

# CURRICULUM VITA

January 2020

Frederick S. vom Saal, Ph.D.

**TITLE** Curators' Distinguished Professor Emeritus

## **BUSINESS ADDRESS**

105 Lefevre Hall  
Division of Biological Sciences  
University of Missouri-Columbia  
Columbia, MO 65211  
Office: 573-356-9621  
FAX: 573-884-5020  
vomsaalf@missouri.edu

## **EDUCATION**

Ph.D. 1976 Rutgers University  
New Brunswick, NJ  
Area of Study: Neurobiology

M.S. 1974 Rutgers University  
New Brunswick, NJ  
Area of Study: Neurobiology

B.A. 1969 New York University  
Washington Square College, N.Y.  
Area of Study: Psychobiology

## **POSITIONS HELD**

2015 - Curators' Distinguished Professor Emeritus  
Division of Biological Sciences  
University of Missouri-Columbia

2007 - Curators' Distinguished Professor  
Division of Biological Sciences  
University of Missouri-Columbia

1990-1991 - Visiting Professor  
Center for Human Reproduction  
College of Physicians and Surgeons  
Columbia University, New York

1989 – 2007 - Professor  
Division of Biological Sciences  
University of Missouri-Columbia

1984 – 1988 - Associate Professor  
Division of Biological Sciences  
University of Missouri-Columbia

1979 – 1983 - Assistant Professor  
Division of Biological Sciences  
Research Investigator, John M. Dalton Research Center  
University of Missouri-Columbia

1976 – 1979 - NRSA Postdoctoral Fellowship from NICHD, NIH  
Supervisor: Dr. F. H. Bronson  
Institute of Reproductive Biology, Department of Zoology,  
University of Texas at Austin

1975 - 1976	Research Assistant, Rutgers University
1974 - 1975	Teaching Assistant, Rutgers University
1974 - 1975	Instructor, Fairleigh-Dickinson University
1973 - 1974	Bevier Fellowship, Rutgers University
1972 - 1973	Russel Scholarship, Rutgers University
1970 - 1972	Biology Teacher, Marymount International School, Paris, France
1969 - 1970	Biology Teacher, Peace Corps Volunteer Borama, Somalia and Bukhalalire, Kenya

## **HONORS & AWARDS**

Russel Scholarship, Rutgers University 1972  
Bevier Fellowship, Rutgers University 1973  
Honorary member, Faculty of Science, University of Parma, Italy and Italian  
Academy of Sciences 1990  
Fellow, American Association for the Advancement of Science 1998  
Millenium Award, Indian Institute for Sustainable Future 2001  
Upstream Award, Jenifer Altman Foundation 2006  
Curators' Distinguished Professor University of Missouri 2007  
Mystical Seven Honor Society 2008  
Environmental Health Hero Award, CleanMed Association 2010  
University of Missouri Alumni Association Faculty Award 2010  
Heinz Foundation Award in Environmental Science 2010  
Derald H. Ruttenberg Visiting Professorship, Mt Sinai Medical School, New York 2013

## **JOURNAL AND GRANT REVIEWER AND EDITORIAL BOARDS**

Animal Behavior; Archives of Pediatrics & Adolescent Medicine; Biology of Reproduction; BMC Biology; British Medical Journal; Ecology; Endocrine Disruption; Endocrinology; Endocrine Reviews; Environmental Health Perspectives; Environmental Research; Environmental Health; Environmental Science & Technology; Environmental Toxicology and Pharmacology; Ethology, Ecology and Evolution; Genetics; Health Affairs; Hormones and Behavior; Human Reproduction; International Journal of Obesity; JAMA; Journal of the American Chemical Society; Journal of Clinical Endocrinology & Metabolism; Journal of Developmental Origins of Health and Disease; Journal of Exposure Science and Environmental Epidemiology; Journal of Neuroendocrinology; Journal of Reproduction and Fertility; Life Sciences; Molecular Cellular Endocrinology; Nature, Nature Reviews Endocrinology; NEJM; Neoplasia, Neurobiology of Aging; Neurotoxicology, Pharmacology, Biochemistry and Behavior; Pediatrics; Philosophical Transactions of the Royal Society B; Physiology and Behavior; PLoS One; PNAS; PPTOX; Reproductive Toxicology; Toxicology and Applied Pharmacology; Science; Toxicological Science.

NIH review panels

National Science Foundation

National Institute of Mental Health

March of Dimes Birth Defects Foundation

Harry F. Guggenheim Foundation

U.S. Department of Agriculture

Italian National Research Council

Current Editorial Boards: Ethology, Ecology and Evolution

## **COURSES TAUGHT 2010-2014**

Reproductive Biology Bio 4984, Fall 2014, Capstone course

Endocrine Disrupting Chemicals, Bio 4994, Fall 2014, Capstone course

Reproductive Biology Bio 4984, Fall 2013, Capstone course

Reproductive Biology Bio 4984, Winter 2013, Capstone course

Reproductive Biology Bio 4984, Fall 2012, Capstone course

Endocrine Disrupting Chemicals, Bio 4994, Fall 2012, Capstone course

Reproductive Biology Bio 4984 Winter 2012, Writing intensive, Capstone course

Endocrine Disrupting Chemicals, Bio 4994, Fall 2011, Capstone course

Reproductive Biology, Bio 8085, Fall 2011, Graduate seminar

Endocrine Disrupting Chemicals, Bio 4994, Winter 2011, Capstone course

Developmental Endocrinology, Bio 8002, Winter 2010, Graduate seminar

Reproductive Biology Bio 4984 Winter 2010, Writing intensive, Capstone course

Endocrine Disrupting Chemicals, Bio 4994, Fall 2010, Capstone course

Developmental Endocrinology, Bio 8002, Fall 2010, Graduate seminar

## **DEPARTMENTAL, COLLEGE AND UNIVERSITY COMMITTEES**

Divisional Council, Biology Division, 1983-1985. Chairman, 1984.  
Graduate Affairs Committee, Biology Division, 1979-1989.  
Director Search Committee, Biology Division, 1984.  
Neurosciences Search Committee, Biology Division, Chairman, 1985.  
Donald M. Nelson Distinguished Lecturer Committee, Chairman, UMC, 1979-1996.  
Chancellor's Awards Committee, UMC, 1984-1985; Chairman, 1987.  
Campus Laboratory Animal Review Committee, UMC, 1983-1987.  
UM Animal Resources Advisory Committee, UM, 1983-1987.  
Food for the 21st Century Reproductive Biologist Search Committee, 1984  
Food for the 21st Century Reproductive Biologist Search Committee, 1985  
UM Weldon Spring Review Committee, Physical Sciences, Chairman, 1987  
Laboratory Animal Medicine Assistant Director Search Committee, 1987  
Research Council, UMC, 1989-1990  
Faculty Awards Committee, Arts & Science, UMC, 1991-1992  
Animal Care and Use Procedures Review Committee, UM, 1991-1992  
Animal Issues Task Force, Chairman, UMC, 1992  
Life Science Mission Enhancement Committee, 1998-2001  
University of Missouri Animal Care and Use Committee, UMC, 2001-2004  
Dalton Research Center, Director search committee 2004-2005  
Curators Professor Committee, UMC, 2008  
Campus Writing Program Board, UMC, 2006-2010  
Research Council ad hoc reviewer, UMC, 1992-present  
Animal Care Committee, Biology Division, Chairman, 1980-1986; 1979-present  
Prime Fund Committee, UMC, 2003-present  
Chancellor's AAU task force on: Federal Research and Development; 2012-2014  
Curator Professor award committee, UMC 2015.

## **OUTSIDE PROFESSIONAL SERVICE**

Society for the Study of Reproduction, Program Committee Chairman, 1989  
Society of Neuroscience, Chapters Committee, 1990-1993.  
Gerontological Society of America, Research Education and Practice Committee,  
1991-1994.  
Gerontological Society of America, Biological Sciences Executive Committee, 1993.  
Senate Environment and Public Works Committee. Testified on the impact on human  
health of environmental endocrine disruptors, 1994  
Chemical Industry Institute of Toxicology, Technical Advisory Panel, 1995-1998.  
National Research Council, National Academy of Sciences Committee on Hormone-  
Related Toxicants in the Environment, 1995-1999.  
International Life Sciences Institute, Receptor-Mediated Processes and Risk  
Assessment Organizing Committee, 1995-1996.  
State of the World Forum, Endocrine Disruptor Initiative Steering Committee, 1996-

1997.

NIH (NCI, NIDDK, NIEHS) Prostate Cancer Special Review Committee, August, 2001

NIEHS PO-1 Special Emphasis Review Panel, October, 2002

Co-director, Permanent Monitoring Panel on Environmental Chemicals, Ettore Majorana Center, Erice, Italy, 2002-present.

Gordon Research Conference on Environmental Endocrine Disruptors, GRC Conference Chair: 2004.

Organizing committee: 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012.

NIEHS- RFA Special Emphasis Review Panel, May, 2006.

Associate Editor: Human Reproduction 2006 – 2008.

Editorial Board: Dose-Response 2002 – 2012.

Editorial Board: Endocrinology 2009-2012.

Editorial Board: Ethology, Ecology and Evolution 2000 – present.

Editorial Board: Endocrine Disruption 2013 – present.

Science Communication Fellows Board 2007 – 2013.

Science Communication Network Board 2008 – present.

Endometriosis Association Board 2008 – present.

Heinz Center Scientific Advisory Council 2011 – present.

NIH panel Ad hoc member Endocrinology, Metabolism, Nutrition and Reproductive Sciences Special Emphasis Panel, July, 2012.

Superfund NIH grant review panel member, November, 2012.

Examiner, T. Corbel Ph.D. thesis committee, University of Toulouse, Toulouse France, December 2013.

Integrative and Clinical Endocrinology and Reproduction Study Section, NIH panel member 2010 – 2014.

## **INVITED SYMPOSIUM AND WORKSHOP PARTICIPANT (2003-2019)**

### **2003**

Symposium on: Health effects, Genetics Conference, Missouri Teachers Assoc., Kansas City, MO, April, 2003.

Symposium on: Endocrine Disruptors Assessment and Multiple System Toxicity, Toxicology and Risk Assessment Conference, Dayton, OH, May, 2003.

Symposium on: Developmental exposures to environmental chemicals: Role in disease/dysfunction later in life. Second World Congress on Fetal Origins of Adult Disease, Brighton, UK, June, 2003.

Symposium on: Fetal origins of adult disease. Annual meeting of the Teratology Society, Philadelphia, PA, June, 2003.

Workshop on: Endocrine disrupting chemicals, World Wildlife Fund, Gunnison, Colorado, July, 2003.

Symposium on: Endocrine disrupting activities of halogenated hydrocarbons. 2003 Dioxin meeting, Boston, MA, August, 2003.

- Symposium on: Endocrine disruption and bioterrorism. Global Emergencies meeting, Center Ettore Majorana, Erice, Sicily, August, 2003.
- Symposium on: Andrology in the 2000's. Genk Institute for Fertility Technology. Antwerp, Belgium, September, 2003.
- Symposium on: Environmental Hormones, Tulane University, New Orleans, LA, October, 2003.
- Symposium on: Environmental neuromodulation. 23rd Annual Society for Experimental Toxicology and Chemistry meeting, Austin, TX, November, 2003.
- Symposium on: Science based guidelines for laboratory animal care. Institute for Laboratory Animal Research meeting, Washington, DC, November, 2003.
- Symposium on: Low dose effects of endocrine disrupting chemicals, Freie Universitat, Berlin, November, 2003.

## 2004

- Symposium on: Endocrine disrupting chemicals, Kyoto University, Kyoto, Japan, January, 2004
- Symposium on: Environmental causes of obesity, Duke University, Durham, North Carolina, February, 2004.
- Symposium on: Epigenetic regulation of reproductive development. Society for Gonocological Investigation continuing medical education meeting, Houston, TX, March, 2004.
- Gordon Research Conference on Environmental Endocrine Disruptors (Conference Chair), Colby-Sawyer College, New London, NH, June, 2004.
- Symposium on: Prenatal origins of reproductive dysfunction in the female. Society for the Study of Reproduction meeting, Vancouver, August, 2004.

## 2005

- Symposium on: Endocrine disruptors and disruption of hormonal activity. Faculty of agricultural, food and environmental quality sciences, Hebrew University, Tel Aviv, January, 2005.
- Symposium on: Collegiate Division Awards Ceremony, Missouri Academy of Sciences. Lincoln University, Jefferson City, MO, April, 2005.
- Symposium on: Swiss National Research Program on Endocrine Disruptors: Relevance to Humans, Animals and Ecosystems. Two lectures presented at the University of Zurich and the University of Lausanne, Switzerland, May, 2005.
- Symposium on: Endocrine disrupting chemicals. Endocrine Society meeting. San Diego, June, 2005.
- Symposium on: Endocrine disruptors and sexual development. International Academy of Sex Research. Ottawa, July, 2005.
- NIH Meeting (meeting co-organizer): Variability in contaminants in animal feed. National Institute of Environmental Health Sciences, Research Triangle Park, NC, September

2005.

- Symposium on: Developmental Disruption. International Congress on the Developmental Origins of Health and Disease. Toronto, November, 2005.
- Workshop on: Society for Women's Health Research workshop on Sex and Gender Differences in Obesity and Cardiovascular Disease. Washington, DC, November, 2005.

## 2006

- Scientific Advisory Session: Health effects of phthalates and bisphenol A in children. Committee on Health, California Assembly, January, 2006.
- Symposium on: Environmental Health lecture series on: Plastic promises: Better living or bodily harm. The Institute for Children's Environmental Health, Seattle, WA, February, 2006.
- Symposium on: Oregon Environmental Council lecture series. Oregon Environmental Council, Portland, OR, February, 2006.
- Symposium on: How today's environment affects tomorrow's children. Learning Disabilities Association of America, Jacksonville, FL, February, 2006.
- Symposium on: Environmental effects on the fetal origin of obesity. Society of Toxicology meeting, San Diego, CA, March, 2006.
- Symposium on: Genetics at Science City, Union Station, Kansas City, Missouri, April, 2006.
- Symposium on: Plenary lecture, Biology student research symposium, Allegheny College, Meadville, PA, April, 2006.
- Symposium on: Hormesis and non-monotonic dose-response curves. Gordon Research Conference, Il Ciocco, Italy, June, 2006.
- Workshop on: Co-Organizer, Variation in feeds. National Institute of Environmental Health Sciences, Research Triangle Park, NC. July, 2006
- Symposium on: Co-Organizer, Plastic contaminants in the ocean. Planetary Emergencies Meeting. Erice, Sicily, August, 2006.
- Workshop on: Co-Organizer, Workshop on global contamination by plastic. Planetary Emergencies Meeting. Erice, Sicily, August, 2006.
- Symposium on: Endocrine Disruptors Twelfth International Congress on Hormonal Steroids and Hormones and Cancer, Athens, Greece, September, 2006.
- Workshop on: Co-Organizer, Workshop on Bisphenol A. National Institute of Environmental Health Sciences, Research Triangle Park, NC. November, 2006.

## 2007

- Summit on: Fertility and the Environment, Collaborative for Health and the Environment, San Francisco, CA, January, 2007.
- Symposium on: Obesity: Developmental Origins and Environmental Influences AAAS meeting, San Francisco, CA, February, 2007.

- Symposium on: Health effects of chemicals in composites and sealants. Meeting of the International Association of Oral Medicine and Toxicology (IAOMT), Tuscon, March, 2007.
- Symposium on: Protecting Human Life and Caring for Creation: Why Protecting Unborn Children in their First Environment Matters. US. Coalition of Catholic Bishops meeting, Washington DC, April, 2007.
- Symposium on: Exploring life sciences at the University of Missouri. Annual Life Sciences Week, University of Missouri-Columbia, Columbia, MO, April, 2007
- Scientific Advisory Session: Health effects of phthalates and bisphenol A in children. Committee on Health, California Assembly, Sacramento, CA May, 2007.
- Symposium: International Conference on Fetal Programming and Developmental Toxicity, Faroe Islands, May, 2007.
- Symposium: Fourth Copenhagen Workshop on Endocrine Disrupters, Copenhagen, Denmark, May, 2007
- Symposium on: Endocrine Disruptors: Is there a problem? International Congress of Toxicology, Quebec City, CA, July, 2007.
- Symposium on: Marine Debris in the Pacific. University of Hilo, Hawaii, October, 2007.
- Symposium: Developmental exposure to environmental chemicals and disease. Society for Developmental Origins of Health and Disease meeting, Australia, November, 2007.
- Symposium on: Communicating scientific findings to the media and public. Science Communication Network. Washington DC, December, 2007

## 2008

- Symposium on: Endocrine Disruption. Odense, Denmark, March, 2008
- Symposium on: Plenary Lecture, 5th Annual Pediatric Healthy Weight Summit. Greenville, NC, March 2008.
- Symposium on: Endocrinology, Health, and the Environment. Graduate program in Endocrinology, Rutgers University, April, 2008.
- Symposium on: Identifying Critical Issues in Endocrine Disruption Research, Science Communication Network. Washington DC, April, 2008.
- Symposium on: A New Approach to Sustainable Chemicals, American Chemical Society meeting, New Orleans, LA, April, 2008.
- Symposium on: New Developments in Science, Griffiths Society, University of Missouri, Columbia, MO, April, 2008.
- Symposium on: Health Effects of Bisphenol A. Ministry of Health, Ottawa Canada, April, 2008.
- Symposium on: Role of Endocrine Disruptors from the Environment in the Aetiology of Obesity and Diabetes. 16th European Congress on Obesity. Geneva Switzerland, May, 2008.
- Symposium on: Effects and mechanisms of action of environmental endocrine disruptors on reproduction. Society for the Study of Reproduction meeting,



- Kona, Hawaii, May, 2008.
- Invited Testimony: Senate environment and energy committee, Springfield Illinois, May, 2008
- Symposium on: New Developments in Endocrine Disruptor Research, Gordon Research Conference, Waterville Valley, NH, June, 2008.
- Symposium on: Role of Environmental Chemicals in the Fetal Basis of Obesity, NIEHS Sponsored meeting on Obesity, Boston, MA, June, 2008.
- Symposium on: New Directions in Science, Science Communication Network meeting, Boston, MA, June, 2008.
- Invited Testimony: California Assembly Health Committee, Sacramento, CA, June, 2008.
- Symposium on: The Safety of Bisphenol A in Food Contact Applications. Toxicology Forum, Aspen, CO, July, 2008.
- Symposium on: Emerging Issues in Water Quality, Planetary Emergencies Meeting, Erice, Sicily, August, 2008.
- Symposium on: Health Effects of Chemicals in Plastic, Medical Transcription Meeting, Columbia, MO, September, 2008.
- Symposium on: Role of Endocrine Disruptors in Impaired Fertility. Association of Reproductive Health Professionals meeting, Washington, DC, September, 2008.
- Invited Testimony: Review of the Safety of Bisphenol A. FDA Science Advisory Panel meeting, Rockville, MD, September, 2008.
- Symposium on: Safety of Plastic Water Pipes. WWA Water Quality Meeting, Stevens Point, Wisconsin. September, 2008.
- Symposium on: Advancing Green Chemistry and Environmental Health, University of California, Irvine, CA, November, 2008.
- Symposium on: Advancing Alternative Approaches to Regulating Bisphenol A, Coming Clean Coalition, Washington DC, December, 2008.

## 2009

- Symposium on: Communicating Environmental Research Findings, Science Communication Network. Washington DC, March, 2009.
- Symposium on: Bisphenol A, German Environmental Ministry, Berlin, March, 2009.
- Workshop on: Ubiquitous endocrine disruptors and possible human health effects, University of Copenhagen, Copenhagen, Denmark, May, 2009.
- Symposium on: Endocrine disruption and risk assessment. Endocrine Disruption Forum, Endocrine Society meeting, Washington, D.C. June, 2009.
- Testimony on: Bisphenol A: Proposition 65 hearing, State of California. Oakland, CA, July, 2009.
- Workshop on: Next Generation Superfund Contaminants. NIEHS Superfund Basic Research Program, Tuscon, AR, August, 2009.
- Symposium on: Co-Chair, Green Chemistry, Planetary Emergencies meeting, Erice, Sicily, August, 2009.

- Symposium on: Methods for conducting research on bisphenol A. National Institute of Environmental Health Sciences, Raleigh, NC, October, 2009.
- Symposium on: Environmental, Developmental & Epigenetic Modulators of Aging. University of Texas at San Antonio, San Antonio, TX, October, 2009.
- Symposium on: Biologically-Active Agents in the Environment, E-Hormone meeting, Tulane University, New Orleans, LA, October, 2009.
- Symposium on: Toxicology Open House Plenary Lecture, University of Illinois, Champaign, IL, November, 2009.
- Symposium on: NIEHS and The Decade of the Environment, Society of Toxicology meeting, Miami, FL, December, 2009.

## 2010

- Testimony on: Human health hazards posed by bisphenol A. Consumer Affairs Committee, Pennsylvania House of Representatives, January, 2010.
- Symposium on: Communicating science to the public. Science Communication Fellows meeting. Washington DC, February, 2010.
- Symposium on: Perinatal Programming. University Medicine Berlin, Berlin, Germany, March, 2010.
- Symposium on: Exploring Life Sciences. Life Sciences Week, University of Missouri, Columbia MO, April, 2010.
- Conference on: Creating healing environments. CleanMen Association, Baltimore MD, May, 2010.
- Workshop on: What are the Next Steps to Mitigate the Threats Posed by Contaminants of Emerging Concern? Wingspread Foundation, Racine WI, May, 2010.
- Symposium on: The challenge that low-dose adverse effects poses for green Chemistry. 14th Annual green chemistry conference, American Chemical Society, Washington DC, June, 2010.
- Conference on: Bisphenol A. National Institute of Environmental Health Sciences. Raleigh NC, September, 2010.
- Workshop on: Bisphenol A. World Health Organization, Ottawa, Canada, November, 2010.
- Award Ceremony: Global change caused by the impact of human activities and natural processes on the environment. Heinz Foundation, Washington DC, November, 2010
- Conference on: Bisphenol A, Science and the Law. Center for Progressive Reform. Washington DC, December 2010.

## 2011

- Symposium on: Neuro-behavioral effects of environmental chemicals. Winter Animal Behavior Conference, Steamboat Springs CO, January, 2011.
- Symposium on: Communicating science to the public and media. Science

- Communication Fellows meeting. Washington DC, March, 2011.
- Symposium on: Green Chemistry and Environmental Health: Principles and Tools for Next-Generation Materials. Advancing Green Chemistry Foundation, Sausalito, CA, March, 2011.
- Symposium on: Endocrine disruptors and obesity. National University of Athens, Athens Greece, May, 2011
- Symposium on: Role of Environmental Chemical Exposure in the Etiology of Obesity, Type 2 Diabetes and Metabolic Syndrome. European Association for the Study of Obesity (EASO) meeting, Istanbul, Turkey. May, 2011.
- Symposium on: Bisphenol A and Uraemic Toxins, differentiating facts from fiction. European Renal Association and European Dialysis and Transplant Association, Prague, Czech Republic, June, 2011.
- Symposium on: Endocrine Disruptors. Gordon Research Conference on Hormone Action in Development and Cancer. Smithfield, RI, July, 2011.
- Symposium on: Ethics in environmental reporting. Association for Education in Journalism & Mass Communication meeting. St. Louis, MO. August, 2011.
- Workshop on: Chemicals of Emerging Concern. Planetary Emergencies meeting, Co-Organizer, Erice, Sicily, August, 2011.
- Workshop on: Overcoming Barriers For Regulating Environmental Endocrine Disrupting Chemicals. Co-Organizer, St. Louis, MO, September, 2011.
- Symposium on: Environmental effects on obesity. International School of Ethology Conference on The Obese Species: Clinical and preclinical understanding of eating and energy balance disorders. Erice, Sicily, October, 2011.

## 2012

- Symposium on: Endocrine disrupting chemicals. National Institute of Environmental Health Sciences. Raleigh, NC, January, 2012.
- Symposium on: Misrepresentation of scientific research in the media. Science Communication Fellows meeting. Washington DC, March, 2012.
- Workshop on: Collaborative program on bisphenol A. FDA-NCTR, Little Rock, AR, March, 2012.
- Workshop on: Non-monotonic dose responses: relevance and implications for food. Pew Foundation, Washington DC, April, 2012
- Symposium on: Resolving controversies in endocrine disruption. Gordon Research Conference. West Dover, VT, June, 2012.
- Conference on: Keynote address. Fetal programming and environmental exposures: Implications for prenatal care and pre-term birth. New York Academy of Sciences, New York, NY, June 2012.
- Symposium on: Exposure to endocrine disrupting chemicals during dialysis, European Dialysis and Transplant Association, Paris, France, June, 2012.
- Workshop on: Emerging terrorist chemicals of concern. Co-Organizer, Planetary Emergencies meeting, Erice, Sicily, August, 2012.

- Symposium on: Endocrine Disruptors: Low Dose Effects and Non-Monotonic Dose Responses, NIEHS & ANSES meeting, Berlin, Germany, September, 2012.
- Workshop on: Green Chemistry: Approaches to premarket testing of chemicals. Advancing Green Chemistry, Tarrytown, NY, October, 2012.
- Symposium on: Science & Power, Environmental Health and Justice meeting, Chicago, November, 2012.

### **2013**

- Symposium on: Thermal paper as a source of human exposure to BPA and metabolic disruption in mice. Bisphenol A workshop, NIEHS, Raleigh, NC January, 2013.
- Symposium on: Developmental Origins of Endocrine Disorders: Impacts of Environmental Exposures, Endocrine Society meeting, San Francisco, CA, June, 2013.
- Symposium on: Reproduction, epigenetics and the environment. Nairobi, Kenya, August, 2013.
- Symposium on: Bioterrorist threats to water. Co-Organizer. Planetary Emergencies meeting, Erice, Sicily, August, 2013.
- Symposium on: Greenwald Symposium on reproduction and regenerative medicine. Kansas City, MO October, 2013.
- Symposium on: Endocrine Disrupting Chemicals in Dialysis Equipment and Urinary Tract Symptoms. American Society of Nephrology. Atlanta, Georgia, November 2013.

### **2014**

- Symposium on: Endocrine disrupting chemicals. Winter Conference on Brain Research, Steamboat Springs, CO, January, 2014.
- Symposium on: Round-table discussion on endocrine disruptors and metabolic disease, Co-Organizer, Parma Italy, May, 2014.
- Symposium on: Endocrine disrupting effects of the herbicide glyphosate. Co-Organizer, Planetary Emergencies meeting, Erice, Sicily, August, 2014.
- Symposium on: Contamination of water by chemicals in plastic, Tapped: Inside the bottled water industry. Museum of Science, Boston, MA, September, 2014.
- Symposium on: Endocrine disrupting chemicals in dialysis equipment. Canadian Association of Nephrology, Niagara Falls, NY, October, 2014.
- Webinar on: Pharmacokinetics and health effects of bisphenol A. Collaborative for Health and the Environment. November, 2014.

### **2015**

- Webinar on: Environmental Medicine Training: Plastics (BPA and phthalates), Progressive Medical Education, January, 2015.
- Symposium on: Developmental programming of fertility, American Society of Animal Science Triennial Reproduction Symposium, Orlando FL, July 2015.

- Workshop on: Contraceptive Conundrum: Effects and Side Effects, Pelegrino  
Biomedical Ethics program, Georgetown University, Washington DC, August 2015.
- Symposium on: Health risks of glyphosate. Co-Organizer, Planetary Emergencies  
meeting, Erice, Sicily, August, 2015.
- Workshop on: Bisphenol A outcomes in CLARITY, NIEHS, Raleigh NC, November  
2015.

## 2016

- Symposium on: Bisphenols: Health and regulatory issues, Wisconsin Environmental  
Health Network, Madison WI, February 2016.
- Symposium on: Pollutants and infant development. Co-Organizer, Planetary  
Emergencies meeting, Erice, Sicily, August, 2016.
- Symposium on: History of the field of Endocrine Disruption. NIEHS, Bethesda, MD,  
September, 2016.

## 2017

- Symposium on: Estradiol and estrogenic chemicals modulate androgen action during  
prostate development. Hormonal control of prostate development, O'Brien Center  
Symposium, University of Wisconsin, Department of Urology, Madison WI, May  
2017
- Symposium on: Predicting the social consequences of ubiquitous exposures to toxic  
chemicals in water, air and products. Co-Organizer, Planetary Emergencies  
meeting, Erice, Sicily, August, 2017.
- Workshop on: Endocrine Disrupting Chemicals. Raleigh, NC, December, 2017.

## 2018

- Symposium on: Update on findings from CLARITY-BPA. PPTOX meeting, Faroe Islands,  
May, 2018.
- Symposium on: Transgenerational effects of manmade environmental contaminants:  
Symposium on: Mechanisms and evolutionary consequences. Co-Organizer, Planetary  
Emergencies meeting, Erice, Sicily, August, 2018.

## 2019

- Symposium on: Health effects of bisphenols. Environmental Health Symposium,  
Phoenix Arizona, April, 2019.
- Symposium on: Thyroid disruption. Environmental Health Symposium, Phoenix Arizona,  
April, 2019.
- Symposium on: Environmental Obesogens and Metabolic Disruptors, Environmental  
Health Symposium, Phoenix Arizona, April, 2019.
- Workshop on: Endocrine Disruption, HEEDS, Crested Butte, Colorado, July, 2019.
- Symposium on: Health and Environment Plenary Session. Co-Organizer, Planetary  
Emergencies meeting, Erice, Sicily, August, 2019.

**CONFERENCE/SYMPOSIUM/WORKSHOP ORGANIZER & CO-ORGANIZER (since 2002)**

- Workshop on: Impact of endocrine disruptors on brain development and behavior (meeting co-organizer), Ettore Majorana Center for Scientific Culture, Erice, Italy, March, 2002.
- Gordon Research Conference: (Conference Chair) Environmental Endocrine Disruptors, Colby-Sawyer College, New London, NH, June, 2004.
- NIH Meeting: Variability in contaminants in animal feed. National Institute of Environmental Health Sciences, Research Triangle Park, NC, September 2005.
- Workshop on: Variation in feeds. National Institute of Environmental Health Sciences, Research Triangle Park, NC. July, 2006
- Symposium on: Plastic contaminants in the ocean. Planetary Emergencies Meeting. Erice, Sicily, August, 2006.
- Workshop on: Workshop on global contamination by plastic. Planetary Emergencies Meeting. Erice, Sicily, August, 2006.
- Workshop on: Workshop on Bisphenol A. National Institute of Environmental Health Sciences, Research Triangle Park, NC. November, 2006.
- Symposium on: Emerging Issues in Water Quality, Planetary Emergencies Meeting, Erice, Sicily, August, 2008.
- Symposium on: Green Chemistry, Planetary Emergencies meeting, Erice, Sicily, August, 2009.
- Symposium on: Green Chemistry: Integrating Environmental Health and Chemical Innovation. University of Missouri, October, 2010.
- Workshop on: Chemicals of Emerging Concern. Planetary Emergencies meeting, Erice, Sicily, August, 2011.
- Workshop on: Overcoming Barriers For Regulating Environmental Endocrine Disrupting Chemicals. University of Missouri, September, 2011.
- Workshop on: Emerging terrorist chemicals of concern. Planetary Emergencies meeting, Erice, Sicily, August, 2012.
- Symposium on: Bioterrorist threats to water. Planetary Emergencies meeting, Erice, Sicily, August, 2013.
- Symposium on: Round-table discussion on endocrine disruptors and metabolic disease, Parma Italy, May, 2014.
- Symposium on: Health risks of glyphosate. Co-Organizer, Planetary Emergencies meeting, Erice, Sicily, August, 2015.
- Symposium on: Pollutants and infant development. Co-Organizer, Planetary Emergencies meeting, Erice, Sicily, August, 2016.
- Symposium on: Predicting the social consequences of ubiquitous exposures to toxic chemicals in water, air and products. Co-Organizer, Planetary Emergencies meeting, Erice, Sicily, August, 2017.

Symposium on: Mechanisms and evolutionary consequences. Co-Organizer, Planetary Emergencies meeting, Erice, Sicily, August, 2018.

Symposium on: Health and Environment Plenary Session. Co-Organizer, Planetary Emergencies meeting, Erice, Sicily, August, 2019.

### **INVITED PRESENTATIONS AT UNIVERSITIES (2000-present)**

Reproductive Sciences Program, University of Michigan, Ann Arbor, MI, May, 2000.

Toxicology Program, Iowa State University, Ames, Iowa, May, 2000.

Environmental Sciences Program, Arangabad University, Arangabad, India, March, 2001.

Biology Department, Virginia Commonwealth University, Blacksburgh, VA, April, 2001.

Zoology Department, North Carolina State University, Raleigh, NC, May, 2003.

Bioenvironmental Medicine Department, Chiba University, Tokyo, Japan, January, 2004.

Biology Department, Kumamoto University, Kumamoto, Japan, January, 2004.

Department of Environmental and Molecular Toxicology, North Carolina State University, Raleigh, NC, April, 2004.

Molecular and Environmental Toxicology Center, University of Wisconsin-Madison, April, 2005.

Department of Biology, University of Wisconsin-Madison, April, 2005.

Cancer Center, Massachusetts General Hospital, Boston, May, 2005.

Biology Department, University of Florida, Gainesville, March, 2006.

Lifelong Learning Institute, University of Missouri, April, 2006.

Unitarian Fellowship Forum, Columbia, Missouri, April, 2006.

World Health Organization meeting on hormone residues in beef, Geneva, Switzerland, September, 2006.

Department of Epidemiology, Boston University School of Public Health, Boston MA November, 2007.

Department of Structural Biology, University of South Dakota, Vermillion, SD, October, 2008.

Department of Biology, University of Utah, Salt Lake City, Utah, October, 2008.

Northwest Rotary Club, Columbia, MO, November, 2008.

Reproductive Biology Program, University of Idaho and Washington State University, February, 2009.

Thompson Autism Center, University of Missouri, Columbia, MO, February, 2009.

Copenhagen University Hospital, Postgraduate course on Endocrine Disruptors, Copenhagen, Denmark, May, 2009.

University of Texas Medical Branch, Molecular endocrinology program, Galveston, TX,

November, 2009.

University of Illinois, Toxicology Program, Urbana, IL, November, 2009.

Department of Nutrition and Exercise Physiology, University of Missouri-Columbia, February, 2010.

Carnegie Mellon University, Green Chemistry Program (University Lecture Series), Pittsburgh, PA, March, 2010.

Laboratoire de Pharmacologie Toxicologie (INRA), Toulouse, France, December, 2010.

University of Missouri, Chemical Engineering Department, November, 2011.

University of Texas Medical School, Neuroscience Department, March, 2013.

Derald H. Ruttenberg Visiting Professorship, Mount Sinai School of Medicine, April 2013.

University of Wisconsin, Toxicology Program, February, 2016.

## **PUBLICATIONS** (\* book chapter)

### GOOGLE SCHOLAR CITATIONS 12-29-19

	ALL	SINCE 2014
Citations	32,734	13,978
h-index	81	55

1. vom Saal, F.S., Hamilton, L. and Gandelman, R. Faster acquisition of an olfactory discrimination following septal lesions in male albino rats. *Physiol. Behav.* 14:697-703, 1975.
2. Gandelman, R. and vom Saal, F.S. Pup-killing in mice: The effects of gonadectomy and testosterone administration. *Physiol. Behav.* 15:647-651, 1975.
3. vom Saal, F.S., Svare, B. and Gandelman, R. Time of neonatal androgen exposure influences length of testosterone treatment required to induce aggression in adult male and female mice. *Behav. Biol.* 17:391-397, 1976.
4. vom Saal, F.S., Gandelman, R. and Svare, B. Aggression in male and female mice: Evidence for changed neural sensitivity in response to neonatal but not adult androgen exposure. *Physiol. Behav.* 17:53-57, 1976.
5. Gandelman, R., vom Saal, F.S. and Reinisch, J. Contiguity to male fetuses affects morphology and behavior in female mice. *Nature* 266:722-724, 1977.
6. Gandelman, R. and vom Saal, F.S. Exposure to early androgen attenuates androgen-induced pup-killing in male and female mice. *Behav. Biol.* 20:252-260, 1977.



7. vom Saal, F.S., Timmons, R. and Hamilton, L. Effects of diet and dietary experience on body weight regulation in rats with septal lesions. *Physiol. Psychol.* 6:306-313, 1978.
8. vom Saal, F.S. and Bronson, F. In utero proximity of female mouse fetuses to males: Effect on reproductive performance during later life. *Biol. Reprod.* 19:842-853, 1978.
9. vom Saal, F.S. Cyproterone acetate exposure during gestation in mice retards fetal growth. *Physiol. Behav.* 21:515-517, 1978.
10. Bronson, F. and vom Saal, F.S. The preovulatory surge in luteinizing hormone secretion in mice: Variation in magnitude due to ambient light intensity. *Biol. Reprod.* 20:1005-1008, 1979.
11. Bronson, F. and vom Saal, F.S. Control of the release of luteinizing hormone by steroids in the mouse. *Endocrinol.* 104:1247-1255, 1979.
12. vom Saal, F.S. Prenatal exposure to androgen influences morphology and aggressive behavior of male and female mice. *Horm. Behav.* 12: 1-11, 1979.
13. vom Saal, F.S. and Bronson, F. Sexual characteristics of adult female mice are correlated with their blood testosterone levels during prenatal development. *Science* 208:597-599, 1980.
14. vom Saal, F.S. and Bronson, F. Variation in length of the estrous cycle in mice due to former intrauterine proximity to male fetuses. *Biol. Reprod.* 22:777-780, 1980.
15. vom Saal, F.S., Pryor, S. and Bronson, F. Effects of prior intrauterine position and housing on oestrous cycle length in adolescent mice. *J. Reprod. Fert.* 62:33-37, 1981.
16. vom Saal, F.S. Variation in phenotype due to random intrauterine positioning of male and female fetuses in rodents. *J. Reprod. Fert.* 62: 633-650, 1981.
- \*17. vom Saal, F.S. The intrauterine position phenomenon in mice. In: *Biology of Aggression*, P. Brain and D. Benton (Eds.), Sijthoff and Noordhoff, Netherlands, pp. 231-236, 1981.
- \*18. vom Saal, F.S. Intrauterine positioning of male and female fetuses influences prenatal hormone titers and adult behavior. In: *Proceedings of the Fifth World Congress of Sexology*, Excerpta Medica, Amsterdam, 1982.

19. vom Saal, F.S. and Howard L. The regulation of infanticide and parental behavior: Implications for reproductive success in male mice. *Science* 215:1270-1272, 1982.
20. vom Saal, F.S., Grant, W., McMullen, C. and Laves, K. High fetal estrogen titers correlate with enhanced adult sexual performance and decreased aggression in male mice. *Science* 220:1306-1309, 1983.
21. vom Saal, F.S. Variation in infanticide and parental behavior in male mice due to prior intrauterine proximity to female fetuses: Elimination by prenatal stress. *Physiol. Behavior*. 30:675-681, 1983.
- \*22. vom Saal, F.S. Models of early hormonal effects on intrasex aggression in mice. In: *Hormones and Aggressive Behavior*, B. Svare (Ed.), Plenum, New York, pp. 197-222, 1983.
- \*23. vom Saal, F.S. The interaction of circulating estrogens and androgens in regulating mammalian sexual differentiation. In: *Hormones and Behavior in Higher Vertebrates*, J. Balthazart, E. Prove and R. Giles (Eds.), Springer Verlag, Berlin, pp. 159-177, 1983.
- \*24. vom Saal, F.S. Proximate and ultimate causes of infanticide in male house mice. In: *Infanticide: Comparative and Evolutionary Aspects*, G. Hausfater and S. Blaffer-Hrdy (Eds.), Aldine Pub., 1984, pp. 401-424.
- \*25. vom Saal, F.S. The intrauterine position phenomenon: Effects on physiology, aggressive behavior and population dynamics in house mice. In: *Prog. Clin. Biol. Res.*, Vol. 169, *Biological Perspectives on Aggression*, K. Flannelly, R. Blanchard and D. Blanchard (Eds.), Liss, New York, pp. 135-179, 1984.
26. Rines, J. and vom Saal, F.S. Fetal effects on sexual behavior and aggression in young and old female mice treated with estrogen and progesterone. *Horm. Behav.* 18:117-129, 1984.
27. vom Saal, F.S. Time-contingent change in infanticide and parental behavior induced by ejaculation in male mice. *Physiol. Behav.* 34:7-15, 1985.
- \*28. Brain, P., Haug, M. and vom Saal, F.S. Are female mice the docile sex? In: *The Aggressive Female*, M. Haug, D. Benton, P. Brain, B. Olivier, and J. Mos (Eds.), CIP-Gegevens Koninklijke Bibliotheek, The Haag, pp. 61-78, 1985.
29. vom Saal, F.S. and Moyer, C. Prenatal effects on reproductive capacity during aging in female mice. *Biol. Reprod.* 32:1116-1126, 1985.

30. McCarthy, M. and vom Saal, F.S. The influence of reproductive state on infanticide by wild female house mice. *Physiol. Behav.* 35:843-849, 1985.
31. McCarthy, M. and vom Saal, F.S. Inhibition of infanticide after mating in wild male house mice. *Physiol. Behav.* 36:203-209, 1986.
32. McCarthy, M., Bare, J. and vom Saal, F.S. Infanticide and parental behavior in wild female house mice (*Mus musculus*): Effects of ovariectomy, adrenalectomy, and administration of oxytocin and prostaglandin. *Physiol. Behav.* 36:17-23, 1986.
33. McCarthy, M. and vom Saal, F.S. Infanticide by virgin CF-1 and wild male house mice (*Mus musculus*): Effects of age, prolonged isolation and testing procedure. *Develop. Psychobiol.* 19:279-290, 1986.
- \*34. vom Saal, F.S. and Finch, C. Reproductive senescence: Phenomena and mechanisms in mammals and selected vertebrates. In: *Physiology of Reproduction*, E. Knobil, J. Neill and D. Pfaff (Eds.), Raven Press, New York, pp. 2351-2413, 1988.
- \*35. vom Saal, F.S. Perinatal testosterone exposure has opposite effects on intermale aggression and infanticide in mice. In: *House Mouse Aggression*. Edited by P. Brain and S. Parmigiani. Gordon and Breach Science Pub., pp. 179-204, 1988.
36. vom Saal, F.S. Sexual differentiation in litter bearing mammals: influence of sex of adjacent fetuses in utero. *J. Anim. Sci.* 67: 1824-1840, 1989.
37. vom Saal, F.S. The production of and sensitivity to cues that delay puberty and prolong subsequent oestrous cycles in female mice are influenced by prior intrauterine position. *J. Reprod. Fert.* 86: 457-471, 1989.
- \*38. Perrigo, G. and vom Saal, F.S. Mating-induced regulation of infanticide in male mice: Fetal programming of a unique stimulus-response. In: *Ethoexperimental Approaches to the Study of Behavior*. Edited by R. Blanchard, P. Brain, D. Blanchard and S. Parmigiani. Kluwer Academic Pub., Dordrecht, The Netherlands, pp. 320-333, 1989.
39. Perrigo, G., Bryant, W. and vom Saal, F.S. The use of live pups in a humane, injury-free test for infanticidal behaviour in male mice. *Anim. Behav.* 38:897-904, 1989.
40. Perrigo, G., Bryant, W. and vom Saal, F.S. Fetal, hormonal and experiential factors influencing the mating-induced regulation of infanticide in male house mice. *Physiol. Behav.* 46: 121-128, 1989.

41. Rohde-Parfet, K., Ganjam, V., Lamberson, W. Rieke, A., vom Saal, F.S. and Day, B. Intrauterine position effects in female swine: subsequent reproductive performance, and social and sexual behavior. *Applied Anim. Behav. Sci.*, 26:349-362, 1990.
42. Rohde-Parfet, K., Lamberson, W. Rieke, A., Cantley, T. Ganjam, V., vom Saal, F.S. and Day, B. Intrauterine position effects in male and female swine: subsequent survivability, growth rate, morphology and serum characteristics. *J. Anim. Sci.*, 68:179-185, 1990.
43. Perrigo, G., Bryant, W. and vom Saal, F.S. A unique neural timing system prevents male mice from harming their own offspring. *Anim. Behav.*, 39:535-539, 1990.
44. vom Saal, F.S., Quadagno, D., Even, M., Keisler, L., Keisler, D., and Khan, S. Paradoxical effects of maternal stress on fetal steroids and postnatal reproductive traits in female mice from different intrauterine positions. *Biol. Reprod.*, 43:751-761, 1990.
45. Perrigo, G., Belvin, L. and vom Saal, F.S. Humane behavioral assays in the laboratory: An alternative test for assessing how rodents behave toward young. *Humane Innovations and Alternatives in Animal Experimentation*: 4: 208-209, 1990.
46. Clark, M., Galef, B. and vom Saal, F.S. Nonrandom sex composition of gerbil, mouse and hamster litters before and after birth. *Develop. Psychobiol.*, 24: 81-90, 1991.
- \*47. vom Saal, F.S. Prenatal gonadal influences on mouse sociosexual behaviours. In M. Haug, P.F. Brain, and C. Aron, (Eds.). *Heterotypical Behaviour in Man and Animals*. Chapman and Hall, London, pp. 42-70, 1991.
48. Montano, M., Wang, M., Even, M. and vom Saal, F.S. Serum corticosterone in fetal mice: Sex differences, circadian changes, and effect of maternal stress. *Physiol. Behav.* 50: 323-329, 1991.
49. Keisler, L., vom Saal, F.S., Keisler, D. and Walker, S. Hormonal manipulation of the prenatal environment alters reproductive morphology and increases longevity in autoimmune NZB/W mice. *Biol. Reprod.* 44: 707-716, 1991.
50. vom Saal, F.S., Even, M. and D. Quadagno, D. Effects of maternal stress on puberty, fertility and aggressive behavior of female mice. *Physiol. Behav.*, 49: 1073-1078, 1991.
51. Perrigo, G., Belvin, E. and vom Saal, F.S. Individual variation in neural timing of infanticide and parental behaviour in male mice. *Physiol. Behav.* 50: 287-296, 1991.

52. Even, M. and vom Saal, F.S. Seminal vesicle and preputial gland response to steroids in adult male mice is influenced by prior intrauterine position. *Physiol. Behav.*, 51:11-16, 1992.
53. Perrigo, G., Belvin, E. and vom Saal, F.S. Time and sex in the male mouse: Temporal regulation of infanticide and parental behavior. *Chronobiol. Int.*, 9:421-433, 1992.
54. Clark, M.M., vom Saal, F.S. and Galef, B.G. Intrauterine positions and testosterone levels of adult male gerbils are correlated. *Physiol. Behav.* 51:957-960, 1992.
55. vom Saal, F.S. and Dhar, M. D. Blood flow in the uterine loop artery and loop vein is bi-directional in the mouse: Implications for intrauterine transport of steroids. *Physiol. Behav.*, 52: 163-171, 1992.
- \*56. vom Saal, F.S., Montano, M.M. and Wang, H-S. Sexual differentiation in mammals. In: *Chemically Induced Alterations in Sexual and Functional Development: The Wildlife-Human Connection*. T. Colborn and C. Clement (Eds), Princeton Scientific Pub., Princeton, N.J., pp. 17-83, 1992.
57. Even, M.D., Dhar, M. and vom Saal, F.S. Transport of steroids between fetuses via amniotic fluid in relation to the intrauterine position phenomenon in rats. *J. Reprod. Fertil.* 96:709-716, 1992.
58. Zielinski, W.J. vom Saal, F.S. and Vandenberg, J.G. The effect of intrauterine position on the survival, reproduction and home range size of female mouse mice (*Mus musculus*). *Behav. Ecol. Sociobiol.* 30:185-191, 1992.
59. Nonneman, D.J., Ganjam, V.K., Welshons, W.V., vom Saal, F.S. Intrauterine position effects on steroid metabolism and steroid receptors of reproductive organs in male mice. *Biol. Reprod.* 47:723-729, 1992.
60. Perrigo, G., Belvin, E. and vom Saal, F. Social inhibition of infanticide in male house mice. *Ecol. Ethol. Evol.* 5:181-185, 1993.
61. Clark, M.M., Bishop, A.M., vom Saal, F.S. and Galef, B.G. Responsiveness to testosterone of adult male gerbils from known intrauterine positions. *Physiol. Behav.* 53:1183-1187, 1993.
62. Perrigo, G., Belvin, L., Quindry, P., Kadir, T., Becker, J., van Look, C., Niewoehner, J. and vom Saal, F. Genetic mediation of infanticidal and parental behavior in male and female domestic and wild stock house mice. *Behav. Genetics* 23:525-531, 1993.

63. Colborn, T., vom Saal, F.S. and Soto, A.M. Developmental effects of endocrine disrupting chemicals in wildlife and humans. *Environ. Health Perspectives* 101:378-384,1993.
64. Montano, M., Wang, M. vom Saal, F. Sex difference in serum concentrations of corticosterone in mouse fetuses is mediated by differential placental transport from the mother and eliminated by maternal adrenalectomy of stress. *J. Reprod. Fertil.* 99: 283-290, 1993.
65. Even, M.D, Laughlin, M.H., Krause, G.F. and vom Saal, F.S. Blood flow to uterine segments and placentae differs as a function of uterine location, side, and fetal sex in pregnant rats. *J. Reprod. Fertil.*, 102:245-252, 1994.
- \*66. vom Saal, F. The role of social, religious and medical practices in the neglect, abuse, abandonment and killing of infants. In: *Infanticide and Parental Care*. S. Parmigiani and F. vom Saal (Eds). Harwood Academic Press, London, 43-72, 1994.
67. Perrigo, G. and vom Saal, F. Behavioral Cycles and the neural timing of infanticide and parenting in mice. In: *Infanticide and Parental Care*. S. Parmigiani and F. vom Saal (Eds). Harwood Academic Press, London, pp. 365-396, 1994.
68. Parmigiani, S. and vom Saal, F. *Infanticide and Parental Care*. Harwood Academic Press, London, 1994.
69. Palanza, P., Parmigiani, S. and vom Saal, F.S. Maternal aggression toward infanticidal males of different social status in wild house mice. *Aggressive Behavior* 20:267-274, 1994.
- \*70. vom Saal, F.S., Finch, C.E. and Nelson, J.F. Natural history and mechanisms of aging in humans, laboratory rodents and other selected vertebrates. In: *Physiology of Reproduction*, E. Knobil, J. Neill and D. Pfaff (Eds.), Raven Press, New York, 2nd edition, Vol 2, pp 1213-1314, 1994.
71. Palanza, P., Parmigiani, S. and vom Saal, F.S. Male urinary cues stimulate intrasexual aggression and urine marking in wild female mice. *Animal Behaviour* 48:245-247, 1994.
72. vom Saal, F.S., Nagel, S.C., Palanza, P., Boechler, M., Parmigiani, S. Welshons, W. Estrogenic pesticides: binding relative to estradiol in MCF-7 cells and effects of exposure during fetal life on subsequent territorial behavior in male mice. *Tox. Let.* 77:343-350, 1995.

73. Drickamer, L.C., vom Saal, F.S., Marriner, L.M. and Clover, C. Anogenital distance and aggression in male house mice (*Mus domesticus*). *Aggressive Behav.*, 21:301-309, 1995.
74. Palanza, P., Parmigiani, S. and vom Saal, F.S. Correlation between anogenital distance at birth, maternal aggression and stimulus characteristics of wild female mice. *Physiol. Behav.* 58: 827-835, 1995.
75. vom Saal, F.S. Environmental estrogenic chemicals: Their impact on embryonic development. *Human and Ecological Risk Assessment (HERA)* 1(2):3-15, 1995.
76. vom Saal, F.S., Franks, P., Boechler, M., Palanza, P. and Parmigiani, S. Nest defense in highly aggressive wild canadian house mice: Effect of presence of the stud male. *Physiol. Behav.*, 58:669-678, 1995.
77. Keisler, L.W., vom Saal, F.S., Keisler, D.H., Rudeen, P.K. and Walker, S.E. Aberrant hormone balance in fetal autoimmune NZB/W mice following prenatal exposure to testosterone excess or the androgen blocker flutamide. *Biol. Reprod.* 53:1190-1197, 1995.
78. Montano, M.M., Welshons, W.V. and vom Saal, F.S. Free estradiol in serum and brain uptake of estradiol during fetal and neonatal sexual differentiation in female rats. *Biol. Reprod.*, 53:1198-1207, 1995.
79. Walker, S.E., Keisler, L.W., Caldwell, C.W., Kier, A.B. and vom Saal, F.S. Effects of altered prenatal hormonal environment on expression of autoimmune disease in NZB/NZW mice. *Environ. Health Perspect.* 104:815-821, 1996.
80. Nagel, S.C., vom Saal, F.S., Thayer, K.A., Dhar, M.G., Boechler, M. and Welshons, W.V. Relative binding affinity-serum modified access (RBA-SMA) assay predicts the relative *in vivo* bioactivity of the xenoestrogens bisphenol A and octylphenol. *Environ. Health Perspect.* 105:70-76, 1997.
81. vom Saal, F.S., Timms, B.G., Montano, M.M., Palanza, P. Thayer, K.A., Nagel, S.C., Dhar, M.D., Ganjam, V.K., Parmigiani, S. and Welshons, W.V. Prostate enlargement in mice due to fetal exposure to low doses of estradiol or diethylstilbestrol and opposite effects at high doses. *Proc. Nat. Acad. Sci.*, 94:2056-2061, 1997.
82. Welshons, W.V., vom Saal, F.S. and Nagel, S.C. Bisphenol A in food cans: An Update. *Environ. Health Perspect.* 105:571-572, 1997.

83. Sheehan, D.M. and vom Saal, F.S. Low dose effects of hormones: A challenge for risk assessment. *Risk Policy Report* 4(9) 31-39, 1997.
- \*84. Parmigiani S., vom Saal FS, & Palanza P. Social and individual behavior of mice prenatally exposed to endocrine disrupting chemicals. In: A. Gies, C. Gottschalk & A. Wenzel "Effects of endocrine disrupters in the environment on neuronal development and behaviour". pp. 6-15. EPA Publ., Berlin. 1997.
85. vom Saal, F.S. Getting to the truth: What we know and don't know about the hazards of endocrine disrupting chemicals. *Pesticides and You* 17:9-16, 1997.
86. Parmigiani, S., Palanza, P. and vom Saal, F.S. Ethotoxicology: An evolutionary approach to the study of environmental endocrine disrupting chemicals. *Toxicol. Industrial Health* 14:333-340, 1998.
87. vom Saal, F.S., Cooke, P.S., Palanza, P., Thayer, K.A., Nagel, S., Parmigiani, S. and Welshons, W.V. A physiologically based approach to the study of bisphenol A and other estrogenic chemicals on the size of reproductive organs, daily sperm production and behavior. *Toxicol. Industrial Health*, 14:239-260, 1998.
88. vom Saal, F.S. Man-made chemicals and the health of the unborn. *Earth Ethics* 9:20-22, 1998.
89. Nagel, S.C., vom Saal, F.S. and Welshons, W.V. The effective free fraction of estradiol and xenoestrogens in human serum measured by whole cell uptake assays: Physiology of delivery modifies estrogenic activity. *Proc. Soc. Exp. Biol. Med.* 217:300-309, 1998.
90. vom Saal, F.S. and Sheehan, D.M. Challenging risk assessment. *Forum for Applied Research and Public Policy* 13(3):11-18, 1998.
91. vom Saal, F.S., Welshons, W.V. and Hansen, L.G. Organochlorines and breast cancer: Letter to the editor. *New Engl. J. Med.* 338(14):988, 1998.
92. Sheehan, D.M. and vom Saal, F.S. Low dose effects of estrogens are inconsistent with standard safety test design for chemical toxicity. *Kagaku* 68:569-575, 1998.
- \*93. vom Saal, F.S., Clark, M.M., Galef, B.G., Drickamer, L.C. and Vandenberg, J.G. The intrauterine position (IUP) phenomenon. In: *Encyclopedia of Reproduction*. Eds E. Knobil and J. Neill. Academic Press, New York, Volume 2, pp. 893-900, 1999.



94. Timms, B.G., Petersen, S.L. and vom Saal, F.S. Prostate gland growth during development is stimulated in both male and female rat fetuses by intrauterine proximity to female fetuses. *J. Urol.*161:1694-1701, 1999.
- \*95. vom Saal, F.S. and Timms, B.G. The role of natural and manmade estrogens in prostate development. In: R.K. Naz, ed. *Endocrine Disruptors: Effects on Male and Female Reproductive Systems*. CRC Press, Boca Raton, FL, 307-327, 1999.
96. Palanza, P., Parmigiani, S., Huifen Liu, H. and vom Saal, F.S. Prenatal exposure to low doses of the estrogenic chemicals diethylstilbestrol and o,p'-DDT alters aggressive behavior of male and female house mice. *Pharmacology Biochemistry and Behavior* 64:665-672, 1999.
97. Nagel, S.C., vom Saal, F.S. and Welshons, W.W. Developmental effects of estrogenic chemicals are predicted by an *in vitro* assay incorporating modification of cell uptake by serum. *J. Steroid Biochem. Mol. Biol.* 69:343-357, 1999.
98. Welshons, W.V., Nagel, S.C., Thayer, K.A., Judy, B.M. and vom Saal, F.S. Low-dose bioactivity of xenoestrogens in animals: fetal exposure to low doses of methoxychlor and other xenoestrogens increases adult prostate size in mice. *Tox. Ind. Health*, 15:12-25, 1999.
99. Bigsby, R. Chapin, R., Daston, G., Davis, B., Gorski, J., Gray, E., Howdeshell, K. Zoeller, T. and vom Saal, F. Evaluating the effects of endocrine disruptors on endocrine function during development. *Environ. Health Perspect.* 107 (Suppl 4):613-618, 1999.
- \*100. vom Saal, F.S. Low dose effects of endocrine disruptors. *Proceedings of the International Symposium on Environmental Endocrine Disruptors, Japanese Environmental Agency Report*, 1999.
101. Palanza, P. Morellini, F., Parmigiani, S. and vom Saal, F.S. Prenatal exposure to endocrine disrupting chemicals: Effects on behavioral development. *Neurosci. Biobeh. Rev.* 23:1011-1027, 1999.
102. Howdeshell, K.L., Hotchkiss, A.K., Thayer, K.A., Vandenberg, J.G. and vom Saal, F.S. Exposure to bisphenol A advances puberty. *Nature* 401:763-764, 1999.
- \*103. Parmigiani, S. Palanza, P. and vom Saal, F.S. Ethotoxicology: An evolutionary approach to behavioral toxicology. In: *Environmental Endocrine Disruptors: An Evolutionary Perspective*. Eds. L.J. Guillette D.A. Crain, Taylor and Francis Publishers, New York, 217-233, 1999.

104. Howdeshell, K.L. and vom Saal, F.S. Developmental exposure to bisphenol A: Interaction with endogenous estradiol during pregnancy in mice. *American Zoologist* 40: 429-437, 2000.
105. Wang, M-S. and vom Saal, F.S. Maternal age influences traits in offspring. *Nature*, 407:469-470, 2000.
106. vom Saal, F.S. and Welshons, W.V. NIH panel confirms that endocrine disrupting chemicals cause effects at very low doses. *Risk Policy Report* 7(11):47-50, November 30, 2000. Inside Washington Publishers. Source: Risk Policy Report via InsideEPA.com
107. Thayer, K.A., R. Ruhlen, R., Howdeshell, K.L., Buchanan, D., Cooke, P.S., Welshons, W.V., Haseman, J. and vom Saal, F.S. Altered prostate growth and daily sperm production in male mice exposed prenatally to subclinical doses of 17 $\alpha$ -ethinyl estradiol. *Human Reproduction* 16:988-996, 2001.
- \*108. Swan S.H. and vom Saal, F.S. Alterations in male reproductive development: The role of endocrine disrupting chemicals. In: *Endocrine Disruptors in the Environment*. M. Metzler, ed. *Handbook of Environmental Chemistry*, Vol. 3, pp. 131-170, Springer Verlag, Berlin, 2001.
109. Palanza, P., Parmigiani, S. and vom Saal, F.S. Effects of prenatal exposure to low doses of diethylstilbestrol, o,p'-DDT and methoxychlor on postnatal growth and neurobehavioral development in male and female mice. *Horm. Behav.* 252-265, 2001.
110. Palanza, P. Morellini, F., Parmigiani, S. and vom Saal, F. Ethological methods to study the effects of maternal exposure to estrogenic endocrine disrupters: A study with methoxychlor. *Neurotoxicology and Teratology* 24:55-69, 2002.
- \*111. Ottinger, M.A. and vom Saal, F.S. Impact of Environmental Endocrine Disruptors on Sexual Differentiation in Birds and Mammals. In: *Hormones, Brain and Behavior*, Ed. D. Pfaff, Academic Press, New York, pp 325-383, 2002.
112. Timms, B.G., Peterson, R.E. and vom Saal, F.S. 2,3,7,8-Tetrachlorodibenzo-p-dioxin interacts with endogenous estradiol to disrupt prostate gland morphogenesis in male rat fetuses. *Toxicological Sciences* 67:264-274, 2002.
113. Palanza, P., Howdeshell, K.L., Parmigiani, S. and vom Saal, F.S. Exposure to a low dose of bisphenol A during fetal life or in adulthood alters maternal behavior in mice. *Environ. Health Perspect.* 110:415-422, 2002.

- \*114. Palanza, P. and vom Saal, F.S. Effects of endocrine disrupters on behaviour and reproduction. In: Behavioural Ecotoxicology. G. Dell’Omo, Ed. John Wiley, New York, pp. 377-407, 2002.
115. Alworth, L.C., Howdeshell, K.L., Ruhlen, R. Day, K., Lubahn, D.B., Huang, H-M., Besch-Williford, C.L. and vom Saal, F.S. Uterine responsiveness to estradiol and DNA methylation are altered by fetal exposure to diethylstilbestrol and methoxychlor in CD-1 mice: Effects of low versus high doses. Toxicology and Applied Pharmacology 183:10-22, 2002.
- \*116. vom Saal, F.S. Effects of fetal exposure to natural and exogenous steroids. In: Understanding the Biology of Sex Differences: Sex Begins in the Womb. Society for Womens Health Research, Washington, DC, 15-16, 2002.
117. Welshons, W.V., Thayer, K.S., Taylor, J., Judy, B. and vom Saal, F.S. Large effects from small exposures: I. Mechanisms for endocrine-disrupting chemicals with estrogenic activity. Environ. Health Perspect. 111: 994-1006, 2003.
- \*118. Parmigiani, S., vom Saal, F.S., Palanza, P. and Colborn, T. Exposure to very low doses of endocrine disrupting chemicals (EDCs) during fetal life permanently alters brain development and behavior in animals and humans. R. C. Ragaini, Editor, Proceedings of Conference: International Seminar on Nuclear War and Planetary Emergencies, 27th Session, Erice, Sicily, August, 2002, World Scientific Publishers, Singapore, pp. 293-308, 2003.
119. Rice, C., Birnbaum, L.S., Cogliano, J., Mahaffey, K., Needham, L., Rogan, W. and vom Saal, F.S. Exposure assessment for endocrine disruptors: some considerations in the design of studies. Environ. Health Perspect. 111:1683-1690, 2003.
120. Howdeshell, KL Peterman, P.H., Judy, B.M., Taylor, J.A., Orazio, C.E., Ruhlen, R.L., vom Saal, F.S. and Welshons, W.V. Bisphenol A is released from used polycarbonate animal cages into water at room temperature. Environ. Health Perspect. 111:1180-1187, 2003.
- \*121. Nagel, S.C. and vom Saal, F.S. Endocrine control of sexual differentiation: Effects of the maternal-fetal environment and endocrine disrupting chemicals. In: Principles of Sex-Based Physiology, Ed. V. Miller and M. Hay. Elsevier, New York, pp. 15-37, 2003.
122. Richter, C.A. and F.S. vom Saal. Dioxin interacts with estrogen and androgen response systems to disrupt prostate development. Organohalogen Compounds 65:63-66, 2003.

123. vom Saal, F.S., Richter, C.A., Ruhlen, R.R. Nagel, S.C. and Welshons, W.V. Disruption of laboratory experiments due to leaching of bisphenol A from polycarbonate cages and bottles and uncontrolled variability in components of animal feed. Proceedings from the International Workshop on Development of Science-Based Guidelines for Laboratory Animal Care, National Academies Press, Washington DC, 65-69, 2004.
- \*124. Myers, J.P., Guillette, L.J., Palanza, P., Parmigiani, S., Swan, S.H. and vom Saal, F.S. The emerging science of endocrine disruption. R. C. Ragaini, Editor, Proceedings of Conference: International Seminar on Nuclear War and Planetary Emergencies, 30th Session, Erice, Sicily, August, 2003, World Scientific Publishers, Singapore, pp. 105-121, 2004.
- \*125. Richter, C.A., Timms, B.G. and vom Saal, F.S. Prostate Development: Mechanisms for opposite effects of low and high doses of estrogenic chemicals. In: R.K. Naz, ed. Endocrine Disruptors (2<sup>nd</sup> Edition): Effects on Male and Female Reproductive Systems. CRC Press, Boca Raton, FL, 379-410, 2005.
126. vom Saal, F.S., Richter, C.A. Ruhlen, R.R., Nagel, S.C., Timms, B.G. and Welshons, W.V. Importance of appropriate controls, animal feed and animal models in interpreting results from low-dose studies of bisphenol A. Birth Defects Research (Part A) 73: 140-145, 2005.
127. vom Saal, F.S., Nagel, S.C., Timms, B.G. and Welshons, W.V. Implications for human health of the extensive bisphenol A literature showing adverse effects at low doses: A response to attempts to mislead the public. Toxicology, 212:244-252, 2005.
128. vom Saal, F.S., Richter, C.A., Ruhlen, R.R., Taylor, J.A., Rottinghaus, G.E. and Welshons, W.V. Commercial animal Feed: Variability in estrogenic activity and effects on body weight in mice. Birth Defects Research (Part A) 73:474-475, 2005.
129. Timms, B.G., K.L. Howdeshell, L. Barton, S. Bradley, C.A. Richter and F.S. vom Saal. Estrogenic chemicals in plastic and oral contraceptives disrupt development of the fetal mouse prostate and urethra. Proc. Natl. Acad. Sci., 102: 7014-7019, 2005.
130. vom Saal, F.S. and Hughes, C. An extensive new literature concerning low-dose effects of bisphenol A shows the need for a new risk assessment. Environ. Health Perspect. 113:926-933, 2005.
131. vom Saal, F.S. Low-dose bisphenol A: confirmed by an extensive literature. Chemistry and Industry 7:14-15, 2005.

132. Weltje, L., vom Saal, F.S. and Oehlmann, J. Reproductive stimulation by low doses of xenoestrogens contrasts with the view of hormesis as an adaptive response. *Human and Experimental Toxicology* 24:1-7, 2005.
133. vom Saal, F.S. and Welshons, W.V. Large effects from small exposures: II. The importance of positive controls in low-dose research on bisphenol A. *Environmental Research* 100:50-76, 2006.
134. Welshons, W.V., Nagel, S.C. and vom Saal, F.S. Large effects from small exposures: III. Mechanisms mediating responses to the low doses of the plastic monomer bisphenol A. *Endocrinol.* 147:S56-S69, 2006.
135. vom Saal, F.S. Bisphenol A Eliminates Brain and Behavior Sex Dimorphisms in Mice. How Low Can You Go? *Endocrinol.* 147:3679-3680, 2006.
- \*136. vom Saal, F.S., Kirkpatrick, J.R. and Coe, B.L. Environmental estrogens, endocrine disruption and obesity. In: *Obesity: Epidemiology, Pathophysiology and Prevention*. Editors: Debasis Bagchi and Harry G. Preuss, CRC Press, Boca Raton, FL, p 33-41. 2006.
- \*137. vom Saal, F.S., Taylor, J.A. Coe, B.L., Kirkpatrick, J.R. Bell, M.E., Welshons, W.V. and Parmigiani, S. Leaching of bisphenol A from polycarbonate plastic disrupts development via epigenetic mechanisms. In: R. C. Ragaini, Editor, *Proceedings of Conference: International Seminar on Nuclear War and Planetary Emergencies, 36th Session*, Erice, Sicily, August, 2006, World Scientific Publishers, Singapore, page 221-229, 2007.
138. Richter, C.A., Taylor, J.A., Ruhlen, R.R., Welshons, W.V. and vom Saal, F.S. Estradiol and bisphenol A stimulate androgen receptor and estrogen receptor gene expression in fetal mouse prostate cells. *Environ. Health Perspect.* 115:902-908, 2007.
139. Richter, C.R., Birnbaum, L.S., Farabollini, F., Newbold, R.R., Rubin, B.S., Talsness, C.E., Vandenberg, J.G., Walser-Kuntz, D.R. and vom Saal, F.S. In vivo effects of bisphenol A in laboratory rodent studies. *Reprod. Toxicol.* 24:199-224, 2007.
140. vom Saal, F.S. Could hormone residues be involved? *Human Reprod.* 22:1503-1505, 2007.
141. vom Saal, F.S., Akingbemi, B.T., Belcher, S.M., Birnbaum, L.S., Crain, D.A., Farabollini, F., Guillette, L.J., Hauser, R., Heindel J.J., Ho, S-M. et al. Chapel Hill bisphenol A expert panel consensus statement: Integration of mechanisms, effects in animals and potential to impact human health at current levels of exposure. *Reprod. Toxicol.* 24(2):131-138, 2007.

- \*142. Myers, J.P., Guillette L.J. Jr., Swan, S.H. and vom Saal, F.S. Endocrine Disruptor Chemicals: Overview. In: Encyclopedia of Ecology. Ed: Sven Erik Jorgensen and Brian Fath, Elsevier, New York, 1265-1269, 2008.
- \*143. vom Saal, F.S., Guillette, L.J. Jr., Myers, J.P. and Swan, S.H. Endocrine disruptors: Effects in wildlife and laboratory animals. In: Encyclopedia of Ecology. Ed: Sven Erik Jorgensen and Brian Fath, Elsevier, New York, 1261-1264, 2008.
- \*144. Swan, S.H. Guillette, L.J. Jr., Myers, J.P. and vom Saal, F.S. Endocrine disruptors: epidemiological studies of reproductive effects in humans. In: Encyclopedia of Ecology. Ed: Sven Erik Jorgensen and Brian Fath, Elsevier, New York, 1383-1388, 2008.
145. Ruhlen, R.L., Howdeshell, K.L., Mao, J., Taylor, J.A., Bronson, F.H., Newbold, R.R., Welshons, W.V. and vom Saal, F.S. Low phytoestrogen levels in feed increase fetal serum estradiol resulting in the “fetal estrogenization syndrome” and obesity in CD-1 mice. *Environ. Health Perspect.* 116:322-328, 2008.
146. Coe, B.L., Kirkpatrick, J.R., Taylor, J.A. and vom Saal, F.S. A new “crowded uterine horn” mouse model for examining the relationship between fetal growth and adult obesity. *Basic Clin. Pharmacol. Toxicol.* 102:162-167, 2008.
147. Heindel, J.J. and vom Saal, F.S. Meeting report: Batch-to-batch variability in estrogenic activity in commercial animal diets: Importance and approaches for laboratory animal research. *Environ. Health Perspect.* 116:389-393, 2008.
148. Taylor, J.A., Welshons W.V. and vom Saal, F.S. No effect of route of exposure (oral; subcutaneous injection) on plasma bisphenol A throughout 24 hr after administration in neonatal female mice. *Reprod. Toxicol.* 25:169-176, 2008.
149. Myers, J.P. and vom Saal, F.S. Should public health standards for endocrine-disrupting compounds be based upon 16th Century dogma or modern endocrinology? *San Francisco Medicine* 81(1): 30-31, 2008.
- \*150. vom Saal, F.S. and Myers, J.P. The Endocrine Disrupting Chemical Bisphenol A in Plastic: The Threat Posed to Fetuses, Infants and Children at Current Levels of Human Exposure. *Proceedings of Marine Debris in the Pacific Symposia.* 2008.
151. vom Saal, F.S., Parmigiani, S., Palanza, P.L., Everett, L.G. and Ragaini, R. The plastic world: sources, amounts, ecological impacts and effects on development, reproduction, brain and behavior in aquatic and terrestrial animals and humans. *Environ. Res.* 108(2):127-130, 2008.

152. Palanza, P.L., Gioiosa, L. Parmigiani, S. and vom Saal, F.S. Effects of developmental exposure to bisphenol A on brain and behavior in mice. *Environ. Res.* 108(2):150-157. 2008.
153. vom Saal, F.S. and Myers, J.P. Bisphenol A and Risk of Metabolic Disorders. *JAMA* 300(11):1353-1355, 2008.
154. Myers, JP, vom Saal, FS, Akingbemi, BT, Arizono, K, Belcher, S, Colborn, T, Chahoud, I, Crain, DA, Farabollini, F, Guillette, LJ, Jr., Hassold, T, Ho, SM, Hunt, PA, Iguchi, T, Jobling, S, Kanno, J, Laufer, H, Marcus, M, McLachlan, JA, Nadal, A, Oehlmann, J, Olea, N, Palanza, P, Parmigiani, S, Rubin, BS, Schoenfelder, G, Sonnenschein, C, Soto, AM, Talsness, CE, Taylor, JA, Vandenberg, LN, Vandenberg, JG, Vogel, S, Watson, CS, Welshons, WV and Zoeller, RT (2009). Why public health agencies cannot depend on good laboratory practices as a criterion for selecting data: the case of bisphenol A. *Environ. Health Perspect.* 117:309-315, 2009.
155. Talsness, C.E., Andrade, A.J.M., Kuriyama, S.N., Taylor, J.A. and vom Saal, F.S. Components of plastic: experimental studies in animals and relevance for human health. *Philosophical Transactions of the Royal Society B.* 364:2079-2096, 2009.
156. Heindel, J.J. and vom Saal, F.S. Role of nutrition and environmental endocrine disrupting chemicals during the perinatal period on the aetiology of obesity. *Mol. Cell Endocrinol.* 304:90-96, 2009.
157. Thompson, R.C., Moore, C., vom Saal, F.S. and Swan, S.H. Plastics, the environment and human health: Current consensus and future trends. *Philosophical Transactions of the Royal Society B.* 364: 2153-2166, 2009.
158. Thompson, R.C., Swan, S.H., Moore, C. and vom Saal, F.S. Our plastic age. *Philosophical Transactions of the Royal Society B.* 364:1973-1976, 2009.
159. Myers, J.P., Zoeller, T.J. and vom Saal, F.S. A clash of old and new scientific concepts in toxicity, with important implications for public health. *Environ. Health Perspect.* 117:1652-1655, 2009.
- \*160. vom Saal, F.S., Taylor, J.A., Palanza, P. and Parmigiani, S. The high-volume hormonally active chemical bisphenol A: Human exposure, health hazards and need to find alternatives. In: R. C. Ragaini, Editor, *Proceedings of Conference: International Seminar on Nuclear War and Planetary Emergencies, 42th Session, Erice, Sicily, August, 2009, World Scientific Publishers, Singapore, pp. 763-772, 2010.*

161. vom Saal, F.S. The need for new legislation to regulate BPA and other “grandfathered” chemicals. *Plastics in Packaging* 101:28, 2010.
162. vom Saal, F.S., Akingbemi, B., Belcher, S., Crain, D., Crews, D., Guidice, L. et al. Flawed Experimental Design Reveals the Need for Guidelines Requiring Appropriate Positive Controls in Endocrine Disruption Research. *Toxicological Sciences* 115: 612-613, 2010.
163. vom Saal, F.S. and Myers, J.P. Good laboratory practices are not synonymous with good scientific practices, accurate reporting, or valid data. *Environ. Health Perspect.* 118:A60, 2010.
164. Ela, W.P., D.L. Sedlak, M. Barlaz, H. Henry, D. Muir, D. Swackhamer, E.J. Weber, R.G. Arnold, L. Ferguson, J. Field, E. Furlong, J.P. Giesy, R. U. Halden, T. Henry, R. Hites, K. Hornbuckle, P. Howard, R.G. Luthy, A. Meyer, A.E. Sáez, F.S. vom Saal, C. Vulpe, and M.R. Wiesner. Identifying the next generation of superfund and hazardous waste site contaminants. *Environ. Health Perspect.* 119:6-10, doi:10.1289/ehp.1002497, 2010.
165. Taylor, J.A., vom Saal, F.S., Welshons, W.V., Drury, B., Rottinghaus, G., Hunt, P.A., Toutain, P.L., Laffont, C.M. and VandeVoort, C.A. Similarity of bisphenol A pharmacokinetics in rhesus monkeys and mice: Relevance for human exposure. *Environ. Health Perspect.* 119:422-430, 2011.
166. Fujimoto, V.Y., Kim, D., vom Saal, F.S., Lamb, J.D., Taylor, J.A., and Bloom, M.S. Serum unconjugated bisphenol A concentrations in women adversely influence oocyte quality during in vitro fertilization. *Fertil. Steril.* 95:1816-1819, 2011.
167. Ruhlen, RL, Taylor, JA, Mao, J, Kirkpatrick, J, Welshons, WV and vom Saal, FS. Choice of animal feed can alter fetal steroid levels and mask developmental effects of endocrine disrupting chemicals. *J Develop Origins Health Disease* 2:36-48, 2011.
168. Novak, P.J., Blazer, V.S., Halden, R.U., Klaper, R.D., Kolpin, D.W., Kriebel, D., Love, N.G., Martinović-Weigelt, D., Patisaul, H.B., Snyder, S.A., vom Saal, F.S., Weisbrod, A.V., Swackhamer, D.L. Assessing contaminant risk on a global scale. *Nature* 471:578 2011.
169. Novak, P.J.; Arnold, W.A.; Blazer, V.S.; Halden, R.U.; Klaper, R.D.; Kolpin, D.W.; Kriebel, D.; Love, N.G.; Martinovic, D.; Patisaul, H.B.; Snyder, S.A.; vom Saal, F.S.; Weisbrod, A.V.; Swackhamer, D.L. On the Need for a National (US) Research Program to Elucidate the Potential Risks to Human Health and the Environment Posed by Contaminants of Emerging Concern. *Environ. Sci. Technol.* 45:3829–3830,



2011.

170. Sieli, P.T., Jašarević, E., Warzak, D.A., Mao, J., Ellersieck, M.R., Liao, C., Kannan, K., Collet, S., Toutain, P.L., vom Saal, F.S. and Rosenfeld, C.S. Comparison of serum bisphenol A concentrations in mice exposed to bisphenol A through the diet versus oral bolus exposure. *Environ. Health Perspect.* 119:1260-1265, 2011.

171. Bloom, M.S., Kim, D., vom Saal, F.S., Taylor, J.A., Cheng, G., Lamb, J.D., and Fujimoto, V.Y. Bisphenol A exposure reduces the estradiol response to gonadotropin stimulation during in vitro fertilization. *Fertil. Steril.* 96:672-677 e2, 2011.

172. Bloom, M. S., F. S. vom Saal, D. Kim, J. A. Taylor, J. D. Lamb and V. Y. Fujimoto. Serum unconjugated bisphenol A concentrations in men may influence embryo quality indicators during in vitro fertilization. *Environ Toxicol Pharmacol* 32:319-23, 2011.

173. Taylor, J.A., Richter, C.A., Ruhlen, R.L. and vom Saal, F.S. Estrogenic chemicals and drugs: Mechanisms for effects on the developing male urogenital system. *J. Steroid Biochem. Mol. Biol.* 127:83– 95, 2011.

174. vom Saal, F.S. Adverse Health Effects of Bisphenol A (BPA): Implications for the use of BPA in hemodialyzers and other medical equipment. Online: <http://www.spektrum-der-dialyse.de/themenbereiche/dialyse>. *Spektrum der Dialyse & Apherese.* 2011.

175. Lankford, D.M. and vom Saal, F.S. Development of a writing intensive capstone course to facilitate the integration and communication of complex issues in biology. *J. College Science Teaching* 41(4):18-26, 2012.

\*176. vom Saal, F.S., Taylor J.A., Palanza P. and Parmigiani S. New Approaches to Risk Evaluation for Chemicals of Emerging Concern (CECs). In: R. C. Ragaini, Editor, *Proceedings of Conference: International Seminar on Nuclear War and Planetary Emergencies, 44th Session, Erice, Sicily, August, 2011*, World Scientific Publishers, Singapore, 566-578, 2012.

177. vom Saal, F.S., Prins, G.S. and Welshons, W.V. Report of very low real world exposure to bisphenol A is unwarranted based on a lack of data and flawed assumptions. *Toxicol. Sci.* 125:318-320, 2012.

\*178. Schug, T.T., Vogel, S.A., Vandenberg, L.N., Braun, J., Hauser, R., Taylor, J.A., vom Saal, F.S., and Heindel, J.J. Bisphenol A. In: *Dioxins and Health: Including Other Persistent Organic Pollutants and Endocrine Disruptors*. 3rd Edition. Edited by: A.

Schecter, Wiley & Sons, New York, pp 381-413, 2012.

179. Taylor, J.A., vom Saal, F.S., Welshons, W.V. Drury, B., Rottinghaus, G., Hunt, P.A., Toutain, P-L. and Laffont, C.M. Bisphenol A in thermal paper receipts. *Environ. Health Perspect.* 120:A15, 2012.

180. Hanna. C.W., Fujimoto, V.Y., Robinson, W.P., Kim, D., Parsons, P.J., vom Saal, F.S., Taylor, J.A., Steuerwald, A.J. and Bloom, M.S. DNA methylation changes in whole blood associated with exposure to environmental contaminants: mercury, lead, cadmium and bisphenol A, in women undergoing ovarian stimulation for IVF. *Human Reprod.* 27:1401-1410, 2012.

181. vom Saal, F.S., Nagel, S.C., Coe, B.L., Angle, B.M. and Taylor, J.A. The estrogenic endocrine disrupting chemical bisphenol A (BPA) and obesity. *Molec. Cell. Endocrinol.* 354:74-84, 2012.

182. Vandenberg, L.N., Colborn, T., Hayes, T.B., Heindel, J.J., Jacobs, D.R., Lee, D-H., Shioda, T., Soto, A.M., vom Saal, F.S., Welshons, W.V., Zoeller, R.T. and Myers, J.P. A paradigm shift in environmental chemical research: Understanding and expecting “low dose” effects and non-monotonic dose responses. *Endocrine Reviews* 33:378-455, 2012.

183. Zoeller RT, Brown TR, Doan LL, Gore AC, Skakkebaek NE, Soto AM, Woodruff TJ, vom Saal FS. Endocrine-disrupting Chemicals and Public Health Protection: A Statement of Principles from The Endocrine Society. *Endocrinol.* 153:4097-4110, 2012.

184. vom Saal, F.S. and Hunt, P.A. Opinion: FDA’s decision on BPA exposes Catch 22. *Scientific American* (<http://blogs.scientificamerican.com/guest-blog/2012/06/11/opinion-fdas-decision-on-bpa-exposes-catch-22/>), June 11, 2012.

185. Nicholson, T.M., Ricke, E.A., Marker, P., Miano, J.M., Mayer, R., Timms, B.G., vom Saal, F.S., Wood, R., Ricke, W.A. Testosterone and estradiol-17 $\beta$  induce new glandular prostatic growth, bladder outlet obstruction, and urinary voiding dysfunction in male mice. *Endocrinol.* 153:5556-5565, 2012.

186. Taylor, J.A., Richter, C.A, Shioda, T., Coser, K., Suzuki, A., Watanabe, H., Iguchi, T. and vom Saal, F.S. Dose-related estrogen effects on gene expression in fetal mouse prostate mesenchymal cells. *Plos One*, 7(10):e48311, 2012.

187. Schug, T.T., Erlebacher, A., Leibowitz, S., Ma, L., Muglia, L.J., Rando, O.J.,

Rogers, J.M., Romero. R., vom Saal, F.S. and Wise, D.L. Fetal Programming and Environmental Exposures: Implications for Prenatal Care and Preterm Birth. *Annals New York Acad Sci.* 1276:37–46, 2012.

188. Do, R.P., Stahlhut, R.W., Ponzi, D., vom Saal, F.S. and Taylor, J.A. Non-monotonic dose effects of in utero exposure to di(2-ethylhexyl) phthalate (DEHP) on testicular and serum testosterone and anogenital distance in male mouse fetuses. *Reprod. Toxicol.* 34(4):614-621, 2012.

\*189. vom Saal, F.S., Coe, B.L., Angle, B.R. and Taylor, J.A. Disruption of development by environmental estrogens: Adult obesity and metabolic disease. In: *Obesity: Epidemiology, Pathophysiology and Prevention, Vol 2*, Editors: Debasis Bagchi and Harry G. Preuss, CRC Press, Boca Raton, FL, pp 73-83, 2012.

190. Schug, T.T, R. Abagyan, B Blumberg, T Collins, D Crews, P DeFur, S Dickerson, T Edwards, A Gore, L.J. Guillette, T Hayes, J Heindel, A Moores, K.P. O'Brien, H.B. Patisaul, T Tal, K Thayer, L Vandenberg, J Warner, C Watson, F.S. vom Saal, R.T. Zoeller and J.P. Myers. Designing endocrine disruption out of the next generation of chemicals. *Green Chemistry: J. Royal Soc. Chemistry* 15:181-198, 2013.

191. Vandenberg, L.N., Colborn, C., Hayes T.B., Heindel J.J., Jacobs, D.R. Jr, Lee D-H, Myers, J.P., Shioda, T., Soto A.M., vom Saal, F.S., Welshons, W.V. and Zoeller, R.T. Regulatory decisions on endocrine disrupting chemicals should be based on the principles of endocrinology. *Reprod, Toxicol.* 38:1–15, 2013.

192. Gioiosa, L., Parmigiani, S., vom Saal, F.S., Palanza, P. Effects of bisphenol A on emotional behavior depend upon the timing of exposure, age and gender in mice. *Hormones and Behavior* 4:598-605, 2013.

193. Vandenberg, L.N., Hunt, P.A., Myers, J.P. and vom Saal, F.S. Human exposures to bisphenol A: mismatches between data and assumptions. *Rev Environ Health* 28(1):37–58, 2013.

194. Angle, B. M., R. P. Do, D. Ponzi, R. W. Stahlhut, B. E. Drury, S. C. Nagel, W. V. Welshons, C. L. Besch-Williford, P. Palanza, S. Parmigiani, F. S. vom Saal and J. A. Taylor. Metabolic disruption in male mice due to fetal exposure to low but not high doses of bisphenol A (BPA): Evidence for non-monotonic effects on body weight, food intake, adipocytes, leptin, adiponectin, insulin and glucose regulation. *Reproductive Toxicology* 42:256-268, 2013.  
10.1016/j.reprotox.2013.07.017

195. Vandenberg, L.N., Ehrlich, S., Belcher, S.M., Ben-Jonathan, N., Dolinoy, D.C., Hugo, E.S., Hunt, P.A., Newbold, R.R., Rubin, B.S., Saili, K.S., Soto, A.M., Wang, H-S.,

vom Saal, F.S. Low Dose Effects of Bisphenol A: An Integrated Review of In Vitro, Laboratory Animal and Epidemiology Studies. *Endocrine Disruption* 1:E1-E20, 2013. [doi.org/10.4161/endo.26490](https://doi.org/10.4161/endo.26490)

196. vom Saal, F.S., Vandevort, C.A., Taylor, J.A., Welshons, W.V., Toutain, P-L., Hunt, P.A. Bisphenol A (BPA) pharmacokinetics with daily oral bolus or continuous exposure via silastic capsules in pregnant rhesus monkeys: Relevance for human exposures. *Reproductive Toxicology* 45:105–116, 2014.

197. Vandenberg, L.N., Gerona, R.R., Kannan, K., Taylor, J.A., van Breemen, R.B., Dickenson, C.A., Liao, C., Yuan, Y., Newbold, R.R., Padmanabhan, V., vom Saal, F.S., Woodruff, T.J. A round robin approach to the analysis of bisphenol A (BPA) in human blood samples. *Environmental Health* 13(1):25, 2014.  
Doi: 10.1186/1476-069X-13-25

198. Lathi, RB, Liebert, CA, Brookfield, KF, Swan, SH, Taylor, JA, vom Saal, FS, Fujimoto, VY, Baker, VL. Conjugated bisphenol A (BPA) in maternal serum in relation to miscarriage risk. *Fertility and Sterility* 102:123–128, 2014.

199. Vandenberg, L.N., Welshons, W.V., vom Saal, F.S., Toutain, P-L., Myers, J.P. Should oral gavage be abandoned in toxicity testing of endocrine disruptors? *Environmental Health* 13(1):46, 2014.

200. vom Saal, F.S. and Welshons, W.V. Evidence that serum and urine BPA can be accurately measured without contamination and that hazards can be identified at low, human-relevant BPA exposures when experiments include appropriate controls. *Molecular and Cellular Endocrinology*, 398:101-113, 2014.  
DOI 10.1016/j.mce.2014.09.028

201. Bhandari, R. Deem, S.L., Holliday, D.K., Jandegian, C.M., Kassotis, C.D., Nagel, S.C., Tillitt, D.E. vom Saal, F.S., and Rosenfeld, C.S. Effects of the environmental estrogenic contaminants bisphenol A and 17 $\alpha$ -ethinyl estradiol on sexual development and adult behaviors in aquatic wildlife species. *General and Comparative Endocrinology* 398:101–113, 2014.  
DOI 10.1016/j.ygcen.2014.09.014

202. Hormann, A.M., vom Saal, F.S., Nagel, S.C., Stahlhut, R.W., Moyer, C.L., Eilersieck, M.R., Welshons, W.V., Toutain, P-L and Julia A. Taylor, J.A. Holding thermal receipt paper and eating food after using hand sanitizer results in high serum bioactive and urine total levels of bisphenol A (BPA). *PLoS One* 9, e110509, 2014.  
DOI 10.1371/journal.pone.0110509

203. Bhandari, R.K., vom Saal, F.S. and Tillitt, D.E. Transgenerational effects from early developmental exposures to bisphenol A or 17 $\alpha$ -ethinylestradiol in medaka, *Oryzias latipes*. *Scientific Reports*, 5: 9303, 2015.  
DOI 10.1038/srep09303
204. Kassotis, C.D., Alvarez, D.A., Taylor, J.A., vom Saal, F.S., Nagel, S.C. and Tillitt, D.E. Characterization of Missouri surface waters near point sources of pollution reveals potential novel atmospheric route of exposure for bisphenol A and wastewater hormonal activity pattern. *Science of the Total Environment*, 524–525: 384–393, 2015.  
DOI 10.1016/j.scitotenv.2015.04.013
205. Jandegian, C.M., Deem, S.L., Bhandari, R.K., Holliday, C.M., Nicks, D., Rosenfeld, C.S., Selcer, K.W., Tillitt, D.E., vom Saal, F.S., Velez-Rivera, V. and Yang, Y. Developmental exposure to bisphenol A (BPA) alters sexual differentiation in painted turtles (*Chrysemys picta*). *General and Comparative Endocrinology* 215:77–85, 2015.  
DOI 10.1016/j.ygcn.2015.04.003
206. Heindel, J.J., vom Saal, F.S., Blumberg, B., Bovolenta, P., Calamandrei, G., Ceresini, G., Cohn, B.A., Fabbri, E., Gioiosa, L., Kassotis, C., Legler, J., La Merrill, M., Rizzi, L., Machtinger, R., Mantovani, A., Mendez, M.A., Montanini, L., Molteni, L., Nagel, S.C., Parmigiani, S., Panzica, G., Paterlini, S., Pomatto, V., Ruzzin, J., Sartor, G., Schug, T.T., Street, M., Suvorov, A., Volpi, R., Zoeller, R.T. and Palanza, P. Parma Consensus Statement on Metabolic Disruptors. *Environmental Health* 14:54, 2015.  
DOI 10.1186/s12940-015-0042-7
207. Oreskes, N., Carlat, D. Mann, M.E., Thacker, P.D., vom Saal, F.S. Viewpoint: Why Disclosure Matters. *Environmental Science & Technology* 49:7527–7528, 2015.  
doi:10.1021/acs.est.5b02726
208. Gioiosa, L., Palanza, P., Parmigiani, S. and vom Saal, F.S. Risk evaluation of endocrine disrupting chemicals: Effects of developmental exposure to low doses of bisphenol A (BPA) on behavior and physiology in mice (*Mus musculus domesticus*). *Dose Response* 1–8, 2015.  
DOI: 10.1177/1559325815610760
209. Palanza, P., Nagel, S.C., Parmigiani, S. and vom Saal, F.S. Prenatal exposure to endocrine disruptors (sex, timing and behavioral endpoints). *Current Opinion in Behavioral Sciences*. 7:69–75, 2015.

DOI: [org/10.1016/j.cobeha.2015.11.017](https://doi.org/10.1016/j.cobeha.2015.11.017)

210. Myers, J.P., Antoniou, M., Blumberg B., Carroll, L., Colborn, T., Everett, L.G., Hansen, M., Landrigan, P.J., Lanphear, B.P., Mesnage, R., Vandenberg, L.N., vom Saal, F.S., Welshons, W.V. and Benbrook, C.M. Concerns over use of glyphosate-based herbicides and risks associated with exposures: a consensus statement. *Environmental Health* 15:19, 2016.

DOI: [10.1186/s12940-016-0117-0](https://doi.org/10.1186/s12940-016-0117-0)

\*211. vom Saal, F.S. Endocrine disrupting chemicals threaten fetal health. In: Thomas Berry in Italy: Reflections on Spirituality and Sustainability. Edited by E. Ferrero, Pacem in Terris Press, 99-114, 2016.

212. vom Saal, F.S. and Welshons, W.V. Endocrine disruptors: Manmade and Natural Estrogens: Opposite Effects on Assisted Reproduction. *Nature Rev Endocrinol* 12, 251-252, 2016.

DOI: [10.1038/nrendo.2016.38](https://doi.org/10.1038/nrendo.2016.38)

213. vom Saal, F.S, Environmental programming of reproduction during fetal life: Effects of intrauterine position and the endocrine disrupting chemical bisphenol A (BPA). *J. Anim. Sci.* 94:1-15, 2016.

DOI: [10.2527/jas2016-0211](https://doi.org/10.2527/jas2016-0211)

214. Stahlhut RW, van Breemen RB, Gerona RR, Taylor JA, Welshons WV, vom Saal FS. Comment on "optimal exposure biomarkers for nonpersistent chemicals in environmental epidemiology". *Environ Health Perspect* 124:A66, 2016.

215. Trasande, L., Vandenberg, L.N., Bourguignon, J-P., Myers, J.P., Slama, R., vom Saal, F.S., Zoeller, R.T. Peer-reviewed and unbiased research, rather than 'sound science', should be used to evaluate endocrine disrupting chemicals. *Journal of Epidemiology and Community Health*. *Journal of Epidemiology and Community Health*, *J Epidemiol Community Health* 70:1051-1056, 2016.

216. Thaddeus T. Schug<sup>1</sup>, Anne F. Johnson<sup>2</sup>, Linda S. Birnbaum<sup>3</sup>, Theo Colborn<sup>4</sup>, Louis J. Guillette, Jr.<sup>5</sup>, David Crews<sup>6</sup>, Terry Collins<sup>7</sup>, Ana M. Soto<sup>8</sup>, Frederick S. vom Saal<sup>9</sup>, John A. McLachlan<sup>10</sup>, Carlos Sonnenschein<sup>8</sup> and Jerrold J. Heindel<sup>1</sup> Endocrine Disruptors: Past Lessons and Future Directions. *Molecular Endocrinology*, 30:833-847, 2016.

217. VandeVoort, C.A., Gerona, R.R., vom Saal, F.S., Tarantal, A.F., Hunt P.A., Hillenweck, A. and Zalko, D. Maternal and fetal pharmacokinetics of oral radio-

labeled and authentic bisphenol A in the rhesus monkey. PlosOne 11: e0165410, 2016.

218. Heindel, J.J., Blumberg, B., Cave, M., Machtinger, R., Mantovani, A., Mendez, M.A., Nadal, A., Palanza, P., Panzica, G., Sargis, R., Vandenberg, L.N., vom Saal, F.S. Metabolism Disrupting Chemicals and Metabolic Disorders. Reproductive Toxicology 68:3-33, 2017.

DOI: 10.1016/j.reprotox.2016.10.001

\*219. vom Saal, F.S., Palanza, P. and Parmigiani, P. Disruption of development by environmental chemicals and psycho-social stress. In: R. C. Ragaini, Editor, Proceedings of Conference: International Seminar on Nuclear War and Planetary Emergencies, 49th Session, Erice, Sicily, August, 2016, World Scientific Publishers, Singapore. pp 233-238, 2017.

\*220. Denninghoff, J.S. and vom Saal, F.S. Sources of contaminants in the home: indoor air quality and human health. In: Integrative Environmental Health, Editors: A. Cohen and F.S. vom Saal, Oxford University Press, London, p 67-85, 2017.

\*221. Cohen, A. and vom Saal, F.S., Editors. Integrative Environmental Health. Oxford University Press, London, 2017.

ISBN-13: 978-0190490911

\*222. Charpak, N., Parmigiani, S. and vom Saal, F.S. Interdisciplinary research center of excellence for children welfare: Brain and Body. In: R. C. Ragaini, Editor, Proceedings of Conference: International Seminar on Nuclear War and Planetary Emergencies, 49th Session, Erice, Sicily, August, 2016, World Scientific Publishers, Singapore. pp 227-232, 2016.

223. Vandenberg, L.N., Blumberg, B., Antoniou, M., Benbrook, C.M. Carroll, L., Colborn, T., Everett, L.G., Hansen, M., Landrigan, P.J., Lanphear, B.P., Mesnage, R., vom Saal, F.S., Welshons, W.V. and Myers, J.P. Current safety standards for glyphosate-based herbicides are outdated and may fail to protect public health or the environment. Journal of Epidemiology and Community Health (JECH). Online, March 2017.

DOI:10.1136/jech-2016-208463

\*224. vom Saal, F.S. The intrauterine position phenomenon. Encyclopedia of Reproduction, Elsevier, London, 2018.

- \*225. Ricke, W.A, Timms, B.G.. and vom Saal, F.S. Developmental and adult anatomy of the prostate in humans and rodents. *Encyclopedia of Reproduction*, Elsevier, London, 2018.
- \*226. vom Saal, F.S. and Welshons, W.V. Estrogen agonists. *Encyclopedia of Reproduction*, Elsevier, London, 2018.
227. Taylor, J.A., Shioda, K., Mitsunaga, S., Yawata, S., Angle, B.M., Nagel, S.C., Vom Saal, F.S. and Shioda, T. Prenatal exposure to bisphenol A disrupts naturally occurring bimodal DNA methylation at proximal promoter of fggy, an obesity-relevant gene encoding a carbohydrate kinase, in gonadal white adipose tissues of CD-1 mice. *Endocrinology* 159, 779-794, 2018.  
DOI: 10.1210/en.2017-00711
- \*228. Heindel, J.J., Palanza, P. Parmigiani, S. and vom Saal, F.S. Increasing Incidence of Disease in Global Populations Across the Lifespan and Generations: Key Role of Environmental Endocrine Disrupting Chemicals. In: F. Ruggiu, Editor, *Proceedings of Conference: International Seminar on Nuclear War and Planetary Emergencies*, 50th Session, Erice, Sicily, August, 2017, World Scientific Publishers, Singapore, 2018.
229. Nicholson, T.M., Nguyen, J., Levenson, G.E., Taylor, J.A., vom Saal, F.S., Wood, R.W. and Ricke, R.W. The endocrine disruptor Bisphenol-A is implicated in urinary voiding dysfunction in male mice. *Am. J. Physiol. Renal Physiol.* 315: F1208–F1216, 2018.  
doi:10.1152/ajprenal.00582.2017
230. Stahlhut, R.W., Taylor, J.A. Nadal, A. Myers, J.P. Dyer, J.A. and vom Saal, F.S. Interaction of Hb1Ac and bisphenol A in the insulin response to glucose in men and women. *J. Endo. Soc.* 2(10):1173-1187, 2018.  
doi: 10.1210/js.2018-00151
231. Taylor, J.A., Meng, A., Nagel, S.C., Sommerfield-Sager, J., Shioda, T., vom Saal, F.S. Reduced body weight at weaning followed by increased post-weaning growth rate interacts with part-per-trillion fetal serum concentrations of bisphenol A (BPA) to impair glucose tolerance in male mice. *PLoS ONE* 13(12): e0208846, 2018.  
Doi: 10.1371/journal.pone.0208846.
232. vom Saal, F.S. Flaws in design, execution and interpretation limit CLARITY-BPA's value for risk assessments of bisphenol A. *Basic Clin. Pharmacol. Toxicol.* 1-12, 2019.  
doi: 10.1111/bcpt.13195



233. Cleary, J.A., Tillitt, D.E., vom Saal, F.S., Nicks, D.K., Claunch, R.A. and Bhandari, R.K. Atrazine-induced Transgenerational Reproductive Effects in Medaka. *Environmental Pollution* 251:639-650, 2019.  
Doi: 10.1016/j.envpol.2019.05.013
- \*234. vom Saal, F.S., Parmigiani, S., Palanza, P., Bhandari, R.K. Transgenerational Effects on Fertility of Estrogenic Chemicals in Fish. In: F. Ruggiu, Editor, *Proceedings of Conference: International Seminar on Nuclear War and Planetary Emergencies, 51th Session*, Erice, Sicily, August, 2018, World Scientific Publishers, Singapore, 2019.
235. Genoa R. Warner, Yogesh Somasundar, Kyle C. Jansen, Matthew R. Mills, Abigail E. Burton, Evan Z. Kaaret, Cindy Weng, Alexander D. Ryabov, Gabrielle Pros, Tomislav Pintauer, Rakesh Kanda, Julia A. Taylor, Frederick S. vom Saal and Terrence J. Collins. Bioinspired, Multidisciplinary, Iterative Catalyst Design Creates the Highest Performance Peroxidase Mimics and the Field of Sustainable Ultradilute Oxidation Catalysis (SUDOC). *Journal of the American Chemical Society-Catalysis* 9:7023-7037, 2019.  
Doi: 10.1021/acscatal.9b01409
- \*236. Zoeller, R.T. and vom Saal, F.S. Endocrine disrupting chemicals (EDCs): Brain-Behavior Effects on Thyroid and Sexual Differentiation. In: xx, J. McBurney (Ed). Oxford University Press, in press, 2019.
237. Thayil, A.J., Xuegeng Wang, X., Bhandari, P., vom Saal, F.S., Tillitt, D.E. and Bhandari, R.K. Bisphenol A and 17 $\alpha$ -ethinylestradiol-induced Transgenerational Gene Expression Differences in the Brain-Pituitary-Testis Axis of Medaka. Submitted.
238. Bhandari, R.K., Taylor, J.A., Sommerfeld-Sager, J., Tillitt, D.E., Ricke, W.A. and vom Saal, F.S. (2019). Estrogen receptor 1 expression and methylation of ESR1 promoter in mouse fetal prostate mesenchymal cells induced by gestational exposure to bisphenol A or ethinylestradiol. *Environ Epigenet* 5, dvz012.  
DOI: 10.1093/eep/dvz012
239. Uchtmann, K.S., Taylor, J.A. Timms, B.G., Stahlhut, R.W., Ricke, E.A., Ellersieck, M.R., vom Saal, F.S. and Ricke, W.A. Fetal Bisphenol A and Ethinylestradiol Exposure Alters Male Rat Urogenital Tract Morphology at Birth: Confirmation of Prior Low-Dose Findings in CLARITY-BPA. *Reprod. Toxicol.* 91:131-141.  
Doi: 10.1016/j.reprotox.2019.11.007

240. Gerona, R., vom Saal, F.S., Hunt, P.A. Bisphenol A: Have flawed analytical techniques compromised risk assessment? *Lancet Diabetes & Endocrinology*, ONLINE Dec 5, 2019.

DOI: 10.1016/S2213-8587(19)30381-X

241. Jerrold J. Heindel, Scott Belcher, Jodi A. Flaws, Gail S. Prins, Shuk-Mei Ho, Jiude Mao, Heather B. Patisaul, William Ricke, Cheryl S. Rosenfeld, Ana M. Soto, Frederick S. vom Saal, R. Thomas Zoeller. Data integration, analysis, and interpretation of eight academic CLARITY-BPA studies. Submitted.

242. Ramji K. Bhandari, Xuegeng Wang, Frederick S. vom Saal, Donald E. Tillitt. Environmentally Induced Transgenerational Health Effects in Fish and Epigenetic Mechanisms. *Environmental Toxicology and Chemistry*, Submitted.

Taylor, J.A., Jones-Bell, M., Berendzen, A., Besch-Williford, C.L., Ricke, W.R. and vom Saal, F.S. Prenatal exposure to bisphenol A influences effects of adult exposure to estrogen on the urogenital tract in male CD-1 mice. In preparation.

Ramji K. Bhandari, Xuegeng Wang, Caitlin M. Jandegian, Frederick S. vom Saal, Donald E. Tillitt. Transcriptome analysis of testis reveals the effects of developmental exposure to bisphenol A or 17 $\alpha$ -ethinylestradiol in medaka. In preparation.

Bhandari, R.K., Wang, X., vom Saal, F.S., Tillitt, D.E. Environmentally Induced Transgenerational Health Effects in Fish and Epigenetic Mechanisms. In preparation.

## **GRADUATE STUDENT ADVISING**

Member of graduate faculty

Member of doctoral faculty

Jane P. Rines (M.A.) 1982. Thesis title: Evidence for behavior masculinization with age in female mice: Influence of in utero development. University of Missouri-Columbia.

Margaret M. McCarthy (M.A.) 1984. Thesis title: Factors influencing infanticide in male and female wild house mice. University of Missouri-Columbia.

Monica M. Montano (M.A.) 1988. Thesis title: Sex differences in fetal corticosterone in mice are eliminated by maternal stress and adrenalectomy. University of Missouri-Columbia.

- Mary D. Even (Ph.D.) 1991. Thesis title: Uteroplacental blood flow in the pregnant rat. University of Missouri-Columbia.
- Monica M. Montano (Ph.D.) 1991. Thesis title: In vitro and in vivo studies of free, AFP-bound and albumin-bound estradiol in blood: Evidence for uptake and binding in rat brain during sexual differentiation. University of Missouri-Columbia.
- Ming-Hseng Wang (Ph.D.) 1991. Thesis title: Effect of maternal age on offspring's sexual development. University of Missouri-Columbia.
- Susan C. Nagel (Ph.D.) 1998. Thesis title: The role of serum and the physiology of delivery in determining the bioactive fraction of estradiol and xenoestrogens. University of Missouri-Columbia.
- Kristina A. Thayer (Ph.D.) 1999. Thesis title: Prenatal exposure to low doses of estrogen: Reproductive effects in male and female mice and implications for regulation of endocrine disrupting environmental chemicals. University of Missouri-Columbia.
- Leanne C. Allworth (M.A.) 1999. Thesis title: Uterine response to estradiol: Low-dose facilitation and high-dose inhibition due to fetal exposure to diethylstilbestrol and methoxychlor in mice. University of Missouri-Columbia.
- Kembra L. Howdeshell (Ph.D.) 2002. Thesis title: Effects of exposure to environmentally-relevant levels of bisphenol a on mouse reproductive physiology and maternal behavior. University of Missouri-Columbia.
- Catherine M. Sandner (M.A.) 2002. Thesis title: Rodent diets affect reproductive phenotype of mice. University of Missouri-Columbia.
- Rachel L. Ruhlen (Ph.D.) 2003. Thesis title: Diets, estrogen environment of the fetus, and development of the reproductive tract and other systems. University of Missouri-Columbia.
- Benjamin L. Coe (M.A.) 2006. Thesis title: Obesity: A growing concern about fetal nutrition. University of Missouri-Columbia.
- Maren Bell-Jones (M.A.) 2007. Thesis title: Effects and interactions of diet and endocrine disrupting chemicals on the mouse reproductive system. University of Missouri-Columbia.
- James R. Kirkpatrick (Ph.D.) 2009. Thesis title: Examination of exogenous estrogenic

chemical exposure and altered fetal nutrition in the CD-1 mouse fetus.  
University of Missouri-Columbia.

Davide Ponzi (Ph.D.) 2011. Thesis title: Social and psychobiological regulation of the human child hypothalamus-pituitary-axis: an ontogenetic perspective.  
University of Missouri-Columbia.

Brittany M. Angle (M.A.) 2012. Thesis title: Fetal exposure to low but not high doses of bisphenol A (BPA) increases abdominal fat, impairs glucose tolerance and alters serum hormones in male mice: evidence for nonmonotonic dose-response relationships. University of Missouri-Columbia.

Rylee Phong Do (M.A.) 2012. Thesis title: Different effects of in utero exposure to low vs. high oral doses of di(2-ethylhexyl) phthalate (DEHP) on maternal and fetal testosterone in CD-1 mice. University of Missouri-Columbia.

Annette M. Hormann (M.A.) 2013. Thesis title: Human bisphenol A exposure from thermal cash register receipt paper via dermal transmission and oral ingestion. University of Missouri-Columbia.

#### **POSTDOCTORAL FELLOWS**

Dr. Shanawaz Khan, Research Associate, Veterinary Pathobiology, University of Missouri-Columbia.

Dr. Minati Dhar, Research Associate, Department of Physiology, University of Kansas Medical Center, Kansas City, KS.

Dr. Glen Perrigo, Professor, Department of Biology, Texas A&M, Kingwood, TX.

Dr. Michael Boechler, Deceased.

Dr. Julia Taylor, Research Assistant Professor, University of Missouri-Columbia.

Dr. Catherine A. Richter, Senior Research Molecular Biologist, Columbia Environmental Research Center, USGS, Columbia, MO.

Dr. Ramji Bhandari, Assistant Professor, Biology Department, University of North Carolina-Greensville

Dr. Richard Stahlhut, Research Consultant