriguez, J. Sun, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Furans with Basic Side Chains: Synthesis and Biological Evaluation of a Novel Series of Antagonists with Selectivity for the Estrogen Receptor Alpha. *Bioorg. Med. Chem. Lett.* **2001**, *11*, 2521-2524.
301. J. B. Downer, L. A. Jones, J. Engelbach, Lich, L. L., W. Mao, K. E. Carlson, J. A. Katzenellenbogen, and M. J. Welch. Comparison of Animal Models for the Evaluation of Radiolabeled Androgens. *Nucl. Med. Biol.* **2001**, *28*, 613-626.
302. J. B. Downer, L. A. Jones, J. A. Katzenellenbogen, and M. J. Welch. Effect of Administration Route on FES uptake into MCF-7 Tumors. *Nucl. Med. Biol.* **2001**, *28*, 397-399.
303. D. S. Mortensen, A. L. Rodriguez, K. E. Carlson, J. Sun, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Synthesis and Biological Evaluation of a Novel Series of Furans: Ligands Selective for Estrogen Receptor α . *J. Med. Chem.* **2001**, *44*, 3838-3848.
304. K. M. Waters, D. J. Rickard, B. L. Riggs, S. Khosla, J. A. Katzenellenbogen, B. S. Katzenellenbogen, J. Moore, and T. C. Spelsberg. Estrogen Regulation of Human Osteoblast Function is Determined by the Stage of Differentiation and the Estrogen Receptor Isoform. *J. Cell. Biochem.* **2001**, *83*, 448-462.
305. M. J. Meyers, J. Sun, K. E. Carlson, G. A. Marriner, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Estrogen Receptor- β Potency-Selective Ligands: Structure-Activity Relationship Studies of Diarylpropionitriles and Their Acetylene and Polar Analogues. *J. Med. Chem.* **2001**, *44*, 4230-4251.
306. F. Minutolo, S. Bertini, C. Papi, K. E. Carlson, J. A. Katzenellenbogen, and M. Macchia. Salicylaldehyde Moiety as a Phenolic "A-Ring" Substitute in Estrogen Receptor Ligands. *J. Med. Chem.* **2001**, *44*, 4288-4291.
307. R. R. Cesati III, G. Tamagnan, R. M. Baldwin, S. S. Zoghbi, R. B. Innes, R. J. Baldessarini, and J. A. Katzenellenbogen. Synthesis of Cyclopentadienyltricarbonyl Rhenium Phenyltropanes by Double Ligand Transfer: Organometallic Ligands for the Dopamine Transporter, *Bioconjugate Chem.* **2002**, *13*, 29-39.
308. J. Sun, Y. R. Huang, W. R. Harrington, S. Sheng, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Antagonists Selective for Estrogen Receptor α . *Endocrinology* **2002**, *143*, 941-947.
309. E. S. Mull, V. J. Sattigeri and J. A. Katzenellenbogen. Aryl Cyclopentadienyl Tricarbonyl Rhenium Complexes: Novel Ligands for the Estrogen Receptor with Potential Use as Estrogen Radiopharmaceuticals. *Bioorg. Med. Chem. Lett.* **2002**, *10*, 1381-1398.
310. G. A. Nishiguchi, A. L. Rodriguez, and J. A. Katzenellenbogen. Diaryl-Dialkyl-Substituted Pyrazoles: Regioselective Synthesis and Binding Affinity for the Estrogen Receptor. *Bioorg. Med. Chem. Lett.* **2002**, *12*, 947-950.
311. K. Shiau, D. Barstad, J. T. Radek, M. J. Meyers, K. W. Nettles, B. S. Katzenellenbogen, J. A. Katzenellenbogen, D. A. Agard, and G. L. Greene. Structural Characterization of a Subtype-Selective Ligand Reveals a Novel Mode of Estrogen Receptor Antagonism. *Nat. Struct. Biol.* **2002**, *9*, 359-364.
312. D. Vijaykumar, W. Mao, K. S. Kirschbaum, and J. A. Katzenellenbogen. An Efficient Route for the Preparation of a 21-Fluoro Progesterin-16 α ,17 α -Dioxolane, a High Affinity Ligand for PET Imaging of the Progesterone Receptor. *J. Org. Chem.* **2002**, *67*, 4904-4910.
313. L. Luyt and J. A. Katzenellenbogen. A Trithiolate Tripodal Bifunctional Ligand for the Radiolabeling of Peptides with Gallium(III). *Bioconjugate Chem.* **2002**, *13*, 1140-1145.
314. U. Ghosh and J. Katzenellenbogen. A Convenient Method for the Preparation of Highly Substituted Pyrimidines: Synthesis of Tri- and Tetra-Substituted Pyrimidines from 1,3-Dicarbonyl Compounds and N,N,N'-Tris-(Trimethylsilyl)amidines. *J. Heterocycl. Chem.* **2002**, *39*, 1101-1104.
315. A. Tamrazi, K. E. Carlson, J. R. Daniels, K. M. Hurth, and J. A. Katzenellenbogen. Estrogen Receptor Dimerization: Ligand Binding Regulates Dimer Affinity and Dimer Dissociation Rate. *Mol. Endo.* **2002**, *16*, 2706-2719.

316. H. Harris, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Characterization of the Biological Roles of the Estrogen Receptors, ER α and ER β , in Estrogen Target Tissues *in Vivo* through the Use of an ER α - Selective Ligand. *Endocrinology* **2002**, *143*, 4172-4177.
317. D. J. Rickard, K. M. Waters, T. J. Ruesink, S. Khosla, J. A. Katzenellenbogen, B. S. Katzenellenbogen, B. L. Riggs, and T. C. Spelsberg. Estrogen Receptor Isoform-Specific Induction of Progesterone Receptors in Human Osteoblasts. *J Bone Miner. Res.* **2002**, *17*, 580-92.
318. U. Ghosh, D. Ganessunker, V. J. Sattigeri, K. E. Carlson, D. J. Mortensen, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Estrogenic Diazenes: Heterocyclic Non-steroidal Estrogens of Unusual Structure with Selectivity for Estrogen Receptor Subtypes. *Bioorg. Med. Chem.* **2003**, *11*, 629-657.
319. J. Sun, J. A. Katzenellenbogen, H Zhao, and B. S. Katzenellenbogen. DNA Shuffling Method for Generating Estrogen Receptor α and β Chimeras in Yeast. *Biotechniques* **2003**, *34*, 278-288.
320. J. Bowe, X. F. Li, D. Sugden, J. A. Katzenellenbogen, B. S. Katzenellenbogen, and K. T. O'Byrne. The Effects of the Phytoestrogen, Coumestrol, on Gonadotropin-Releasing Hormone (GnRH) mRNA Expression in GT1-7 GnRH Neurones. *J Neuroendocrinology* **2003**, *15*, 105-108.
321. F. Wüst, K. E. Carlson, and J. A. Katzenellenbogen. Synthesis of Novel Arylpyrazolo Corticosteroids as Potential Ligands for Imaging Brain Glucocorticoid Receptors. *Steroids* **2003**, *68*, 177-191.
322. F. Minutolo, M. Antonello, S. Bertini, S. Rapposelli, A. Rossello, S. B. Sheng, K. E. Carlson, J. A. Katzenellenbogen, and M. Macchia. Synthesis, Binding Affinity, and Transcriptional Activity of Hydroxy- and Methoxy-Substituted 3,4-Diarylsalicylaldoximes on Estrogen Receptors α and β . *Bioorg. Med. Chem.* **2003**, *11*, 1247-1257.
323. R. S. Muthyala, S. Sheng, K. E. Carlson, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Bridged Bicyclic Cores Containing a 1,1-Diarylethylene Motif Are High-Affinity Subtype-Selective Ligands for the Estrogen Receptor. *J Med. Chem.* **2003**, *46*, 1589-1602.
324. J. Sun, J. Baudry, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Molecular Basis for the Subtype Discrimination of the Estrogen Receptor- β -Selective Ligand, Diarylpropionitrile. *Mol. Endo.* **2003**, *17*, 247-258.
325. D. Vijaykumar, M. H. Al-Qahtani, M. J. Welch, and J. A. Katzenellenbogen. Synthesis and Biological Evaluation of a Fluorine-18 Labeled Estrogen Receptor- α Selective Ligand: [^{18}F] Propyl Pyrazole Triol. *Nucl. Med. Biol.* **2003**, *30*, 397-404.
326. J. B. Arterburn, C. Corona, K. Venkateswara Rao, K. E. Carlson, and J. A. Katzenellenbogen. Synthesis of 17 α -Substituted Estradiol-Pyridin-2-yl Hydrazine Conjugates as Effective Ligands for Labeling with Alberto's Complex *fac*-[Re(OH $_2$) $_3$ (CO) $_3$] $^+$ in Water. *J Org. Chem.* **2003**, *68*, 7063-7070.
327. K. C. Lee, B. S. Moon, J. H. Lee, K. H. Chung, and J. A. Katzenellenbogen, D. Y. Chi. Synthesis and Binding Affinities of Fluoroalkylated Raloxifenes. *Bioorg. Med. Chem.* **2003**, *11*, 3649-3658.
328. Y. Dobryднева, R. L. Williams, J. A. Katzenellenbogen, and P. F. Blackmore. Diethylstilbestrol and Tetrahydrochrysenes are Calcium Channel Blockers in Human Platelets: Relationship to the Stilbene Pharmacophore. *Thrombosis Research* **2003**, *110*, 23-31.
329. L. G. Luyt, H. M. Bigott, M. J. Welch, and J. A. Katzenellenbogen. 7 α and 17 α -Substituted Estrogens Containing Tridentate Tricarbonyl Rhenium/Technetium Complexes: Synthesis of Estrogen Receptor Imaging Agents and Evaluation Using MicroPET with Technetium-94m. *Bioorg. Med. Chem.* **2003**, *11*, 4977-4989.
330. R. S. Muthyala, K. E. Carlson, and J. A. Katzenellenbogen. Exploration of the Bicyclo[3.3.1]nonane System as a Template for the Development of New Ligands for the Estrogen Receptor. *Bioorg. Med. Chem. Lett.* **2003**, *13*, 4485-4488.
331. A. Tamrazi and J. A. Katzenellenbogen. Site-Specific Fluorescent Labeling of Estrogen Receptors and Structure-Activity Relationships of Ligands in Terms of Receptor Dimer Stability. *Methods in Enzymology* **2003**, *364*, 37-52.
332. A. Tamrazi, K. E. Carlson, and J. A. Katzenellenbogen. Molecular Sensors of Estrogen Receptor Conformations and Dynamics. *Mol. Endo.* **2003**, *17*, 2593-2602.
333. F. Minutolo, M. Antonello, S. Bertini, G. Ortore, G. Placanic, S. Rapposelli, S. Sheng, K. E. Carlson, B. S. Katzenellenbogen, J. A. Katzenellenbogen, and M. Macchia. Novel Estrogen Receptor Ligands Based on an Anthranilyaldoxime Structure: Role of the Phenol-Type Pseudocycle in the Binding Process. *J. Med. Chem.* **2003**, *46*, 4032-4042.

334. W. R. Harrington, S. Sheng, D. H. Barnett, L. N. Petz, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Activities of Estrogen Receptor Alpha- and Beta-Selective Ligands at Diverse Estrogen Responsive Gene Sites Mediating Transactivation or Transrepression. *Mol. Cell. Endo.* **2003**, *206*, 13-22.
335. K. Hurth, M. J. Nilges, K. E. Carlson, A. Tamrazi, R. Belford, and J. A. Katzenellenbogen. Ligand-Induced Changes in Estrogen Receptor Conformation As Measured by Site-Directed Spin Labeling (SDSL). *Biochemistry* **2004**, *43*, 1891-1907.
336. K. W. Nettles, J. Sun, J. T. Radek, S. Sheng, A. L. Rodriguez, J. A. Katzenellenbogen, B. S. Katzenellenbogen, and G. L. Greene. Allosteric Control of Ligand Selectivity between Estrogen Receptors α and β : Implications for Other Nuclear Receptors. *Mol. Cell* **2004**, *13*, 317-327.
337. A. L. Rodriguez, A. Tamrazi, M. L. Collins, and J. A. Katzenellenbogen. Design, Synthesis, and in vitro Biological Evaluation of Small Molecule Inhibitors of Estrogen Receptor α Coactivator Binding. *J. Med. Chem.* **2004**, *47*, 600-611.
338. R. S. Muthyala, Y. H. Ju, S. Sheng, L. D. Williams, D. R. Doerge, B. S. Katzenellenbogen, W. G. Helferich, and J. A. Katzenellenbogen. Equol, a Natural Estrogenic Metabolite from Soy Isoflavones: Convenient Preparation and Resolution of R- and S-Equols and their Differing Binding and Biological Activity through Estrogen Receptors Alpha and Beta. *Bioorg. Med. Chem.* **2004**, *12*, 1559-1567.
339. S. B. Pedersen, K. Kristensen, P. Hermann, J. A. Katzenellenbogen, and B. Richelsen. Estrogen Controls Lipolysis by Up-Regulating α 2A-Adrenergic Receptors Directly in Human Adipose Tissue through the Estrogen Receptor α . Implications for the Female Fat Distribution. *J. Clinical Endo. & Metabolism* **2004**, *89*, 1869-1878.
340. H. W. Tsai, J. A. Katzenellenbogen, B. S. Katzenellenbogen, and M. A. Shupnik. Protein Kinase A Activation of Estrogen Receptor α Transcription Does Not Require Proteasome Activity and Protects the Receptor from Ligand-Mediated Degradation. *Endocrinology* **2004**, *145*, 2730-2738.
341. S. H. Kim, A. Tamrazi, K. E. Carlson, J. R. Daniels, I. Y. Lee, and J. A. Katzenellenbogen. Estrogen Receptor Microarrays: Subtype-Selective Ligand Binding. *J. Am. Chem. Soc.* **2004**, *126*, 4754-4755.
342. V. Selvaraj, M. A. Zakroczymski, A. Naaz, M. Mukai, Y. J. Ju, D. R. Doerge, J. A. Katzenellenbogen, W. G. Helferich, and P. S. Cooke. Estrogenicity of the Isoflavone Metabolite Equol on Reproductive and Non-Reproductive Organs in Mice. *Biol. Reprod.* **2004**, *71*, 966-972.
343. Z. Chen, B. S. Katzenellenbogen, J. A. Katzenellenbogen, H. Zhao. Directed Evolution of Human Estrogen Receptor Variants with Significantly Enhanced Androgen Specificity and Affinity. *J. Bio. Chem.* **2004**, *279*, 33855-33864.
344. D. Spera, G. Cabrera, R. Fiaschi, K. E. Carlson, J. A. Katzenellenbogen, E. Napolitano. Estradiol Derivatives Bearing Sulfur-Containing Substituents at the 11 β or 7 α positions: Versatile Reagents for the Preparation of Estrogen Conjugates. *Bioorg. Med. Chem.* **2004**, *12*, 4393-4401.
345. D. R. Compton, K. E. Carlson, and J. A. Katzenellenbogen. Pyrazolo[1,5-a]pyrimidines as estrogen receptor ligands: defining the orientation of a novel heterocyclic core. *Bioorg. Med. Chem. Lett.* **2004**, *14*, 5681-5684.
346. M. De Angelis and J. A. Katzenellenbogen. Ring Nitrogen-Substituted Non-Steroidal Estrogens: Pyridine and Pyrimidine Analogs of the Phenol in Deoxyhexestrol Experience Resonance Constraints on Preferred Ligand Conformation. *Bioorg. Med. Chem. Lett.* **2004**, *14*, 5835-5839.
347. D. R. Compton, S. Sheng, K. E. Carlson, N. A. Rebacz, I. Y. Lee, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Pyrazolo[1,5- α]Pyrimidines: Estrogen Receptor Ligands Possessing Estrogen Receptor β Antagonist Activity. *J. Med. Chem.* **2004**, *47*, 5872-5893.
348. S. O. Mueller, J. A. Katzenellenbogen, and K. S. Korach. Endogenous Estrogen Receptor β is Transcriptionally Active in Primary Ovarian Cells from Estrogen Receptor Knockout Mice. *Steroids* **2004**, *69*, 681-686.
349. M. Zaitseva, D. S. Yue, J. A. Katzenellenbogen, P. A. W. Rogers, and C. E. Gargett. Estrogen Receptor- α Agonists Promote Angiogenesis in Human Myometrial Microvascular Endothelial Cells. *J. Soc. Gynecol. Invest.* **2004**, *11*, 529-535.
350. M. De Angelis, F. Stossi, K. A. Carlson, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Indazole Estrogens: Highly Selective Ligands for the Estrogen Receptor β . *J. Med. Chem.* **2005**, *48*, 1132-1144.

351. H. M. Bigott, E. Parent, L. G. Luyt, J. A. Katzenellenbogen, and M. J. Welch. Design and Synthesis of Functionalized Cyclopentadienyl Tetracarbonylmetal Complexes for Technetium-94m PET Imaging of Estrogen Receptors. *Bioconj. Chem.* **2005**, *16*, 255-264.
352. F. Dehdashti, J. Picus, J. M. Michalski, C. S. Dence, B. A. Siegel, J. A. Katzenellenbogen, and M. J. Welch. Positron Tomographic Assessment of Androgen Receptors in Prostatic Carcinoma. *Eur. J. Nucl. Med. Molec. Imaging.* **2005**, *32*, 344-350.
353. K. Chockalingam, Z. Chen, J. A. Katzenellenbogen, and H. Zhao. Directed Evolution of Specific Receptor-Ligand Pairs for use in the Creation of Gene Switches. *Proc. Natl. Acad. Sci. USA* **2005**, *102*, 5691-5696.
354. C-K.Chu., J-H. Kim, D. W. Kim, K-H. Chung, J. A. Katzenellenbogen, and D. Y. Chi. Aromatic Fluorination by Decomposition of Triazenes in Ionic Liquids. *Bull. Korean Chem. Soc.* **2005**, *26*, 599-602.
355. S. H. Kim, A. Tamrazi, K. E. Carlson, and J. A. Katzenellenbogen. A Proteomic Microarray Approach for Exploring Ligand-Initiated Nuclear Hormone Receptor Pharmacology, Receptor Selectivity, and Heterodimer Functionality. *Mol. Cell Proteomics.* **2005**, *4*, 267-277.
356. A. Tamrazi, K. E. Carlson, A. L. Rodriguez, and J. A. Katzenellenbogen. Coactivator Proteins as Determinants of Estrogen Receptor Structure and Function: Spectroscopic Evidence for a Novel Coactivator-Stabilized Receptor Conformation. *Molec. Endocrinol.* **2005**, *19*, 1516-1528.
357. M. De Angelis, F. Stossi, M. Waibel, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Isocoumarins as Estrogen Receptor Beta Selective Ligands: Isomers of Isoflavone Phytoestrogens and Their Metabolites. *Bioorg. Med. Chem.* **2005**, *13*, 6529-6542.
358. J. Yoo, C. S. Dence, T. L. Sharp, J. A. Katzenellenbogen, and M. J. Welch. Synthesis of an Estrogen Receptor β -Selective Radioligand: 5-[¹⁸F]Fluoro-(2R*,3S*)-2,3-bis(4-hydroxyphenyl)pentanenitrile and Comparison of in Vivo Distribution with 16 α -[¹⁸F]Fluoro-17 β -estradiol. *J. Med. Chem.* **2005**, *48*, 6366-6378.
359. H. B. Zhou, J. S. Comninos, F. Stossi, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Synthesis and Evaluation of Estrogen Receptor Ligands with Bridged Oxabicyclic Cores Containing a Diarylethylene Motif: Estrogen Antagonists of Unusual Structure. *J. Med. Chem.* **2005**, *48*, 7261-7274.
360. R. G. Mishra, F. Z. Stanczyk, K. A. Burry, S. Oparil, B. S. Katzenellenbogen, M. L. Nealen, J. A. Katzenellenbogen, and R. K. Hermsmeyer. Metabolite ligands of estrogen receptor-beta reduce primate coronary hyperreactivity. *Am. J. Physiol. Heart Circ. Physiol.* **2006**, *290*, H295-H303.
361. J. W. Seo, J. S. Comninos, D. Y. Chi, D. W. Kim, K. E. Carlson, and J. A. Katzenellenbogen. Fluorine-Substituted Cyclofenil Derivatives as Estrogen Receptor Ligands: Synthesis and Structure-Affinity Relationship Study of Potential Positron Emission Tomography Agents for Imaging Estrogen Receptors in Breast Cancer. *J. Med. Chem.* **2006**, *49*, 2496-2511.
362. W. R. Harrington, S. H. Kim, C. C. Funk, Z. Madak-Erdogan, R. Schiff, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Estrogen Dendrimer Conjugates that Preferentially Activate Extranuclear, Nongenomic versus Genomic Pathways of Estrogen Action. *Mol. Endo.* **2006**, *20*, 491-502.
363. F. Stossi, V. S. Likhite, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Estrogen-Occupied Receptor Represses Cyclin G2 Gene Expression and Recruits a Repressor Complex at the Cyclin G2 Promoter. *J. Biol. Chem.* **2006**, *281*, 16272-16278.
364. G. Dayan, M. Lupien, A. Auger, S. I. Anghel, W. Rocha, S. Croisetiere, J. A. Katzenellenbogen, and S. Mader. Tamoxifen and Raloxifene Differ in Their Functional Interactions with Aspartate 351 of Estrogen Receptor α . *Mol. Pharm.* **2006**, *70*, 579-588.
365. D. Zhou, K. Carlson, J. A. Katzenellenbogen, and M. J. Welch. Bromine- and Iodine-Substituted 16 α , 17 α -Dioxolane Progestins for Breast Tumor Imaging and Radiotherapy: Synthesis and Receptor Binding Affinity. *J. Med. Chem.* **2006**, *49*, 4737-4744.
366. E. E. Parent, C. S. Dence, T. L. Sharp, M. J. Welch, and J. A. Katzenellenbogen. Synthesis and Biological Evaluation of a Fluorine-18-Labeled Nonsteroidal Androgen Receptor Antagonist, N-(3-[¹⁸F]Fluoro-4-Nitronaphthyl)-cis-5-Norbornene-Endo-2,3-Dicarboxylic Imide. *Nuc. Med. Bio* **2006**, *33*, 615-624.
367. T. Tuccinardi, S. Bertini, A. Martinelli, F. Minutolo, G. Ortore, G. Placanica, G. Prota, S. Rapposelli, K. E. Carlson, J. A. Katzenellenbogen, and M. Macchia. Synthesis of Anthranilyldoxime Derivatives as Estrogen Receptor Ligands and Computational Prediction of Binding Modes. *J. Med. Chem.* **2006**, *49*, 5001-5012.

368. O. Jacobson, D. Laky, K. E. Carlson, S. Elgavish, M. Gozin, E. Even-Sapir, I. Leibovitch, M. Gutman, R. Chisin, J. A. Katzenellenbogen, and E. Mishani. Chiral Dimethylamine Flutamide Derivatives—Modeling, Synthesis, Androgen Receptor Affinities, and Carbon-11 Labeling. *Nuc. Med. Bio.* **2006**, *33*, 695-704.
369. E. E. Parent, C. Jenks, T. Sharp, M. J. Welch, and J. A. Katzenellenbogen. Synthesis and Biological Evaluation of a Nonsteroidal Bromine-76-Labeled Androgen Receptor Ligand 3-[⁷⁶Br]Bromo-hydroxyflutamide. *Nuc. Med. Bio.* **2006**, *33*, 705-713.
370. C. Ramesh, B. J. Bryant, T. Nayak, C. M. Revankar, T. Anderson, K. E. Carlson, J. A. Katzenellenbogen, L. A. Skiar, J. P. Norenberg, E. R. Prossnitz, and J. B. Arterburn. Linkage Effects on Binding Affinity and Activation of GPR30 and Estrogen Receptors ER α/β with Tridentate Pyridin-2-yl Hydrazine Tricarbonyl-Re/^{99m}Tc(I) Chelates. *J. Am. Chem. Soc.* **2006**, *128*, 14476-14477.
371. S. H. Kim, and J. A. Katzenellenbogen. Hormone-PAMAM Dendrimer Conjugates: Polymer Dynamics and Tether Structure Affect Ligand Access to Receptors. *Angew. Chemie Intl. Ed. Engl.* **2006**, *45*, 7243-7248.
372. F. Minutolo, S. Bertini, A. Martinelli, G. Ortore, G. Placanica, G. Prota, S. Rapposelli, T. Tuccinardi, S. Sheng, K. E. Carlson, B. S. Katzenellenbogen, J. A. Katzenellenbogen, and M. Macchia. Salicylaldoximes and Anthranilaldoximes as Alternatives to Phenol-Based Estrogen Receptor Ligands. *Arkivoc* **2006**, *8*, 83-94.
373. V.S. Likhite, F. Stossi, K. Kim, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Kinase-Specific Phosphorylation of the Estrogen Receptor Changes Receptor Interactions with Ligand, Deoxyribonucleic Acid, and Coregulators Associated with Alterations in Estrogen and Tamoxifen Activity. *Mol. Endocrinol.* **2006**, *20*, 3120-3132.
374. H. B. Zhou, S. Sheng, D. R. Compton, Y. Kim, A. Joachimiak, S. Sharma, K. E. Carlson, B. S. Katzenellenbogen, K. W. Nettles, G. L. Greene, and J. A. Katzenellenbogen. Structure-Guided Optimization of Estrogen Receptor Binding Affinity and Antagonist Potency of Pyrazolopyrimidines with Basic Side Chains. *J. Med. Chem.* **2007**, *50*, 399-403.
375. E. E. Parent, C. S. Dence, C. Jenks, T. L. Sharp, M. J. Welch, and J. A. Katzenellenbogen. Synthesis and Biological Evaluation of [¹⁸F]Bicalutamide, 4-[⁷⁶Br]Bromobicalutamide, and 4-[⁷⁶Br]Bromothiobicalutamide as Non-Steroidal Androgens for Prostate Cancer Imaging. *J. Med. Chem.* **2007**, *50*, 1028-1040.
376. J. W. Seo, D. Y. Chi, C. S. Dence, M. J. Welch, and J. A. Katzenellenbogen. Synthesis and Biodistribution of Fluorine-18 Labeled Fluorocyclofenils for Imaging the Estrogen Receptor. *Nuc. Med. Bio.* **2007**, *34*, 383-390.
377. B. C. Lee, K. C. Lee, H. Lee, R. H. Mach, and J. A. Katzenellenbogen. Synthesis and Binding Affinity of a Fluorine-Substituted Peroxisome Proliferator-Activated Gamma (PPAR γ) Ligand as a Potential Positron Emission Tomography (PET) Imaging Agent. *Bioconj. Chem.* **2007**, *18*, 507-513.
378. B. C. Lee, K. C. Lee, H. Lee, R. H. Mach, and J. A. Katzenellenbogen. Strategies for the Labeling of Halogen-Substituted PPAR-Gamma (PPAR γ) Ligands: Potential Positron Emission Tomography (PET) and Single Photon Emission Computed Tomography (SPECT) Imaging Agents. *Bioconj. Chem.* **2007**, *18*, 514-523.
379. M. Lupien, M. Jeyakumar, E. Hebert, K. Hilmi, D. Cotnoir-White, C. Loch, A. Auger, G. Dayan, G-A Pinard, J-M Wurtz, D. Moras, J. A. Katzenellenbogen, and S. Mader. Raloxifene and ICI182,780 Increase Estrogen Receptor- α Association with a Nuclear Compartment via Overlapping Sets of Hydrophobic Amino Acids in Activation Function 2 Helix 12. *Mol. Endocrinol.* **2007**, *21*, 797-816.
380. H. B. Zhou, M. L. Collins, J. R. Gunther, J. S. Comminos, J. A. Katzenellenbogen. Bicyclo[2.2.2]Octanes: Close Structural Mimics of the Nuclear Receptor-Binding Motif of Steroid Receptor Coactivators. *Bioorg. Med. Chem. Ltrs.* **2007**, *17*, 4118-4122.
381. H. B. Zhou, K. W. Nettles, J. B. Bruning, Y. Kime, A. Joachimiak, S. Sharma, K. E. Carlson, F. Stossi, G. L. Greene, and J. A. Katzenellenbogen. Elemental Isomerism: A Boron-Nitrogen Surrogate for a Carbon-Carbon Double Bond Increases the Chemical Diversity of Estrogen Receptor Ligands. *Chem. Biol.* **2007**, *14*, 659-669.
382. E. E. Parent, K. E. Carlson, J. A. Katzenellenbogen. Synthesis of 7 α -(fluoromethyl)dihydrotestosterone and 7 α -(fluoromethyl)nortestosterone, structurally paired androgens designed to probe the role of sex hormone binding globulin in imaging androgen receptors in prostate tumors by positron emission tomography. *J. Org. Chem.* **2007**, *72*, 5546-5554.

383. A. L. LaFrata, J. A. Katzenellenbogen. Improved chemical syntheses of 5,6-dihydro-5-fluorouracil. *J. Org. Chem.* **2007**, *72*, 8573-8576.
384. S. H. Kim, M. Jeyakumar, and J. A. Katzenellenbogen. Dual Mode Fluorophore-Doped Nickel NTA-Modified Silica Nanoparticles Combine Histidine-Tagged Protein Purification with Site-Specific Fluorophore Labeling. *J. Am. Chem. Soc.* **2007**, *129*, 13254-13264.
385. F. Wüest, K. E. Carlson and John A. Katzenellenbogen. Expeditious Synthesis of Steroids Containing a 2-Methylsulfanyl-Acetyl Side Chain as Potential Glucocorticoid Receptor Imaging Agents. *Steroids* **2008**, *73*, 69-76. [PMID: 19167882](#)
386. J. W. Seo, H. J. Kim, B. S. Lee, J. A. Katzenellenbogen. Convenient One-Pot Synthesis of 2,2-Bis-(4-hydroxyphenyl)-cyclopentanone. *J. Org. Chem.* **2008**, *73*, 715-718. [PMID: 17499727/PMC1948026/NIHMS24100](#)
387. D. W. Kim, H. J. Jeong, S. T. Lim, M. H. Sohn, J. A. Katzenellenbogen, D. Y. Chi. Facile Nucleophilic Fluorination Reactions Using tert-Alcohols as a Reaction Medium: Significantly Enhanced Reactivity of Alkali Metal Fluorides and Improved Selectivity. *J. Org. Chem.* **2008**, *73*, 957-962. [PMID: 18166063](#)
388. K. W. Nettles, J. B. Bruning, G. Gil, J. Nowak, S. K. Sharma, J. B. Hahm, K. Kulp, R. B. Hochberg, H. Zhou, J. A. Katzenellenbogen, B. S. Katzenellenbogen, Y. Kim, A. Joachmiak, G. L. Greene. NFκB Selectivity of Estrogen Receptor Ligands Revealed by Comparative Crystallographic Analyses, *Nature Chem. Bio.* **2008**, *4*, 241-247. [PMID: 18344977](#) [PMC2659626/NIHMS82437](#)
389. E. C. Chang, T-H Charn, S-H Park, W. G. Helferich, B. Komm, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Estrogen Receptors Alpha and Beta as Determinants of Gene Expression: Influence of Ligand, Dose, and Chromatin Binding, *Molec. Endocrinol.*, **2008**, *22*, 1032-1043. [PMID: 18258689/PMC2366177](#)
390. F. Minutolo, R. Bellini, I. Carboni, A. Lapucci, L. Pistolesi, G. Prota, S. Rapposelli, F. Solati, T. Tuccinardi, A. Martinelli, F. Stossi, K. E. Carlson, B. S. Katzenellenbogen, J. A. Katzenellenbogen, M. Macchia. Monoaryl-Substituted Salicylaldoximes as Ligands for Estrogen Receptor β , *J. Med. Chem.*, **2008**, *51*, 1344-1351. [PMID: 18269232](#)
391. B. S. Moon, J. A. Katzenellenbogen, G. J. Cheon, D. Y. Chi, K. C. Lee, G. I. An, Synthesis and Evaluation of Estrogen Receptor β -Selective Ligands: Fluoroalkylated Indazole Estrogens. *Bull. Korean Chem. Soc.*, **2008**, *29*, 1107-1114. (NO PMID #)
392. R. Paulmurugan, A. Tamrazi, J. A. Katzenellenbogen, B. S. Katzenellenbogen and S. S. Gambhir. A Human Estrogen Receptor (ER){ α } Mutation with Differential Responsiveness to Nonsteroidal Ligands: Novel Approaches for Studying Mechanism of ER Action, *Molec. Endocrinol.*, **2008**, *22*, 1552-1564. [PMID: 18451095/PMC2453600](#)
393. J. R. Gunther, T.W. Moore, M. L. Collins, J. A. Katzenellenbogen. Amphipathic Benzenes are Designed Inhibitors of the Estrogen Receptor Alpha/Steroid Receptor Coactivator Interaction, *ACS Chem Bio*, **2008**, *5*, 282-286. [PMID: 18484708/PMC2427189/NIHMS49596](#)
394. E. E. Parent, C. S. Dence, Terry L. Sharp, M. J. Welch, J. A. Katzenellenbogen. 7α -[^{18}F]Fluoromethyl-dihydrotestosterone and 7α -[^{18}F]Fluoromethyl-nortestosterone: Ligands to Determine the Role of Sex Hormone Binding Globulin for Steroidal Radiopharmaceuticals, *J. Nucl. Med.*, **2008** *49*, 987-994. [PMID: 18483103](#)
395. F. Dehdashti, J. E. Mortimer, K. Trinkaus, M. J. Naughton, M. Ellis, J. A. Katzenellenbogen, M. J. Welch, B. A. Siegel. PET-Based Estradiol Challenge as a Predictive Biomarker of Response to Endocrine Therapy in Women with Estrogen-Receptor-Positive Breast Cancer. *Breast Cancer Res Treat*, **2009**, *113*, 509-517. [PMID: 18327670](#) [PMCID: PMC3883567](#)
396. R. A. Alyea, S. E. Laurence, S. H. Kim, B. S. Katzenellenbogen, J. A. Katzenellenbogen, C. S. Watson. The Roles of Membrane Estrogen Receptor Subtypes in Modulating Dopamine Transporters in PC-12 Cells. *J. Neurochem.*, **2008**, *106*, 1525-1533. [PMID: 18489713/PMC2574842/NIHMS56845](#)
397. M. Jeyakumar, P. Webb, J. D. Baxter, T. S. Scanlan, J. A. Katzenellenbogen. Quantification of Ligand-Regulated Nuclear Receptor Corepressor and Coactivator Binding, Key Interactions Determining Ligand Potency and Efficacy for the Thyroid Hormone Receptor. *Biochem.*, **2008**, *47*, 7465-7476. [PMID: 18558711/PMC2574600/NIHMS57470](#)
398. D. Zhou, T. L. Sharp, N. M. Fetting, H. Lee, J. S. Lewis, J. A. Katzenellenbogen, M.J. Welch. Evaluation of a Bromine-76-Labeled Progesterone 16 α , 17 α -Dioxolane for Breast Tumor Imaging and Radiotherapy: In Vivo Biodistribution and Metabolic Stability Studies. *Nucl Med Biol.*, **2008** *35*, 655-663. [PMID: 18678350](#)

[PMC2612641](#)

399. Z. Madak-Erdogan, K. J. Kieser, S.H. Kim, B. Komm, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Nuclear and Extranuclear Pathway Inputs in the Regulation of Global Gene Expression by Estrogen Receptors. *Mol. Endocrinol.* **2008**, *22*, 2116-2127. [PMID: 18617595/PMC2631368](#)
400. A. L. LaFrate, J. R. Gunther, K. E. Carlson, and J. A. Katzenellenbogen. Synthesis and Biological Evaluation of Guanylylhydrazone Coactivator Binding Inhibitors for the Estrogen Receptor, *Biorg. Med. Chem.*, **2008**, *16*, 10075-10084. [PMID: 18976929/PMC2613833/NIHMS82852](#)
401. S. H. Kim, J. R. Gunther, and J. A. Katzenellenbogen. Nonclassical SNAPFL Analog as a Cy5 Resonance Energy Transfer Partner, *Organic Letters*, **2008**, *10*, 4931-4934. [PMID: 18841988/PMC2787200](#)
[NIHMS79501](#)
402. A. A. Parent, J. R. Gunther, and J. A. Katzenellenbogen. Blocking Estrogen Signaling After the Hormone: Pyrimidine-Core Inhibitors of Estrogen Receptor-Binding, *J. Med. Chem.*, **2008**, *51*, 6512-6530. [PMID: 18785725](#) [PMC2680390/NIHMS79500](#)
403. B. G. Trogden, S. H. Kim, S. Lee, J. A. Katzenellenbogen. Tethered Indoles as Functionalizable Ligands for the Estrogen Receptor, *Biorg. Med. Chem. Lett.*, **2009**, *19*, 485-488. [PMID: 19059778/PMC2680426/NIHMS112693](#)
404. S. H. Kim, P. Ge, and J. A. Katzenellenbogen. A New Quinoline Sensitizer-Centered Lanthanide Chelate and Its Use for Protein Labeling on Ni-NTA Beads for TR LRET Assays. *Chem. Commun.*, **2009**, *2*, 183-185. [PMID: 19099062](#) [PMC2743944](#)
405. H. B. Zhou, K. E. Carlson, F. Stossi, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Analogs of Methyl-Piperidinopyrazole (MPP): Antiestrogens with Estrogen Receptor α Selective Activity. *Biorg. Med. Chem. Lett.*, **2009**, *19*, 108-110. [PMID: 19014882/PMC2711511/NIHMS112714](#)
406. M. Jeyakumar and J. A. Katzenellenbogen. A Dual-Acceptor Time-Resolved Föster Resonance Energy Transfer Assay for Simultaneous Determination of Thyroid Hormone Regulation of Corepressor and Coactivator Binding to the Thyroid Hormone Receptor: Mimicking the Cellular Context of Thyroid Hormone Action, *Anal. Biochem.*, **2009**, *386*, 73-78. [PMID: 19111515/PMC2701686/NIHMS12800](#)
407. J. R. Gunther, Y. Du, E. Rhoden, I. Lewis, B. Revenaugh, T. W. Moore, S. H. Kim, R. Dingleline, H. Fu, and J. A. Katzenellenbogen. A Set of Time-Resolved Fluorescence Resonance Energy Transfer Assays or the Discovery of Inhibitors of Estrogen Receptor-Coactivator Binding, *J. Biomol. Screening*, **2009**, *14*, 181-193. [PMID: 19196699/PMC2731238/NIHMS137699](#)
408. M. Asim, M. El-Salfiti, Z. Qian, C. Choueiri, S. Salari, J. Cheng, H. Shadnia, M. Bal, C. Pratt, K. E. Carlson, J. A. Katzenellenbogen, J. S. Wright, T. Durst. Deconstructing the estradiol ABCD ring structure: A new family of A-CD compounds which are potent and subtype-selective estrogen receptor agonists, *Bioorg Med Chem Lett.*, **2009**, *19*, 1250-1253. [PMID: 19167882/NIHMS100547](#)
409. F. Minutolo, S. Bertini, C. Granchi, T. Marchitello, G. Prota, S. Rapposelli, T. Tuccinardi, A. Martinelli, J. R. Gunther, K. E. Carlson, J. A. Katzenellenbogen, M. Macchia. Structural Evolutions of Salicylaldoximes as Selective Agonists for Estrogen Receptor β , *J. Med. Chem.*, **2009**, *52*, 858-867. [PMID: 19128016](#)
410. B. C. Lee, C. S. Dence, H. Zhou, E. E. Parent, M. J. Welch and J. A. Katzenellenbogen. Fluorine-18 Labeling and Biodistribution Studies on Peroxisome Proliferator-Activated Receptor-Gamma (PPAR γ) Ligands: Potential Positron Emission Tomography (PET) Imaging Agents. *Nuc. Med. Bio.*, **2009**, *36*, 147-53. [PMID:19217526/NIHMS154139](#) [PMCID: PMC2774759](#)
411. J. R. Gunther, A. A. Parent, J. A. Katzenellenbogen. Alternative Inhibition of Androgen Receptor Signaling: Peptidomimetic Pyrimidines as Direct Androgen Receptor/Coactivator Disruptors. *ACS Chem. Biol.*, **2009**, *4*, 435-440. [PMID: 19441848/NIHMS117747](#) [PMCID: PMC2941991](#)
412. A. L. LaFrate, K. E. Carlson, J. A. Katzenellenbogen. Steroidal Bivalent Ligands for the Estrogen Receptor: Design, Synthesis, Characterization and Binding Affinities. *Bioorg. Med. Chem.*, **2009**, *17*, 3528-3535. [PMID: 19394231/NIHMS118596](#) [PMCID: PMC3178464](#)
413. M. Waibel, K. J. Kieser, K. E. Carlsons, F. Stossi, B. S. Katzenellenbogen and J. A. Katzenellenbogen. Phenethyl Pyridines with Non-Polar Internal Substituents as Selective Ligands for Estrogen Receptor Beta. *Eur. J. Med. Chem.*, **2009**, *44*, 3560-3570. [PMID: 19286283/NIHMS97418](#) [PMCID: PMC3176332](#)
414. B. S. Moon, K. E. Carlson, J. A. Katzenellenbogen, T. H. Choi, D. Y. Chi, J. Y. Kim, G. J. Cheon, H. Y. Koh, K. C. Lee, G. An. Synthesis and Evaluation of Aryl-Substituted Diarylpropionitriles, Selective Ligands for Estrogen Receptor Beta, as Positron-Emission Tomographic Imaging Agents. *Bioorg Med Chem.* **2009**, *17*, 3479-3488. [PMID: 19359182](#)

415. D. Zhou, H. B. Zhou, C. C. Jenks, J. S. Lewis, J. A. Katzenellenbogen, M. Welch. Bromination from the Macroscopic Level to the Tracer Radiochemical Level: (76)Br Radiolabeling of Aromatic Compounds via Electrophilic Substitution. *Bioconj. Chem.*, **2009**, *20*, 808-816. [PMID:19260733/PMC2743097/NIHMS99981/](#)
416. M. Waibel, M. De Angelis, F. Stossi, K. J. Kieser, B. S. Katzenellenbogen and J. A. Katzenellenbogen. Bibenzyl- and Stilbene-Core Compounds with Non-Polar Linker Atom Substituents as Selective Ligands for Estrogen Receptor Beta. *Eur. J. Med. Chem.*, **2009**, *44*, 3412-3424. [PMID: 19286283/NIHMS104389](#) PMCID: PMC3175689
417. A. B. Williams, P. T. Weiser, R. N. Hanson, J. R. Gunther, J. A. Katzenellenbogen. Synthesis of Biphenyl Proteomimetics as Estrogen Receptor-Alpha Coactivator Binding Inhibitors. *Org. Lett.*, **2009**, *11*, 5370-5373. [PMID: 19902964](#) PMCID: PMC3263526
418. M. Asim, M. El-Salfiti, Y. Qian, C. Choueiri, S. Salari, J. Cheng, H. Shadnia, M. Bal, M. A. Christine Pratt, K. E. Carlson, J. A. Katzenellenbogen, J. S. Wright, T. Durst. Deconstructing Estradiol: Removal of B-ring Generates Compounds which are Potent and Subtype-Selective Estrogen Receptor Agonists. *Bioorg. Med. Chem. Lett.*, **2009**, *19*, 1250-1253. [PMID: 19167882](#)
419. J. H. Lee, H. B. Zhou, C. S. Dence, K. E. Carlson, M. J. Welch, J. A. Katzenellenbogen. Development of [F-18]fluorine-substituted tanaproget as a progesterone receptor imaging agent for positron emission tomography. *Bioconjug. Chem.* **2010**, *21*, 1096-1104. [PMID: 20496889](#)
420. K. J. Kieser, D. W. Kim, K. E. Carlson, B. S. Katzenellenbogen, J. A. Katzenellenbogen. Characterization of the Pharmacophore Properties of Novel Selective Estrogen Receptor Downregulators (SERDs). *J. Med. Chem.* **2010**, *53*, 3320-3329. [PubMed PMID: 20334372](#). PMCID: PMC2916745
421. T. H. Charn, E. T. Liu, E. C. Chang, Y. K. Lee, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Genome-Wide Dynamics of Chromatin Binding of Estrogen Receptors Alpha and Beta: Mutual Restriction and Competitive Site Selection. *Mol. Endocrinol.*, **2010**, *24*, 47-59. Epub 2009 Nov 6. [PMID: 19897598/PMC2802902](#)
422. H. B. Zhou, J. H. Lee, C. G. Mayne, K. E. Carlson, J. A. Katzenellenbogen. Imaging Progesterone Receptor in Breast Tumors: Synthesis and Receptor Binding Affinity of Fluoroalkyl-Substituted Analogues of Tanaproget, *J. Med. Chem.*, **2010**, *53*, 3349-3360. PubMed PMID: 20355713; [PMCID: PMC2884396](#)
423. S. H. Kim, J. R. Gunther, J. A. Katzenellenbogen. Monitoring a Coordinated Exchange Process in a Four-Component Biological Interaction System: Development of a Time-Resolved Terbium-Based One-Donor/Three-Acceptor Multicolor FRET System, *J. Am. Chem. Soc.*, **2010**, *132*, 4685-4692. [PMID: 20230029/PMCID: PMC2860875](#).
424. C.-M. Zeng, S. A. Kerrigan, J. A. Katzenellenbogen, C. Slocum, K. Gallacher, M. Shomali, C. R. Lyttle, G. Hattersley, C. P. Miller. Efficient Synthesis of (2R,3S)-2-Amino-3-(Benzyloxy)-4,4,4-Trifluorobutanoic Acid (4,4,4-Trifluoro-OBn-D-alloThreonine), *Tetrahedron Lett.*, **2010**, *51*, 5361-5363. PMID: 20636720
425. K. Chambliss, Q. Wu, S. Oltmann, E. Konaniah, M. Umetani, K. S. Korach, G. Thomas, C. Mineo, I. Yuhanna, S. H. Kim, Z. Madak-Erdogan, A. Maggi, S. Dineen, C. Roland, D. Hui, R. Brekken, J. A. Katzenellenbogen, B. S. Katzenellenbogen, P. W. Shaul. Non-Nuclear Estrogen Receptor Alpha Signaling Promotes Cardiovascular Protection but not Uterine or Breast Cancer Growth in Mice. *J. Clin. Invest.*, **2010**, *120*, 2319-2330. [PMID: 20577047/PMCID: PMC2898582](#)
426. W. P. S. Wong, J. P. Tiano, M. L. Oeser, S. Liu, C. Le May, S. Dalle, M. Hu, J. E. Gunton, J. A. Katzenellenbogen, E. R. Simpson, K. S. Korach, J. L. Jameson, F. Mauvais-Jarvis. Extranuclear Estrogen Receptor-Alpha Stimulates NeuroD1 Binding to the Insulin Promoter and Favors Insulin Synthesis, *PNAS*, **2010**, *107*, 13057-13062. [PMID: 20616010/PMCID: PMC2919966](#)
427. N. C. Ackroyd, J. A. Katzenellenbogen. Pyridyl-Cyclopentadiene Re (CO)(2)(+) Complexes as a Compact Core System for SPECT Ligand Development, *Organometallics*, **2010**, *29*, 3669-3671. [PMID: 20865134/PMCID: PMC2942762](#)
428. T. W. Moore, J. R. Gunther, J. A. Katzenellenbogen. Probing the Topological Tolerance of Multimeric Protein Interactions: Evaluation of an Estrogen/Synthetic Ligand for FK506 Binding Protein Conjugate, *Bioconjug. Chem.*, **2010**, *21*, 1880-1889. [PMID: 20919698/PMC2967433/NIH242378](#)
429. S. L. Neese, D. L. Korol, J. A. Katzenellenbogen, S. L. Schant. Impact of Estrogen Receptor Alpha and Beta Agonists on Delayed Alternation in Middle-Aged Rats. *Horm. Behav.*, **2010**, *8*, 878-890. [PMID: 20816967/PMCID: PMC2982874](#)

430. J. B. Bruning, A. A. Parent, G. Gil, M. Zhao, J. Nowak, M. C. Pace, C. L. Smith, P. V. Afonine, P. D. Adams, J. A. Katzenellenbogen, K. W. Nettles. Coupling of Receptor Conformation and Ligand Orientation Determine Graded Activity, *Nat. Chem. Bio.*, **2010**, *6*, 837-843. [PMID: 20924370/PMCID: PMC2974172](#)
431. J. S. Wright, H. Shadnia, J. M. Anderson, T. Durst, M. Asim, M. El-Salfiti, C. Choueiri, M. A. Pratt, S. C. Ruddy, R. Lau, K. E. Carlson, J. A. Katzenellenbogen, P. J. O'Brien, L. Wan. A-CD Estrogens. I. Substituent Effects, Hormone Potency, and Receptor Subtype Selectivity in a New Family of Flexible Estrogenic Compounds. *J. Med. Chem.*, **2010**, *54*, 433-448. [PMID: 21190382](#)
432. J. Santollo, B. S. Katzenellenbogen, J. A. Katzenellenbogen, L. A. Eckel. Activation of ER α is Necessary for Estradiol's Anorexigenic Effect in Female Rats. *Horm. Behav.*, **2010**, *58*, 872-877. [PMCID: PMC2982904](#)
433. S.-J. Cheong, D.R. Jang, H.-J. Jeon, S. T. Lim, M.-H. Sohn, J. A. Katzenellenbogen and D. W. Kim. Reduction of Sodium Iodide Symporter Expression by Estrogen Receptor Ligands in Breast Cancer Cells. *J. Med. Chem.*, **2011**, *38*, 287-294. [PMID: 21315285 \[PubMed - in process\]](#)
434. M. Jeyakumar, K. E. Carlson, J. R. Gunther, and J. A. Katzenellenbogen. Exploration of Dimensions of Estrogen Potency: Parsing Ligand Binding and Coactivator Binding Affinities. *J. Bio. Chem.*, **2011**, *286*, 12971-12982. PMID: 21321128 PMCID: PMC3075970
435. K. Saijo, J.G. Collier, A.C. Li, J. A. Katzenellenbogen, C. K. Glass. An ADIOL-ER β -CtBP Transrepression Pathway Negatively Regulates Microglia-Mediated Inflammation. *Cell*, **2011**, *145*, 584-595. [PMID:21565615](#) PMCID:PMC3433492
436. S. Bertini, A. De Cupertinis, C. Granchi, B. Bargagli, T. Tuccinardi, A. Martinelli, M. Macchia, J. R. Gunther, K. E. Carlson, J. A. Katzenellenbogen, F. Minutolo. Selective and Potent Agonists for Estrogen Receptor Beta Derived from Molecular Refinements of Salicylaldoximes. **2011**, *46*, 2453-62. [PMCID: PMC3088081](#) [NIHMSID: NIHMS286968](#)
437. A. Sun, T. W. Moore, J. R. Gunther, M. S. Kim, E. Rhoden, Y. Du, H. Fu, J. P. Snyder, J. A. Katzenellenbogen. Discovering Small-Molecule Estrogen Receptor α /Coactivator Binding Inhibitors: High-Throughput Screening, Ligand Development, and Models for Enhanced Potency. *ChemMedChem*, **2011**, *6*, 654-666. [PMID: 21365764](#) PMCID: PMC3177402
438. R. Paulmurugan, A. Tamrazi, T. F. Massoud, J. A. Katzenellenbogen, S. S. Gambhir. In Vitro and in Vivo Molecular Imaging of Estrogen Receptor α and β Homo- and Heterodimerization: Exploration of New Modes of Receptor Regulation. *Mol. Endocrinol.* **2011**, *25*, 2029-2040. Epub 2011 Nov 3. [PubMed PMID: 22052998](#) PMCID: PMC3231840
439. M. J. McLachlan, J. A. Katzenellenbogen, H. Zhao. A New Fluorescence Complementation Biosensor for Detection of Estrogenic Compounds. *Biotechnol Bioeng.* **2011**, *108*, 2794-803. Epub 2011 Aug 4. [PMID: 21732327/PMCID: PMC3210473](#).
440. J. A. Katzenellenbogen. The 2010 Philip S. Portoghese Medicinal Chemistry Lectureship: Addressing the "Core Issue" in the Design of Estrogen Receptor Ligands. *J Med. Chem.* **2011**, *54*, 5271-5282. [PMID: 21707083; PMCID: PMC3150643](#).
441. V. M. Carroll, M. Jeyakumar, K. E. Carlson, J. A. Katzenellenbogen. Diarylpropionitrile (DPN) Enantiomers: Synthesis and Evaluation of Estrogen Receptor Beta-Selective Ligands. *J. Med. Chem.* **2012**, *55*, 528-537. [PubMed PMID: 22122563](#) PMCID: PMC3381613
442. P. Wang, J. Min, J. C. Nwachukwu, V. Cavett, K. E. Carlson, P. Guo, M. Zhu, Y. Zheng, C. Dong, J. A. Katzenellenbogen, K. W. Nettles, H-B Zhou. Identification and Structure-Activity Relationships of a Novel Series of Estrogen Receptor Ligands Based on 7-Thiabicyclo[2.2.1]hept-2-ene-7-oxide. *J. Med. Chem.*, **2012**, *55*, 2324-2341. [PMID: 22283328/PMCID :PMC3297713](#)
443. A.M. Fowler, S.R. Chan, T.L. Sharp, N.M. Fettig, D. Zhou, C.S. Dence, K.E. Carlson, M. Jeyakumar, J.A. Katzenellenbogen, R.D. Schreiber, M. J. Welch. Small-Animal PET of Steroid Hormone Receptors Predicts Tumor Response to Endocrine Therapy Using a Preclinical Model of Breast Cancer. *J Nucl Med.* **2012**, *53*, 1119-1126. PubMed PMID: 22669982 PMCID: PMC3956595
444. M. Asim, D. Klonowska, C. Choueiri, I. Korobkov, K. E. Carlson, J. A. Katzenellenbogen, T. Durst. BC-Spiro-Estradiols. Synthesis and Estrogen Receptor Binding Affinity of Four New Estradiol Isomers. *Bioorg Med Chem Lett.* **2012**, *22*, 3713-3717. PubMed PMID: 22546676.
445. Y. Zheng, M. Zhu, S. Srinivasan, J. C. Nwachukwu, V. Cavett, J. Min, K. E. Carlson, P. Wang, C. Dong, J. A. Katzenellenbogen, K. W. Nettles, H. B. Zhou. Development of Selective Estrogen Receptor Modulator (SERM)-Like Activity Through an Indirect Mechanism of Estrogen Receptor Antagonism: Defining the

- Binding Mode of 7-Oxabicyclo[2.2.1]hept-5-ene Scaffold Core Ligands. *ChemMedChem*. **2012** 7, 1094-1100. PubMed PMID: 22517684 PMCID: PMC4301955 NIHMSID: NIHMS644299
446. F. Dehdashti, R. Laforest R, F. Gao, R. L. Aft, C. S. Dence, D. Zhou, K. I. Shoghi, B. A. Siegel, B.A. Katzenellenbogen, J. A. Katzenellenbogen, M. J. Welch. Assessment of Progesterone Receptors in Breast Carcinoma by PET with 21-18F-fluoro-16 α ,17 α -[(R)-(1'- α -furylmethylidene)dioxy]-19-norpregn-4-ene-3,20-dione. *J. Nucl. Med.* **2012** 53, 363-370. PubMed PMID: 22331216/PMCID: PMC3595048 NIHMSID: NIHMS443339
447. D. Zeng, N.S. Lee, Y. Liu, D. Zhou, C. S. Dence, K. L. Wooley, J. A. Katzenellenbogen, M. J. Welch, (64)Cu Core-Labeled Nanoparticles with High Specific Activity via Metal-Free Click Chemistry. *ACS Nano*. **2012**, 6, 5209-5219 PubMed PMID: 22548282/PMCID: PMC3383893
448. J. H. Lee, O. Peters, L. Lehmann, C. S. Dence, T. L. Sharp, K. E. Carlson, D. Zhou, M. Jeyakumar, M. J. Welch, J. A. Katzenellenbogen. Synthesis and biological evaluation of two agents for imaging estrogen receptor β by positron emission tomography: challenges in PET imaging of a low abundance target. *Nucl Med Biol*. **2012**, 39, 1105-1116. PubMed PMID: 22749433; PubMed Central PMCID: PMC3465515.
449. M. Zhu, C. Zhang, J. C. Nwachukwu, S. Srinivasan, V. Cavett, Y. Zheng, K. E. Carlson, C. Dong, J. A. Katzenellenbogen, K. W. Nettles, H. B. Zhou. Bicyclic core estrogens as full antagonists: synthesis, biological evaluation and structure-activity relationships of estrogen receptor ligands based on bridged oxabicyclic core arylsulfonamides. *Org Biomol Chem*. **2012**, 10, 8692-700. PubMed PMID: 23033157 PMCID: PMC3500388
450. E. Seppehr, M. Lebl-Rinnova, M. K. Mann, S. L. Pisani, M. I. Churchwell, D. L. Korol, J. A. Katzenellenbogen, D. R. Doerge. Pharmacokinetics of the estrogen receptor subtype-selective ligands, PPT and DPN: Quantification using UPLC-ES/MS/MS. *J Pharm Biomed Anal*. **2012** 71, 119-126. PubMed PMID: 22981216 PMCID: PMC3509942
451. Y. Kim, S. H. Kim, D. Ferracane, J. A. Katzenellenbogen, C. M. Schroeder. Specific Labeling of Zinc Finger Proteins using Noncanonical Amino Acids and Copper-Free Click Chemistry. *Bioconjug Chem*. **2012**, 23, 1891-1901. PubMed PMID: 22871171; PubMed Central PMCID: PMC3462365.
452. Y. Kim, S. H. Kim, M. Tanyeri, J. A. Katzenellenbogen, C. M. Schroeder. Dendrimer Probes for Enhanced Photostability and Localization in Fluorescence Imaging. *Biophys J.*, **2013**, 104, 1566-1575. PMID: 23561533 PMCID: PMC3617423
453. S. M. Bartell, L. Han, H. N. Kim, S. H. Kim, J. A. Katzenellenbogen, B. S. Katzenellenbogen, K. L. Chambliss, P. W. Shaul, P. K. Roberson, R. S. Weinstein, R. L. Jilka, M. Almeida, S. C. Manolagas. Non-nuclear-initiated actions of the estrogen receptor protect cortical bone mass. *Mol Endol*, **2013**, 27, 649-656. PMID: 23443267/PMCID: PMC3607700
455. S. Srinivasan, J. C. Nwachukwu, A. A. Parent, V. Cavett, J. Nowak, T. S. Hughes, D. J. Kojetin, J. A. Katzenellenbogen, K. W. Nettles. Ligand-Binding Dynamics Rewire Cellular Signaling via Estrogen Receptor- α . *Nat Chem Biol.*, **2013**, 9, 326-332. PMID: 23524984/ PMCID: PMC3631275.
456. M. Shan, K. E. Carlson, A. Bujotzek, A. Wellner, R. Gust, M. Weber, J. A. Katzenellenbogen, R. Haag. Nonsteroidal Bivalent Estrogen Ligands: An Application of the Bivalent Concept to the Estrogen Receptor. *ACS Chem. Bio.*, **2013**, 8, 707-715. PMID: 23312071/ PMCID: PMC3631453.
457. J. Min, P. Wang, S. Srinivasan, J. C. Nwachukwu, P. Guo, M. Huang, K. E. Carlson, J. A. Katzenellenbogen, K. W. Nettles, and H-B Zhou. Thiophene-Core Estrogen Receptor Ligands Having Superagonist Activity. *J Med Chem*, **2013**, 56, 3346-3466. PMID: 23586645/PMCID: PMC3666579.
458. Z. Madak-Erdogan, T. H. Charn, Y. Jiang, E. T. Liu, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Integrative Genomics of Gene and Metabolic Regulation by Estrogen Receptors α and β , and their Coregulators. *Mol Syst Biol*. **2013**, 9, 676. PMID: 23774759 PMCID: PMC3964312
459. J. S. Wright, J. M. Anderson, H. Shadnia, T. Durst, J. A. Katzenellenbogen. Experimental Versus Predicted Affinities for Ligand Binding to Estrogen Receptor: Iterative Selection and Rescoring of Docked Poses Systematically Improves the Correlation. *J Comput Aided Mol Des*, **2013**, 27, 707-721. PMID: 23975271
460. P. Fan, O. L. Griffith, F. Agboke, P. Anur, X. Zou, R. E. McDaniel, K. Creswell, S. H. Kim, J. A. Katzenellenbogen, J. W. Gray, V. C. Jordan. c-Src Modulates Estrogen-Induced Stress and Apoptosis in Estrogen-Deprived Breast Cancer Cells. *Cancer Res*. **2013**, 73, 4510-4520. PMID: 23704208 PMCID: PMC3715569

461. V. Saint-Criq, S. H. Kim, J. A. Katzenellenbogen, B. J. Harvey. Non-Genomic Estrogen Regulation of Ion Transport and Airway Surface Liquid Dynamics in Cystic Fibrosis Bronchial Epithelium. *PLoS One*, **2013**, *8*, e78593. PMID: 24223826 PMCID: PMC3817220
462. Y. Jiang, P. Gong, Z. Madak-Erdogan, T. Martin, M. Jeyakumar, K. E. Carlson, I. Khan, T. J. Smillie, A. G. Chittiboyina, S. C. Rotte, W. G. Helferich, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Mechanisms Enforcing the Estrogen Receptor β Selectivity of Botanical Estrogens. *FASEB J.*, **2013**, *27*, 4406-4418. PMID: 23882126 PMCID: PMC3804744
463. H. Xing, L. Tang, X. Yang, K. Hwang, W. Wang, Q. Yin, N. Y. Wong, L. W. Dobrucki, N. Yasui, J. A. Katzenellenbogen, W. G. Helferich, J. Cheng, Y. Lu Y. Selective Delivery of an Anticancer Drug with Aptamer-Functionalized Liposomes to Breast Cancer Cells in Vitro and in Vivo. *J Mater Chem B Mater Biol Med.* **2013**, *1*:5288-5297. PMID: 24159374; PubMed Central PMCID: PMC3800741.
464. M. Adlanmerini, R. Solinhac, A. Abot, A. Fabre, I. Raymond-Letron, A.-L. Guihot, F. Boudou, L. Sautier, E. Vessieres, S. H. Kim, P. Liere, C. Fontaine, A. Krust, P. Chambon, J. A. Katzenellenbogen, P. Gourdy, P. W. Shaul, D. Henrion, J.-F. Arnal, and F. Lenfant. Mutation of the Palmitoylation Site of Estrogen Receptor {Alpha} In Vivo Reveals Tissue-Specific Roles for Membrane Versus Nuclear Actions. *PNAS*, **2014**, *111*, E283-290E. PMID: 24371309 PMCID: PMC3896153
465. J. C. Nwachukwu, S. Srinivasan, N. E. Bruno, A. A. Parent, T. S. Hughes, J. A. Pollock, O. Gjyshi, V. Cavett, J. Nowak, R. D. Garcia-Ordenez, R. Houtman, P. R. Griffin, D. J. Kojetin, J. A. Katzenellenbogen, M. D. Conkright, K. W. Nettles. Resveratrol modulates the inflammatory response via an estrogen receptor-signal integration network. *eLIFE*, **2014**, *10*, 7554. PMID: 24771768 PMCID: PMC4017646
466. Z. Q. Liao, C. Dong, K. E. Carlson, S. Srinivasan, J. C. Nwachukwu, R. W. Chesnut, A. Sharma, K. W. Nettles, J. A. Katzenellenbogen, H. B. Zhou. Triaryl-Substituted Schiff Bases are High-Affinity Subtype-Selective Ligands for the Estrogen Receptor. *J. Med. Chem.*, **2014**, *57*, 3532-3545. PMID: 24708493 PMCID: PMC4002130
467. S. E. Royston, N. Yasui, A. G. Kondilis, S. V. Lord, J. A. Katzenellenbogen, M. M. Mahoney. ESR1 and ESR2 Differentially Regulate Daily and Circadian Activity Rhythms in Female Mice. *Endocrinology*, **2014**, *155*, 2613-2623. PMID: 24735329
468. Z. Li, K. Chen, X. Jiao, C. Wang, N. E. Willmarth, M. C. Casimiro, W. Li, X. Ju, S. H. Kim, M. P. Lisanti, J. A. Katzenellenbogen, R. G. Pestell. Cyclin D1 Integrates Estrogen-Mediated DNA Damage Repair Signaling. *Cancer Res.*, **2014**, *74*, 3959-3970. PMID: 24830723 PMCID: PMC4102655
469. A. A. Parent, D. H. Ess, J. A. Katzenellenbogen. π - π Interaction Energies as Determinants of the Photodimerization of Mono-, Di- and Triazastilbenes. *JOC*, **2014**, *79*, 5448-5462. PMID: 24837276 PMCID: PMC4076016
470. D. Zhou, M. Lin, N. Yasui, M. H. Al-Qahtani, C. S. Dence, S. Schwarz, J. A. Katzenellenbogen. Optimization of the Preparation of Fluorine-18-Labeled Steroid Receptor Ligands 16alpha-[18F]Fluoroestradiol (FES), [18F]Fluoro Furanyl Norprogesterone (FFNP), and 16beta-[18F]Fluoro-5alpha-Dihydrotestosterone (FDHT) as Radiopharmaceuticals. *J Labelled Comp Radiopharm.*, **2014**, *57*, 371-377. PMID: 24861984 PMCID: PMC4138509
471. H. Aguilar, A. Urruticoechea, P. Halonen, K. Kiyotani, T. Mushiroda, X. Barril, J. Serra-Musach, A. Islam, L. Caizzi, L. Di Croce, E. Nevedomskaya, W. Zwart, J. Bostner, E. Karlsson, G. Pérez Tenorio, T. Fornander, D. C. Sgroi, R. Garcia-Mata, M. P. H. M. Jansen, N. Garcia, N. Bonifaci, F. Climent, M. T. Soler, A. Rodriguez-Vida, M. Gil, J. Brunet, G. Martrat, L. Gomez-Baldo, A. I. Extremera, A. Figueras, J. Balart, R. Clarke, K. L. Burnstein, K. E. Carlson, J. A. Katzenellenbogen, M. Vizoso, M. Esteller, A. Villanueva, A. B. Rodriguez-Peña, X. R. Bu. VAV3 Mediates Resistance to Breast Cancer Endocrine Therapy. *Breast Cancer Res*, **2014**, *16*, R53. PMID: 24886537 PMCID: PMC4076632
472. C. Dabrota, M. Asim, C. Choueiri, A. Gargaun, I. Korobkov, A. Butt, K. E. Carlson, J. A. Katzenellenbogen, J. S. Wright, T. Durst. Synthesis and Receptor Binding in Trans-CD Ring-Fused A-CD Estrogens: Comparison with the Cis-Fused Isomers. *Bioorg Med Chem Lett.*, **2014**, *24*, 3841-3844. PMID: 25027938 PMCID: PMC4249688

473. A. Abot, C. Fontaine, M. Buscato, R. Solinhac, G. Flouriot, A. Fabre, A. Drougard, S. Rajan, M. Laine, A. Milon, I. Muller, D. Henrion, M. Adlanmerini, M. C.Valéra, A. Gompel, C. Gerard, C. Péqueux, M. Mestdagt, I. Raymond-Letron, C. Knauf, F. Ferriere, P. Valet, P. Gourdy, B. S. Katzenellenbogen, J.A. Katzenellenbogen, F. Lenfant, G. L. Greene, J. M. Foidart, J. F. Arnal. The Uterine and Vascular Actions of Estetrol Delineate a Distinctive Profile of Estrogen Receptor α Modulation, Uncoupling Nuclear and Membrane Activation. *EMBO Mol Med.*, **2014**, *6*, 1328-1346. PMID: 25214462 PMCID: PMC4287935
474. D. Zhou, S. H. Kim, V. M. Carroll, C. S. Dence, J. A. Katzenellenbogen. Utilizing Electrostatic Interactions to Facilitate F-18 Radiolabeling of Poly(Amido)Amine (PAMAM) Dendrimers. *Org Biomol Chem.*, **2014**, *12*, 8696-8701. PMID: 25254430
475. P. Gong, Z. Madak-Erdogan, J. Li, J. Cheng, C. M. Greenlief, W. G. Helferich, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Transcriptomic analysis identifies gene networks regulated by estrogen receptor α (ER α) and ER β that control distinct effects of different botanical estrogens. *Nucl. Recept. Signal*, **2014**, *12*, 1-13. PMID: 25363786 PMCID: PMC4193135
476. S. M. Moore, A. J. Khalaj, S. Kumar, Z. Winchester, J. Yoon, T. Yoo, L. Martinez-Torres, N. Yasui, J. A. Katzenellenbogen, S. K. Tiwari-Woodruff. Multiple functional therapeutic effects of the estrogen receptor β agonist indazole-Cl in a mouse model of multiple sclerosis. *Proc Natl Acad Sci USA*, **2014**, *111*, 18061-18066. PMID: 25453074 PMCID: PMC4273334
477. I. Paterni, C. Granchi, J. A. Katzenellenbogen, F. Minutolo. Estrogen Receptors Alpha (ER α) and Beta (ER β): Subtype-Selective Ligands and Clinical Potential. *Steroids*, **2014**, *90*, 13-29. PMID: 24971815 PMCID: PMC4192010
478. S. R. Chan, A. M. Fowler, J. A. Allen, D. Zhou, C. Dence, T. Sharp, N. M. Fettig, F. Dehdashti, J. A. Katzenellenbogen. Longitudinal Noninvasive Imaging of Progesterone Receptor as a Predictive Biomarker of Tumor Responsiveness to Estrogen Deprivation Therapy. *Clin Cancer Res*, **2015**, *21*, 1063-1070. PMID: 25520392
479. I. Paterni, S. Bertini, C. Granchi, T. Tuccinardi, M. Macchia, A. Martinelli, I. Caligiuri, G. Toffoli, F. Rizzolio, K. E. Carlson, B. S. Katzenellenbogen, J. A. Katzenellenbogen, F. Minutolo. Highly Selective Salicylketoxime-Based Estrogen Receptor β Agonists Display Antiproliferative Activities in a Glioma Model. *J. Med. Chem.*, **2015**, *58*, 1184-1194. PMID: 25559213
480. Y. Zhao, P. Gong, Y. Chen, J. C. Nwachukwu, S. Srinivasan, C. M. Ko, M. K. Bagchi, R. N. Taylor, K. S. Korach., K.W. Nettles, J. A. Katzenellenbogen, and B.S. Katzenellenbogen. Dual Suppression of Estrogenic and Inflammatory Activities for Targeting of Endometriosis. *Sci Transl Med.* **2015**, *7*, 1-15. PMID: 25609169
481. D. Zhou, W. Chu, X. Peng, J. McConathy, R. H. Mach, J. A. Katzenellenbogen. Facile purification and click labeling with 2-[18F]fluoroethyl azide using solid phase extraction cartridges. *Tetrahedron Ltrs*, **2015**, *56*, 952-954. PMID: 25520392 PMCID: PMC4348221
482. A. Bosch, Z. Li, A. Bergamaschi, H. Ellis, E. Toska, A. Prat, J. J. Tao, D. E. Spratt, N. T. Viola-Villegas, P. Castel, G. Minuesa, N. Morse, J. Rodón, Y. Ibrahim, J. Cortes, J. Perez-Garcia, P. Galvan, J. Grueso, M. Guzman, J. A. Katzenellenbogen, M. Kharas, J. S. Lewis, M. Dickler, V. Serra, N. Rosen, S. Chandarlapaty, M. Scaltriti, J. Baselga. PI3K inhibition results in enhanced estrogen receptor function and dependence in hormone receptor-positive breast cancer. *Sci. Transl. Med.*, **2015**, *7*, 283ra51. PMID: 25877889 PMCID: PMC4433148
483. T. W. Moore, J. R. Gunther, J. A. Katzenellenbogen. Estrogen Receptor Alpha/Co-Activator Interaction Assay: TR-FRET. *Methods Mol. Biol*, **2015**, *1278*, 545-553. PMID: 25859975
484. S. H. Kim, Z. Madak-Erdogan, S. C. Bae, K. E. Carlson, C. G. Mayne, S. Granick, B. S. Katzenellenbogen, J. A. Katzenellenbogen. Ligand Accessibility and Bioactivity of a Hormone-Dendrimer Conjugate Depend on pH and pH History. *J. Am. Chem. Soc.*, **2015**, *137*, 10326-10335. PMID: 26186415
485. C. Granchi, Y. Qian, H. Y. Lee, I. Paterni, C. Pasero, J. Iegre, K. E. Carlson, T. Tuccinardi, X. Chen, J. A. Katzenellenbogen, P. J. Hergenrother, F. Minutolo. Salicylketoximes That Target Glucose Transporter 1 Restrict Energy Supply to Lung Cancer Cells. *Chem. Med. Chem.*, **2015**, *10*, 1892-1900. PMID: 26332543

486. J. A. Pollock, S. H. Kim, J. A. Katzenellenbogen. Imidoyl dichlorides as new reagents for the rapid formation of 2-aminobenzimidazoles and related azoles. *Tetrahedron Lett.*, **2015**, *56*, 6097-6099.
487. J. D. Durrant, K. E. Carlson, T. A. Martin, T. L. Offutt, C. G. Mayne, J. A. Katzenellenbogen, R. E. Amaro. Neural-Network Scoring Functions Identify Structurally Novel Estrogen-Receptor Ligands. *J. Chem. Inf. Model.*, **2015**, *55*, 1953-1961. PMID: 26286148 PMCID: PMC4780411
488. M. C. Valéra, C. Fontaine, F. Lenfant, C. Cabou, M. Guillaume, N. Smirnova, S. H. Kim, P. Chambon, J. A. Katzenellenbogen, B. S. Katzenellenbogen, B. Payrastra, J. F. Arnal. Protective Hematopoietic Impact of Estrogens in a Mouse Model of Thrombosis: Respective Roles of Nuclear vs Membrane Estrogen Receptor α . *Endocrinology*, **2015**, *156*, 4293-4301. PMID: 26280130
489. N. F. Smirnova, C. Fontaine, M. Buscato, A. Lupieri, A. Vinel, M. C. Valera, M. Guillaume, N. Malet, J. M. Foidart, I. Raymond-Letron, F. Lenfant, P. Gourdy, B. S. Katzenellenbogen, J. A. Katzenellenbogen, M. Laffargue, J. F. Arnal. The Activation Function-1 of Estrogen Receptor Alpha Prevents Arterial Neointima Development Through a Direct Effect on Smooth Muscle Cells. *Circ. Res.*, **2015**, *117*, 770-778. PMID: 26316608
490. D. Reilly, S. H. Kim, J. A. Katzenellenbogen, C. Schroeder. Fluorescent Nanoconjugate Derivatives with Enhanced Photostability for Single Molecule Imaging. *Anal. Chem.*, **2015**, *87*, 11048-11057. PMID: 26461122
491. N. Yasui, C. G. Mayne, J. A. Katzenellenbogen. Preparation of o-Fluorophenols from Nonaromatic Precursors: Mechanistic Considerations for Adaptation to Fluorine-18 Radiolabeling. *Org. Lett.*, **2015**, *17*, 5540-5543. PMID: 26536250
492. Z. Madak-Erdogan, P. Gong, Y. Zhao, L. Xu, K. Wrobel, J. Hartman, M. Wang, A. Cam, U. Iwaniec, R. Turner, N. Twaddle, D. Doerge, I. Khan, J. A. Katzenellenbogen, B. S. Katzenellenbogen, W. Helferich. Dietary Licorice Root Supplementation Improves Diet-Induced Weight Gain, Lipid Deposition and Hepatic Steatosis in Ovariectomized Mice without Stimulating Reproductive Tissues and Mammary Gland. *Mol. Nutr. Food Research*, **2016**, *60*, 369-380. PMID: 26555669 PMCID: PMC4738101
493. S. W. Fanning, C. G. Mayne, V. Dharmajajan, K. E. Carlson, T. A. Martin, S. J. Novick, W. Toy, B. Green, S. Panchamukhi, B. S. Katzenellenbogen, E. Tajikhorshid, P. R. Griffin, Y. Shen, S. Chandarlapaty, J. A. Katzenellenbogen, G. L. Griffin. Estrogen Receptor Alpha Somatic Mutations Y537S and D538G Confer Breast Cancer Endocrine Resistance by Stabilizing the Activating Function-2 Binding Conformation. *Elife*, **2016**, Epub ahead of print. PMID: 26836308 PMCID: PMC4821807
494. A. M. Fowler, A. S. Clark, J. A. Katzenellenbogen, H. M. Linden, F. Dehdashti. Imaging Diagnostic and Therapeutic Targets: Steroid Receptors in Breast Cancer. *J. Nucl. Med.*, **2016**, Supp 1:75S-80S. PMID: 26834106 PMCID: PMC4795822
495. R. Xiong, H. K. Patel, L. M. Gutgesell, J. Zhao, L. Delgado-Rivera, T. N. Pham, H. Zhao, K. E. Carlson, T. Martin, J. A. Katzenellenbogen, T. W. Moore, D. A. Tonetti, G. R. Thatcher. Selective Human Estrogen Receptor Partial Agonists (ShERPAs) for Tamoxifen-Resistant Breast Cancer. *J. Med. Chem.*, **2016**, *59*, 219-237. PMID: 26681208 PMCID: PMC4779956
496. S. L. Pisani, S. L. Neese, J. A. Katzenellenbogen, S. L. Schantz, D. L. Korol. Estrogen Receptor-Selective Agonists Modulate Learning in Female Rats in a Dose- and Task-Specific Manner. *Endocrinology*, **2016**, *157*, 292-303. PMID: 26465198 PMCID: PMC4701887
497. N. Boonmuen, P. Gong, Z. Ali, A. G. Chittiboyina, I. Khan, D. R. Doerge, W. G. Helferich, K. E. Carlson, T. Martin, P. Piyachaturawat, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Licorice root components in dietary supplements are selective estrogen receptor modulators with a spectrum of estrogenic and anti-estrogenic activities. *Steroids*, **2016**, *105*, 42-49. PMID: 26631549 PMCID: PMC4714869
498. Y. Zhao, Y. Chen, Y. Kuang, M. K. Bagchi, R. N. Taylor, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Multiple Beneficial Roles of Repressor of Estrogen Receptor Activity (REA) in Suppressing the Progression of Endometriosis. *Endocrinology*, **2016**, *157*, 900-912. PMID: 26653759 PMCID: PMC4733120
499. G. Navarro, W. Xu, D. A. Jacobson, B. Wicksteed, C. Allard, G. Zhang, K. De Gendt, S. H. Kim, H. Wu, H. Zhang, G. Verhoeven, J. A. Katzenellenbogen, F. Mauvais-Jarvis. Extranuclear Actions of the Androgen Receptor Enhance Glucose-Stimulated Insulin Secretion in the Male. *Cell Metabolism*, **2016**, *23*, 837-851.

500. J.C. Nwachukwu, S. Srinivasan, Y. Zheng, S. Wang, J. Min, C. Dong, Z. Liao, J. Nowak, N. J. Wright, R. Houtman, K. E. Carlson, J. S. Josan, O. Elemento, J. A. Katzenellenbogen, H. B. Zhou, K. W. Nettles. Predictive features of ligand-specific signaling through the estrogen receptor. *Mol Syst Biol.*, **2016**, *12*, 864:1-14. PubMed PMID: 27107013; PubMed Central PMCID: PMC4848761.
501. Granchi C, Lapillo M, Spena CR, Rizzolio F, Tuccinardi T, Martin TA, Carlson KE, Katzenellenbogen JA, Minutolo F. Cyclic Ketoximes as Estrogen Receptor β Selective Agonists. *ChemMedChem.* **2016**, *11*, 1752-1761. doi: 10.1002/cmdc.201600140. [Epub ahead of print] PubMed PMID: 27135651.
502. Z. Madak-Erdogan, S-H. Kim, P Gong, Y. C. Zhao, H. Zhang, K. L. Chambliss, K. E. Carlson, C. G. Mayne, P. W. Shaul, K. S. Korach, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Design of pathway-preferential estrogens that provide beneficial metabolic and vascular effects without stimulating reproductive tissues. *Science Signaling*, **2016**, May 24;9(429):ra53. doi: 10.1126/scisignal.aad8170.
503. P. Gong, Z. Madak-Erdogan, J. A. Flaws, D. J. Shapiro, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Estrogen receptor- α and aryl hydrocarbon receptor involvement in the actions of botanical estrogens in target cells. *Mol Cell Endocrinol.*, **2016**, *437*, 190-200. [Epub ahead of print] PMID: 27543265
504. K. L. Chambliss, J. Barrera, M. Umetani, J. Umetani, S. H. Kim, Z. Madak-Erdogan, L. Huang, B.S. Katzenellenbogen, J. A. Katzenellenbogen, C. Mineo, P. W. Shaul. Nonnuclear Estrogen Receptor Activation Improves Hepatic Steatosis in Female Mice. *Endocrinology*, **2016**, *157*, 373-374. PMID: 27552247
505. J. A. Pollock, S. E. Wardell, A. A. Parent, D. B. Stagg, S. J. Ellison, H. M. Alley, C. A. Chao, S. A. Lawrence, J. P. Stice, I. Spasojevic, J. G. Baker, S. H. Kim, D. P. McDonnell, J. A. Katzenellenbogen, and J. D. Norris. Inhibiting androgen receptor nuclear entry in castration-resistant prostate cancer. *Nat. Chem. Biol.*, **2016**, *12*, 795-801. PMID: 27501397
506. S. Srinivasan, J. C. Nwachukwu, N. E. Bruno, V. Dharmarajan, D. Goswami, I. Kastrati, S. Novick, J. Nowak, V. Cavett, H. B. Zhou, N. Boonmuen, Y. Zhao, J. Min, J. Frasor, B. S. Katzenellenbogen, P. R. Griffin, J. A. Katzenellenbogen, K. W. Nettles. Full antagonism of the estrogen receptor without a prototypical ligand side chain. *Nat. Chem. Biol.*, **2017**, *13*, 111-118. PMID: 27870835 PMCID: PMC5161551
507. N. Sharma, K. E. Carlson, J. C. Nwachukwu, S. Srinivasan, A. Sharma, K. W. Nettles, J. A. Katzenellenbogen. Exploring the Structural Compliancy versus Specificity of the Estrogen Receptor Using Isomeric Three-Dimensional Ligands. *ACS Chem. Biol.*, **2017**, *12*, 494-503. PMID:28032978 PMCID: PMC5315646 [Available on 2018-02-17]
508. J. C. Nwachukwu, S. Srinivasan, N. E. Bruno, J. Nowak, N. J. Wright, F. Minutolo, E. S. Rangarajan, T. IZard, X. Q Yao, B. J. Grant, D. J. Kojetin, O. Elemento, J. A. Katzenellenbogen, K. W. Nettles. Systems Structural Biology Analysis of Ligand Effects on ER α Predicts Cellular Response to Environmental Estrogens and Anti-hormone Therapies. *Cell Chem Biol*, **2017**, *24*, 35-45. PMID: 28042045
509. S. Zhang, Z. Wang, Z. Hu, C. Li, C. Tang, K. E. Carlson, J. Luo, C. Dong, J. A. Katzenellenbogen, J. Huang, H. B. Zhou. Selenophenes: Introducing a New Element into the Core of Non-Steroidal Estrogen Receptor Ligands. *ChemMedChem*, **2017**, *12*, 235-249. PMID: 27976818
510. H. H. Farman, J. Wu, K. L. Gustafsson, S. H. Windahl, S. H. Kim, J. A. Katzenellenbogen, C. Ohlsson, M. K. Lagerquist. Extra-nuclear effects of estrogen on cortical bone in males require ER α AF-1. *J. Mol. Endocrinol.*, **2017**, *58*, 105-111. PMID: 28057769 PMCID: PMC5278601
511. J. L. Christenson, K. T. Butterfield, N. S. Spoelstra, J. D. Norris, J. S. Josan, J. A. Pollock, D. P. McDonnell, B. S. Katzenellenbogen, J. A. Katzenellenbogen, J. K. Richer. MMTV-PyMT and Derived Met-1 Mouse Mammary Tumor Cells as Models for Studying the Role of the Androgen Receptor in Triple-Negative Breast Cancer Progression. *Horm. Cancer*, **2017**, *8*, 69-77. PMID: 28194662 PMCID: PMC5407486 [Available on 2018-04-01]
512. S. Menazza, J. Suna, S. Appachia, K. L. Chambliss, S. H. Kim, A. Aponte, S. Khane, J. A. Katzenellenbogen, B. S. Katzenellenbogen, P. W. Shaul. Non-nuclear estrogen receptor alpha activation in endothelium reduces cardiac ischemia-reperfusion injury in mice. *J. Mol. Cell. Card.*, **2017**, *107*, 41-51. PMID: 28457941 PMCID: PMC5514412 [Available on 2018-06-01] DOI: 10.1016/j.yjmcc.2017.04.004
513. W. Toy, H. Weir, P. Razavi, M. Lawson, A. U. Goepfert, A. M. Mazzola, A. Smith, J. Wilson, C. Morrow, W. L. Wong, E. De Stanchina, K. E. Carlson, T. S. Martin, S. Uddin, Z. Li, S. Fanning, J. A. Katzenellenbogen, G. Greene, J. Baselga and S. Chandarlapaty. Activating ESR1 Mutations Differentially Affect the Efficacy of ER Antagonists. *Cancer Discov.*, **2017**, *7*, 277-287. PMID: 27986707 PMCID:PMC5340622 [Available on 2018-03-01]

514. A. Martin, J. Yu, J. Xiong, A. Khalid, B. S. Katzenellenbogen, S. J. Kim, J. A. Katzenellenbogen, S. Y. Malaivijitnond, Gabet, S. A. Krum, B. Frenkel. Estrogens and Androgens Inhibit Association of RANKL with the Pre-osteoblast Membrane through Post-transnational Mechanisms, *J. Cell. Phys.*, **2017**, 232, 3798-3807. PMID: PMC5562539 [Available on 2017-12-01] DOI:10.1002/jcp.25862
515. J. D. Stender, J. C. Nwachukwu, I. Kastrati, Y. Kim, T. Strid, M. Yakir, S. Srinivasan, J. Nowak, T. Izard, E. S. Rangarajan, K. E. Carlson, J. A. Katzenellenbogen, X. Q. Yao, B. J. Grant, H. S. Leong, C. Y. Lin, J. Frasor, K. W. Nettles, C. K. Glass. Structural and Molecular Mechanisms of Cytokine-Mediated Endocrine Resistance in Human Breast Cancer Cells. *Mol Cell.* **2017**, 65, 1122-1135. doi:10.1016/j.molcel.2017.02.008.
516. Z. Madak-Erdogan, T. H. Charn, Y. Jiang, E. T. Liu, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Integrative Genomics of Gene and Metabolic Regulation by Estrogen Receptors α and β , and their Coregulators. *Mol Syst Biol.* **2017**, 13, 929. PMID: 28442489 PMID: PMC5408777 doi: 10.15252/msb.20177595.
517. D. Zhou, S. H. Kim, W. Chu, T. Voller, J. A. Katzenellenbogen. Evaluation of Aromatic Radiobromination by Nucleophilic Substitution Using Diaryliodonium Salt Precursors. *J Labelled Comp Radiopharm.*, **2017**, 60, 450-456. PMID: 28512784 PMID: PMC5550022 [Available on 2018-07-01] doi: 10.1002/jlcr.3519.
518. J. Min, V. S. Guillen, A. Sharma, Y. Zhao, Y. Ziegler, P. Gong, C. G. Mayne, S. Srinivasan, S. H. Kim, K. E. Carlson, K. W. Nettles, B. S. Katzenellenbogen, J. A. Katzenellenbogen. Adamantyl Antiestrogens with Novel Side Chains Reveal a Spectrum of Activities in Suppressing Estrogen Receptor Mediated Activities in Breast Cancer Cells. *J Med Chem.*, **2017**, 60, 6321-6336. PMID: 28657320 doi:10.1021/acs.jmedchem.7b00585
519. Y. Zhao, M. J. Laws, V. S. Guillen, Y. Ziegler, J. Min, A. Sharma, S. H. Kim, D. Chu, B. H. Park, S. Oesterreich, C. Mao, D. J. Shapiro, K. W. Nettles, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Structurally Novel Antiestrogens Elicit Differential Responses from Constitutively Active Mutant Estrogen Receptors in Breast Cancer Cells and Tumors. *Cancer Res.*, **2017**, 77, 5602-5613. doi: 10.1158/0008-5472.CAN-17-1265.
520. S. Abid, S. Xie, M. Bose, P. W. Shaul, L. S. Terada, S. L. Brody, P. J. Thomas, J. A. Katzenellenbogen, S. H. Kim, D. E. Greenberg, R. Jain. 17β -Estradiol Dysregulates Innate Immune Responses to *Pseudomonas aeruginosa* Respiratory Infection and Is Modulated by Estrogen Receptor Antagonism. *Infect Immun.*, **2017**, 85, 1-15. PMID: PMC5607430 [Available on 2018-03-20]
521. C. L. Miranda, L.A. Johnson, O. de Montgolfier, V.D. Elias, L. S. Ullrich, J. J. Hay, I. L. Paraiso, J. Choi, R. L. Reed, J. S. Revel, C. Kioussi, G. Bobe, U. T. Iwaniec, R. T. Turner, B. S. Katzenellenbogen, J. A. Katzenellenbogen, P. R. Blakemore, A.F.Gombart, C. S. Maier, J.Raber, J. F. Stevens. Non-estrogenic Xanthohumol Derivatives Mitigate Insulin Resistance and Cognitive Impairment in High-Fat Dietinduced Obese Mice. *Sci. Rep.*, **2018**, 8, 613. PMID: PMC5766630
522. K. S. Eckstrum, W. Edwards, A. Banerjee, W. Wang, J. A. Flaws, J. A. Katzenellenbogen, S. H. Kim, L. T. Raetzman. Effects of Exposure to the Endocrine Disrupting Chemical Bisphenol A during Critical Windows of Murine Pituitary Development. *Endocrinology*, **2018**, 159, 119-131. PMID: PMC5761589
523. G. Bononi, C. Granchi, M. Lapillo, M. Giannotti, D. Nieri, S. Fortunato, M. E. Boustani, I. Caligiuri, G. Poli, K. E. Carlson, S. H. Kim, M. Macchia, A. Martinelli, F. Rizzolio, A. Chicca, J. A. Katzenellenbogen, F. Minutolo, T. Tuccinardi. Discovery of Long-Chain Salicylketoxime Derivatives as Monoacylglycerol Lipase (MAGL) Inhibitors. *Eur J Med Chem.*, **2018**, 157, 817-836. doi: 10.1016/j.ejmech.2018.08.038. [Epub ahead of print] PubMed PMID: 30144699.
524. L. Wang, V. S. Guillen, N. Sharma, K. Flessa, J. Min, K. E. Carlson, W. Toy, S. Braqi, B. S. Katzenellenbogen, J. A. Katzenellenbogen, S. Chandarlapaty, A. Sharma. New Class of Selective Estrogen Receptor Degraders (SERDs): Expanding the Toolbox of PROTAC Degrons. *ACS Med Chem Lett.*, **2018**, 9, 803-808. doi:10.1021/acsmchemlett.8b00106. eCollection 2018 Aug 9. PubMed PMID: 30128071; PubMed Central PMID: PMC6088359.
525. S. K. Ippagunta, J. A. Pollock, N. Sharma, W. Lin, T. Chen, K. Tawaratsumida, A. A. High, J. Min, Y. Chen, R.K. Guy, V. Redecke, J. A. Katzenellenbogen, H. Häcker. Identification of Toll-like Receptor Signaling Inhibitors Based on Selective Activation of Hierarchically Acting Signaling Proteins. *Sci Signal.*, **2018**, 11, 543. pii:eaq1077. doi: 10.1126/scisignal.aq1077. PubMed PMID: 30108181.
526. E. Guivarc'h, M. Buscato, A. L. Guihot, J. Favre, E. Vessières, L. Grimaud, J. Wakim, N. J. Melhem, R. Zahreddine, M. Adlanmerini, L. Loufrani, C. Knauf, J. A. Katzenellenbogen, B. S. Katzenellenbogen, J. M.

- Foidart, P. Gourdy, F. Lenfant, J. F. Arnal, D. Henrion, C. Fontaine. Predominant Role of Nuclear Versus Membrane Estrogen Receptor α in Arterial Protection: Implications for Estrogen Receptor α Modulation in Cardiovascular Prevention/Safety. *J Am Heart Assoc.*, **2018**, *7*, 13. doi: 10.1161/JAHA.118.008950. PubMed PMID: 29959137; PubMed Central PMCID: PMC6064913.
527. H. Karim, S. H. Kim, A. S. Lapato, N. Yasui, J. A. Katzenellenbogen, S. K. Tiwari-Woodruff. Increase in Chemokine CXCL1 by ER β Ligand Treatment is a Key Mediator in Promoting Axon Myelination. *Proc Natl Acad Sci U S A*, **2018**, *115*, 6291-6296. doi: 10.1073/pnas.1721732115. Epub 2018 May 29. PubMed PMID: 29844175.
528. K. L. A. Chen, X. Liu, Y. C. Zhao, K. Hieronymi, G. Rossi, L. S. Auvil, M. Welge, C. Bushell, R. L. Smith, K. E. Carlson, S. H. Kim, J. A. Katzenellenbogen, M. J. Miller, Z. Madak-Erdogan. Long-Term Administration of Conjugated Estrogen and Bazedoxifene Decreased Murine Fecal β -Glucuronidase Activity Without Impacting Overall Microbiome Community. *Sci Rep.*, **2018**, *8*, 8166. doi: 10.1038/s41598-018-26506-1. PubMed PMID: 29802368; PubMed Central PMCID: PMC5970144.
529. Y. Amzaleg, J. Ji, D. Kittivanichkul, A. E Törnqvist, S. Windahl, E. Sabag, A. B. Khalid, H. Sternberg, M. West, J. A. Katzenellenbogen, S. A. Krum, N. O. Chimgé, D. E. Schones, Y. Gabet, C. Ohlsson, B. Frenkel. Estrogens and Selective Estrogen Receptor Modulators Differentially Antagonize Runx2 in ST2 Mesenchymal Progenitor Cells. *J Steroid Biochem Mol Biol.*, **2018**, *183*, 10-17. doi:10.1016/j.jsbmb.2018.05.002. [Epub ahead of print] PubMed PMID: 29751107.
530. A. Vinel, A. E. Coudert, M. Buscato, M. C. Valera, A. Ostertag, J. A. Katzenellenbogen, B. S. Katzenellenbogen, A. Berdal, S. Babajko, J. F. Arnal, C. Fontaine. Respective Role of Membrane and Nuclearestrogen Receptor (ER) α in the Mandible of Growing Mice: Implications for ER α Modulation. *J Bone Miner Res.*, **2018**, *33*, 1520-1531. doi:10.1002/jbmr.3434. Epub 2018 May 15. PubMed PMID: 29624728.
531. J. A. Pollock, N. Sharma, S. K. Ippagunta, V. Redecke, H. Häcker, and J. A. Katzenellenbogen. Triaryl Pyrazole Toll-Like Receptor Signaling Inhibitors: Structure-Activity Relationships Governing Pan- and Selective Signaling Inhibitors. *ChemMedChem*, **2018**, *13*:2208-2216. doi: 10.1002/cmdc.201800417. Epub 2018 Sep 13. PubMed PMID: 30117269.
532. Zhou D, Xu J, Mpoy C, Chu W, Kim SH, Li H, Rogers BE, Katzenellenbogen JA. Preliminary evaluation of a novel (18)F-labeled PARP-1 ligand for PET imaging of PARP-1 expression in prostate cancer. *Nucl Med Biol.* **2018**, *66*:26-31. doi:10.1016/j.nucmedbio.2018.08.003. Epub 2018 Aug 24. PubMed PMID: 30195072; PubMed Central PMCID: PMC6252111.
533. Selvaraj UM, Zuurbier KR, Whoolery CW, Plautz EJ, Chambliss KL, Kong X, Zhang S, Kim SH, Katzenellenbogen BS, Katzenellenbogen JA, Mineo C, Shaul PW, Stowe AM. Selective Nonnuclear Estrogen Receptor Activation Decreases Stroke Severity and Promotes Functional Recovery in Female Mice. *Endocrinology.* **2018**, *159*:3848-3859. doi: 10.1210/en.2018-00600. PubMed PMID: 30256928; PubMed Central PMCID: PMC6203892.
534. Sharma A, Toy W, Guillen VS, Sharma N, Min J, Carlson KE, Mayne CG, Lin S, Sabio M, Greene G, Katzenellenbogen BS, Chandarlapaty S, Katzenellenbogen JA. Antagonists for Constitutively Active Mutant Estrogen Receptors: Insights into the Roles of Antiestrogen-Core and Side-Chain. *ACS Chem Biol.* **2018**, *13*, 3374-3384. doi: 10.1021/acscchembio.8b00877. PubMed PMID: 30404440.
535. Fanning SW, Jeselsohn R, Dharmarajan V, Mayne CG, Karimi M, Buchwalter G, Houtman R, Toy W, Fowler CE, Han R, Lainé M, Carlson KE, Martin TA, Nowak J, Nwachukwu JC, Hosfield DJ, Chandarlapaty S, Tajkhorshid E, Nettles KW, Griffin PR, Shen Y, Katzenellenbogen JA, Brown M, Greene GL. The SERM/SERD bazedoxifene disrupts ESR1 helix 12 to overcome acquired hormone resistance in breast cancer cells. *Elife.* **2018**, *7*. pii: e37161. doi: 10.7554/eLife.37161. PubMed PMID: 30489256.
536. D. Zhou, W. Chu, T. Voller, J. A. Katzenellenbogen. Copper-Mediated Nucleophilic Radiobromination of Aryl Boron Precursors: Convenient Preparation of a Radiobrominated PARP-1 Inhibitor, **2018**. *59*, 1963-1967. doi: 10.1016/j.tetlet.2018.04.024. PMCID: PMC6195330

537. J. A. Katzenellenbogen, C. G. Mayne, B. S. Katzenellenbogen, G. L. Greene, S. Chandarlapaty, S. Structural underpinnings of oestrogen receptor mutations in endocrine therapy. *Nat. Rev. Cancer.*, **2018**, 662. doi: 10.1038/s41568-018-0053-0
538. K. C. Atkinson, J. B. Lee, A. J. Khalaj, J. P. C. Hasselman, S. H Kim, A. Drew, J. Soto, J. A. Katzenellenbogen, N. G. Harris, A. Obenaus, S. K. Tiwari-Woodruff. Diffusion tensor imaging identifies aspects of therapeutic estrogen receptor β ligand-induced remyelination in a mouse model of multiple sclerosis. *J Neurobio Disease*, **2019**, *130*, 104501. doi:[10.1016/j.nbd.2019.104501](https://doi.org/10.1016/j.nbd.2019.104501) PMID:PMC6698456
539. Y. Ziegler, M. J. Laws, V. Sanabria Guillen, S. H. Kim, P. Dey, B. P. Smith, P. Gong, N. Bindman, Y. Zhao, K. Carlson, M. A. Yasuda, D. Singh, Z. Li, D. El-Ashry, Z. Madak-Erdogan, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Suppression of FOXM1 activities and breast cancer growth in vitro and in vivo by a new class of compounds. *Breast Cancer*, **2019**, *5*, 45. doi: [10.1038/s41523-019-0141-7](https://doi.org/10.1038/s41523-019-0141-7) PMID: PMC6884575
540. S. Majumdar, J. C. Rinaldi, N. R. Malhotra NR, L. Xie L, D. P. Hu, T. D. Gauntner, H. S. Grewal, W. Y. Hu, S. H. Kim, J. A. Katzenellenbogen, S. Kasper, G. S. Prins. Differential Actions of Estrogen Receptor α and β via Nongenomic Signaling in Human Prostate Stem and Progenitor Cells. *Endocrinology*, **2019**, *160*, 2692-2708. doi: 10.1210/en.2019-00177 PMID: PMC6804489 [Available on 2020-08-21]
541. Z. Madak-Erdogan, S. Band, Y.C. Zhao, B. P. Smith, E. Kulkoyluoglu-Cotul, Q. Zuo, A. Santaliz Casiano, K. Wrobel, G. Rossi, R. L. Smith, S. H. Kim, J. A. Katzenellenbogen, M. L. Johnson, M. Patel, N. Marino, A. M. V. Storniolo and J. A. Flaws. Free Fatty Acids Rewire Cancer Metabolism in Obesity-Associated Breast Cancer via Estrogen Receptor and mTOR Signaling. *Cancer Res.*, **2019**, *79*, 2494-2510. doi: 10.1158/0008-5472.CAN-18-2849.
542. Y. C. Lo, O. Cormier, T. Liu, K. W. Nettles, J. A. Katzenellenbogen, T. Stearns, R. B. Altman. Pocket similarity identifies selective estrogen receptor modulators as microtubule modulators at the taxane site. *Nat. Commun.*, **2019**, *10*, 1033. doi: 10.1038/s41467-019-08965-w. PMID: PMC6399299
543. H. Karim, S. H. Kim SH, Lauderdale K, Lapato AS, Atkinson K, Yasui N, Yamate-Morgan H, Sekyi M, Katzenellenbogen JA, Tiwari-Woodruff SK. Analogues of ER β ligand chloroindazole exert immunomodulatory and remyelinating effects in a mouse model of multiple sclerosis. *Sci. Rep.*, **2019**, *9*, 503. doi:[10.1038/s41598-018-37420-x](https://doi.org/10.1038/s41598-018-37420-x). PMID: PMC6345788
544. Fontaine C, Buscato M, Vinel A, Giton F, Raymond-Letron I, Kim SH, Katzenellenbogen BS, Katzenellenbogen JA, Gourdy P, Milon A, Flouriot G, Ohlsson C, Lenfant F, Arnal JF. The tissue-specific effects of different 17 β -estradiol doses reveal the key sensitizing role of AF1 domain in ER α activity. *Mol Cell Endocrinol*. **2020** Apr 5;505:110741. doi: 10.1016/j.mce.2020.110741. Epub 2020 Jan 28. PMID: 32004676
545. Katzenellenbogen JA. The quest for improving the management of breast cancer by functional imaging: The discovery and development of 16 α -[¹⁸F]fluoroestradiol (FES), a PET radiotracer for the estrogen receptor, a historical review. *Nucl Med Biol*. **2020** Feb 22;S0969-8051(20)30028-7. doi: 10.1016/j.nucmedbio.2020.02.007. Online ahead of print. PMID: 32229068.
546. Laws MJ, Ziegler Y, Shahoei SH, Dey P, Kim SH, Yasuda M, Park BH, Nettles KW, Katzenellenbogen JA, Nelson ER, Katzenellenbogen BS. Suppression of breast cancer metastasis and extension of survival by a new antiestrogen in a preclinical model driven by mutant estrogen receptors. *Breast Cancer Res Treat*. **2020** *181*:297-307. doi: 10.1007/s10549-020-05629-y. Epub 2020 Apr 10. PMID: 32277377
547. Brakta S, Chorich LP, Kim HG, Coons LA, Katzenellenbogen JA, Hall JE, Korach KS, Layman LC. Long-Term Follow-Up and Treatment of a Female With Complete Estrogen Insensitivity. *J Clin Endocrinol Metab*. **2020** *105*:1478-88. doi: 10.1210/clinem/dgaa106. PMID: 32152632

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B. Reviews, Chapters, and Conference Reports [Part 2 of 3]

1. J. A. Katzenellenbogen, "Affinity Labeling of Hormone Binding Sites" (Review), *Annual Reports in Medicinal Chemistry* **1974**, 9, 222-223.
2. J. A. Katzenellenbogen, H. J. Johnson, Jr., H. N. Myers, and K. E. Carlson, Chemical Probes of Estrogen Action. Affinity Labeling. *J. Toxicol. Environ. Health, Suppl. 1*, **1976**, 205-230.
3. J. Clark, E. Baulieu, J. Baxter, B. de Crombrughe, E. Jorgenson, B. Katzenellenbogen, J. Katzenellenbogen, K. Leubke, J. Moran, H. Rochefort, M. Sherman, and M. Topert, Group Report on Intracellular Receptors. In Dahlem Conference on "Estrogen and Antiestrogen Action at the Target Cell", Abakon Verlagsgesellschaft, Berlin, **1976**, pp 147-169.
4. J. A. Katzenellenbogen, K. E. Carlson, H. J. Johnson, Jr., H. N. Meyers, and R. J. Kempton, Affinity Labeling of Steroid Receptors, *Endocrinology, Proceedings of the Fifth International Congress of Endocrinology, Hamburg, July, 1976*. (International Congress Series 402), Excerpta Medica, pp. 473-477.
5. D. Reibstein, J. H. Law, S. B. Bowlus, and J. A. Katzenellenbogen, Enzymatic Synthesis of Juvenile Hormone in *Manduca Sexta*. In "The Juvenile Hormones" (L. I. Gilbert, Ed.), Plenum Press, **1976**, 131-146.
6. J. A. Katzenellenbogen, Insect Pheromone Synthesis: New Methodology. *Science* **1976**, 194, 139-148.
7. J. A. Katzenellenbogen, Affinity Labeling as a Technique in Determining Hormone Mechanisms (Review). In *Biochemical Actions of Hormones*, Vol. 4 (G. Litwack, Ed.), Academic Press, **1977**, (chapter 1) pp 1-84.
8. J. A. Katzenellenbogen, H. J. Johnson, Jr., H. N. Myers, K. E. Carlson, and R. J. Kempton, Specific Chemical Probes for Elucidating the Mechanism of Steroid Hormone Action: Progress Using Estrogen Photoaffinity Labeling Agents. In "A Survey of Contemporary Bioorganic Chemistry" vol. IV (E. E. van Tamelen, Ed.), Academic Press, **1978**, pp. 207-237.
9. J. A. Katzenellenbogen, Photoaffinity Labeling of Estrogen Receptors. *Federation Proceedings, Fed Am. Soc. Exp. Biol.* **1978**, 37, 174-178.
10. W. Jegl, J. A. Katzenellenbogen, M. S. Okamoto, I. C. Paul, W. H. Pirkle, and P. G. Schmidt, The Chemistry of Life. A Second Semester Course on Color Videotapes. *J. Chem. Educ.* **1978**, 55, 225-229.
11. B. S. Katzenellenbogen, T. S. Tsai, T. Tatee, and J. A. Katzenellenbogen, Estrogen and Antiestrogen Action: Studies in Reproductive Tissues and Tumors. In "Steroid Hormone Receptor Systems" (W. W. Leavitt and J. H. Clark, Eds.), Plenum Press, New York, **1979**, pp 111-132.
12. B. S. Katzenellenbogen, H. S. Bhakoo, E. R. Ferguson, N. C. Lan, T. Tatee, T. L. Tsai, and J. A. Katzenellenbogen, Estrogen and Antiestrogen Action in Reproductive Tissues and Tumors. *Recent Prog. Horm. Res.* **1979**, 35, 259-300.
13. J. A. Katzenellenbogen, M. R. Kilbourn, and K. E. Carlson, Photosensitive Steroids as Probes of Estrogen Receptors Sites. *Ann. New York Acad. Sci.* **1980**, 346, 18-30.
14. J. A. Katzenellenbogen, B. S. Katzenellenbogen, T. Tatee, D. W. Robertson and S. W. Landvatter, The Chemistry of Estrogens and Antiestrogens: Relationships Between Structure, Receptor Binding, and Biological Activity. In "Estrogens and the Environment" (J. McLachlan, Ed.), Elsevier North Holland, **1980**, pp 33-51.
15. J. A. Katzenellenbogen, D. F. Heiman, K. E. Carlson, D. W. Payne, and J. W. Lloyd, Optimization of the Binding Selectivity of Estrogens. In "Cytotoxic Agents in Hormone Receptors Tumors" (J. Raus, H. Martens, G. Leclercq, Eds.), Academic Press, **1980**, pp 3-38
16. B. S. Katzenellenbogen, J. A. Katzenellenbogen, R. L. Eckert, J. R. Hayes, D. W. Robertson, T. Tatee, and T. L. Tsai, Antiestrogen Action in Estrogen Target Tissues: Receptor Interactions and Antiestrogen Metabolism. *Progress in Cancer Research and Therapy* **1980**, 14, 309-320.
17. B. S. Katzenellenbogen, J. A. Katzenellenbogen, E. R. Ferguson, J. R. Hayes, N. C. Lan, D. W. Robertson and T. Tatee, Antiestrogen Action in Uterus: Receptor Interactions and Antiestrogen Metabolism. In "The Non-Steroid Antiestrogens," (R. L. Sutherland and V. C. Jordan, Eds.), Academic Press, **1981**, 95-112.
18. J. A. Katzenellenbogen, K. E. Carlson, D. F. Heiman, and J. E. Lloyd, Receptor Binding as a Basis for Radiopharmaceutical Design. In "Radiopharmaceuticals: Structure-Activity Relationships" (R. P. Spencer, Ed.) Grune and Stratton, **1981**, (chapter 2) pp 23-86.

19. J. A. Katzenellenbogen, The Development of Gamma-Emitting Hormone Analogs as Imaging Agents for Receptor-Positive Tumors. In "The Prostatic Cell: Structure and Function" Part B (G. P. Murphy and A. A. Sandberg, Eds.), A. Liss, New York, **1981**, pp 313-327.
20. J. A. Katzenellenbogen, D. F. Heiman, S. G. Senderoff, K. D. McElvany, S. W. Landvatter, K. E. Carlson, R. Goswami, and J. E. Lloyd, Estrogen Receptor-Based Agents for Imaging Breast Tumors: Binding Selectivity as a Basis for Design and Optimization. In "Applications of Nuclear and Radiochemistry" (N. Morcos and R. M. Lambrecht, Eds.), Pergamon Press, New York, **1982**, pp 311-323.
21. J. A. Katzenellenbogen, D. F. Heiman, K. E. Carlson, and J. E. Lloyd, *In Vivo* and *In Vitro* Steroid Receptor Assays in the Design of Estrogen Pharmaceuticals. In "Receptor Binding Radiotracers" vol .1 (W. C. Eckelman, Volume Editor), CRC Press, Boca Raton, **1982**, (chapter 6) pp 93-126.
22. D. M. Gill and J. A. Katzenellenbogen, Hybrid Toxins and Their Receptors, Evolution of Hormone Receptors Systems (R. A. Bradshaw, G. N. Gill, Ed.), A. R. Liss, **1983**, pp 483-488.
23. J. A. Katzenellenbogen and B. S. Katzenellenbogen, Affinity Labeling of Receptors for Steroid and Thyroid Hormones. In "Vitamins and Hormones" vol 41 (G. Aurbach, Ed.), Academic Press, **1984**, pp 213-274.
24. J. A. Katzenellenbogen, Molecular Probes for the Estrogen Receptor: Affinity Labels. Fluorescent Estrogens and Breast Tumor Imaging Agents. In: 3rd SCI-RSC Medicinal Chemistry Symposium, Churchill College, Cambridge, England, September 15-18, **1985**, (R. W. Lambert, Ed), pp 312-321.
25. J. A. Katzenellenbogen, Radiolabeled Antiestrogens and Other Probes for the Estrogen Receptor. In "Estrogens/Antiestrogen Action and Breast Cancer Therapy" (V. C. Jordan, Ed.), University of Wisconsin Press, Madison, **1986**, (chapter 5) pp 73-89.
26. J. A. Katzenellenbogen, and J. A. Zablocki, Cytotoxic Oestrogens and Antioestrogens: Concepts, Progress and Evaluation. In "Pharmacology and Clinical Uses of Inhibitors of Hormone Secretion and Action" (B. J. A. Furr and A. E. Wakeling, Eds.), Balliere Tindall, London, **1987**, (chapter 3) pp 41-59.
27. J. A. Katzenellenbogen, "The Synthesis of Carbon-11, Fluorine-18, and Nitrogen-13 Labeled Radiotracers for Biomedical Applications" (Book review). *J. Am. Chem. Soc.* **1987**, *109*, 7587-7588.
28. B. S. Katzenellenbogen and J. A. Katzenellenbogen, Techniques Used in Affinity Labeling Studies of Steroid and Thyroid Hormone Receptors: Estrogen Receptor. In "Affinity Labeling and Cloning of Steroid and Thyroid Hormone Receptors" (H. Gronemeyer, Ed.), VCH Publishers, Weinheim, Germany, **1988**, pp 17-27.
29. B. S. Katzenellenbogen and J. A. Katzenellenbogen, Affinity Labeling Studies of Estrogen Receptors. In "Affinity Labelling and Cloning of Steroid and Thyroid Hormone Receptors" (H. Gronemeyer, Ed.), VCH Publishers, Weinheim, Germany, **1988**, pp 87-108.
30. J. A. Katzenellenbogen, A. Liu, S. J. Brandes, K. E. Carlson, and M. J. Welch, Strategies for the Development of Androgen Receptor-Based Imaging Agents for Prostate Cancer. In "Radionuclides in the Prostate Gland" (G. S. Limouris and S. K. Shoukla, Eds.), Edizioni Associate, Rome, **1991**, pp 91-103.
31. J. A. Katzenellenbogen, The Pharmacology of Steroid Radiopharmaceuticals: Specific and Non-Specific Binding and Uptake Selectivity. In "Radiopharmaceuticals: Chemistry and Pharmacology " (A. D. Nunn, Ed.), M. Dekker, New York, NY, **1992**, (chapter 8) pp 297-331.
32. J. A. Katzenellenbogen, Probes for Steroid Receptors - Studies at the Molecular, Cellular, and Whole Organism Levels. In *Robert A. Welch Foundation Conference on Chemical Research XXXV Chemistry at the Frontiers of Medicine*, (October 28-29, 1991), **1992**, (chapter 11) pp 229-257.
33. J. A. Katzenellenbogen, Molecular Probes for Steroid Receptors: Affinity Labels, Imaging Agents, and Fluorescent Ligands. In "Trends in Drug Research" (Pharmacochimistry, Volume 20) (V. Claassen, Ed.), Elsevier Science Publishers, B. V., **1993**, pp 243-257.
34. J. A. Katzenellenbogen, Designing Steroid Receptor-Based Radiotracers to Image Breast and Prostate Tumors. In "Molecular Nuclear Medicine" *J. Nuc. Med.*, **1995**, *36*, 8S-13S.
35. J. A. Katzenellenbogen, R. E. Coleman, R. A. Hawkins, K. A. Krohn, S. M. Larson, J. M. Mendelsohn, C. K. Osborne, D. Piwnica-Worms, R. C. Reba, B. A. Siegel, M. J. Welch, and F. Shtern, Tumor Receptor Imaging: Proceedings of the National Cancer Institute Workshop, Review of Current Work, and Prospective for Further Investigations. *Clin. Cancer Res.*, **1995**, *1*, 921-932.
36. J. A. Katzenellenbogen, The Structural Pervasiveness of Estrogenic Activity (Proceedings from the Estrogens in the Environment III meeting). *Environmental Health Perspective*, **1995**, *103* (Suppl 7):99-101.
37. J. A. Katzenellenbogen, The Development of Molecular Probes for Fluorescence Assay, Tumor Imaging, and Structural Studies of Steroid Receptors. *Med. Chem. Res.*, **1995**, *5*, 606-617.

38. J. A. Katzenellenbogen, B. W. O'Malley, and B. S. Katzenellenbogen, Tripartite Steroid Hormone Receptor Pharmacology: Interaction with Multiple Effector Sites as a Basis for the Cell- and Promoter-Specific Action of these Hormones. *Mol. Endocrinol.*, **1996**, *10*, 119-131.
39. J. A. Katzenellenbogen and B. S. Katzenellenbogen, Nuclear Hormone Receptors: Ligand-Activated Regulators of Transcription and Diverse Cell Responses. *Chem. Biol.*, **1996**, *3*, 529-536.
40. R. J. Miksicek and J. A. Katzenellenbogen, Estrogen Receptor Imaging Using Intrinsically Fluorescent Ligands. In "Analytical Use of Fluorescent Probes in Oncology" (Elli Kohen, Ed.), Plenum Press, New York, **1996**, (chapter 21) pp 213-219.
41. G. M. Anstead, K. E. Carlson, and J. A. Katzenellenbogen, The Estradiol Pharmacophore: Ligand Structure-Estrogen Receptor Binding Affinity Relationships and a Model for the Receptor Binding Site. *Steroids*, **1997**, *62*, 268-303.
42. J. A. Katzenellenbogen, Estrogen and Progestin Radiopharmaceuticals for Imaging Breast Cancer. In "Estrogens, Progestins, and Their Antagonists" (E. J. Pavlik, Ed.), Birkhäuser, Boston, **1996**, (chapter 8) pp 197-242.
43. M. J. Welch, J. B. Downer, and J. A. Katzenellenbogen in *Current Directions in Radiopharmaceutical Research and Development*, Kluwer Academic Publishers, Dordrecht/Boston/London, **1996**, (chapter 9) pp 137-156.
44. J. A. Katzenellenbogen, M. J. Welch and F. Dehdashti, The Development of Estrogen and Progestin Radiopharmaceuticals for Imaging Breast Cancer. *Anticancer Res.*, **1997**, *17*, 1573-1576.
45. R. K. Hom and J. A. Katzenellenbogen, Technetium-99m Labeled Receptor-Specific Small Molecule Radiopharmaceuticals: Recent Developments and Encouraging Results. *Nucl. Med. Biol.*, **1997**, *24*, 485-498.
46. F. Minutolo and J. A. Katzenellenbogen, A Convenient Three-Component Synthesis of Substituted Cyclopentadienyl Tricarbonyl Re(I) and Tc(I) Complexes and its Potential for Radiolabeling. *Technetium, Rhenium and Other Metals in Chemistry and Nuclear Medicine* (M. Nicolini and U. Mazzi, Eds.), **1999**, *5*, 109-116.
47. J. A. Katzenellenbogen, F. Minutolo, T. W. Spradua and M. B. Skaddan, Preserving Bioactivity of Small Molecules Labeled with Technetium and Rhenium: An Organometallic Approach. *Technetium, Rhenium and Other Metals in Chemistry and Nuclear Medicine* (M. Nicolini and U. Mazzi, Eds.), **1999**, *5*, 363-372.
48. F. Wüst, M. B. Skaddan, K. E. Carlson, P. Leibnitz, J. A. Katzenellenbogen, H. Spies and B. Johannsen, Technetium and rhenium-labelled steroids. 7. Synthesis and receptor binding of novel progestin-rhenium complexes. *Technetium, Rhenium and Other Metals in Chemistry and Nuclear Medicine* (M. Nicolini and U. Mazzi, Eds.), **1999**, *5*, 491-495.
49. H. Gao, J. A. Katzenellenbogen, R. Garg, and C. Hansch. Comparative QSAR Analysis of Estrogen Receptor Ligands. *Chem. Rev.*, **1999**, *99*, 723-744.
50. B. S. Katzenellenbogen, M. M. Montano, T. R. Ediger, J. Sun, K. Ekena, G. Lazennec, P. G.V. Martini, E. M. McInerney, R. Delage-Mourroux, K. Weis, J. A. Katzenellenbogen. Estrogen Receptors: Selective Ligands, Partners, and Distinctive Pharmacology. *Recent Progress in Hormone Research*, **2000**, *55*, 163-195.
51. B. S. Katzenellenbogen and J. A. Katzenellenbogen. Estrogen Receptor Alpha and Estrogen Receptor Beta: Regulation by Selective Estrogen Receptor Modulators (SERMs) and Importance in Breast Cancer. *Breast Cancer Res.*, **2000**, *2*.
52. B. S. Katzenellenbogen and J. A. Katzenellenbogen. Estrogen Receptor Transcription and Transactivation Estrogen Receptor Alpha and Estrogen Receptor Beta: Regulation by Selective Estrogen Receptor Modulators and Importance in Breast Cancer. *Breast Cancer Res.*, **2000**, 335-344.
53. B. S. Katzenellenbogen, I. Choi, R. Delage-Mourroux, T. R. Ediger, P. G. V. Martini, M. Montano, J. Sun, K. Weis, and J. A. Katzenellenbogen, Molecular Mechanisms of Estrogen Action: Selective Ligands and Receptor Pharmacology. *J Steroid Biochem. Mol. Biol.*, **2000**, *74*, 279-285.
54. B. S. Katzenellenbogen, J. Sun, W. R. Harrington, D. M. Kraichely, D. Ganessunker, and J. A. Katzenellenbogen, Structure-function Relationships in Estrogen Receptors and the Characterization of Novel Selective Estrogen Receptor Modulators with Unique Pharmacological Profiles. *Ann. N. Y. Acad. Sci.*, **2001**, 949, 6-15.
55. J. A. Katzenellenbogen. Steroids Labeled With ¹⁸F for Imaging Tumors by Positron Emission Tomography. *J. Fluorine Chem.*, **2001**, *109*, 49-54.
56. B. S. Katzenellenbogen, J. A. Katzenellenbogen. Defining the "S" in SERMS. *Science*, **2002**, *295*, 2380.

57. J. A. Katzenellenbogen. Receptor Imaging of Tumors (Non-Peptide). In "Handbook of Radiopharmaceuticals: Radiochemistry and Applications" (M. J. Welch & C. Redvanly, Ed.), John Wiley & Sons, Ltd, **2003**, (chapter 25) pp 715-750.
58. J. A. Katzenellenbogen, R. Muthyala. Interactions of Exogenous Endocrine Active Substances with Nuclear Receptors. *Pure Appl. Chem*, **2003**, 75, 1797-1817.
59. J. A. Katzenellenbogen, R. Muthyala, B. S. Katzenellenbogen. Nature of the Ligand-Binding Pocket of Estrogen Receptor α and β : The Search for Subtype-Selective Ligands and Implications for the Prediction of Estrogenic Activity. *Pure Appl. Chem.*, **2003**, 75, 2397-2403.
60. J. A. Katzenellenbogen, Steroid Receptor Methods-Protocols and Assays edited by Benjamin A. Lieberman. *Chem Bio Chem*, **2003**, 4, 548.
61. J. A. Katzenellenbogen. Designing Effective Hybrid Toxins. *Chem. & Bio.*, **2005**, 12, 719-724.
62. J. A. Katzenellenbogen. Contrast Agents III: Radiopharmaceuticals-From Diagnostics to Therapeutics: Topics in Current Chemistry, 252, edited by Werner Krause [Book Review]. *J. Am. Chem.*, **2005**, 127, 15992.
63. K. Dahlman-Wright, V. Cavailles, S. A. Fuqua, V. C. Jordan, J. A. Katzenellenbogen, K. S. Korach, A. Maggi, M. Muramatsu, M. G. Parker, J.-Å Gustafsson. International Union of Pharmacology. LXIV. Estrogen Receptors. *Pharmacol. Rev.*, **2006**, 58, 773-781.
64. T. W. Moore, C. G. Mayne, J. A. Katzenellenbogen. Minireview: Not Picking Pockets: Nuclear Receptor Alternate-Site Modulators (NRAMs). *Mol. Endo.*, **2009**, 24,683-695. [PMID: 19933380](#)
65. T. W. Moore, J. A. Katzenellenbogen. Inhibitors of Nuclear Hormone Receptor/Coactivator Interactions, *Annl Repts Med Chem*, 2010, 4, 443-457.
66. F. Minutolo, M. Macchia, B. S. Katzenellenbogen, J. A. Katzenellenbogen. Estrogen Receptor Beta Ligands: Recent Advances and Biomedical Applications. *Med. Res. Reviews*, **2011**, 31, 364-442. (Published online 12/2009)
67. K. A. Krohn, J. A. Katzenellenbogen. Tribute to Professor Michael John Welch (1939-2012). *Bioconjug Chem.* **2012**, 23, 1719-1720. PubMed PMID: 22900752.
68. J. Josan, J. A. Katzenellenbogen. Designer Antiandrogens Join the Race Against Drug Resistance. *Elife*, **2013**, 1-4. PMID: 23580166; PubMed Central PMCID: PMC3622176.
69. I. Paterni, C. Granchi, J. A. Katzenellenbogen, F. Minutolo. Estrogen receptors alpha (ER α) and beta (ER β): Subtype-selective ligands and clinical potential. *Steroids*, **2014**, 90C, 13-29. PMID: 24971815 PMCID:PMC4192010
70. J-F Arnal, F. Lenfant, R. Metivier, G.Fluoriot, D. Henrion, M. Adlanmerini, C. Fontaine, P. Gourdy, P. Chambon, B. S. Katzenellenbogen, J. A. Katzenellenbogen. Membrane and Nuclear Estrogen Receptor Alpha Actions: From Tissue Specificity to Medical Implications. *Physiol. Rev.*,**2017**, 97, 1045-1087.
71. J. A. Katzenellenbogen, C. G. Mayne, B. S. Katzenellenbogen, G. L. Greene, S. Chandralapaty. Structural underpinnings of oestrogen receptor mutations in endocrine therapy resistance. *Nature Reviews Cancer*, **2018**, 18:377-388.

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C. Abstracts of Presentations at Scientific Meetings [Part 3 of 3]

1. J. A. Katzenellenbogen, H. N. Myers, and H. J. Johnson, Jr., Photoaffinity Labeling Reagents for Estrogen Binding Proteins, ACS 166th National Meeting, August, **1973**.
2. J. A. Katzenellenbogen and A. L. Crumrine, Position-Selective Alkylation of Ester Dienolates, ACS 167th National Meeting, April, **1974**.
3. J. A. Katzenellenbogen and H. M. Hsiung, Iodohexestrols. The Synthesis of Five Iodinated Hexestrol Derivatives. Characterization of their Estrogenic and Binding Activity in Uterine Tissue, ACS 167th National Meeting, April, **1974**.

4. J. A. Katzenellenbogen, H. J. Johnson, Jr., K. E. Carlson, and H. N. Meyers, The Photoreactivity of Some Light-Sensitive Estrogen Derivatives, American Society of Biological Chemists Meeting, June **1974**.
5. J. A. Katzenellenbogen, H. J. Johnson, Jr., K. E. Carlson and H. N. Myers, An Approach to Affinity Labeling of the Estrogen Binding Protein from Rat Uterus, IV International Congress on Hormonal Steroids, September, **1974**.
6. H. N. Myers, H. J. Johnson, Jr., K. E. Carlson, and J. A. Katzenellenbogen, Diazocarbonyl Derivatives of Estrogens as Photoaffinity Labeling Reagents for the Estrogen Binding Protein of Rat Uterus, ACS Great Lakes Regional Meeting, June, **1974**.
7. R. A. Amos and J. A. Katzenellenbogen, Reaction of Lithium Dialkylcuprates with Acetoxy Epoxides. Assessment of a Method for Nucleophilic α -Alkylation of Ketones, ACS 170th National Meeting, August, **1975**.
8. J. A. Katzenellenbogen and A. L. Crumrine, Selective g -alkylation of Dienolate Anions Derived from Unsaturated Acids. A Simple Route to Isoprenoid 1,5-Dienes, ACS 170th National Meetings, August, **1975**.
9. P. E. Dunn, R. C. Peterson, M. F. Reich, J. A. Katzenellenbogen, F. J. Kezdy, and J. H. Law, Specificity of the Insect Juvenile Hormone Carrier Protein, ACS 170th National Meeting, August, **1975**.
10. J. A. Katzenellenbogen, A. L. Crumrine, and R. A. Amos, New Uses for Oranocopper Reagents, ACS Midwest Regional Meeting, Carbondale, Illinois, October, **1975**.
11. R. C. Peterson, M. F. Reich, P. E. Dunn, J. A. Katzenellenbogen, and J. H. Law, Specificity of Insect Juvenile Hormone Carrier Protein for Juvenile Hormone Isomers and Analogs, American Society of Biological Chemists, San Francisco, June, **1976**.
12. J. A. Katzenellenbogen, Photoaffinity Labeling of Estrogen Receptors from Uterine Tissues. Factors Influencing Labeling Efficiency, First International Symposium on Radiopharmaceutical Chemistry, Brookhaven, New York, September **1976** (Journal of Labeled Compounds and Radiopharmaceuticals 1977, 13, 216).
13. J. A. Katzenellenbogen, H. J. Johnson, Jr., H. N. Myers, K. E. Carlson, and R. J. Kempton, Jr., Selective Labeling of Estrogen Receptors, 173rd National Meeting of the American Chemical Society, New Orleans, March, **1977** (Abstract MEDI 47).
14. P. L. Carl, J. H. L. Chen, J. A. Katzenellenbogen, D. B. Kohn, and M. J. Weber, Possible Use of Proteolytically Activated Pro-Drugs in Cancer Chemotherapy, University of Illinois Intercampus Faculty Workshop on Cancer Research, Chicago, April, **1977**.
15. B. S. Katzenellenbogen, J. A. Katzenellenbogen, and E. R. Ferguson, Interaction of Radiolabeled Antiestrogen (^3H -CI-628) with Uterine Tissue and Molecular Mechanism of its Action, Endocrine Society, Chicago, Illinois, June, **1977**.
16. D. W. Payne and J. A. Katzenellenbogen, New Methods for Studying Alpha-Fetoprotein-Estrogen Interactions. Studies with Potential Photoaffinity Labeling Reagents, American Society of Biological Chemists, June, **1978**. Abstract #2168. Federation Proceedings, 37 (1978).
17. D. W. Payne and J. A. Katzenellenbogen, Photoaffinity Labeling Reagents for Rat Alpha-fetoprotein, American Society of Biological Chemists, Dallas, Texas, April, **1979**.
18. D. W. Payne and J. A. Katzenellenbogen, A Comparison of Estrogen Receptor in Rabbit Uterus and Vagina, The Endocrine Society, Anaheim, California, June, **1979**.
19. D. F. Heiman, R. Goswami, K. J. Allison, K. E. Carlson, D. W. Payne, and J. A. Katzenellenbogen, Halogenated Estrogen Analogs as Potential Breast Tumor Imaging Agents, Great Lakes Regional ACS Meeting, Rockford, Illinois, June, **1979**.
20. M. R. Kilbourn and J. A. Katzenellenbogen, New Photoreactive Estrogens Incorporating *m*-Nitroanisoles, Great Lakes Regional ACS Meeting, Rockford, Illinois, June, **1979**.
21. J. A. Katzenellenbogen, D. F. Heiman, R. Goswami, K. J. Allison, K. E. Carlson, and D. W. Payne, Halogenated Estrogen Analogs as Potential Breast Tumor Imaging Agents, 26th Annual Meeting of the Society of Nuclear Medicine, Atlanta, Georgia, June, **1979**.
22. J. A. Katzenellenbogen, Affinity Labeling of Receptor Proteins, American Society of Biological Chemists, Dallas, Texas, April, **1979**.
23. G. A. Krafft and J. A. Katzenellenbogen, Synthesis of Potential Enzyme Activated Proteinase and Esterase Inactivators, National Meeting, ACS, Washington, DC, **1979**.

24. J. A. Katzenellenbogen, D. F. Heiman, R. Goswami, K. J. Allison, K. E. Carlson, and D. W. Payne, Halogenated Estrogen Analogs as Potential Breast Tumor Imaging Agents, First International Congress on Hormones and Cancer, Rome, October 3-6, **1979** (Cancer Treatment Reports 1979, *63*, 1214).
25. S. W. Rollinson and J. A. Katzenellenbogen, The Synthesis of Obtusilactones and Related α -Alkylidene- β -Hydroxybutyrolactone Natural Products, 179th National American Chemical Society Meeting, Houston, Texas, **1980**.
26. J. R. Hayes, E. A. Rorke, D. W. Robertson, B. S. Katzenellenbogen, and J. A. Katzenellenbogen, Biological Potency of the Metabolites of the Antiestrogen CI 628 and U 23,469, Proceeding 62nd Annual Endocrine Society Meeting, Abstract #830, p 282, Washington, DC, June, **1980**.
27. J. A. Katzenellenbogen, D. F. Heiman, J. E. Lloyd, and K. E. Carlson, *In Vitro* Binding Assays as a Guide for Optimization of the Structure of Steroid Receptor-Binding Radiopharmaceuticals: Estimation of Receptor vs Non-Receptor Binding, 3rd International Symposium on Radiopharmaceutical Chemistry, St. Louis, Missouri, June 16-20, **1980**.
28. J. A. Katzenellenbogen, D. F. Heiman, K. E. Carlson, J. E. Lloyd, Design and Development of Steroid Receptor-Based Radiopharmaceutical Agents for Imaging Breast Tumors, 2nd Chemical Congress of the North American Continent, San Francisco, California, August, **1980**.
29. J. A. Katzenellenbogen, S. G. Senderoff, M. J. Welch, K. D. McElvany, (⁷⁷Br)-16 α -Bromoestradiol-17 β , A High Specific Activity, Gamma-Emitting Estrogen that Shows Selective, Receptor-mediated Uptake by Uterus and DMBA-Induced Mammary Tumors in Rats. 3rd International Symposium on Radiopharmaceutical Chemistry, St. Louis, Missouri, June 16-20, **1980**.
30. D. W. Robertson and J. A. Katzenellenbogen, In Quest of Receptor-Mediated Cytotoxicity: The Synthesis and Biochemical Evaluation of Chemically Reactive Tamoxifen Analogs, 181st ACS National Meeting, Atlanta, Georgia, March **1981**.
31. J. A. Katzenellenbogen, S. G. Senderoff, S. W. Landvatter, K. D. McElvany, M. J. Welch, New Halogenated Estrogens with High Binding Affinity and Selectivity for the Estrogen Receptor: Potential Breast Tumor Imaging Agents, Society of Nuclear Medicine 29th Annual Meeting, Las Vegas, Nevada, June, **1981**.
32. K. D. McElvany, K. E. Carlson, M. J. Welch, S. G. Senderoff, J. A. Katzenellenbogen, *In Vivo* Comparison of 16 α [Br-77]-Bromoestradiol-17 β and 16 α [I-125]-Iodoestradiol-17 β , Society of Nuclear Medicine 28th Annual Meeting, Las Vegas, Nevada, June, **1981**.
33. K. D. McElvany, J. A. Katzenellenbogen, S. G. Senderoff, B. A. Siegel, M. J. Welch, Tissue Distribution, Clearance Rates and Radiation Dosimetry of 16 α [Br-77]-Bromoestradiol-17 β , Society of Nuclear Medicine 28th Annual Meeting, Las Vegas, Nevada, June, **1981**.
34. B. S. Katzenellenbogen, L. L. Wei, D. W. Robertson, J. R. Hayes, K. E. Carlson, J. A. Katzenellenbogen, Interaction of Tamoxifen Aziridine Analogs with Estrogen Receptors: Potential Cytotoxic Antiestrogens, 1981 National Endocrine Society Meeting, Cincinnati, Ohio, June, **1981**.
35. J. A. Katzenellenbogen, S. G. Senderoff, K. E. Carlson, Gamma α -Emitting Estrogens: Development of Imaging Agents for Breast Tumors, 5th International Symposium of the Journal of Steroid Biochemistry, Puerto Vallarta, Mexico, July 13-15, **1981**.
36. J. A. Katzenellenbogen, *In Vivo* and *In Vitro* Steroid Receptor Assays in the Design of Estrogen Radiopharmaceuticals for Imaging Breast Tumors, Second International Symposium on Radiopharmacology, Chicago, Illinois, September, **1981**.
37. S. W. Landvatter and J. A. Katzenellenbogen, Stereochemical Considerations in the Binding of Non-Steroidal Estrogens to the Estrogen Receptor. National Meeting of the American Chemical Society, New York, August, **1981**, MEDI 88.
38. K. D. McElvany, M. J. Welch, J. A. Katzenellenbogen, Radiobrominated Estrogen Receptor-Binding Radiopharmaceuticals for Breast Tumor Imaging, 3rd World Congress of the World Federation of Nuclear Medicine and Biology, Paris, France, August 23-September 2, **1982**.
39. K. D. McElvany, K. E. Carlson, M. J. Welch, J. A. Katzenellenbogen, Factors Affecting the Interpretation of Radiolabeled Estrogen Binding Studies in Rats, Society of Nuclear Medicine 29th Annual Meeting, Miami Beach, Florida, June 15-18, **1982**.
40. J. A. Katzenellenbogen, K. E. Carlson, D. W. Robertson, D. F. Heiman, Highly Selective Affinity Labeling of the Estrogen Receptor with Tamoxifen Aziridine, 64th Annual Meeting, The Endocrine Society, San Francisco, California, June 16-18, **1982**.

41. S. W. Landvatter, M. K. Mao, J. A. Katzenellenbogen, K. D. McElvany, M. J. Welch, Preparation and Properties of Halogenated Estrogens as Imaging Agents for Breast Tumors, Fourth International Symposium on Radiopharmaceutical Chemistry, Julich, Germany, August, **1982**.
42. J.A. Katzenellenbogen, K. E. Carlson, D. W. Robertson, D. F. Heiman, Highly Selective Affinity Labeling of the Estrogen Receptor with Tamoxifen Aziridine, VI International Congress on Hormonal Steroids, Jerusalem, Israel, September, **1982**.
43. J. A. Katzenellenbogen, K. D. McElvany, S. W. Landvatter, D. F. Heiman, Radiohalogenated Estrogens: Imaging Agents for Human Breast Tumors, VI International Congress on Hormonal Steroids, Jerusalem, Israel, September, **1982**.
44. P. M. Martin, B. Benyahia, H. Magdelenat, and J. A. Katzenellenbogen, A New Approach for the Visualization of Estrogen Receptors in Target Tissues, VI International Congress on Hormonal Steroids, Jerusalem, Israel, September, **1982**.
45. B. S. Katzenellenbogen, L. L. Wei, F. J. Monsma, Jr., M. A. Miller, K. E. Carlson, and J. A. Katzenellenbogen, Analysis of the Estrogen Receptor in Uterus and Breast Cancer Cells Using a Covalent Labeling Antiestrogen, VI International Symposium of the Journal of Steroid Biochemistry, "Recent Advances in Steroid Biochemistry" May 30 to June 1, **1982**, Paris, France.
46. B. S. Katzenellenbogen, L. L. Wei, D. W. Robertson, and J. A. Katzenellenbogen. Selective cytotoxicity mediated by the estrogen receptor. UCLA Symposium. J. Cell Biol. 6: Abstract 134, **1982**.
47. J. A. Katzenellenbogen, D. O. Kieseewetter, S. W. Landvatter, K. E. Carlson, M. R. Kilbourn, K. D. McElvany, M. J. Welch and the Los Alamos Medical Radioisotope Group, Gamma-Emitting Estrogens: Imaging Agents for Estrogen Receptor-Positive Breast Tumors, International Association for Breast Cancer Research, Breast Cancer Research Conference, Denver, Colorado, March 20-24, **1983**.
48. J. A. Katzenellenbogen, R. D. Bindal, D. F. Heiman, and D. W. Robertson, Photofluorogenic Estrogens: Non-steroidal Estrogens that Become Fluorescent Upon Photocyclization-oxidation, VI International Symposium of the Journal of Steroid Biochemistry, "Recent Advances in Steroid Biochemistry", May 30 to June 1, **1983**, Paris, France.
49. R. C. Richmond, T. J. Curphey, J. A. Katzenellenbogen, One Approach to Targeted Platinum Drug Activity - Design of a Synthetic Antiestrogen-Pt(II) Complex, Fourth International Symposium on Platinum Coordination Complexes in Cancer Chemotherapy, Burlington, Vermont, June 22-24, **1983**.
50. S. W. Landvatter, K. D. McElvany, M. R. Kilbourn, J. A. Katzenellenbogen, and M. J. Welch, 1-[F-18]-Fluoropentestrol: Synthesis and Preliminary Tissue Uptake Studies of a Positron-emitting Estrogen in Rats, Society of Nuclear Medicine 30th Annual Meeting, St. Louis, Missouri, June 7-10, **1983**.
51. B. S. Katzenellenbogen, F. J. Monsma, Jr., M. A. Miller, M. J. Norman, and J. A. Katzenellenbogen, Characterization of the Estrogen Receptor and its Dynamics in MCF-7 Breast Cancer Cells Using a Covalently-Attaching Antiestrogen, **1983** Annual Meeting of the Endocrine Society, San Antonio, Texas.
52. S. B. Daniels, E. Cooney, M. J. Sofia, P. K. Chakravarty, and J. A. Katzenellenbogen, Haloenol Lactones: Potent Enzyme-Activated Irreversible Inhibitors of Chymotrypsin, 186th ACS Meeting, Washington, DC, August **1983**.
53. D. O. Kieseewetter and J. A. Katzenellenbogen, Preparation of 16 (F-18) Fluoroestradiols, 186th ACS Meeting, Washington, DC, August, **1983**.
54. J. A. Katzenellenbogen and B. S. Katzenellenbogen, Non-Steroidal Antiestrogens: Synthesis, Metabolism, Mechanism of Action, and Probes for the Estrogen Receptor, 187th ACS Meeting, St. Louis, MO, April, **1984**.
55. D. O. Kieseewetter and J. A. Katzenellenbogen, Assignment of Stereochemistry of 16-Fluoro Derivatives of Estradiol, 187th ACS Meeting, St. Louis, MO, April, **1984**.
56. M. J. Sofia and J. A. Katzenellenbogen, Halo Enol Lactones: The Synthesis of the 4-Phenyl Tetrahydrofuranone and the 4- and 5-Phenyl Tetrahydropyranones, and the Effect of Lactone Substitution Pattern on Chymotrypsin Inactivation, 187th ACS Meeting, St. Louis, MO, April, **1984**.
57. R. D. Bindal and J. A. Katzenellenbogen, Photofluorogenic Ligands for Estrogen Receptor, 187th ACS Meeting, St. Louis, MO, April, **1984**.
58. D. Y. Chi and J. A. Katzenellenbogen, Optimization of Halofluorination. Model Studies for the Preparation of [F-18]-2-Fluorohexestrol, 187th ACS Meeting, St. Louis, MO, April, **1984**.
59. John A. Katzenellenbogen, Design of Affinity Labeling and Gamma-Emitting Agents for the Estrogen Receptor, 25th Annual Medicinal Chemistry Symposium, Buffalo, NY, June, **1984**.

60. M. J. Welch, M. R. Kilbourn, C. J. Mathias, J. W. Brodack, D. O. Kiesewetter, J. A. Katzenellenbogen, Fluorine-18 Labeled Spiroperidol (I) and 16 α -Fluoro-17 β -estradiol (II) — From Radiochemicals to Radiopharmaceuticals, Society of Nuclear Medicine 31st Annual Meeting, Los Angeles, CA, June 5-8, **1984**.
61. J. A. Katzenellenbogen, K. E. Carlson, R. D. Bindal, The Measurement of Estrogen Receptor Binding in Cell-Free Preparations by Fluorescence: A Comparison of Fluorimetric and Radiometric Methods, International Conference on the Applications of Fluorescence in the Biomedical Sciences, Pittsburgh, PA, April 12-15, **1985**.
62. J. W. Brodack, M. R. Kilbourn, M. J. Welch, and J. A. Katzenellenbogen, NCA [¹⁸F]-16 α -Fluoroestradiol-17 β : Optimization of Yield and Quality Control by HPLC, Society of Nuclear Medicine 32nd Annual Meeting, Houston, TX, June 2-5, **1985**.
63. C. J. Mathias, J. W. Brodack, M. R. Kilbourn, K. A. Carlson, J. A. Katzenellenbogen, M. J. Welch, Biodistribution and Metabolism of 16 α -([¹⁸F]-Fluoro)-17 β -Estradiol, Society of Nuclear Medicine 32nd Annual Meeting, Houston, TX, June 2-5, **1985**.
64. D. Y. Chi, J. A. Katzenellenbogen, [F-18]Halofluorination: A Rapid and Efficient Method for the Incorporation of Radiofluorine Into Organic Molecules, Society of Nuclear Medicine 32nd Annual Meeting, Houston, TX, June 2-5, **1985**.
65. S. Sondej-Pochapsky, J. A. Katzenellenbogen, A Novel Two-step Approach to Geminal Difluoro Compounds, 190th Annual American Chemical Society, Chicago, IL, September 8, **1985**.
66. J. W. Brodack, M. J. Welch, M. R. Kilbourn, and J. A. Katzenellenbogen, Application of Robotics for the Routine Production of Fluorine-18 Labeled Radiopharmaceuticals, Presented at the American Chemical Society Meeting, Chicago, IL, September, **1985**.
67. J. A. Zablocki and J. A. Katzenellenbogen, Synthesis and Properties of Norhexestrol Aziridines. Potential Affinity Labeling Agents for the Estrogen Receptor, 190th Annual American Chemical Society, Chicago, IL, September 8, **1985**.
68. D. Y. Chi, J. A. Katzenellenbogen, M. R. Kilbourn, M. J. Welch, 3-N-(2-[¹⁸F]Fluoroalkyl)Spiperone: Synthesis by N-Alkylation with Olefin Halofluorination Products and Preliminary Biodistribution Studies, 191st ACS Meeting, New York, New York, April, **1986**.
69. J. A. Katzenellenbogen, J. W. Brodack, C. J. Mathias, M. R. Kilbourn, M. A. Mintun, and M. J. Welch, 16 α -[¹⁸F]-Fluoroestradiol: A Positron-Emitting Imaging Agent for Estrogen Receptor-Positive Breast Tumors, International Congress on Endocrinology and Malignancy, Rome, April 22-27, 1986, *Anticancer Research* **1986**, 6, 363.
70. J. A. Katzenellenbogen, K. E. Carlson, and R. D. Bindal, Estrogen Receptor (ER) Assay by Fluorescence Using 12-Oxo-9(11)-dehydroestradiol (12-oxo-E₂), International Congress on Endocrinology and Malignancy, Rome, April 22-27, **1986**, *Anticancer Research*, 6, 378 (1986).
71. B. S. Katzenellenbogen, Y. Berthois, Y. Y. Sheen, K. Kendra, and J. A. Katzenellenbogen, Phenol Red in Tissue Culture Media is a Weak Estrogen: Implications Concerning the Study of Proliferation and Protein Synthesis of Estrogen-Responsive Cells in Culture, International Congress on Endocrinology and Malignancy, Rome, April 22-27, **1986**, *Anticancer Research* 1986, 6, 396.
72. J. A. Zablocki and J. A. Katzenellenbogen, Synthesis of Norhexestrol Aziridines—Estrogenic and Antiestrogenic Affinity Labeling Agents for the Estrogen Receptor, 18th Central Regional ACS Meeting, Bowling Green, OH, June, **1986**.
73. M. R. Kilbourn, J. W. Brodack, D. Y. Chi, C. S. Dence, D-R. Hwang, P. A. Jerabek, J. A. Katzenellenbogen, T. B. Patrick, M. J. Welch, F-18-Fluoride Ion: Versatile Reagent for Radiopharmaceutical Synthesis, 33rd Annual Meeting Society of Nuclear Medicine, Washington, DC, June 22-25, **1986**.
74. M. J. Welch, C. J. Mathias, D. Y. Chi, J. A. Katzenellenbogen, M. R. Kilbourn, J. W. Brodack, Brain Uptake of Alkylated and Fluoroalkylated Derivatives of Spiroperidol; Ligands for Studying Dopamine Receptors *In Vivo*, 33rd Annual Meeting Society of Nuclear Medicine, Washington, DC, June 22-25, **1986**.
75. B. W. Gabriel, D. N. Danforth, Jr., J. A. Katzenellenbogen, Electrophoretic Analysis of the Estrogen Receptor in MCF-7 Cells Labeled by Covalent-Attaching Tamoxifen Aziridine, The Endocrine Society, Anaheim, CA, June, **1986**.
76. J. W. Brodack, M. R. Kilbourn, M. J. Welch, J. A. Katzenellenbogen, Robotics for the Production of Several Short-lived Positron-emitting Radiopharmaceuticals, Radiopharmaceutical Chemistry, Boston, MA, June 29-July 3, **1986**.

77. D. Y. Chi, M. R. Kilbourn, J. A. Katzenellenbogen, J. W. Brodack, M. J. Welch, Synthesis of N-(ω -[^{18}F]Fluoroalkyl)piperone Derivatives: Rapid and Efficient Methods for the [^{18}F]Fluoroalkylation of Amines and Amides, *Radiopharmaceutical Chemistry*, Boston, MA, June 29-July 3, **1986**.
78. M. R. Kilbourn, J. W. Brodack, D. Y. Chi, C. S. Dence, P. A. Jerabek, J. A. Katzenellenbogen, T. B. Patrick, M. J. Welch, [^{18}F]Fluoride Ion: A Versatile Reagent for Radiopharmaceutical Synthesis, *Radiopharmaceutical Chemistry*, Boston, MA, June 29-July 3, **1986**.
79. S. J. Brandes and J. A. Katzenellenbogen, The Development of Fluoroandrogens and Fluoroprogestins as Potential Imaging Agents for Receptor-Positive Prostate and Breast Tumors In: Sixth International Symposium on Radiopharmaceutical Chemistry, Boston, June 29-July 3, **1986**, pp. 370-372.
80. G. M. Anstead, J. A. Katzenellenbogen, The Design of Integrated Fluorescent Estrogens, 192nd ACS Meeting, Anaheim, CA, September 7-12, **1986**.
81. S. J. Brandes, J. A. Katzenellenbogen, Fluoroandrogens and Fluoroprogestins and Potential Imaging Agents for Receptor-Positive Prostate and Breast Tumors, 192nd ACS Meeting, Anaheim, CA, September 7-12, **1986**.
82. G. M. Anstead and J. A. Katzenellenbogen, Fluorescence Solvatochromism of Substituted Stilbenes, 193rd ACS Meeting, Denver, CO, April, **1987**, ORGN 267.
83. M. J. Welch, D. Y. Chi, M. R. Kilbourn, C. J. Mathias, J. W. Brodack, J. S. Perlmutter, M. E. Raichle, M. M. Ter-Pogossian, and J. A. Katzenellenbogen, N-(3-[^{18}F]Fluoropropyl)-Spiperone: A New Ligand for PET Studies of the Dopamine Receptor, 13th International Symposium on Cerebral Blood Flow and Metabolism, Montreal, June 20-25, **1987**.
84. M. A. Mintun, M. J. Welch, C. J. Mathias, J. A. Brodack, B. A. Siegel, and J. A. Katzenellenbogen, Application of 16 α -[F-18]-fluoro-17 β -estradiol (I) for the Assessment of Estrogen Receptors in Human Breast Carcinoma, Society of Nuclear Medicine 34th Annual Meeting, Toronto, June 2-5, **1987**.
85. M. G. Pomper, J. W. Brodack, D. Y. Chi, S. J. Brandes, J. A. Katzenellenbogen, and M. J. Welch, Synthesis and Animal Distribution Studies of a F-18-labeled Progestin: 17 α -(3-fluoro-1-propynyl)-19-nortestosterone, Society of Nuclear Medicine 34th Annual Meeting, Toronto, June 2-5, **1987**.
86. J. F. Elliston, J. A. Zablocki, J. A. Katzenellenbogen, and B. S. Katzenellenbogen, Ketonestrol Aziridine, an Efficient and Selective Agonistic Estrogen Receptor Affinity Label, The Endocrine Society, Indianapolis, June, **1987**.
87. G. M. Anstead, J. L. Ensign, and J. A. Katzenellenbogen, 2-Arylindenes: Considerations in the Binding Orientation of Unsymmetrical Non-Steroidal Ligands to the Estrogen Receptors, 194th ACS Meeting, New Orleans, September, **1987**.
88. G. M. Anstead, S. A. Haroutounian, T. L. Fevig, R. D. Bindal, J. A. Zablocki, J. E. Lloyd, K. E. Carlson, and J. A. Katzenellenbogen, Fluorescent Probes for the Estrogen Receptor: Utilization of Conjugates, Intramolecular Charge Transfer, Photofluorescence, and Excited State Ionization, XIIIth International Conference on Photochemistry, Budapest, Hungary, September, **1987**.
89. D. S. Vicini, G. K. Ogilvie, and J. A. Katzenellenbogen, Estrogen Receptor Analysis of Normal and Neoplastic Lymph Node Tissue in Dogs, Veterinary Cancer Society, 7th Annual Conference, Madison, WI, October 26-28, **1987**.
90. S. S. Pochapsky and J. A. Katzenellenbogen, Synthesis of an F-18 Labeled Metabolic Blocking Agent for Myocardial Imaging, 195th National ACS Meeting, Toronto, Canada, June, **1988**.
91. D.-J. Baek and J. A. Katzenellenbogen, Enol Lactone Inhibitors of α -Chymotrypsin: Studies on the Mechanism of Inactivation and Stereospecific Deacylation of Acyl Enzyme Intermediate, 195th National ACS Meeting, Toronto, Canada, June, **1988**.
92. M. G. Pomper, J. W. Brodack, C. J. Mathias, K. E. Carlson, J. A. Katzenellenbogen, and M. J. Welch, 21-[^{18}F]Fluoro-16 α -ethyl-19-norprogesterone (FENP): Synthesis and Target Tissue Selective Uptake of a Progestin Receptor-based Radiotracer, (Society of Nuclear Medicine, San Francisco, CA, June, 1988), *J. Nucl. Med.*, **29**, 768, **1988**.
93. M. J. Welch, J. S. Perlmutter, A. H. McGuire, C. J. Mathias, J. W. Brodack, M. A. Mintun, and J. A. Katzenellenbogen, Uptake of Fluorine-18 Labeled Sex Hormones in Mammalian Brain; Measured with F-18 Ligands and PET, (Society of Nuclear Medicine, San Francisco, CA, June, 1988), *J. Nucl. Med.*, **29**, 795, **1988**.

94. J. A. Katzenellenbogen, M. G. Pomper, C. J. Mathias, H. van Brocklin, J. W. Brodack, M. A. Mintun, and M. J. Welch, Fluorine-18 Labeled Estrogens as Imaging Agents for Estrogen Receptor-Positive Breast Tumors, 8th International Congress of Endocrinology, Tokyo, Japan, July, **1988**.
95. J. A. Katzenellenbogen and M. J. Welch, Fluorination when Fluorine is the Limiting Reagent: The Synthesis of Radiopharmaceuticals Labeled with Fluorine-18 for PET Imaging, 12th International Symposium on Fluorine Chemistry, Santa Cruz, CA, April, **1988**.
96. S. A. Haroutounian and J. A. Katzenellenbogen, Excited State Ionizers — Photofluorogenic Agents: Fluorescent Probes for the Estrogen Receptor. Xth International Symposium on Medicinal Chemistry, Budapest, Hungary, P-86, August, **1988**.
97. K. G. Pinney and J. A. Katzenellenbogen, Acyl Azides as Photoaffinity Reagents for the Estrogen Receptor, 196th Meeting of the American Chemical Society, Los Angeles, CA, September, **1988**.
98. J. A. Katzenellenbogen, R. D. Thomas, C. J. Mathias, H. van Brocklin, and M. J. Welch, Fluorine-18 Labeled 11 β -Substituted Estrogens: Synthesis, Receptor Binding, and Comparative Target Tissue Uptake Studies, 196th Meeting of the American Chemical Society, Los Angeles, CA, September, **1988**.
99. M. G. Pomper, J. A. Katzenellenbogen, R. D. Thomas, C. J. Mathias, H. van Brocklin, and M. J. Welch, Fluorine-18 Labeled 11 β -Substituted Estrogens: Synthesis, Receptor Binding, and Comparative Target Tissue Uptake Studies, 7th International Symposium on Radiopharmaceutical Chemistry, Groningen, The Netherlands, July, 1988. *J. Labeled Compounds Radiopharmaceuticals*, **26**, 323-325, **1989**.
100. J. A. Katzenellenbogen, D-J. Baek, G. W. Bemis, P. E. Reed, Enol Lactone Inhibitors of Serine Proteases, UCLA Symposium, "Protein and Pharmaceutical Engineering," Park City, UT, Jan 17-22, **1989**.
101. J. A. Katzenellenbogen, M. G. Pomper, D. M. Smith, K. L. Harlow, B. S. Katzenellenbogen, The Estrogen Receptor: Recent Advances and Molecular Probes, NERM XIX (Northeast Regional ACS Meeting), Albany, NY, June, **1989**.
102. M. G. Pomper, K. G. Pinney, K. E. Carlson, H. F. VanBrocklin, M. J. Welch, J. A. Katzenellenbogen, Uptake Selectivity of Fluorine-substituted Progestins: Analogs of R5020 and a Novel Retroprogestin, (The Society of Nuclear Medicine 36th Annual Meeting, St. Louis, MO, June 13-16, 1989), *J. Nucl. Med.*, **30**, 928, **1989**.
103. M. G. Pomper, M. J. Kochanny, A. M. Thieme, K. E. Carlson, H. F. VanBrocklin, C. J. Mathias, M. J. Welch, J. A. Katzenellenbogen, Imaging Agents for Brain Corticosteroid Receptors: Synthesis and Tissue Distribution of Fluorine-18 Substituted Corticosteroids, (The Society of Nuclear Medicine 36th Annual Meeting, St. Louis, MO, June 13-16, 1989), *J. Nucl. Med.*, **30**, 821, **1989**.
104. H. F. VanBrocklin, M. G. Pomper, C. J. Mathias, J. A. Katzenellenbogen, M. J. Welch, 17 α -Ethyne-11 β -substituted, Fluorine-18 Labeled Estrogens Improved PET Imaging Agent. (The Society of Nuclear Medicine 36th Annual Meeting, St. Louis, MO, June 13-16, 1989), *J. Nucl. Med.*, **30**, 753, **1989**.
105. R. Hanson, J. A. Katzenellenbogen, Structure Activity Relationships of 17 α -X-Vinyl Estradiols, American Chemical Society, 197th ACS National Meeting, Dallas, TX, April 9-14, **1989**.
106. E. Napolitano, R. Fiaschi, C. Rosenthal, R. Hanson, J. A. Katzenellenbogen, Synthesis and Evaluation of 11 β -Alkenyl and 11 β -Aryl Estradiols: Precursors for 17 α -Halovinyl Estrogenic Radioligands, American Chemical Society, 197th National Meeting, Dallas, TX, April 9-14, **1989**.
107. E. Napolitano, R. Fiaschi, R. Hanson, J. A. Katzenellenbogen, Fluorinated Estrogens: Synthesis and Evaluation of 11 β -Fluoroethyl Estradiol, American Chemical Society, 197th National Meeting, Dallas, TX, April 9-14, **1989**.
108. K. W. Harlow, B. S. Katzenellenbogen, G. L. Greene, D. N. Smith, J. A. Katzenellenbogen, Identification of Cysteine-530 as the Covalent Attachment Site of Tamoxifen Aziridine in the MCF-7 Estrogen Receptor. 9th International Symposium of the Journal of Steroid Biochemistry, Canary Islands, Spain, May **1989**.
109. K. W. Harlow, B. S. Katzenellenbogen, G. L. Greene, D. N. Smith, J. A. Katzenellenbogen, Identification of Cysteine-530 as the Covalent Attachment Site of Tamoxifen Aziridine in the MCF-7 Estrogen Receptor. 3rd Symposium of the Protein Society, Seattle, Washington, July-August, **1989**.
110. M. J. Welch, A. H. McGuire, D.-R. Hwang, J. A. Katzenellenbogen, Clinical Prospects of New PET Radiopharmaceuticals. 5th European Conference on Clinical Oncology, London, September, **1989**.
111. J. A. Katzenellenbogen, M. G. Pomper, A. Liu, M. J. Kochanny, A. M. Thieme, K. E. Carlson, C. J. Mathias, H. VanBrocklin, M. A. Mintun, M. J. Welch, ¹⁸F-Labeled Steroids for Positron Emission Tomography of Receptor-Positive Tumors and Brain Receptors, 1989 International Chemical Congress of Pacific Basin Societies (PACIFICHEM), Hawaii, December, **1989**.

112. M. G. Pomper, M. J. Kochanny, A. M. Thieme, K. E. Carlson, C. J. Mathias, H. VanBrocklin, M. J. Welch, J. A. Katzenellenbogen, Fluorine-18 Labeled Corticosteroids for Imaging Hippocampal Receptors, American Health Assistance Foundation 15th Anniversary Conference on Alzheimer's Disease, Tucson, AZ, Feb. 1989. *Neurobiol. Aging*, **11**, 84, **1990**
113. J. A. Katzenellenbogen, M. G. Pomper, A. Liu, M. J. Kochanny, K. E. Carlson, C. J. Mathias, H. VanBrocklin, M. J. Welch, ¹⁸F-Labeled Steroids for Positron Emission Tomography of Receptor-Positive Tumors and Brain Receptors, American Chemical Society, 199th National Meeting, Boston, MA, April, **1990**.
114. K. G. Pinney, J. A. Katzenellenbogen, Synthesis of a Tetrafluoro-Substituted Aryl Azide and its Protio Analogue as Selective Photoaffinity Labeling Reagents for the Estrogen Receptor. American Chemical Society, 199th National Meeting, Boston, MA, April, **1990**.
115. K. J. Hwang, J. A. Katzenellenbogen, Tetrahydrochrysenes Derivatives as Fluorescent Estrogens: Synthesis, Receptor Binding and Spectroscopic Properties, American Chemical Society, 199th National Meeting, Boston, MA, April, **1990**.
116. Liu, K. E. Carlson, J. A. Katzenellenbogen, H. F. VanBrocklin, C. J. Mathias, M. J. Welch, Androgen Receptor, Androgen Receptor-Based Imaging Agents for the Prostate: Synthesis and Tissue Distribution Studies with Tritium and Fluorine-18 Labeled Androgens, 8th International Symposium on Radiopharmaceutical Chemistry, Princeton NJ, June, **1990**.
117. M. J. Kochanny, M. G. Pomper, K. E. Carlson, C. J. Mathias, H. F. VanBrocklin, M. J. Welch and J. A. Katzenellenbogen, Imaging Agents for Brain Corticosteroid Receptors: Synthesis and Tissue Distribution of 21-[¹⁸F]Fluoro-Deacylcortivazol, 8th International Symposium on Radiopharmaceutical Chemistry, Princeton NJ, June, **1990**.
118. H. F. VanBrocklin, M. J. Welch, J. W. Brodack, C. J. Mathias, M. G. Pomper, K. E. Carlson, J. A. Katzenellenbogen, Fluorine-18 Labeled Estrogens: Synthesis and Biological Evaluation of 11 β - and 17 α -Substituted Estradiols, 8th International Symposium on Radiopharmaceutical Chemistry, Princeton NJ, June, **1990**.
119. R. A. Weisman, J. A. Sahakian, J. W. Brodack, M. J. Welch, J. C. Merrill, A. P. Li, J. A. Katzenellenbogen. The Use of Cultured Liver Cells From Rats and Humans to Study the Metabolism of the PET Imaging Agent (¹⁸F)-Fluoroestradiol. 8th International Symposium on Radiopharmaceutical Chemistry, Princeton NJ, June, **1990**.
120. N. French, E. Napolitano, H.F. VanBrocklin, J.W. Brodack, R.N. Hanson, M.J. Welch, J.A. Katzenellenbogen, The β -Heteroatom Effect in Metabolic Defluorination: The Interaction of Resonance and Inductive Effects May be a Fundamental Determinant in the Metabolic Lability of Fluorine-Substituted Compounds. 8th International Symposium on Radiopharmaceutical Chemistry, Princeton NJ, June, **1990**.
121. H. F. VanBrocklin, J. W. Brodack, C. J. Mathias, M. J. Welch, J. A. Katzenellenbogen, J. F. Keenan, G. J. Mizejewski, Age Dependence of the Alpha-Fetoprotein-16 α -[F-18]Fluoroestradiol (FES) Interaction in Female Rat Serum. Society of Nuclear Medicine, Washington, D. C., June, **1990**.
122. F. Dehdashti, A. H. McGuire, H. F. VanBrocklin, J. W. Brodack, D. P. Andriole, C. J. Mathias, B. A. Siegel, M. J. Welch, M. G. Pomper, J. A. Katzenellenbogen, Assessment of Progestin Receptors in Breast Carcinoma by Positron Emission Tomography. Society of Nuclear Medicine, Washington, D. C., June, **1990**.
123. J. A. Katzenellenbogen, M. G. Pomper, A. Liu, K. E. Carlson, C. J. Mathias, H. van Brocklin, M. J. Welch. Steroid Hormones Labeled with Positron-Emitting Radionuclides for Imaging Receptor-Positive Tumors. 15th International Cancer Congress (UICC) Hamburg, Germany, August, **1990**.
124. Liu, J. A. Katzenellenbogen, H. F. VanBrocklin, M. J. Welch, Synthesis and Evaluation of Fluorine-18 Labeled Androgens as Imaging Agents for Prostatic Tumors. 201st National ACS Meeting, Atlanta, GA, April **1991**
125. J. A. Katzenellenbogen, and B. S. Katzenellenbogen, Combining Chemical Probes and Molecular Biology to Study Estrogen Agonists and Antagonists. ACS Central Great Lakes Joint Regional Meeting, Indianapolis, IN, May **1991**.
126. H. F. VanBrocklin, M. J. Welch, J. A. Katzenellenbogen, 16 β -[F-18]Fluoroestradiols: Synthesis and Evaluation of Novel PET Imaging Agents for Estrogen Receptors. Society of Nuclear Medicine, 38th Annual Meeting, Cincinnati, OH, June **1991**
127. H. F. VanBrocklin, P. A. Rocque, M. J. Welch, J. A. Katzenellenbogen, 17 α -Ethinyl-16 β -[F-18]Fluoro-11 β -methoxyestradiol: Control of Metabolism Enhances Target Tissue Uptake. Society of Nuclear Medicine, 38th Annual Meeting, Cincinnati, OH, June **1991**.

128. J. P. DiZio, R. Fiaschi, J. A. Katzenellenbogen, C. J. Anderson, G. J. Ehrhardt, and M. J. Welch, Progesterone-Rhenium Complexes: Potential Metal-Based Imaging Agents for Steroid Receptors. Society of Nuclear Medicine, 38th Annual Meeting, Cincinnati, OH, June **1991**
129. K. J. Hwang, K. E. Carlson, and J. A. Katzenellenbogen, Fluorometric Assays of the Estrogen Receptor Using Tetrahydrochrysenes Derivatives as Fluorescent Ligands. Amer. Soc. Photobiology. June **1991**.
130. J. A. Katzenellenbogen, A. Liu, S. J. Brandes, K. E. Carlson, and M. J. Welch, The Development of Fluorine-18 Labeled Androgens as PET Imaging Agents for Prostatic Cancer, 4th Internal. Congress on Hormones and Cancer, Amsterdam, The Netherlands, September **1991**
131. Liu, C. S. Dence, M. J. Welch, and J. A. Katzenellenbogen, Fluorine-18 Labeled Androgens: Radiochemical Synthesis and Tissue Distribution Studies on Fluorine-Substituted Androgens, Potential Imaging Agents for Breast Cancer. Society for Basic Urologic Research, **1991** Annual Meeting, Rochester MN, November 1991
132. H. F. VanBrocklin, P. R. Kym, J. P. O'Neil, T. A. Bonasera, M. J. Welch, and J. A. Katzenellenbogen, A Novel Metabolically Stable Site for Fluorine-18 Labeling of Progestins, Useful in the Development of Imaging Agents for Progesterone-Positive Tumors. 9th International Symposium on Radiopharmaceutical Chemistry, Paris, April **1992**.
133. P. R. Kym, K. E. Carlson, H. F. VanBrocklin, and J. A. Katzenellenbogen. Molecular Probes for the Progesterone Receptor: Design, Synthesis and Biochemical Evaluation. 203rd National Meeting of the American Chemical Society, San Francisco, CA. April **1992**.
134. R. Rai and J. A. Katzenellenbogen, Guanidino-Phenyl Substituted Enol Lactones as Mechanism-Based Inhibitors of Trypsin-Like Serine Proteases. 203rd National Meeting of the American Chemical Society, San Francisco, CA. April **1992**.
135. J. A. Katzenellenbogen, K. E. Carlson, and M. J. Welch. Molecular Probes for Steroid Receptors: Affinity Labels, Imaging Agents, and Fluorescent Ligands. 9th Noordwijkerhout-Camerino Symposium, The Netherlands, May **1993**.
136. T. S. Pajreau, M. J. Welch, T. A. Bonasera, and J. A. Katzenellenbogen. The Radiotoxicity of 16 α -[F-18]-Fluoroestradiol ([F-18]FES) in Cell Culture. (The Society of Nuclear Medicine 40th Annual Meeting, Toronto, Ontario, June 1993) *J. Nucl. Med.* **1993**, 34S, 160P.
137. T. A. Bonasera, T. S. Pajreau, F. Dehdashti, M. J. Welch and J. A. Katzenellenbogen. Comparison of the Hepatic Metabolism of 16 α -[F-18]Fluoroestradiol (FES) and 16 β -[F-18]Fluoromoxestrol (FMOX) Utilizing Isolated Hepatocytes from Different Species. (The Society of Nuclear Medicine 40th Annual Meeting, Toronto, Ontario, June 1993) *J. Nucl. Med.* **1993**, 34S, 49P.
138. F. Dehdashti, L. K. Griffeth, J. E. Mortimer, D. M. Radford, A. H. McGuire, M. J. Fusselman, R. J. Burney, C. S. Dence, T. A. Bonasera, B. A. Siegel, M. J. Welch, J. A. Katzenellenbogen. Positron Tomographic Assessment of Breast Lesions with FDG and FES. (The Society of Nuclear Medicine 40th Annual Meeting, Toronto, Ontario, June 1993) *J. Nucl. Med.* **1993**, 34S, 56P.
139. B. O. Buckman, C. S. Dence, H. F. VanBrocklin, S. R. Bergmann, J. A. Katzenellenbogen, and M. J. Welch. Synthesis and Initial Evaluation of ω -Carbon-11 Palmitic Acid as a Cardiac Imaging Agent. (The Society of Nuclear Medicine 40th Annual Meeting, Toronto, Ontario, June 1993) *J. Nucl. Med.* **1993**, 34S, 79P.
140. J. P. O'Neil, C. J. Anderson, K. E. Carlson, M. J. Welch, J. A. Katzenellenbogen. An Improved Progesterone-Tchnetium Complex as a Potential Imaging Agent for Steroid Receptors. (The Society of Nuclear Medicine 40th Annual Meeting, Toronto, Ontario, June 1993) *J. Nucl. Med.* **1993**, 34S, 18P.
141. J. A. Katzenellenbogen and Colleagues (University of Illinois) and M. J. Welch and Colleagues (Washington University Medical School). Strategies in the Design of Breast Tumor Imaging Agents. International Isotope Society 6th Central US Meeting, Ann Arbor, Michigan, May **1993**.
142. W. Scribner and J. A. Katzenellenbogen. The Design and Synthesis of Novel Fluorescent Probes for the Estrogen Receptor. 207th National Meeting of the American Chemical Society, San Diego, CA, March **1994**.
143. J. A. Katzenellenbogen, D. A. Seielstad, R. A. Goldstein, Z. A. Luthey-Schulten, and P. G. Wolynes. A 3-Dimensional Structural Model for the Hormone Binding Domain of the Nuclear Receptors. Keystone Symposium on Molecular and Cellular Biology, Taos, NM, February, **1994**.
144. F. Dehdashti, J. E. Mortimer, L. K. Griffeth, A. H. McGuire, D. M. Radford, M. J. Fusselman, R. J. Burney, T. A. Bonasera, B. A. Siegel, J. A. Katzenellenbogen, and M. J. Welch. Positron Tomographic Assessment of Breast Lesions with FDG and FES. (The Society of Nuclear Medicine 41st Annual Meeting, Orlando, FL, June 1994) *J. Nucl. Med.* **1994**, 35S, 141P.

145. E. N. Napolitano, C. S. Dence, M. J. Welch, and J. A. Katzenellenbogen. Carbon-11 Labeled Estrogens as Imaging Agents for Breast Tumors. (The Society of Nuclear Medicine 41st Annual Meeting, Orlando, FL, June 1994) *J. Nucl. Med.* **1994**, 35S, 250P.
146. T. A. Bonasera, J. P. O'Neil, Y. S. Choe, L. L. Lich, J. T. Hood, Jr, M. J. Welch, and J. A. Katzenellenbogen. Imaging the Prostate in Baboons with Fluorine-18 Labeled Androgen Receptor Ligands. (The Society of Nuclear Medicine 41st Annual Meeting, Orlando, FL, June 1994) *J. Nucl. Med.* **1994**, 35S, 53P.
147. J. A. Katzenellenbogen. Imaging Agents for Steroid Receptors Labeled with Fluorine-18 and Technetium-99m. 208th National Meeting of the American Chemical Society, Washington, DC, August **1994**.
148. D. A. Seielstad, K. E. Carlson, P. J. Kushner, G. L. Greene, and J. A. Katzenellenbogen. Mapping the Boundaries and Topology of the Estrogen Receptor Ligand Binding Domain by Selective Proteolysis with Molecular Analysis by Electrospray Ionization Mass Spectrometry. 12th International Symposium of the Journal of Steroid Biochemistry and Molecular Biology, Berlin, May **1995**.
149. K. S. Kirschbaum, T. A. Bonasera, B. O. Buckman, M. J. Welch, J. A. Katzenellenbogen. [F-18]Progestins: Synthesis and Tissue Distribution of 21-Fluoroprogestin-16 α ,17 α -furan Ketals and Acetals: Potential Breast Tumor Imaging Agents. (The Society of Nuclear Medicine 42nd Annual Meeting, Minneapolis, MN, June **1995**).
150. Y. S. Choe, P. J. Lidström, T. A. Bonasera, D. Y. Chi, K. S. Kirschbaum, M. J. Welch, and J. A. Katzenellenbogen. Bromo-[F-18]fluorination: A Radiofluorination Method Applied to the Synthesis of 11 β -[F-18]Fluoroandrogens and 6 α -[F-18]Fluoroprogestins. (The Society of Nuclear Medicine 42nd Annual Meeting, Minneapolis, MN, June **1995**).
151. R. K. Hom, D. Y. Chi, Y. Sugano, and J. A. Katzenellenbogen. Bis(aminothiols) Oxorhenium Complexes Whose Structure Mimic Steroids. (The Society of Nuclear Medicine 42nd Annual Meeting, Minneapolis, MN, June 1995). *J. Nucl. Med.* **1995**, 36S, 68P.
152. J. A. Katzenellenbogen. Affinity Labeling Studies on Steroid Hormone Receptors Provide Guidance to Molecular and Structural Biology Studies. 23rd Annual Meeting of the American Society for Photobiology, Washington DC, June **1995**.
153. Y. Sugano, and J. A. Katzenellenbogen. Synthesis of an N₂S₂ Tetradentate Chelate System for the Preparation of Oxorhenium(V) and Oxotechnetium(V) Complexes Whose Structure Mimic that of Steroids. (11th International Symposium on Radiopharmaceutical Chemistry, Vancouver, Canada, August 1995) *J. Labd. Cpd. Radiopharm* **1995**,37, 424-425.
154. T. W. Spradau, and J. A. Katzenellenbogen. Cyclopentadienyltricarbonylrhenium and Technetium. An Organometallic Approach to Labeling Small Molecules with Radiometals. Studies on a Π Ligand Transfer Process. (11th International Symposium on Radiopharmaceutical Chemistry, Vancouver, Canada, August 1995) *J. Labd. Cpd. Radiopharm* **1995**,37, 453-455.
155. R. K. Hom, D. Y. Chi, and J. A. Katzenellenbogen. Stereochemical Issues in the Synthesis of Bis-Bidentate (NS)₂ Amino Thiol Complexes of Oxorhenium(V) and Oxotechnetium(V) whose Structures Mimic Those of Steroids. (11th International Symposium on Radiopharmaceutical Chemistry, Vancouver, Canada, August 1995) *J. Labd. Cpd. Radiopharm* **1995**,37, 441-443.
156. J. A. Katzenellenbogen Fluorine-18 Labeled Steroids for Imaging Receptor-Positive Tumors by Positron Emission Tomography (PET): Synthesis, Binding, Distribution, and Metabolism. 210th American Chemical Society National Meeting, Chicago IL, August 20-24, **1995**.
157. D. A. Seielstad, K. E. Carlson, J. R. Benson, F. B. Nygaard, K. W. Harlow, P. J. Kushner, G. L. Greene, J. A. Katzenellenbogen. Structural Analysis of the Human Estrogen Receptor Ligand Binding Domain Using Electrospray Ionization Mass Spectrometry (ESI-MS): Identification of Sites of Proteolytic Sensitivity and Sites of Covalent Attachment by Affinity Labeling Probes. 1996 Keystone Symposium on Steroid/Thyroid/Retinoic Acid Family, Lake Tahoe, CA, March **1996**.
158. T. W. Spradau, and J. A. Katzenellenbogen. Protein Labeling with Cyclopentadienyltricarbonyltechnetium. The Society of Nuclear Medicine 43rd Annual Meeting, Denver, CO, June **1996**.
159. R. W. Chesnut, and J. A. Katzenellenbogen. Gallium-Chelating Ligands with High Affinity for the Estrogen Receptor. The Society of Nuclear Medicine 43rd Annual Meeting, Denver, CO, June **1996**.
160. D. A. Seielstad, K. E. Carlson, J. R. Benson, F. B. Nygaard, K. W. Harlow, P. J. Kushner, G. L. Greene, J. A. Katzenellenbogen. Analysis of the Human Estrogen Receptor Ligand Binding Domain Using Electrospray Ionization Mass Spectrometry (ESI-MS): Identification of Sites of Chemical Modification, Proteolytic

- Sensitivity, and Affinity Labeling. 10th International Congress of Endocrinology, San Francisco, CA, June **1996**.
161. J. A. Katzenellenbogen, F. Dehdashti, M. J. Welch. Estrogens and Progestins Labeled with Fluorine-18: Imaging Agents for Receptor Positive Breast Tumors. 21st Meeting of the International Association for Breast Cancer Research, Paris, France, July **1996**.
 162. J. A. Katzenellenbogen. Fluorine in a Flash for a Flash: The Design and Synthesis of Steroid Radiopharmaceuticals Labeled with Fluorine-18 for PET Imaging. 13th Winter Fluorine Conference, St. Petersburg, FL, January **1997**.
 163. B. S. Katzenellenbogen, K. Ekena, G. Lazennec, E. McInerney, M. M. Montano, and J. A. Katzenellenbogen. Tripartite Estrogen Receptor Pharmacology: Regulation of Gene Expression by Estrogens and Antiestrogens. Wyeth Ayerst Meeting on Estrogens, Key West, Florida, June, **1997**.
 164. E. D. Hostetler, S. Fallis, T. J. McCarthy, C. S. Dence, M. J. Welch, and J. A. Katzenellenbogen. New Synthetic Routes for the Preparation of C-11 Palmitic Acid Labeled at Tail Positions. 12th International Symposium on Radiopharmaceutical Chemistry, Uppsala, Sweden, June **1997**.
 165. T. W. Spradau, W. B. Edwards, C. J. Anderson, M. J. Welch, and J. A. Katzenellenbogen. Preparation and Biodistribution of Octreotide Labeled with Cyclopentadienyl Tricarbonyl Technetium-99m. 12th International Symposium on Radiopharmaceutical Chemistry, Uppsala, Sweden, June **1997**.
 166. R. K. Hom, M. B. Skaddan, and J. A. Katzenellenbogen. New Structural Motifs for Oxorhenium(V) Complexes whose Structures Mimic those of Estrogen Receptor Ligands. 12th International Symposium on Radiopharmaceutical Chemistry, Uppsala, Sweden, June **1997**.
 167. E. Burns, E. Goode, P. Minutolo, J. Katzenellenbogen, J. Kosmeder, R. Moriarty, W. S. Bowers, C. Parker, K. Tomer, L. T. Burka, J. Huss, C. Kasper, and C. Weinberger. Non-Farnesoid FXR Activators and Cellular Growth Control. 9th International CBT Symposium on Steroid and Orphan Nuclear Receptors, Huddinge, Sweden, October **1997**.
 168. M. Cushman, H. He, J. A. Katzenellenbogen, R. K. Varma, E. Hamel, M. C. Lin, P. Verdier-Pinard, S. Ram, and Y. Sachdeva, Synthesis, Antitubulin Activity, and Anticancer Activity of More Potent Analogs in the 2-Alkoxyestradiol Series. 213th ACS National Meeting, San Francisco, April 13-17, **1997**.
 169. B. S. Katzenellenbogen, M. M. Montano, K. Ekena, G. Lazennec, T. Ediger, I. Choi, J. A. Katzenellenbogen. New dimensions in estrogen receptor pharmacology. Keystone Symposium on Nuclear Receptor Gene Superfamily, Lake Tahoe, CA, March **1998**.
 170. F. Wüst, R. Berger, J. A. Katzenellenbogen, R. Alberto, P. A. Schubiger, H. Spies, and B. Johannsen. Rheniumkomplexe von Steroidalen Estrogenen, Androgenen und Progestinen. Deutsche Gesellschaft für Nuclearmedizin e.V. 36. Internationale Jahrestagung, Leipzig, Germany, April **1998**.
 171. B. S. Katzenellenbogen, M. M. Montano, K. Ekena, G. Lazennec, T. Ediger, E. McInerney, I. Choi, J. Sun, K. Weis, and J. A. Katzenellenbogen. Estrogen Receptor Pharmacology. 80th Annual Meeting of The Endocrine Society, New Orleans, June **1998**.
 172. F. Wüst, J. A. Katzenellenbogen, H. Spies, and B. Johannsen. Rhenium Complexes of 17 α -Substituted Estradiol Capable of Binding to the Estrogen Receptor. Joint WFNMB&B and EANM Congress, Berlin, Germany, August 30–September 4, **1998**.
 173. C. Gee, K. E. Carlson, and J. A. Katzenellenbogen. Spectroscopic Probing of the Conformational Flexibility of the Estrogen Receptor Ligand Binding Domain. Keystone Symposium on Nuclear Receptor Gene Family, Incline Village, Nevada, March 28–April 3, **1998**.
 174. E. D. Hostetler, S. D. Jonson, M. J. Welch, and J. A. Katzenellenbogen. 2-[F-18]Fluoroestradiol: A Receptor-Based Radiopharmaceutical with High Binding for SHBG. The Society of Nuclear Medicine 45th Annual Meeting, Toronto, June 11, **1998**.
 175. M. B. Skaddan, F. R. Wüst, and J. A. Katzenellenbogen. Novel Rhenium-Containing Estrogen Mimics as Potential Imaging Agents for Breast Cancer. 216th National Meeting of the American Chemical Society, Boston, August 23-27, **1998**.
 176. S. R. Stauffer and J. A. Katzenellenbogen. Conformationally Biased s-cis Anilidoamides as Novel Ligands for the Estrogen Receptor. 216th National Meeting of the American Chemical Society, Boston, August 23-27, **1998**.
 177. J. A. Katzenellenbogen, F. Minutolo, T. W. Spradau, and M. B. Skaddan. Preserving Bioactivity of Small Molecules labeled with Technetium and Rhenium: an Organometallic Approach. 5th International Symposium

- on Technetium in Chemistry and Nuclear Medicine, Bressanone, Italy, September 6–9, **1998**. *Quart. J. Nucl. Med.* **42** (3S) 3, **1998**.
178. F. Minutolo, and J. A. Katzenellenbogen. A Convenient Three-Component Synthesis of Substituted Cyclopentadienyl Tricarbonyl Re(I) and Tc(I) Complexes and its Potential for Radiolabeling. 5th International Symposium on Technetium in Chemistry and Nuclear Medicine, Bressanone, Italy, September 6–9, **1998**. *Quart. J. Nucl. Med.* **42** (3S) 19 **1998**.
 179. F. Wüst, M. B. Skaddan, J. A. Katzenellenbogen, and H. Spies. Synthesis and Receptor Binding of Novel Progestin-Rhenium Complexes. 5th International Symposium on Technetium in Chemistry and Nuclear Medicine, Bressanone, Italy, September 6–9, **1998**. *Quart. J. Nucl. Med.* **42** (3S) 41 **1998**
 180. J. A. Katzenellenbogen. Steroid Radiopharmaceuticals Labeled with Organometallic Rhenium and Technetium. 217th ACS National Meeting, Anaheim, CA, March, **1999**.
 181. M.J. Meyers, and J. A. Katzenellenbogen. Selective Antagonists for Estrogen Receptor-Beta: Steric Factors Regulate Agonist versus Antagonist Activity. 81st Annual Meeting of the Endocrine Society, San Diego, CA, June 12-15, **1999**.
 182. R. R. Cesati, G. Tamagnan, R. m. Baldwin, S. S. Zoghbi, R. B. Innis, J. A. Katzenellenbogen. Synthesis of Cyclopentadienyl Tricarbonyl Technetium Phenyl-Tropine Derivatives by Direct Double Ligand Transfer with Ferrocene Precursors. 13th International Symposium on Radiopharmaceutical Chemistry, June 27-30, **1999**.
 183. M. B. Skaddan, F. R. Wust, M. J. Welch, J. A. Katzenellenbogen. Synthesis and Biological Evaluation of 7 α Re/Tc “3+1” and Cyclopentadienyltricarbonylmetal (CpTM) Estrogen Mimics Based on the Conjugated Design. 13th International Symposium on Radiopharmaceutical Chemistry, June 27-30, **1999**.
 184. F. Minutolo, J. A. Katzenellenbogen. New Route to Substituted CpRe(CO)₃ and CpTc(CO)₃ Complexes using Diazocyclopentadiene: A Mechanistic Analysis. 13th International Symposium on Radiopharmaceutical Chemistry, June 27-30, **1999**.
 185. F. Minutolo, J. A. Katzenellenbogen. A Practical Solid-Phase Diazocyclopentadiene Source for the Synthesis of Substituted CpRe(CO)₃ and CpTc(CO)₃ Complexes. 13th International Symposium on Radiopharmaceutical Chemistry, June 27-30, **1999**.
 186. B. S. Katzenellenbogen, T. Ediger, J. Sun, I. Choi, K. Weis, P. Martini, R. Delage-Mourroux, and J. A. Katzenellenbogen. Molecular mechanisms of estrogen action: receptors, partners and cell biology. *Frontiers in Estrogen Action*, April, **1999**.
 187. J. Sun, M. J. Meyers, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Selective antagonists for estrogen receptor-beta: steric factors regulate agonist versus antagonist activity. Symposium Abstract P1-236, p. 185, 81st Annual Meeting of the Endocrine Society, San Diego, CA, June **1999**.
 188. B. S. Katzenellenbogen, I. Choi, R. Delage-Mourroux, T. Ediger, P. Martini, M. M. Montano, J. Sun, K. Weis, J. A. Katzenellenbogen. Molecular mechanisms of estrogen action: selective ligands and receptor pharmacology. Nobel Symposium on Estrogens and Women's Health – Benefit or Threat?, Karlskoga, Sweden, July **1999**.
 189. M. J. Meyers, J. Sun, K. E. Carlson, B. S. Katzenellenbogen, and J. A. Katzenellenbogen, Novel Estrogen Receptor- β Selective Antagonists: Asymmetric Synthesis and Structure-Activity Relationships of - and - Dialkyltetrahydrochrysenes. 218th ACS National Meeting, New Orleans, Aug. 22-26, **1999**.
 190. R. R. Cesati, G. Tamagnan, R. M. Baldwin, S. S. Zoghbi, R. B. Innes, and J. A. Katzenellenbogen, Synthesis of Cyclopentadienyl Tricarbonyl Technetium Phenyl-Tropine Derivatives by Direct Double Ligand Transfer with Ferrocene Precursors. 218th ACS National Meeting, New Orleans, August 22-26, **1999**.
 191. R. Tedesco, J. A. Thomas, B. S. Katzenellenbogen, and J. A. Katzenellenbogen, Reengineering Ligand Receptor Specificity by Reciprocal Alterations at Binding Contact Sites. 218th ACS National Meeting, New Orleans, August 22-26, **1999**.
 192. J. A. Katzenellenbogen, Award Address (Arthur C. Cope Scholar Award). Chemical and Biological Tools to Study and Exploit the Estrogen Receptor. 218th ACS National Meeting, New Orleans, August 22-26, **1999**.
 193. J. Sun, D. M. Kraichely, M. J. Meyers, J.A. Katzenellenbogen, and B. S. Katzenellenbogen. Novel Selective Estrogen Receptor-Beta Antagonists Block Transcriptional Activation and Abolish Coactivator Recruitment. Keystone Symposium Nuclear Receptors 2000, Steamboat Springs, CO, March 25-31, **2000**.
 194. D. Mortensen and J. A. Katzenellenbogen, Novel Heterocyclic Ligands for the Estrogen Receptor. 219th ACS National Meeting, San Francisco, CA, March, **2000**.

195. B. S. Katzenellenbogen, P. G. V. Martini, R. R. Rajendran, R. Delage-Mourroux, J. Sun, I. Choi, D. M. Kraichely, J. A. Katzenellenbogen. Estrogen receptors alpha and beta: selective ligands and coregulator modulation of receptor activity. Keystone Symposium, Nuclear Receptors 2000, Steamboat Springs, CO, March **2000**.
196. J. A. Katzenellenbogen, J. A. Thomas, R. Tedesco, and B. S. Katzenellenbogen. Redesigning Hormone Specificity. Keystone Symposium Nuclear Receptors 2000, Steamboat Springs, CO, March 25-31, **2000**.
197. J. A. Katzenellenbogen, Estrogen Receptor Ligands: Design and Dynamics. Frontiers in Estrogen Action, April, Manalapan, FL, April **2000**.
198. J. A. Thomas, R. Tedesco, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Reengineering the Specificity of Hormone Receptor Recognition through Coordinated Changes at Key Contact Sites in Estrogen Ligands and the Estrogen Receptor. ENDO 2000 The Endocrine Society 82nd Annual Meeting, June, **2000**.
199. G. Tamagnan, R. R. Cesati III, S. S. Zoghbi, A. Varrone, A. Tikriti, J. P. Seibyl, N. Kula, R. J. Baldessarini, J. A. Katzenellenbogen, R. B. Innis, and R. M. Baldwin. Labeling, Dopamine Transporter Affinity, and Brain Uptake of the First Cyclopentadienyltricarbonyl-^{99m}Tc-Tropane Conjugate. 47th Meeting of the Society for Nuclear Medicine, June 3-7, **2000**.
200. Y. Dobrydenva, R. L. Williams, J. A. Katzenellenbogen and P. F. Blackmore. Tetrahydrochrysenes as a Novel Class of Calcium Channel Blockers in Thrombin-Activated Human Platelets. American Society for Pharmacology and Experimental Therapeutics. Boston, MA, June 4-8, **2000**.
201. J. A. Katzenellenbogen and S. R., Stauffer, Design and Combinatorial Synthesis of Novel Heterocyclic Antiestrogens. Era of Hope, Department of Defense Breast Cancer Research Program Meeting. Atlanta, GA, June 8-11, **2000**.
202. S. R. Stauffer, K. E. Carlson, J. A. Katzenellenbogen, Solid Phase Synthesis and Relative Binding Affinity Assessment of a Tetrasubstituted Pyrazole Library, Novel Ligands for the Estrogen Receptor. 6th Annual Conference and Exhibition "Screening in the New Millennium". Vancouver, British Columbia, Canada, September 6-9, **2000**.
203. D. S. Mortensen, B. F. Fink, S. R. Stauffer, Y. Huang, J. Sun, B. S. Katzenellenbogen, J. A. Katzenellenbogen. Heterocyclic Non-Steroidal Ligands for the Estrogen Receptor with Very High Receptor Subtype Specificity. ICE 2000, Sydney, Australia, October 29-November 3, **2000**.
204. J. A. Katzenellenbogen, J. A. Thomas, R. Tedesco, B. S. Katzenellenbogen. Redesigning Hormone Specificity of the Estrogen Receptor by Reciprocal Exchange of Ligand-Receptor Contact Functional Groups. ICE 2000, Sydney, Australia, October 29-November 3, **2000**.
205. J. A. Katzenellenbogen, F. Dehdashti, J. E. Mortimer, B. A. Siegel, K. Trinkaus, M. J. Welch. Imaging Breast and Prostate Cancer for Steroid Receptors and Metabolism: An Approach to Predicting Response to Hormone Therapy. Hormones and Cancer 2000, Port Douglas, Australia, November 3-7, **2000**.
206. B. S. Katzenellenbogen, J. Sun, J. A. Katzenellenbogen, M. J. Meyers, and S. R. Stauffer. Development and Characterization of Estrogen Receptor Subtype Selective Ligands. Frontiers in Estrogen Action. April, **2001**.
207. N. I. Gorshkov, J. A. Katzenellenbogen, L. G. Luyt, A. A. Lumpov, A. E. Miroslavov, D. N. Suglobov. New Dithiocarbamate-Carboxylate Chelation Unites for Linking $M(CO)_3^+$ (M=Tc, Re) Species to Other Molecules. "14th International Symposium on Radiopharmaceutical Chemistry" *Journal of Labelled Compound & Radiopharmaceuticals*. June **2001**.
208. S. H. Kim, S. D. Jonson, M. J. Welch, J. A. Katzenellenbogen. Fluorine-Substituted Ligands for the Peroxisome Proliferator-Activated Receptor Gamma (PPAR γ): Potential Imaging Agents for Metastatic Tumors. "14th International Symposium on Radiopharmaceutical Chemistry" *Journal of Labelled Compound & Radiopharmaceuticals*. June **2001**.
209. L. G. Luyt and J. A. Katzenellenbogen. Tridentate Re(I)/Tc(I) Tricarbonyl Estradiol Complexes. "14th International Symposium on Radiopharmaceutical Chemistry" *Journal of Labelled Compound & Radiopharmaceuticals*. June **2001**.
210. L. G. Luyt, J. A. Katzenellenbogen, H. M. Bigott, M. J. Welch. Preparation of Cyclopentadienyltricarbonyl Technetium-94m Complexes. "14th International Symposium on Radiopharmaceutical Chemistry" *Journal of Labelled Compound & Radiopharmaceuticals*. June **2001**.
211. L. G. Luyt, J. A. Katzenellenbogen. Synthesis of a Functionalized Gallium(III) Tripodyl Complex. "14th International Symposium on Radiopharmaceutical Chemistry" *Journal of Labelled Compound & Radiopharmaceuticals*. June **2001**.

212. D. V. Kumar and J. A. Katzenellenbogen. Halogen-Substituted Triarylpyrazoles: Potential Estrogen Receptor-Alpha Selective Radiopharmaceuticals. "14th International Symposium on Radiopharmaceutical Chemistry" *Journal of Labelled Compound & Radiopharmaceuticals*. June **2001**.
213. J. Sun, Y. R. Huang, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Selective Antagonists for Estrogen Receptor Alpha. ENDO 2001. Denver, CO, June **2001**.
214. J. Sun, M. J. Meyers, G. A. Marriner, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Estrogen Receptor Beta Potency-Selective Ligands Based on Non-Steroidal Nitriles and Their Acetylene and Polar Analogs. ENDO 2001, Denver, CO, June **2001**.
215. A. Tamrazi, J. Daniels, K. Hurth, J. A. Katzenellenbogen. Estrogen Agonists and Antagonists Have Differential Effects on the Dimer Exchange Kinetics and the Regional Dynamic Behavior of the Estrogen Receptor: Studies Using Site-Specific Fluorescent Labeled Receptors.6. "The 83rd Annual Meeting of the Endocrine Society": ENDO 2001, Denver, CO, June 20-23, **2001**.
216. J. A. Katzenellenbogen. Exploring the Structural Space of Estrogen Receptor Ligands: Subtype-Selective Binding and Activation. "222nd National Meeting of the American Chemical Society." Chicago, IL, August **2001**.
217. L. G. Luyt and J. A. Katzenellenbogen. Tridentate Re(I)/Tc(I) Tricarbonyl Estradiol Complexes. "222nd National Meeting of the American Chemical Society." Chicago, IL, August **2001**.
218. K. Shiau, D. Barstad, J. T. Radek, M. J. Meyers, J. A. Katzenellenbogen, B. S. Katzenellenbogen, D. A. Agard, G. L. Greene. Structural Characterization of an Estrogen Receptor Alpha, Agonist/Estrogen Receptor Beta, Antagonist Reveals a Novel Mode of Receptor Antagonism. "222nd National Meeting of the American Chemical Society." Chicago, IL, August **2001**.
219. T. Kouro, H. A. Harris, J. A. Katzenellenbogen, P. W. Kincade. A Role of Estrogen Receptor Alpha in the Regulation of B Lymphopoiesis? "American Association of Immunologists Meeting." April, **2002**.
220. E. Miroslavov, N. I. Gorshkov, J. A. Katzenellenbogen, L. G. Luyt, A. A. Lumpov, and D. N. Suglovov. Technetium and Rhenium Tricarbonyl Complexes with Thiosemicarbazide Ligands. "14 Radiochemistry Conference." Czech Republic. April 14-19, **2002**.
221. A. L. Rodriguez, M. Collins, and J. A. Katzenellenbogen. Development of Estrogen Receptor Coactivator Inhibitors. "2002 Keystone Symposium on Nuclear Receptor Superfamily." Snowbird, UT, April **2002**.
222. A. Tamrazi, J. Daniels, K. Hurth and J. A. Katzenellenbogen. Functional Fluorescent Estrogen Receptors (ER): Homo- and Heterodimerization, Coregulator Recruitment and Site-Specific Regional Dynamics of ER-Ligand Binding Domain (LBD) Subtypes. "2002 Keystone Symposium on Nuclear Receptor Superfamily." Snowbird, UT, April **2002**.
223. K. M. Hurth, M. N. Nilges, K. E. Carlson, R. L. Belford, and J. A. Katzenellenbogen. Ligand-Induced Changes in the Estrogen Receptor Measured by Site-Directed Spin Labeling (SDSL). "2002 Keystone Symposium on Nuclear Receptor Superfamily." Snowbird, UT, April **2002**.
224. S. Katzenellenbogen, J. Frasor, R. R. Rajendran, W. R. Harrington, S. Sheng, J. A. Katzenellenbogen. Estrogen receptors, SERMs and breast cancer. Speaker Abstract, Keystone Symposium, Nuclear Receptor Superfamily 2002, Snowbird, UT, April **2002**.
225. W. R. Harrington, S. Sheng, D. H. Barnett, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Activities of estrogen receptor alpha and beta subtype-selective ligands at a range of estrogen responsive gene sites. Abstract, Keystone Symposium, Nuclear Receptor Superfamily 2002, Snowbird, UT, April **2002**.
226. K. Nettles, J. Radek, A. Shiau, J. A. Katzenellenbogen, B. S. Katzenellenbogen and G. Greene. Molecular Determinants of Ligand Selectivity Between ER α and ER β . "2002 Keystone Symposium on Nuclear Receptor Superfamily." Snowbird, UT, April **2002**.
227. J. Radek, A. Shiau, J. A. Katzenellenbogen, B. S. Katzenellenbogen, G. L. Greene. Molecular determinants of ligand selectivity between ER α and ER β . Abstract, Keystone Symposium, Nuclear Receptor Superfamily 2002, Snowbird, UT, April **2002**.
228. M.H. Al-Qahtani, D.V. Kumar, J.A. Katzenellenbogen and M.J. Welch. Radiosynthesis of [^{18}F], A New Fluoropropylpyrazoletriphenol Ligand Selective for the Estrogen Receptor- α . "49th Annual Meeting of the Society of Nuclear Medicine." Los Angeles, CA, June 15-19, **2002**.
229. S. Katzenellenbogen, J. Frasor, J. Sun, R. R. Rajendran, W. R. Harrington, S. Sheng, R. D. Balsara, J. A. Katzenellenbogen. Estrogen receptors, SERMs and breast cancer. Symposium Abstract, 84th Annual Meeting of The Endocrine Society, San Diego, CA, June **2002**.

230. J. Bowe, X F Li, D Sugden, J A Katzenellenbogen, B S Katzenellenbogen, K T O'Byrne. The Effects of the Phytoestrogen, Coumestrol, on GnRH mRNA Expression in GT1-7 Cells. 84th Annual Meeting of the Endocrine Society "ENDO2002" San Francisco, CA, June **2002**, P1-104.
231. G. Dayan, S. I. Anghel, W. Rocha, V. Perly, S. Croisetière, J A Katzenellenbogen, S. Mader. The Role of Amino Acid D351 in the Antiestrogenicity of Tamoxifen Derivatives. 84th Annual Meeting of the Endocrine Society "ENDO2002" San Francisco, CA, June **2002**, P1-413.
232. Compton, J. A. Katzenellenbogen. Design and Synthesis of Pyrazolo[1,5-a]pyridines and Pyrazolo[1,5-a]pyrimidines as Novel Heterocyclic Core Structures for the Estrogen Receptor. "224th ACS National Meeting" Boston, MA, August 18-22, **2002**.
233. R. S. Muthyala, S. Sheng, B. S. Katzenellenbogen, J. A. Katzenellenbogen. Design and Synthesis of Bicyclic Core Estrogens as New Subtype-Selective Ligands for the Estrogen Receptor. "224th ACS National Meeting" Boston, MA, August 18-22, **2002**.
234. A. L. Rodriguez, Anobel Tamrazi, J. A. Katzenellenbogen. Substituted Naphthalene Scaffolds as Estrogen Receptor Coactivator Mimics. "224th ACS National Meeting" Boston, MA, August 18-22, **2002**.
235. N. I. Gorshkov, J. A. Katzenellenbogen, L. G. Luyt, A. A. Lumbov, A. E. Miroslavov and D. N. Suglobov, Technetium and Rhenium in Chemistry and Nuclear Medicine, "6th International Symposium on Technetium and Rhenium" Bressanone, Italy, September 4-7, **2002**.
236. T. Kouro, H. A. Harris, J. A. Katzenellenbogen, P. W. Kincade. A Role of Estrogen Alpha in the Regulation of B Lymphopoiesis? "American Assoc. of Immunologists Meeting", New Orleans, LA, April 20-24, **2002**.
237. Tamrazi, J. A. Katzenellenbogen, Fluorophore-Labeled Estrogen Receptors: Molecular Sensors of Receptor Conformation and Conformational Dynamics, "225th ACS National Meeting", New Orleans, LA, March 23-27, **2003**.
238. R. W. Chestnut, L. J. Bailey, J. S. Bundy, S. E. Bendler, S. A. Clark, D. N. Davis, N. A. Orwar, J. A. Katzenellenbogen, K. E. Carlson. Novel 7 α -substituted Estradiol Derivatives, "American Chemical Society National Meeting", New Orleans, LA, March 23-27, **2003**.
239. Dehdashti, J. Picus, J. M. Michalski, C. Dence, B. A. Siegel, J. A. Katzenellenbogen, M. J. Welch. Positron Tomographic Assessment of Androgen Receptors in Prostate Carcinoma, "SNM 50th Annual Meeting", New Orleans, LA, June 21-25, **2003**.
240. Minutolo, M. Antonello, S. Bertini, G. Ortore, G. Placanica, S. Rapposelli, S. Sheng, K. E. Carlson, B. S. Katzenellenbogen, J. A. Katzenellenbogen, M. Macchia. Alternatives to phenol-based estrogen receptor ligands. Abstract, Italian Chemical Society Medicinal Chemistry Division Conference, Turin, Italy, June **2003**.
241. K. W. Nettles, J. Sun, J. T. Radek, A. L. Rodriguez, J. A. Katzenellenbogen, B. S. Katzenellenbogen, G. L. Greene. Ligand selectivity between estrogen receptors α and β reveals importance of amino acids distal to the ligand. Abstract, 85th Annual Meeting of The Endocrine Society, Philadelphia, PA, June **2003**.
242. M. Bigott, L. G. Luyt, M. J. Welch, J. A. Katzenellenbogen. Synthesis of Rhenium/Technetium Labeled Estrogen Receptor Imaging Agents: Evaluation Using Micropet with Technetium-94M, "15th International Symposium on Radiopharmaceutical Chemistry", Sydney, Australia, August, **2003**.
243. J. H. Lee, B. S. Moon, K. C. Lee, J. A. Katzenellenbogen, K. H. Chung, D. Y. Chi. Synthesis of a ¹⁸F-Labeled Raloxifene Derivative, "15th International Symposium on Radiopharmaceutical Chemistry", Sydney, Australia, August, **2003**.
244. J. A. Katzenellenbogen, A. Tamrazi, S.-H. Kim, A. Gee, K. Hurth, J. Daniels, I.-Y. Lee, and K. E. Carlson. New Methods For Investigating Nuclear Hormone Receptor Conformations and Interactions, "Nuclear Receptors and Endocrine Disorders", Cincinnati, OH, December 5-7, **2003**.
245. W. R. Harrington, S. Sheng, D. H. Barnett, L. N. Petz, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Activities of estrogen receptor alpha- and beta-selective ligands at diverse estrogen responsive gene sites mediating transactivation or transrepression. Jensen Symposium on Nuclear Receptors and Endocrine Diseases, University of Cincinnati, December **2003**.
246. W. R. Harrington, S. H. Kim, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Estrogen-Dendrimer Conjugates that Preferentially Activate Membrane-Initiated, Non-Genomic versus Genomic Pathways of Estrogen Action, "National Meeting of Endocrine Society, ENDO 2004," New Orleans, LA, June 16-19, **2004**.

247. J. Yoo, C. S. Dence, J. A. Katzenellenbogen, M. J. Welch, Synthesis and Biodistribution of an Estrogen Receptor β Selective Radioligand: 5-[^{18}F]Fluoro-(2*R*,3*S*)-2,3-Bis(4-Hydroxyphenyl)-Pentanenitrile (FDPN). "51st Society of Nuclear Medicine Meeting", Philadelphia, PA, June 19-23, **2004**.
248. J. A. Katzenellenbogen. Estrogen receptor: ligands and probes of receptor conformations and interactions. "227th National ACS Meeting", Anaheim, CA, March **2004**.
249. J. A. Katzenellenbogen. Imaging nuclear hormone receptors in vivo. "227th National ACS Meeting", Anaheim, CA, March **2004**.
250. D. R. Compton, K. E. Carlson, J. A. Katzenellenbogen. Synthesis of 1,4-dibenzo[*B,E*]diazepines as potential selective estrogen receptor modulators. "227th National ACS Meeting", Anaheim, CA, March **2004**.
251. J. A. Katzenellenbogen, Novel Probes for Studying the Structure and Function of the Estrogen Receptor. 36th Central Regional Meeting of the American Chemical Society, Indianapolis, IN, June 2-4, **2004**.
252. J. A. Katzenellenbogen, A Chemical Tag for the Estrogen Receptor: Affinity Labels and the Graduate Work of David Robertson. 228th ACS National Meeting, Philadelphia, PA, August 22-26, **2004**.
253. F. Minutolo, M. Antonello, S. Bertini, G. Placanica, S. Rapposelli, K. E. Carlson, J. A. Katzenellenbogen, and M. Macchia, Diaryl-substituted Salicyl- and Anthranil-Ketoximes as Potential Estrogen Receptor Ligands. *Farmaco (Societa chimica italiana)* : 1989) August, 59(8), 601-607, **2004**.
254. R. G. Mishra, F. Z. Stanczyk, K. A. Burry, S. Oparil, B. S. Katzenellenbogen, J. A. Katzenellenbogen, M. L. Nealen, R. K. Hermsmeyer. Estrogen receptor beta suppresses primate coronary hyperreactivity. American Heart Association Second International Conference on Women, Heart Disease, and Stroke, Orlando, FL, February **2005**.
255. G. Trogden, S. H. Kim, J. A. Katzenellenbogen. Synthesis and Applications of Tether-containing Indole Estrogens, "229th ACS National Meeting", San Diego, CA, March 13-17, **2005**.
256. V. S. Likhite, M. Boyne, N. L. Kelleher, J. A. Katzenellenbogen. Estrogen Receptor Phosphorylation and its Effects on Receptor Function. "ENDO 2005, 87th Annual Meeting of the Endocrine Society", San Diego, CA, June 4-7, **2005**.
257. F. Stossi, V. S. Likhite, J. A. Katzenellenbogen, B. S. Katzenellenbogen, Estrogen-occupied Estrogen receptor inhibits Cyclin G2 Expression and Recruits a Repressor Complex at the Cyclin G2 Promoter. "ENDO 2005, 87th Annual Meeting of the Endocrine Society", San Diego, CA, June 4-7, **2005**.
258. J. Yoo, C. S. Dence, T. L. Sharp, J. A. Katzenellenbogen, M. J. Welch. 16α -[^{18}F]Fluoro- 17β -estradiol ([^{18}F]FES) Binds Largely to Estrogen Receptor- α Receptors. "International Symposium on Radiopharmaceutical Chemistry 16 ISRC 2005", Iowa City, IA, June **2005**.
259. P. M. Thomas, M. T. Boyne, L. Jiang, V. Likhite, L. Wang, P. Cole, J. A. Katzenellenbogen, G. A. Valaskovic, N. L. Kelleher. "Middle Down" Interrogation of Transcriptional Cofactors using Nano-LC/ESI/Q-FTMS in both On- and Off-Line Modes. "53rd ASMS Conference on Mass Spectrometry", San Antonio, CA, June **2005**.
260. J. W. Seo, D. Y. Chi, L. G. Luyt, C. S. Dence, T. L. Sharp, F. Wuest, R. H. Mach, M. J. Welch, J. A. Katzenellenbogen. Sigma-2 Selective Fluorinated Ligands: Synthetic Method and Biodistribution Study. "International Symposium on Radiopharmaceutical Chemistry 16 ISRC 2005", Iowa City, IA, June **2005**.
261. J. W. Seo, D. Y. Chi, L. G. Luyt, C. S. Dence, T. L. Sharp, F. Wuest, R. H. Mach, M. J. Welch, J. A. Katzenellenbogen. Novel Fluorine-18 Labeled Estrogen Receptor Ligands: Fluoroalkyl-Cyclofenil Analogues. "International Symposium on Radiopharmaceutical Chemistry 16 ISRC 2005", Iowa City, IA, June **2005**.
262. Zhou, K. E. Carlson, R. H. Mach, J. A. Katzenellenbogen, M. J. Welch. 16α , 17β -Dioxolane Bromine- and Iodine-Substituted Progestins for Breast Tumor Imaging and Radiotherapy: Synthesis. "International Symposium on Radiopharmaceutical Chemistry 16 ISRC 2005", Iowa City, IA, June **2005**.
263. B. Lee, K. Lee, J. A. Katzenellenbogen. Synthesis of Fluorine-Labeled Ligands for PET Imaging of the Peroxisome Proliferator-Activated Receptor Gamma (PPAR γ). "International Symposium on Radiopharmaceutical Chemistry 16 ISRC 2005", Iowa City, IA, June **2005**.
264. N. C. Ackroyd, J. A. Katzenellenbogen. Cyclopentadienyl Rhenium (Technetium) Tricarbonyl Complexes Integrated in Estrogen Receptor (ER) Ligands for ER⁺ Tumor Imaging. "International Symposium on Radiopharmaceutical Chemistry 16 ISRC 2005", Iowa City, IA, June **2005**.

265. M. L. Nickels, J. A. Katzenellenbogen. Novel Tacn Complexes as Estrogen Receptor Ligands for Tumor Imaging. "International Symposium on Radiopharmaceutical Chemistry 16 ISRC 2005", Iowa City, IA, June **2005**.
266. W. Kim, D. H. Barnett, J. R. Gunther, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Inhibitors of Carbonic Anhydrase XII Suitable for F-18 Radiolabeling. "International Symposium on Radiopharmaceutical Chemistry 16 ISRC 2005", Iowa City, IA, June **2005**.
267. J. A. Katzenellenbogen. Probing Estrogen Receptor Structure and Function: Ligands, Fluorophores, and In Vivo Imaging. "Great Lakes Nuclear Receptor Meeting", Madison, Wisconsin, October 14-15 **2005**.
268. V. S. Likhite, P. M. Thomas, M. T. Boyne II, N. L. Kelleher, and J. A. Katzenellenbogen. Estrogen Receptor Phosphorylation Leads to Changes in Receptor Interactions Consistent with Enhanced Estrogen Agonism and Reduced Tamoxifen Activity. "Great Lakes Nuclear Receptor Meeting", Madison, Wisconsin, October 14-15 **2005**.
269. V. S. Likhite, M. T. Boyne II, P. M. Thomas, N. L. Kelleher and J. A. Katzenellenbogen. Estrogen Receptor Phosphorylation Leads to Changes in Receptor Interactions Consistent with Enhanced Estrogen Agonism and Reduced Tamoxifen Activity. "Keystone Meeting: Nuclear Receptors: Steroid Sisters", Banff, Alberta Canada, March 18-23, **2006**.
270. B. S. Katzenellenbogen, E. Chang, F. Stossi, S. Park, P. Mussi, D. Barnett, Z. Madak-Erdogan, C. Morrow, R. Hess, J. A. Katzenellenbogen. Novel Modulators of Estrogen Receptor Function. "Keystone Meeting: Nuclear Receptors: Steroid Sisters", Banff, Alberta Canada, March 18-23, **2006**.
271. Z. Madak-Erdogan, C. C. Funk, S. H. Kim, W. R. Harrington, R. Schiff, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Examination of extranuclear, non-genomic versus genomic pathways of estrogen action. Keystone Symposium, Nuclear Receptors: Steroid Sisters, Banff, Alberta, Canada, March **2006**.
272. Stossi, V. S. Likhite, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Estrogen-occupied estrogen receptor represses cyclin G2 gene expression and recruits a repressor complex at the cyclin G2 promoter. Keystone Symposium, Nuclear Receptors: Steroid Sisters, Banff, Alberta, Canada, March **2006**.
273. J. A. Katzenellenbogen. Interrogation of Post Translational Modifications on Transcription Factors by nano-LC-LTQ-FTMS/MS. "ASMS Conference", Washington State Convention Center, Seattle, Washington, May 27-28, **2006**.
274. V. S. Likhite, M. T. Boyne II, P. M. Thomas, N. L. Kelleher and J. A. Katzenellenbogen. Global Phosphorylation Status of Estrogen Receptor by 'Middle Down' FTMS Analysis. "The Endocrine Society Meeting", Boston, MA June 23-28, **2006**.
275. B. S. Katzenellenbogen, J. A. Katzenellenbogen. The Diverse World of Estrogens and Estrogen Receptor Actions. "The Endocrine Society Meeting", Boston, MA June 23-28, **2006**.
276. V. S. Likhite, J. A. Katzenellenbogen. Estrogen Receptor Phosphorylation Leads to Changes in Receptor Interactions Consistent with Enhanced Estrogen Agonism and Reduced Tamoxifen Activity. "Environmental Horizons 2006 Conference", Urbana, IL, April 19, **2006**.
277. F. Minutolo, S. Bertini, S. Rapposelli, K. E. Carlson, J. A. Katzenellenbogen, F. Stossi, B. S. Katzenellenbogen, M. Macchia. Aminobenzotiazoles as β -Selective Estrogen Receptor Ligands. "XXII Italian Medicinal Chemistry Society Mtg", Florence, Italy, September 10-15, **2006**.
278. K. L. Chambliss, P. Kumar, I. S. Yuhanna, B. S. Katzenellenbogen, J. A. Katzenellenbogen, C. Mineo, P. W. Shaul. Estrogen Dendrimer Conjugate Reveals that Estrogen-induced Endothelial Cell Migration and Proliferation are Mediated by Non-nuclear Estrogen Receptors that Interact Directly with Gai. American Heart Association Meeting". Chicago, IL, November 12-15, **2006**.
279. J. A. Katzenellenbogen, Estrogen Receptor Subtype-Selective Ligands, Receptor Structure and Actions, "12th International Congress on Hormonal Steroids and Hormones and Cancer", Athens, Greece, September 13-17, **2006**.
280. J.P. Norenberg, T.K. Nayak, T.L. Anderson, C. Ramesh, B.J. Bryant, C.M. Revankar, K.E. Carlson, J.A. Katzenellenbogen, E.R. Prossnitz, J.B. Arterburn, S. Vertrees and H. Hathaway. Characterization of in vivo Pharmacokinetics of Estrogen Receptors with a Tridentate Pyridin-2-yl Hydrazine Tricarbonyl-^{99m}Tc Estradiol Chelate, "7th International Symposium on Technetium in Chemistry and Nuclear Medicine", Bressanone, Italy, September 6-9, **2006**.
281. B.C. Lee, C. S. Dence, M. J. Welch, S. Lee, R. H. Mach, and J. A. Katzenellenbogen. Synthesis of Fluorine-18 Labeled Sigma-2 Receptor Ligands for as a Potential Positron Emission Tomography (PET) Imaging

- Using Fluorine-18 Labeled 4-FluoroBromoBenzene. “9th World Congress of Nuclear Medicine and Biology”, Seoul, Korea, Oct. 22-27, **2006**.
282. B.C. Lee, C. S. Dence, M. J. Welch, S. Lee, R. H. Mach, and J. A. Katzenellenbogen. Synthesis of Fluorine-18 Labeled Ligands for the Peroxisome Proliferator-Activated Receptor Gamma (PPAR gamma), Potential Positron Emission Tomography (PET) Agents for Imaging Lipid Metabolism and Cancer. “9th World Congress of Nuclear Medicine and Biology”, Seoul, Korea, Oct. 22-27, **2006**.
 283. L. Jiang, M. T. Boyne, A. J. Forbes, P. M. Thomas, L. Wang, V. Likhite, J. Ervin, G. A. Valaskovic, P. A. Cole, J. A. Katzenellenbogen, and N. L. Kelleher. Interrogation of Post Translational Modifications on Transcription Factors by nano-LC-LTQ-FTMS/MS. “ASMS Conference”, Seattle, Washington, June, **2006**.
 284. M. L. Nickels, B. C. Lee, J. A. Katzenellenbogen. Synthesis of 2-[¹⁸F]Fluoroestradiol for Imaging of ER+ Tumors. “17th International Symposium on Radiopharmaceutical Sciences”, Aachen, Germany, April 29-May 5, **2007**.
 285. M. L. Nickels, S.H. Kim, and J. A. Katzenellenbogen. Novel TACN Complexes as Estrogen Receptor Ligands for Tumor Imaging, “17th International Symposium on Radiopharmaceutical Sciences”, Aachen, Germany, April 29-May 5, **2007**.
 286. J. A. Katzenellenbogen, E. E. Parent, C. S. Dence, M. J. Welch. Synthesis and *In Vivo* Characterization of High Affinity Androgens to Evaluate the Role of SHBG in Radiosteroid Delivery, “17th International Symposium on Radiopharmaceutical Sciences”, Aachen, Germany, April 29-May 5, **2007**.
 287. J.H. Lee, K. C. Lee, E.J. Kim, J.C. Lee, B.C. Lee, T.H. Choi, K. S. Chun, S.E. Kim, J. A. Katzenellenbogen, D.Y. Chi. Synthesis and Biological Evaluation of 18F-Labeled Raloxifene Derivative for Estrogen Receptor Imaging Agent, “17th International Symposium on Radiopharmaceutical Sciences”, Aachen, Germany, April 29-May 5, **2007**.
 288. H.-B. Zhou, E.E. Parent, K. E. Carlson, J.A. Katzenellenbogen. Bromine-Substituted Estrogen Receptor Beta Selective Benzoxazoles for Breast Tumor Imaging and Radiotherapy: Synthesis and Receptor Binding Affinity, “17th International Symposium on Radiopharmaceutical Sciences”, Aachen, Germany, April 29-May 5, **2007**.
 289. H.-B. Zhou, K. E. Carlson, J. A. Katzenellenbogen. Fluorine-Substituted 6-Aryl-1,4-Dihydrobenzo [d][1,3]Oxazine-2-Thiones for Breast Tumor Imaging and Radiotherapy: Synthesis and Receptor Binding Affinity, “17th International Symposium on Radiopharmaceutical Sciences”, Aachen, Germany, April 29-May 5, **2007**.
 290. J. C. Park, D. E. Reichert, J. A. Katzenellenbogen, D. N. Pandya, J.-T. Lee, J. Yoo. Cyclen-Based Copper Complexes as Potential Estrogen Receptor Ligands: Synthesis, Binding Affinity, and Computer Modeling, “17th International Symposium on Radiopharmaceutical Sciences”, Aachen, Germany, April 29-May 5, **2007**.
 291. B. S. Katzenellenbogen, D. H. Barnett, E. C. Chang, Z. Madak-Erdogan, S. H. Park, J. D. Stender, F. Stossi, J. A. Katzenellenbogen. Integration of nuclear and extranuclear signaling by estrogen receptors. EMBO Conference on Nuclear Receptors in Health and Disease, Italy, May **2007**.
 292. Z. Madak-Erdogan, S. H. Kim, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Nuclear and extranuclear signaling by estrogen receptors and their impact on global gene expression. EMBO Conference on Nuclear Receptors in Health and Disease, Italy, May **2007**.
 293. D. Zhou, T. Sharp, J. A. Katzenellenbogen, M. J. Welch, [Br-76] 16 α ,17 α -Dioxolane progestin for breast tumor imaging and radiotherapy: Synthesis and tissue biodistribution study, Society of Nuclear Medicine, Washington D.C., June **2007**.
 294. S. H. Kim, J. A. Katzenellenbogen, Considerations in the Design of Hormone-Polymer Conjugates for Selective Activation of Non-Genomic Estrogen Signaling. Polymer Dynamics and Tether Structure Affect Ligand Access to Receptors. “5th International Meeting on Rapid Responses to Steroid Hormones”, Dublin, Ireland, September 2-5, **2007**.
 295. M. Jeyakumar, P. Webb, J. D. Baxter, T. S. Scanlan, J. A. Katzenellenbogen. Dual, Real-Time Interaction Assay of Nuclear Receptor Corepressor/Coactivator Binding. Keystone Symposium on Nuclear Receptors, Whistler, Canada, March, **2008**
 296. S. H. Kim, M. Jeyakumar, J. A. Katzenellenbogen. Dual-Mode Fluorophore-Doped Nickel Nitrioltriacetic Acid-Modified Silica Nanoparticles Combine Histidine-Tagged Protein Purification with Site-Specific Fluorophore Labeling. Keystone Symposium on Nuclear Receptors, Whistler, Canada, March 30-April 4, **2008**

297. Z. Madak-Erdogan, S. H. Kim, J. A. Katzenellenbogen, B. S. Katzenellenbogen, Nuclear and extranuclear pathway inputs in the regulation of global gene expression by estrogen receptors. 2008 Keystone Symposium on Nuclear Receptors: Steroid Sisters. Whistler, Canada, March **2008**.
298. A. Parent J. R. Gunther, J. A. Katzenellenbogen. Synthesis and Evaluation of Pyrimidien-Core inhibitors of the Androgen Receptor/Coactivator Binding Interaction. Endo 2008, Endocrine Society Meeting, San Francisco CA, June 15-19, **2008**.
299. J. R. Gunther, A. A. Parent, A. L. LaFrate, M. L. Collins, T. W. Moore, J. A. Katzenellenbogen. Structural motifs for developing coactivator binding inhibitors for the estrogen receptor α . Endo 2008, Endocrine Society Meeting, San Francisco CA, June 15-19, **2008**.
300. Z. Madak-Erdogan, K. Kieser, S. H. Kim, J. A. Katzenellenbogen, B. S. Katzenellenbogen, Integration of extranuclear and nuclear estrogen receptor signaling and regulation of gene expression in breast cancer. ENDO 2008 Annual Meeting. San Francisco, California, June **2008**.
301. J. A. Katzenellenbogen, Structure Function Relationships between Estrogens and ERs. Extra-Nuclear Steroid Receptors: Integration with Multiple Signaling Pathways. FASEB Summer Research Conference, Carefree, AZ, July, **2008**.
302. B. S. Katzenellenbogen, Z. Madak-Erdogan, K. Kim, S. Park, S. H. Kim, F. Stossie, J. A. Katzenellenbogen, Nuclear and Extranuclear Signaling by Estrogen Receptors in Breast Cancer Cells. Extra-Nuclear Steroid Receptors: Integration with Multiple Signaling Pathways. FASEB Summer Research Conference, Carefree, AZ, July, **2008**.
303. P. W. Shaul, Q. Wu, S. Oltmann, M. Umetani, K. S. Korach, G. D. Thomas, C. Mineo, S. Dineen, C. Roland, J. A. Katzenellenbogen, B. S. Katzenellenbogen, R. A. Brekken, K. L. Chambliss. Nongenomic Estrogen Receptor Signaling via G-Proteins Promotes Cardiovascular Protection and Does not Invoke Uterine Changes or Breast Cancer Growth in Mice. Extra-Nuclear Steroid Receptors: Integration with Multiple Signaling Pathways. FASEB Summer Research Conference, Carefree, AZ, July, **2008**.
304. J. A. Katzenellenbogen. Strategies for Developing and Labeling Radiopharmaceuticals for Imaging Estrogen Receptor Presence and Function in Breast Cancer. ACS National Meeting, Philadelphia, PA, August, **2008**.
305. J. A. Katzenellenbogen. PET Imaging of Nuclear Receptors and Nuclear Receptor Function in Breast and Prostate Cancer: A Hormone Challenge Test to Predict Benefit from Endocrine Therapies. Nobel Conference on Recent Advances in Understanding Estrogen Signaling: from Molecular Insights to Clinical Implications, Sångå Saby, Sweden, September, **2008**.
306. K. J. Kieser, D. W. Kim, K. E. Carlson, B. S. Katzenellenbogen, J. A. Katzenellenbogen. Characterization of the Pharmacophore Properties of Novel Selective Estrogen Receptor Downregulators (SERDs). 29th Northwestern Minisymposium on Reproductive Biology, Chicago, IL, October **2008**.
307. M. H. Kent, C. J. Scavuzzo, J. A. Katzenellenbogen, and D. L. Korol. Effects of Systemic Treatment with Subtype-Selective Estrogen Receptor Agonists on Place Learning in Young Adult Ovariectomized Rats. Society for Neuroscience, Washington, D. C., November 15-19, **2008**.
308. F. Minutolo, R. Bellini, S. Bertini, M. Gambini, T. Marchitello, G. Prota, K. E. Carlson, J. A. Katzenellenbogen, M. Macchia. Halogen-selective cross-coupling reactions in the synthesis of ligands for the estrogen receptors. Merck-IRBM Workshop on Medicinal and Organic Chemistry, Rome, Italy, September, **2008**.
309. S. L. Neese, V. C. Wang, J. A. Katzenellenbogen, D. L. Korol, and S. L. Schantz. Specific Estrogen Receptor α and β Agonists Impair Delayed Spatial Alternation in Long Evans Rats. Society for Neuroscience Annual Meeting, Washington, DC, Nov. 15-19, **2008**.
310. D. Zhou, H.-B. Zhou, C. C. Jenks, T. L. Sharp, E. E. Parent, J. H. Lee, J. A. Katzenellenbogen, M. J. Welch. Evaluation of BR-76 Labeled ERB-041 Analogue as Estrogen Beta Receptor Selective Ligand: No-Carrier-Added Radiolabeling and In Vivo Biodistribution Study. The 18th International Symposium on Radiopharmaceutical Sciences (ISRS-18) will be held in Edmonton, Canada, July 12-17, **2009**.
311. J. H. Lee, H.-B. Zhou, C. S. Dence, K. E. Carlson, M. J. Welch, J. A. Katzenellenbogen. Development of [F-18]Fluorine-Substituted 6-Aryl-1,4-Dihydrobenzo[d][1,3]-Oxazine-2-Thiones As Progesterone Receptor Imaging Agents for PET. The 18th International Symposium on Radiopharmaceutical Sciences (ISRS-18) will be held in Edmonton, Canada, July 12-17, **2009**.
312. E. E. Parent, J. A. Katzenellenbogen, M. J. Welch, Preclinical evaluation of 16 α -[^{76/77}Br]-bromo-11 β -methoxyestradiol as a selective radiotherapeutic agent in ER positive tumors. Radiological Society of North America, Chicago, Nov 29 - Dec 4, **2009**.

313. Q. Wu, K. L. Chambliss, S. C. Oltmann, Extranuclear Estrogen Receptor a Signaling Promotes Endothelial Monolayer Integrity but Not Breast Cancer or Uterine Growth in Mice
314. K.-E. Kil, N. S. Lee, M. Lebl-Rinnova, C. S Dence, K. L Wooley, J. A Katzenellenbogen, D. Zhou, M. J Welch. Preparation of high specific activity Fluorine-18 nanoparticles using click chemistry, Society of Nuclear Medicine, Salt Lake City, June 5-9, **2010**.
315. C. Jenks, E. Parent, M. J. Welch, J. A. Katzenellenbogen. Evaluation of 16α [$^{76,77}\text{Br}$]bromo- 11β -methoxyestradiol- 17β for radiotherapy of estrogen receptor positive breast cancer, Society of Nuclear Medicine, Salt Lake City, June 5-9, **2010**.
316. J. Katzenellenbogen. Estrogen Receptor: Structure, Ligand Design, Activities, and In Vivo Imaging. ACS Spring 2010 National Meeting, The Moscone Center, San Francisco, CA, March 21-25, **2010**.
317. A. Sun, T. W. Moore, J. R. Gunther, M-S Kim, E. Rhoden, Y. Du, H. Fu, J. P Snyder, J. A. Katzenellenbogen. Small Molecule Inhibitors of Estrogen Receptor α / Coactivator Binding: Synthesis and In Vitro and Cell-Based Biological Evaluation. ACS Spring 2010 National Meeting, The Moscone Center, San Francisco, CA, March 21-25, **2010**.
318. P. W. Shaul, K. L. Chambliss, Q. Wu, D. J. Mangelsdorf, C. Mineo, J. A. Katzenellenbogen, B. S. Katzenellenbogen, D. Y. Hui, M. Umetani. Novel Endogenous and Exogenous SERMs and Cardiovascular Health. Pfizer Symposium on Tissue Selective Estrogens Complex, March, **2011**.
319. J. A. Katzenellenbogen. The Molecular Pharmacology of Estrogen Receptor Action: Challenges and Opportunities. European Medicinal Chemistry Society, Saarbruecken, Germany, March, **2011**.
320. V. Saint-Criq, J. A. Katzenellenbogen, B. J. Harvey. Non-Genomic Estrogen Regulation of Airway Surface Liquid Height in Normal and Cystic Fibrosis Bronchial Epithelia. The European Cystic Fibrosis Society Meeting, Pisa, Italy, March 20-April 2, **2011**.
321. H. S. Roth, J. A. Katzenellenbogen, J. L. Rapp, D. L. Olson. High-Throughput, Automated, Microflow NMR Analysis for Student-Synthesized Compounds in an Undergraduate Organic Chemistry Course. 52nd Experimental Nuclear Magnetic Resonance Conference, Asilomar Conference Grounds, Pacific Grove, California, April 10-15, **2011**.
322. J. A. Katzenellenbogen, S. H. Kim, M. Jeyakumar, B. S. Katzenellenbogen, K. W. Nettles, C. K. Glass, K. Saijo, P. W. Shaul, S. C. Manolagas. Estrogen Receptor Ligands of Unusual Structure and Selective Activity. Symposium "Therapeutic potential of ER β as drug target" arranged by Karo Bio AB, in Stockholm, Sweden May 16-17, **2011**.
323. P. W. Shaul, K. L. Chambliss, Q. Wu, D. J. Mangelsdorf, C. Mineo, J. A. Katzenellenbogen, B. S. Katzenellenbogen, D. Y. Hui, and M. Umetani. Novel Endogenous and Exogenous SERMs and Cardiovascular Health. Estrogens SERMs and TSECs, Orlando, FL, April, **2011**.
324. D. Zeng, N. S Lee, Y. Liu, D. Zhou, C. S Dence, K. L Wooley, J. A. Katzenellenbogen, M. J. Welch. Novel Strategy for Preparing Cu-64 Nanoparticles with Ultrahigh Specific Activity using Metal-free Click Chemistry. SNM 58th Annual Meeting, San Antonio, Texas, June 4-8, **2011**.
325. D. Zhou, C. S. Dence, T. Sharp, J. A. Katzenellenbogen, M. J. Welch. Optimization of 16α -[^{18}F]Fluoroestradiol Synthesis with Optimal Effective Specific Activity for Small Animal Studies. SNM 58th Annual Meeting, San Antonio, Texas, June 4-8, **2011**.
326. A. M Fowler, S. R. Chan, T. L. Sharp, N. M. Fettig, C. S. Dence, D. Zhou, J. A. Katzenellenbogen, R. D. Schreiber, M. J. Welch. MicroPET Imaging of Steroid Hormone Receptors and Response to Hormonal Therapy in a Mouse Model of Breast Cancer. SNM 58th Annual Meeting, San Antonio, Texas, June 4-8, **2011**.
327. D. Zhou, D. Zhen, N. S Lee, C. S Dence, K. L Wooley, J. A Katzenellenbogen, M. J. Welch. Fluorine-18 Radiolabeling of SCK Nanoparticles via the Copper-Free Click Chemistry. SNM 58th Annual Meeting, San Antonio, Texas, June 4-8, **2011**.
328. C. S. Dence, A. M. Fowler, D. Zhou, N. Fettig, J. A. Katzenellenbogen, M. J. Welch. 16α -[^{18}F]-Fluoro- 17β -estradiol (FES) Metabolite Analyses in Rodent Tissue Micro Samples by Solid-Phase (SP) Florisil Columns. SNM 58th Annual Meeting, San Antonio, Texas, June 4-8, **2011**.
329. C. Choueiri, M. Asim, D. Klonowska, T. Durst, J. S. Wright, H. Shadnia, J. Katzenellenbogen, K. Carlson, V. Santhakumar. Synthesis of a New Family of Noncarcinogenic Estradiol Agonists as an Alternative to Hormone Replacement Therapy. Canadian Chemical Society Meeting, Montreal June, **2011**

330. C. S. Dence, A. M. Fowler, D. Zhou, N. Fettig, J. A. Katzenellenbogen, M. J. Welch. 16α -[^{18}F]-Fluoro- 17β -Estradiol (FES) Metabolite Analyses in Rodent Tissue Micro Samples by Solid-Phase (SP) Florisil Columns. Society of Nuclear Medicine Meeting in June, **2011**.
331. S-H Kim, V. M. Carroll, J. A. Katzenellenbogen, M. J. Welch, D. Zhou, C. S. Dence. Investigation of Novel Si-F Scaffolds for Small Molecule PET Imaging of the Estrogen Receptor. 19th International Symposium on Radiopharmaceutical Sciences, Amsterdam, the Netherlands, from August 28-September 2, **2011**.
332. V. M., Carroll, S. H. Kim, J. A. Katzenellenbogen, M. J. Welch, Dong Zhou, C. S. Dence. Development of Novel Silicon Precursors for Rapid and Efficient Radiofluorination Reactions: Synthesis of an Estrogen-Dendrimer Conjugate. 19th International Symposium on Radiopharmaceutical Sciences, Amsterdam, the Netherlands, from August 28-September 2, **2011**.
333. N. Yasui, V. M. Carroll, J. A. Katzenellenbogen, M. J. Welch, C. S. Dence. Study of Nucleophilic Fluorination on Electron-Rich Aromatic Rings from Non-Aromatic Precursors. 19th International Symposium on Radiopharmaceutical Sciences, Amsterdam, the Netherlands, from August 28-September 2, **2011**.
334. D. Zhou, C. Dence, J. A. Katzenellenbogen, M. J. Welch. Synthesis of [^{18}F]Fluoro Furanyl Norprogesterone (FFNP) for Clinical Evaluation as a PET Imaging Agent for Progesterone Receptor (PR) in Breast Tumors. 19th International Symposium on Radiopharmaceutical Sciences, Amsterdam, the Netherlands, from August 28-September 2, **2011**.
335. C. S. Dence, A. Fowler, D. Zhou, J. A. Katzenellenbogen, M. J. Welch. Metabolism of [^{18}F]Fluoro Furanyl Norprogesterone (FFNP) in Mice used in Clinical Evaluation of Therapies Involving the Progesterone Receptor (PR) in Breast Tumors. 19th International Symposium on Radiopharmaceutical Sciences, Amsterdam, the Netherlands, from August 28-September 2, **2011**.
336. D. Zeng, D. Zhou, N. S. Lee, Y. Liu, C. S. Dence, K. L. Wooley, J. A. Katzenellenbogen, M. J. Welch. Novel Strategy for Preparing Cu-64/ ^{18}F Labeled Nanoparticles with Ultrahigh Specific Activity using Metal-Free Click Chemistry. 19th International Symposium on Radiopharmaceutical Sciences, Amsterdam, the Netherlands, from August 28-September 2, **2011**.
337. S. M. Bartell, S. Iyer, L. Han, A. Warren, R. S. Shelton, R. Bradsher III, S. H. Kim, B. S. Katzenellenbogen, K. L. Chambliss, P. W. Shaul, J. A. Katzenellenbogen, P. K. Roberson, R. S. Weinstein, C. A. O'Brien, R. L. Jilka, M. Almeida, S. C. Manolagas. Non-Nuclear ER α Signaling Prevents Oxidative Stress and the Loss of Bone, But Not the Loss of Uterine Weight, in OVX Mice. American Society for Bone and Mineral Research Meeting, San Diego Convention Center, San Diego, CA, September 16 - 20, **2011**.
338. S. L. Pisani, J.C. Huffman, J.A. Katzenellenbogen, S.L. Neese, S.L. Schantz, D.L. Korol. Activation of ER α , ER β , and GPR30 Impairs Response Learning in Ovariectomized Rats. Illinois Symposium on Reproductive Sciences, October 10, **2011**.
339. Y. Kim, S-H Kim, M. Tanyeri, J. A. Katzenellenbogen, and C. M. Schroeder. Dye-conjugated Dendrimers as Bright and Photostable Nanoprobes for Fluorescence Microscopy. 2011 American Institute of Chemical Engineer's (AIChE) Annual Conference, Minneapolis Convention Center, Minneapolis, MN, October 16-21, **2011**.
340. Y. Kim, S-H Kim, J. A. Katzenellenbogen, and C. M. Schroeder. Site-specific Labeling of Transcription Factors using Non-canonical Amino Acids and Strain-promoted [2+3] Cycloaddition via Copper-free Click Chemistry. 2011 American Institute of Chemical Engineer's (AIChE) Annual Conference, Minneapolis Convention Center, Minneapolis, MN, October 16-21, **2011**.
341. V. M. Carroll, S. H. Kim, J. A. Katzenellenbogen, M. J. Welch, C. Dence, D. Zhou. A New Dimension in Selective Estrogen Action: An Estrogen Dendrimer Conjugate (EDC) Having Selective Vascular-Protecting Activity also shows Selective Receptor-Mediated Uptake in the Heart and Vasculature. Cancer Community @ Illinois, April, **2012**.
342. V. Saint-Criq, S-H. Kim, J. A. Katzenellenbogen, B. J. Harvey. Rapid Effect of 17β -Estradiol on the Airway Surface Liquified Hydration of Normal and Cystic Fibrosis Epithelia. 35th European Cystic Fibrosis Society Conference, The Convention Centre Dublin, Dublin, Ireland, June 6-9, **2012**.
343. D. Zhou, Y. Liu, C. Dence, J. A. Katzenellenbogen, M. J. Welch. Highly Efficient Radiolabeling/Conjugation of PAMAM Dendrimers with ^{18}F Labeled N-Hydroxysuccinimide Esters Catalyzed by Ion-Ion Interactions. Society of Nuclear Medicine 2012 Annual Meeting, Miami Beach, FL, June 9-13, **2012**.

344. J. A. Katzenellenbogen, S-H Kim, S. C. Bae, Z. Madak-Erdogan, K. E. Carlson, St. Granick, V. M. Carroll, D. Zhou, and B. S. Katzenellenbogen. Cellular and In Vivo Biodistribution and Conformational Dynamics of an Estrogen Dendrimer Conjugate (EDC) Contribute to its Selective Activities. FASEB Meeting on Rapid Signaling, Snowmass, CO, July, **2012**.
345. Z. Madak-Erdogan, T-H Charn, Y. Jiang, E. Tak-Bun Liu, J. A. Katzenellenbogen, B. S. Katzenellenbogen. An Integrative Genomic Analysis Delineating Specification in Hormone Action Through Estrogen Receptor α and Estrogen Receptor β in Breast Cancer Cells. Endocrine Society Meeting 2012, Washington, D. C., July, **2012**.
346. Y. Jiang, M. Jeyakumar, K. E. Carlson, I. Khan, W. Helferich, J. A. Katzenellenbogen, and B. S. Katzenellenbogen. Molecular Mechanisms and Cellular Pathways of Botanical Estrogen Activity. Endocrine Society Meeting, Washington, D. C., July, **2012**.
347. S. M. Bartell, S. Iyer, L. Han, A. Warren, S.H. Kim, B.S. Katzenellenbogen, K.L. Chambliss, P.W. Shaul, J.A. Katzenellenbogen, P.K. Roberson, R.S. Weinstein, C.A. O'Brien, R.L. Jilka, M. Almeida, S.C. Manolagas. An Estrogen Dendrimer Conjugate Incapable of Stimulating the Nuclear-Initiated Actions of Estrogen Receptors Prevents the Loss of Cortical Bone Mass in Estrogen Deficient Mice. American Society of Bone and Mineralization Research. San Diego, CA, October, **2012**.
348. J. A. Katzenellenbogen. Development of Ligands for Estrogen Receptor Beta and the Genomic vs. Non-Genomic Pathway: Appreciating and Exploiting the Many Dimensions of Activity and Selectivity. Americal College of Neuropsychopharmacology, Hollywood, Florida, December, **2012**.
349. Y. Kim, S-H. Kim, M. Tanyeri, J. A. Katzenellenbogen, C. M. Schroeder. Photoswitchable Nanoconjugates as Fluorescent Probes for Super-Resolution Microscopy. Biophysical Society Meeting, Philadelphia, PA, February, **2013**.
350. S. Moore, J-H. Yoon, T. Yoon, A. Khalaj, N. Yasui, J. A. Katzenellenbogen, K. Chandross, and S. K. Tiwari-Woodruff. Yes! We can Remyelinate with Estrogen Receptor Beta Ligands. 11th Biennial ISN Satellite Meeting on Myelin Biology, Riviera Maya, Mexico, April 16-20, **2013**.
351. T. Trinh, J. Josan, J. A. Katzenellenbogen. Inhibiting hER Action at its Dimerization Interface Using Peptides. NCUR 2013, University of Wisconsin-LaCrosse, Wisconsin, April 11-13, **2013**.
352. M. Shan, K. E. Carlson, F. Abendroth, A. Bujotzek, M. Weber, O. Seitz, J. A. Katzenellenbogen. Design, Synthesis, and Evaluation of Spacer-Linked Bivalent Estrogen Analogs.
353. D. Zhou, C. Wenhua, C. Dence, S-H Kim, J. A. Katzenellenbogen, R. H. Mach. "Click Labeling" on Solid Phase Extraction (SPE) Cartridges: Facile Radiosynthesis of *N*-Hydroxysuccinimide (NHS) and Sulfo-NHS Ester Prosthetic Compounds Using 2-[F-18]Fluoroethyl Azide. International Symposium on Radiopharmaceutical Sciences, Jeju, Korea, May, **2013**.
354. S-H Kim, V. Carroll, D. Zhou, C. S. Dence, J. A. Katzenellenbogen. Beyond Conventional Silyl Acetates: Strategies for F-18 Fluoride Incorporation into Aryl Silanes Under Aqueous and Organic Labeling Conditions in the Development of a Useful Prosthetic Group. International Symposium on Radiopharmaceutical Sciences, Jeju, Korea, May, **2013**.
355. V. M. Carroll, S-H Kim, D. Zhou, C. S. Dence, J. A. Katzenellenbogen. Biodistribution Studies with an F-18 Labeled Estrogen Dendrimer Conjugate (¹⁸F]EDC), which Selectively Stimulates Extranuclear-Initiated Estrogen Receptor Action and Affords Selective Cardiovascular Protection, Shows Selective Uptake in Cardiovascular Tissues. International Symposium on Radiopharmaceutical Sciences, Jeju, Korea, May, **2013**.
356. J. A. Katzenellenbogen. How to Write and Effective Renewal Application. World Molecular Imaging Congress, Savannah, GA, September, **2013**.
357. M. Adlanmerini, C. Péqueux, I. Raymond-Letron, S. Hoon Kim, F. Boudou, S. Blacher, JM Foidart, B. S. Katzenellenbogen, J.A. Katzenellenbogen, J. F. Arnal, F. Lenfant. Genomic Effects of Estrogen Receptor Alpha (ER α) are Required for Angiogenesis to increase the growth of ER α -Negative Tumors. EMBO Meeting, Sorrento, Italy, September, **2013**.
358. S. E. Royston, A. G. Kondilis, S. V. Lord, N. Yasui, J. A. Katzenellenbogen, M. M. Mahoney. ESR1 and ESR2 activation differentially contribute to the expression of circadian rhythms in female mice. International Society for Reproductive Sciences, Carbondale, IL, October, **2013**.

359. S. E. Royston, A. G. Kondilis, S. V. Lord, N. Yasui, J. A. Katzenellenbogen, M. M. Mahoney. The Activational Mechanisms Underlying the Impact of Estrogen on the Formation and Expression of Circadian Rhythms in Mice. Society for Neuroscience, San Diego, CA, November, **2013**.
360. D. T. Reilly, S. H. Kim, J. A. Katzenellenbogen. Fluorescent Dendrimer Nanoconjugates as Advanced Probes for Biological Imaging. American Physical Society Meeting, Denver, CO, **2014**.
361. D. T. Reilly, S. H. Kim, J. A. Katzenellenbogen. Fluorescent Dendrimer Nanoconjugates for Advanced Biological Imaging. Annual meetings of the American Institute of Chemical Engineers, Atlanta, GA, **2014**.
362. D. P. McDonnell, J. D. Norris, A. Brunner, S. Dhanajayan, S. Wardell, J. Jasper, R. Safi, J. Josan, J. Pollock, A. Parent, C. Mayne, C. Zhang, and J. A. Katzenellenbogen. Moving from Empirical to Mechanism-Based Discovery Approaches in the Search for Molecules that Disrupt Androgen Signaling in Prostate Cancer. Keystone Symposium, Taos, New Mexico, January, **2014**.
363. J. A. Pollock, A. A. Parent, S. Wardell, D. P. McDonnell, J. A. Katzenellenbogen, J. D. Norris. Antagonists with Selectivity for Mutant Androgen Receptors: Synthesis and Evaluation of Tetra-Aryl Substituted Cyclobutanes. Keystone Symposium, Taos, New Mexico, January, **2014**.
364. N. Yasui, S. H. Kim, V. M. Carroll, D. Zhou, C. S. Dence, J. A. Katzenellenbogen. A Highly Carboxyphilic Di-T-Butylphenylsilyl Chloride System Enables a Kit-Like F-18 Labeling of Resin-Supported Unprotected Peptides or Small Molecules. SNMMI Annual Meeting, St. Louis, Missouri, June 7-11, **2014**.
365. A. M. Fowler, S. R. Chan, C. S. Dence, K. I. Shoghi, J. A. Katzenellenbogen. Limitations of [18F]Fluorothymidine as a Proliferation Biomarker in a Preclinical Model of Breast Cancer: Role of Sex-Dependent Differences in Tissue Biodistribution. SNMMI Annual Meeting, St. Louis, Missouri, June 7-11, **2014**.
366. D. Zhou, C. S. Dence, J. A. Katzenellenbogen. Nucleophilic Fluorination on Electron-Rich Aromatic Rings from Non-Aromatic Precursors: F-18 Labeling Study and Interference from Target Water. SNMMI Annual Meeting, St. Louis, Missouri, June 7-11, **2014**.
367. M. Adlanmerini, R. Solinhac, A. Abot, A. Fabre, P. Chambon, J. A. Katzenellenbogen, P. Gourdy, P. Shaul, D. Henrion, J-F Arnal, F. Lenfant. Mutation of the Palmitoylation Site of Estrogen Receptor α in vivo Reveals Tissue-Specific Roles for Membrane versus Nuclear Actions. Cold Spring Harbor Laboratory-Nuclear Receptors and Disease Meeting 2014, Cold Spring Harbor, NY, October 28-November 1, **2014**.
368. A. Abot, C. Fontaine, G. Greene, J. A. Katzenellenbogen, J-M Foidart, J-F Arnal. The Uterine and Vascular Actions of Estetrol Delineate a Distinctive Profile of Estrogen Receptor α Modulation, Uncoupling Nuclear and Membrane Activation. Cold Spring Harbor Laboratory-Nuclear Receptors and Disease Meeting 2014, Cold Spring Harbor, NY, October 28-November 1, **2014**.
369. S. Srinivasan, J. C. Nwachukwu, N. Bruno, M. Conkright, Y. Zheng, S. Wang, J. Mian, C. Dong, Z. Liao, V. Cavett, J. Nowak, R. Houtman, K. E. Carlson, J. A. Katzenellenbogen, H-B Zhou, K. W. Nettles. Towards Predicting Phenotypic Response to Estrogen Receptor- α Ligands. Cold Spring Harbor Laboratory-Nuclear Receptors and Disease Meeting 2014, Cold Spring Harbor, NY, October 28-November 1, **2014**.
370. J. C. Nwachukwu, S. Srinivasan, D. Goswami, I. Kastrati, S. Novick, V. Cavett, J. Nowak, K. E. Carlson, H-B Zhou, J. Frasier, P. R. Griffin, J. A. Katzenellenbogen, K. W. Nettles. Structural Features of Antagonism and Degradation of the Estrogen Receptor. Cold Spring Harbor Laboratory-Nuclear Receptors and Disease Meeting 2014, Cold Spring Harbor, NY, October 28-November 1, **2014**.
371. B. S. Katzenellenbogen, Z. Madak-Erdogan, A. Bergamaschi, P. Gong, Y. Chen, Y. Zhao, N. Bindman, J. A. Katzenellenbogen. Estrogen Receptor Integrative Genomics and Signaling Networks in Breast Cancer and Endocrine Resistance. Cold Spring Harbor Laboratory-Nuclear Receptors and Disease Meeting 2014, Cold Spring Harbor, NY, October 28-November 1, **2014**.
372. A. J. Khala, P. Kim, M. Syed, S. Habib, S. Nusinowitz, J. A. Katzenellenbogen, S. K. Tiwari-Woodruff. Optical Coherence Tomography (OCT) as a Predictive and Longitudinal In Vivo Biomarker of Disease and Estrogen Receptor β Agonist-Induced Repair in a Mouse Model of Multiple Sclerosis. Society for Neuroscience, Washington, D.C., November 15-19, **2014**.
373. Y. Zhao, Y. Chen, M. K. Bagchi, R. N. Taylor, K. W. Nettles, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Suppression of Endometriosis by Interrupting Crosstalk between the Endometriotic Lesion and the Host Immune System. ENDO 2015, San Diego, California - San Diego Convention Center, March 5-8, **2015**.

374. D. Reilly, S. H. Kim, J. A. Katzenellenbogen. Characterization of New Classes of Bright and Photostable Fluorescent Nanoconjugates for Biological Imaging. Annual meeting of the American Institute of Chemical Engineers, Salt Lake City, UT, November 8-13, **2015**
375. B. S. Katzenellenbogen, Z. Madak-Erdogan, A. Bergamaschi, Y. Zhao, P. Gong, M. Laws, N. Bindman, Y. Chen, J. A. Katzenellenbogen. Estrogen Receptors and Collaborators in Breast Cancer and Endocrine Resistance. 3rd Congress on Steroid Research, Chicago, IL, November 15-18, **2015**.
376. Y. Chen Zhao, J. A. Katzenellenbogen, B. S. Katzenellenbogen, Z. Madak Erdogan. Prevention of Obesity-Related Breast Cancer using Pathway Preferential Estrogens. Keystone Symposia – Nuclear Receptors: Full Throttle. Snowbird Resort, Snowbird, UT, January 10-14, **2016**.
377. K. Chen, Y. Chen Zhao, K. Hieronymi, J. A. Katzenellenbogen, B. S. Katzenellenbogen, Z. Madak Erdogan. Molecular Mechanisms of Low Affinity Estrogen Action in Obese Mouse Models. Keystone Symposia – Nuclear Receptors: Full Throttle. Snowbird Resort, Snowbird, UT, January 10-14, **2016**.
378. Z. Madak Erdogan, Y. Chen Zhao, K. Chen, K. Hieronymi, S. H. Kim, P. Gong, H. Zhang, K. L. Chambliss, P. Shaul, J. A. Katzenellenbogen, B. S. Katzenellenbogen, K. Wrobel, E. Kulkoyluoglu. Systems Biology of Gene and Metabolic Regulation by Estrogen Receptors and Kinases in Breast Cancer and Metabolic Disease. Keystone Symposia – Nuclear Receptors: Full Throttle. Snowbird Resort, Snowbird, UT, January 10-14, **2016**.
379. J. A. Katzenellenbogen, B. S. Katzenellenbogen, Y. Zhao, J.S. Josan, J.A Pollock, J. D. Norris, D. P. McDonnell, and S. Tiwari-Woodruff. Novel Ligands for Estrogen Receptor and Androgen Receptor Targeted Therapies. Keystone Symposia – Nuclear Receptors: Full Throttle. Snowbird Resort, Snowbird, UT, January 10-14, **2016**.
380. J. L. Christenson, K. Butterfield, N. Spoelstra, J. Norris, J. Josan, J. Pollock, B. S. Katzenellenbogen, J. A. Katzenellenbogen, J. K. Richer. MMTV-PyMT and the Met-1 Derived Line as Immunocompetent Models of Androgen Receptor-Positive Triple-Negative Breast Cancer. Keystone Symposia – Nuclear Receptors: Full Throttle. Snowbird Resort, Snowbird, UT, January 10-14, **2016**.
381. H. H. Farman, J. Wu, K. Gustafsson, S. Windahl, S. H. Kim, J. A. Katzenellenbogen. Extranuclear Effects on Cortical Bone in Males is Dependent on Estrogen Receptor α Activation Function-1. European Calcified Tissue, Rome, May 14-17, **2016**.
382. U. M. Selvaraj, E. J. Plautz, K. L. Chambliss, X. Kong, S. Rovinsky, S. Zhang, M. Tegene, S. B. Ortega, C. Mineo, B. S. Katzenellenbogen, J. A. Katzenellenbogen, S. H. Kim, P. W. Shaul, A. M. Stowe. Selective Non-Nuclear Estrogen Receptor Activation Decreases Stroke Severity and Promotes Functional Recovery after Stroke in Mice. 9th Symposium on Neuroprotection and Neurorepair, Leipzig, Germany, April 19-22, **2016**.
383. K. L. Chambliss, A. Sacharidou, Z. Madak-Erdogan, B. S. Katzenellenbogen, J. A. Katzenellenbogen, C. Mineo, P. W. Shaul. Metabolic Actions of Non-nuclear Estrogen Receptors. Rapid Responses to Steroid Hormone” conference, Richmond VA, **2016**.
384. Y. Chen Zhao, G. Rosso, K. Wrobel, E. Kulkoyluoglu, S. H. Kim, J. A. Katzenellenbogen, J. Flaws, R. Smith, Z. Madak Erdogan. Integrative –omics approach identifies novel roles for extra-nuclear ER α signaling in rewiring of cancer cell metabolism during obesity-associated postmenopausal breast cancer. Jensen Symposium, University of Cincinnati, November 3-5, **2016**.
385. H. Karim, J. Hasselmann, N. Yasui, J. A. Katzenellenbogen, and S. K. Tiwari-Woodruff. Therapeutic estrogen receptor beta (ER β) ligands modulate peripheral cytokines and may be responsible for remyelination in a mouse model of multiple sclerosis. Society for Neuroscience, Nov. 12-16, **2016**.
386. Y. Chen Zhao, G. Rosso, K. Wrobel, E. Kulkoyluoglu, S. H. Kim, J. A. Katzenellenbogen, J. Flaws, R. Smith, Z. Madak Erdogan. Extra-nuclear ER α -mTOR Signaling Rewires Cancer Cell Metabolism During Obesity-associated Breast Cancer. American Association for Cancer Research Annual Meeting, Washington, D.C., April 1-5, **2017**.
387. W. Toy, K. E. Carlson, T. A. Martin, H. Weir, W. L. Wong, C. G. Mayne, S. W. Fanning, P. Razavi, Joë Baselga, Y. Shen, B. S. Katzenellenbogen, G. Greene, J. A. Katzenellenbogen, S. Chandarlapaty. *ESR1* mutations activate and confer hormone resistance via distinct mechanisms. American Association for Cancer Research Annual Meeting, Washington, D.C., April 1-5, **2017**.

388. Y. C. Zhao, G. Rossi, S. H. Kim, K. U. Wrobel, E. Kulkoyluoglu, M. L. Johnson, N. Marino, A. M. V. Storniolo, J. Flaws, R. L. Smith, J. A. Katzenellenbogen, Z. Madak-Erdogan. ER α -mTOR signaling crosstalk rewires cancer cell metabolism during obesity-associated postmenopausal breast cancer. *Mechanisms of Metabolic Signaling*, Cold Spring Harbor, NY, May 16-20, **2017**.
389. D. Zhou, W. Chu, J. A. Katzenellenbogen. Sulfonyl [¹⁸F]fluorides open new landscape for radiofluorination. Society of Nuclear Medicine and Molecular Imaging (SNMMI) Annual Meeting, Denver, Colorado, June 10-14, **2017**.
390. M. J. Laws, S. H. Kim, J. Mian, Y. Zhao Y. Ziegler, D. Chu, B. H. Park, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Suppression of Breast Cancer Metastasis and Extension of Host Animal Survival by a New Adamantyl Antiestrogen, K-07, in a Pre-Clinical Breast Cancer Metastasis Model Driven by Constitutively Active Mutant Estrogen Receptors. American Association for Cancer Research (AACR) Annual Meeting, Chicago, IL, April 14-18, **2018**.
391. M. J. Laws, S. H. Kim, Y. Ziegler, N. Bindman, P. Gong, V. S. Guillen, M. Yasuda, D. Singh, D. El-Ashry, J. A. Katzenellenbogen, B. S. Katzenellenbogen. Suppression of Hormone Receptor-Positive and Triple Negative Breast Cancers by New Inhibitors of the Transcription Factor FOXM1. American Association for Cancer Research (AACR) Annual Meeting, Chicago, IL, April 14-18, **2018**.
392. B. Penagaluri, S. R. Devi, S. Srinivasan, K. E. Carlson, T. Martin, J. A. Katzenellenbogen, K. W. Nettles, J. S. Josan. NF- κ B Selective Estrogen Receptor Modulators for Resistant Breast Cancer. American Association for Cancer Research (AACR) Annual Meeting, Chicago, IL, April 14-18, **2018**.
393. Z-K Yao, S. Wardell, I. Spasojevic, J. D. Norris, J. A. Katzenellenbogen, D.P. McDonnell, J. S. Josan. Development of a Selective Androgen Receptor Degradar (SARD) for Treatment of Castration-Resistant Prostate Cancer. American Association for Cancer Research (AACR) Annual Meeting, Chicago, IL, April 14-18, **2018**.
394. D. Zhou, J. Xu, W. Chu, S. H. Kim, B. Rogers, J. A. Katzenellenbogen. Synthesis and Evaluation of a Novel ¹⁸F Labeled PARP-1 Ligand for PET Imaging of PARP-1 Expression in Prostate Cancer. Society of Nuclear Medicine and Molecular Imaging (SNMMI) 2018 Annual Meeting, Philadelphia, PA, June 23-26, **2018**.
395. D. Zhou, W. Chu, T. Voller, J. A. Katzenellenbogen. Copper-Mediated Nucleophilic Radiobromination of Aryl Boron Reagents. Society of Nuclear Medicine and Molecular Imaging (SNMMI) 2018 Annual Meeting, Philadelphia, PA, June 23-26, **2018**.
396. D. Zhou, W. Chu, J. A. Katzenellenbogen. Exploration of Alcohol-Enhanced Cu-Mediated Radiofluorination towards Practical Labeling. Society of Nuclear Medicine and Molecular Imaging (SNMMI) 2018 Annual Meeting, Philadelphia, PA, June 23-26, **2018**.
397. B. S. Katzenellenbogen, Y. Ziegler, M. J. Laws, V. Sanabria Guillen, Sung Hoon Kim, P. Dey, B. P. Smith, P. Gong, N. Bindman, Y. Zhao, K. Carlson, M. A. Yasuda, D. Singh, Z. Li, D. El-Ashry, Z. Madak-Erdogan, and J. A. Katzenellenbogen, Suppression of FOXM1 Activities and Breast Cancer Growth in Vitro and in Vivo by a New Class of Compounds, San Antonio Breast Cancer Symposium, San Antonio, December 10-14 **2019**.
398. J. Min, S. Srinivasan, E. S. Rangarajan, V. Sanabria Guillen, Y. Ziegler, K. E. Carlson, J. C. Nwachukwu, Y. Hou, Sung Hoon Kim, T. Izard, R. Houtman, K. W. Nettles, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Combining Direct and Indirect Modes of Antiestrogen Ligand Antagonism of Estrogen Receptor Activity in Breast Cancer. San Antonio Breast Cancer Symposium, San Antonio, December 10-14, **2019**.
399. J. Min, S. Srinivasan, E. S. Rangarajan, V. Sanabria Guillen, Y. Ziegler, K. E. Carlson, J. C. Nwachukwu, Y. Hou, Sung Hoon Kim, T. Izard, R. Houtman, K. W. Nettles, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Dual Mechanism Estrogen Receptor Inhibitors Produce Robust Breast Cancer Antagonism. 2 Nuclear Receptors Conference, Nassau, February 24-27, **2020**.
400. J. C. Nwachukwu, J. Min, S. Srinivasan, E. S. Rangarajan, V. Sanabria Guillen, Y. Ziegler, K. E. Carlson, Y. Hou, Sung Hoon Kim, Y. Hou, T. Izard, R. Houtman, K. W. Nettles, B. S. Katzenellenbogen, and J. A. Katzenellenbogen. Full Antagonism of Breast Cancer Cell Proliferation Can Result from Many Ligand-Induced Conformational Distortions of the Estrogen Receptor Ligand Binding Domain. Endocrine Society Conference ENDO2020, San Francisco, March 28-31, **2020**.
- 401.

D. Patents

1. J. A. Katzenellenbogen, Synthesis of Isoprenoid 1,5-dienes, U.S. US 4064150, 20 Dec 1977, 10 pp, 1977.
2. L. P. Hager, J. A. Katzenellenbogen, D. R. Storm, J. T. Wachsman, R. I. Gumpert, Process of Immobilizing Active Antimicrobial Principles Ger. Offen. DE 2709059, 15 Sep 1977, 77 pp, 1977.
3. P. L. Carl, J. A. Katzenellenbogen, M. J. Weber, Protease-Activated Anticancer Agents. PCT Int. Appl. WO 81/1145, 30 Apr 1981, 51 pp, 1981. U. S. Provisional Patent Application No.
4. M. J. Jacobs, and J. A. Katzenellenbogen, Use of Estriol to Promote Ruminant Growth and Feed Utilization Efficiency. Eur. Pat. Appl., EP 280545, 1988.
5. J. A. Katzenellenbogen, PCT Patent Application No. PCT/US99/22747 "Estrogen Receptor Ligands", October 1, 1999.
6. J. A. Katzenellenbogen, U. S. Patent Application No. US/09/483,233 "Selective Estrogens and Antiestrogens", January 14, 2000.
7. J. A. Katzenellenbogen, B. S. Katzenellenbogen, B. E. Fink, S. R. Stauffer, D. S. Mortensen, V. J. Sattigeri, and Y. Huang, Preparation of Non-Steroidal Estrogen Receptor Subtype-Selective Ligands. PCT Int. Appl., WO 2000019994, 4/13/00.
8. S. C. Manolagas, and J. A. Katzenellenbogen, Preparation of Activators of Non-Genotropic Estrogen-Like Signaling (ANGELS) for use in Stimulating Bone Formation and Treating Other Diseases. PCT Int. Appl., WO 2003002058, 2003.
9. J. A. Katzenellenbogen, B. S. Katzenellenbogen, D. R. Compton. Sulfonamides as Selective Estrogen Receptor Modulators, US Patent No. 11/459,917; PCT/US2006/029025; WO 2007/014273 A2, Published 1 February 2007.
10. J. A. Katzenellenbogen, Estrogen Receptor Ligands, September 15, 2008.
11. Y. Kim, S. H. Kim, M. Tanyeri, J. A. Katzenellenbogen, C. M. Schroeder. Dye Conjugated Dendrimers. US Patent 2012/0256102, October 11, 2012.
12. J. A. Katzenellenbogen, D. P. McDonnell, A. Parent, J. Pollock, J. Gunther, K. E. Carlson, T. Martin, J. Josan, J. Norris. Tetra-aryl Cyclobutane Inhibitors of Androgen Receptor Action for the Treatment of Hormone Refractory Cancer. PCT Application WO 2015/048246 A1. September 25, 2014.
13. D. Metzger, P. Chambon, H. Zhao, J. Katzenellenbogen, Method for Controlling the Biological Activity of a Protein in a Vertebrate Cell, US Patent, March 1, 2016.
15. J. A. Katzenellenbogen, B. S. Katzenellenbogen, S. H. Kim, Z. Madak-Erodogan, S. Shaul. Estrogen Derived Compositions and Methods of Using the Same. PCT Patent 2017/012586, January 6, 2017.
16. J. A. Katzenellenbogen, D. P. McDonnell, C. Mayne, A. Parent, C. Zhang, J. Josan, J. Norris. 1,4-Dihydropyridine Inhibitors of Androgen Receptor Action. Provisional patent application, submitted, September 21, 2016
17. J. A. Katzenellenbogen, B. S. Katzenellenbogen, S. H. Kim, J. Min, A. Sharma, N. Sharma. Adamantyl Antiestrogens for Cancer Therapy. Provisional patent application No. 62475912, submitted, March 24, 2017, PCT application No. PCT/US18/24144 filed, March 23, 2018

UPDATE