

Curriculum Vitae

ANTHONY R. SCIALLI, M.D.

Date of birth: June 23, 1952
Poughkeepsie, N.Y.

Citizenship: United States of America

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MEDICAL AND SCIENTIFIC EDUCATION

DEGREES

Bachelor of Science, Cum Laude, Biology Rensselaer Polytechnic Institute, Troy, NY	1975
Doctor of Medicine Albany Medical College, Albany, NY	1975

INTERNSHIP, RESIDENCY AND FELLOWSHIP TRAINING

Residency in Obstetrics and Gynecology The George Washington University, Washington, D.C.	1975–1979
Chief Resident, Obstetrics and Gynecology The George Washington University Washington, D.C.	1978
Fellowship in Reproductive Toxicology The Reproductive Toxicology Center Columbia Hospital for Women, Washington, D.C.	1982–1984



December 9, 2023

MEDICAL LICENSURE AND BOARD CERTIFICATIONS

District of Columbia (No. 9708)	1977
State of Maryland (No. D-20475; inactive)	1977
Commonwealth of Virginia (No. 28458; inactive)	1977
State of California (No. 42361)	1980
Board Certified in Obstetrics and Gynecology by the American Board of Obstetrics and Gynecology	1981

PROFESSIONAL APPOINTMENTS

Staff Physician, Ambulatory Care Center, Columbia Hospital for Women, Washington, D.C.	1979–1980
Staff Physician, Guam Memorial Hospital, Tamuning, Guam	1980–1982
Chair, Department of Obstetrics and Gynecology	1981–1982
Executive Committee	1981–1982
Operating Room Committee	1981–1982
Chief of Obstetrics and Gynecology, Family Health Program, Tamuning, Guam	1980–1982
Active Staff, George Washington University Hospital, Washington, D.C.	2007–2019
Active Staff, Columbia Hospital for Women, Washington, D.C.	1982–2002
Active Staff, Georgetown University Hospital, Washington, D.C.	1987–2004
Courtesy Staff, Sibley Memorial Hospital, Washington, D.C.	1988–1993
Director, Columbia Hospital for Women Physicians, Group, Washington, D.C.	1983–1984
Deputy Director, Reproductive Toxicology Center, Washington, D.C.	1983–1986
Principal Investigator, Center for the Evaluation of Risks to Human Reproduction, National Toxicology Program, Alexandria VA	2003–2007
Special Government Employee, US Food and Drug Administration	1987–2017
Director, Reproductive Toxicology Center, Washington, D.C.	1986–present
Senior Scientific Advisor, Tetra Tech Sciences, Arlington, VA	2003–2014
Clinical Privileges, George Washington University Medical Faculty Associates	2007–2019
Member, Scialli Consulting LLC	2014–present

UNIVERSITY APPOINTMENTS

Georgetown University School of Medicine, Washington DC

Instructor in Obstetrics and Gynecology	1980–81 and 1983–1987
Assistant Professor in Obstetrics and Gynecology	1987–1993
Associate Professor in Obstetrics and Gynecology (tenured)	1993–1998
Professor in Obstetrics and Gynecology (tenured until 2000)	1998–2004
Adjunct since July 2004	
Residency Program Director, Department of Obstetrics and Gynecology, Georgetown University Hospital	1988–2004
Adjunct Professor of Biochemistry and Molecular Biology, Georgetown University School of Medicine	2004–2011
Adjunct Professor of Pharmacology and Physiology, Georgetown University School of Medicine	2011–2018
Professor, Georgetown University Graduate School of Arts and Sciences	2018–present

George Washington University School of Medicine, Washington DC

Assistant in Obstetrics and Gynecology	1975–1979
Assistant Clinical Professor in Obstetrics and Gynecology	1983–1987
Associate Clinical Professor in Obstetrics and Gynecology	1987–1995
Clinical Professor in Obstetrics and Gynecology	2008–2020
Clinical Professor Emeritus	2020-present
Columbia Hospital for Women (affiliated with Georgetown University), Washington DC	
Associate Residency Program Director	1984–1986
Residency Program Director	1986–1988

COMMITTEE SERVICE

Committee Service, Columbia Hospital for Women

Credentials Committee	1979–1980
Tissue Committee	1979–1980
Antimicrobial Review Committee	1983–1987
Pharmacy and Standardization Committee	
Vice-chair	1983–1985
Chair	1985–1988
Formulary Subcommittee (Chair)	1983–1985
Incident Report Subcommittee (Chair)	1984–1985
Medical Records Committee	1984–1986
In hospital Infection Committee	1983–1988
Obstetrical Committee	1984–1988
Continuing Medical Education Committee	1984–1988
Gynecology Committee	1986–1988

Executive Committee	1986–1988
Professional Services Committee	1992–1993
Ambulatory Care Committee	1979–1980, 1983–1993
Research Evaluation Committee	1986–1999
Committee Service, Georgetown University	
Faculty Committees:	
Pharmacy Committee	1987–2000
Graduate Medical Education Committee	1995–2004
Physician Advisor, Utilization Management Committee	1997–1999
Clinical Research Center Advisory Committee	1998–2001
Committee on Faculty	2001–2003
Clinical Departments and Clinical Teaching Facilities Committees	2002–2003
Institutional Review Board	2003–2004
Department of Obstetrics and Gynecology:	
Education Committee	1986–2004
Chair	1988–2004
Executive Faculty	1988–2004
Medical Society of the District of Columbia	
Committee on Pharmacy and Therapeutics	1983–1986

SERVICES TO SCIENTIFIC AND PUBLIC COMMUNITY

1. Clinic Physician, Planned Parenthood, Washington, DC 1977–1980
2. Supervising Physician, Planned Parenthood of Northern Virginia 1977–1980
3. Female Reproductive Risk Assessment Scientific Panel, Environmental Protection Agency, Washington, D.C. 1986
4. Women Taking Charge: Action Toward Disease Prevention Panelist; Washington, D.C, February 1986
5. Reviewer, Test Rules Peer Review Project, Environmental Protection Agency 1986
6. Consultant, Washington Free Clinic, Washington DC 1987–1995
7. Consultant, Georgetown Midwifery Associates 1987–1995
8. Reviewer, Essential Obstetrics Functions at First Referral Level, World Health Organization 1988
9. Reviewer, Biomarkers in Reproductive Toxicology, National Academy of Sciences 1988
10. Workshop Chairman, Sperm Measures and Reproductive Success, Institute for Health Policy Analysis and Environmental Protection Agency 1988
11. Consultant to the Scientific Advisory Board, Environmental Health Committee, U.S. Environmental Protection Agency 1988
12. Teratology Information Users Group, National Library of Medicine 1988–present
13. Reviewer, AHFS Drug Information, American Society of Hospital Pharmacists 1989
14. Advisory Committee, Reproductive Hazards in the Workplace, Home, Community and Environment March of Dimes Birth Defects Foundation 1989–1992
15. Consultant to Committee of Reproductive Physiology, Health Protection Branch, Ministry of Health, Welfare, Ottawa, Canada 1989

16. Steering Committee, Reproductive and Developmental Toxicology, Institute for Evaluating Health Risks, Washington DC 1989–2000
17. Ad-hoc Committee on In Vitro Tests for Developmental Toxicology, National Institute of Environmental Health Sciences 1990–1993
18. Ad-hoc Committee on Teratogen Information Systems, Council of Regional Networks 1990–1997
- Chair 1997–1997
19. Expert Consultant, Reproductive and Developmental Toxicology, General Accounting Office report to Senator John Glenn, Washington DC 1991
20. Working Group on Asthma and Pregnancy, National Asthma Education Program, National Heart, Lung, and Blood Institute 1991–1993
21. NIDA Special Review Committee on Human Development Research, National Institute on Drug Abuse 1991–1996
22. External Reviewer, Medical Research Council of Canada, Ottawa, Canada 1991
23. Scientific and Technological Achievement Awards Subcommittee, Environmental Protection Agency 1992–1995
24. Prioritization Committee, Office of Environmental Health Hazard Assessment, State of California 1992–1997
25. Joint NICHD/NHLBI Subcommittee on Asthma and Pregnancy, National Institutes of Health 1992–1993
26. Committee on the Legal and Ethical Issues Relating to the Inclusion of Women in Clinical Studies, Institute of Medicine, National Academy of Sciences 1992–1993
27. IEHR Expert Committee on Reproductive and Developmental Toxicology 1992–1998
28. Chair, Workshop on Field Study Application of Biologic Markers for Female Reproductive Disorders, Agency for Toxic Substances and Disease Registry, US Department of Health and Human Services, Atlanta GA 1993
29. Consultant, Glycol ether, Occupational Safety and Health Administration 1993
30. Peer review panel to NASA, Life and Microgravity Sciences and Applications Division 1993
31. Ad hoc Reviewer, Office of Orphan Products Development, US Food and Drug Administration 1994
32. Advisory Committee on Human Radiation Experiments Interagency Working Group, The White House, Washington DC 1995
33. Consultant, Persian Gulf Expert Scientific Committee, Veterans Health Administration, Washington DC 1995
34. Peer reviewer, Human Health Risk Assessment, Environmental Protection Agency 1995
35. Committee on the Department of Defense Persian Gulf Syndrome Comprehensive Clinical Evaluation Program, Institute of Medicine, National Academy of Sciences 1995–1996
36. Varivax Pregnancy Registry Advisory Committee, Merck and Co., Inc., West Point PA 1995
37. Participant, Workshop on the NIH Inclusion Guidelines, Office of Research on Women's Health, National Institutes of Health 1996
38. Consultant, Presidential Advisory Committee on Gulf War Veterans' Illness, Washington DC 1996
39. Subcommittee on Reproductive and Developmental Toxicants, Committee on Toxicology, National Research Council, Washington DC 1997–2000

40. Consultant, Pregnancy Labeling Task Force, US Food and Drug Administration 1997–2015
41. Expert Panelist, 1997 Preclinical Drug Safety Evaluation Workshop, 1997
PhRMA/FDA Educational Workshop Part II, Rockville MD
42. Academic Advisor, Developmental and Reproductive Toxicology Technical 1997–2023
Committee, Health and Environmental Sciences Institute, Washington DC
Developmental Toxicity New Directions Steering Committee 2007–2011
Chair, Behavioral Testing Steering Committee 2007–2010
43. Scientific Chair, Special Emphasis Panel, National Institute of Child Health and 1998
Human Development, National Institutes of Health, Bethesda MD
44. Steering Committee, Project on the Interpretation of Skeletal Variations for 1998–1999
Human Health Risk Assessment, ILSI Risk Sciences Institute
45. Coinvestigator, Center for the Evaluation of Risks to Human Reproduction, 1998–2003
National Toxicology Program, Alexandria VA
46. Women’s Health Advisory Council, National Women’s Health Resource Center, 1999–2001
Washington DC
47. Chair, Teratology Society Public Affairs Committee Workshop on 2003
Communicating Risks for Pregnancy Exposures
48. National Asthma Education and Prevention Program, Asthma and Pregnancy 2003–2004
Working Group, National Heart, Lung, and Blood Institute, Bethesda MD
49. Peer Reviewer, Human Relevance Framework. ILSI Risk Science Institute, 2004
Washington, D.C.
50. Advisory Board, Rheumatic Diseases and Psoriasis Pregnancy Registry, Amgen, 2005–2014
Thousand Oaks CA
51. Consultant, Pediatric Advisory Committee, US Food and Drug Administration, 2007–2011
Rockville MD
52. Reviewer, Indo-US Science & Technology Forum, New Delhi India 2009
53. Reviewer, U.S. EPA Toxicological Review of Trichloroacetic acid. 2009
54. Member, Pool of Scientific Advisors on risk assessment, European Commission, 2009–present
Health and Consumer Directorate-General, Brussels
55. Member, Data Safety and Monitoring Board, Randomized trial of maternal 2009–2023
vitamin D supplementation to prevent childhood asthma, National Heart, Lung,
and Blood Institute, Bethesda MD
56. Member, Reproductive Toxicity Adjunct Group, Research Institute for Fragrance 2009–2023
Materials
57. Chair, Scientific Advisory Committee, Denosumab Pregnancy Exposure 2010
Registry, Amgen, Thousand Oaks CA
58. Advisory Committee for Reproductive Health Drugs, US FDA, Silver Spring MD 2012
59. Medical and Health Committee, Engeye Clinic, Ddegeya Village, Uganda 2013–present
60. Member, Data Safety and Monitoring Board, Vitamin C to Decrease the Effects 2013–2023
of Smoking in Pregnancy on Infant Lung Function, National Heart, Lung, and
Blood Institute and Office of Dietary Supplements, National Institutes of Health
61. Member, Data Safety and Monitoring Board, Wheezing in Black Preterm Infants: 2013–2023
Impact of Vitamin D Supplementation Strategy, National Heart, Lung, and Blood
Institute, National Institutes of Health
62. Chair, Advisory Committee, Teriflunomide Pregnancy Outcome Exposure 2014–present
Registry
63. Advisor, Reference chemicals, National Toxicology Program Interagency Center 2015–present
for the Evaluation of Alternative Toxicological Methods (NICEATM)

64. Member, Data Safety and Monitoring Board, Vitamin D and Severe Asthma Exacerbations in Childhood, National Heart, Lung, and Blood Institute, Bethesda MD	2015–present
65. Chair, Advisory Committee, Cimzia® (certolizumab pegol) Pregnancy Exposure Registry	2015–present
66. Chair, Advisory Committee, Humira® (adalimumab) Pregnancy Exposure Registry	2015–present
67. Chair, Advisory Committee, Stelara® (ustekinumab) Pregnancy Exposure Registry	2015–present
68. Advisory Committee, Flucelvax Pregnancy Registry	2016–present
69. Chair, Advisory Committee, Entyvio® (vedolizumab) Pregnancy Exposure Registry	2016–present
70. Chair, Advisory Committee, Actemra® (tocilizumab) Pregnancy Exposure Registry	2016–present
71. Non-prescription Drugs Advisory Committee, US FDA, Silver Spring MD	2016
72. Board of Directors, Strike Theater Company	2017–present
73. Special Emphasis Panel, Birth Defects Study To Evaluate Pregnancy exposures (BD-STEPS), Centers for Disease Control and Prevention, Atlanta GA	2018
74. Chair, Advisory Committee, Praluent® (alirocumab) Pregnancy Exposure Registry	2018–present
75. Chair, Advisory Committee, Kevzara® (sarilumab) Pregnancy Exposure Registry	2018–present
76. Chair, Advisory Committee, Dupixent® (dupilumab) Pregnancy Exposure Registry	2018–present

MEMBERSHIP IN PROFESSIONAL AND HONOR SOCIETIES

Alpha Omega Alpha Honor Medical Society	1993
Diplomate, National Board of Medical Examiners	1976
American College of Obstetricians and Gynecologists	
Junior Fellow	1976–1982
Fellow	1982–present
Guam Medical Society	1980–1982
Medical Society of the District of Columbia	1983–2005
American Society for Reproductive Medicine	1983–present
Washington Gynecological Society	1983–2003
Teratology Society (now Society for Birth Defects Research)	1987–present
Public Affairs Committee	1989–1992, 1995–1998, 2004–2007, 2010–2014
Chair	2004–2005
Chair, Ad Hoc Legislative Affairs Committee	1990–1991
ACOG Liaison Committee	1991–1992
Program Committee	1993–1994, 2006–2007
Program Chair	1998
Publications Committee	2002–2007
Vice President-elect	1996–1997
Vice President	1997–1998
President	1998–1999

Representative to the Board of the Federation of American Societies for Experimental Biology	2008–2012	
Nominations and Elections Committee	2008–2009	
Science committee	2009–2023	
American Association of Gynecologic Laparoscopists		1988–1994
Association of Professors of Gynecology and Obstetrics		1989–2006
American College of Toxicology		1989–present
Society of Toxicology, Generally Recognized as Expert category		1990–present
American Society of Andrology		1990–2005
European Teratology Society		1992–present
Organization of Teratology Information Specialists		1992–present
Executive Committee		1994–1996
Occupation Committee		2011–present
Public Affairs Committee cochair		2017–present
Research Committee		2022–present
Middle Atlantic Reproductive and Teratology Association		2002–present
National Birth Defects Prevention Network		2012–present
American Conference of Governmental Industrial Hygienists (ACGIH)		2019–present

HONORS

1. Golden Apple Award for Clinical Teaching, American Medical Student Association 1979
2. Certificate of Appreciation from the Senior Residents in Obstetrics and Gynecology, Georgetown University 1984
3. Clinical Faculty Teaching Award, Georgetown University 1986
4. Sergio E. Fabro Memorial Award for Teaching, Georgetown University 1987
5. Academic Attending of the Year, Department of Obstetrics and Gynecology, Georgetown University 1988, 1992, 1994, 1996, 1997, 2001
6. Certificate of Appreciation, Nurse Practitioner Program, Georgetown University School of Nursing, Washington DC 1998
7. Anthony R. Scialli, M.D. Award, Department of Obstetrics and Gynecology, Georgetown University 2004
8. The Thomas H. Shepard Award, Organization of Teratology Information Services 2005
9. Voluntary Faculty Teaching Award, Department of Obstetrics and Gynecology, George Washington University 2008
10. Physician of the Month, George Washington University Hospital, July 2010
11. Medical Expert of the Month, Organization of Teratology Information Specialists, September 2010
12. Voluntary Faculty Teaching Award, Department of Obstetrics and Gynecology, George Washington University 2012
13. Council on Resident Education in Obstetrics and Gynecology National Faculty Award, George Washington University Department of Obstetrics and Gynecology 2013

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| 14. Bock Prize and Lectureship, Nemours Alfred I. duPont Hospital for Children, Wilmington DE | 2015 |
| 15. Edward W. Carney Distinguished Service Award, Teratology Society | 2016 |
| 16. Agnish Fellowship, Teratology Society | 2018 |

PARTICIPATION/ORGANIZATION OF COURSES

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|---|--------------|
| 1. Instructor, Neonatal Intensive Care Course, Guam Memorial Hospital, Tamuning, Guam | 1981 |
| 2. Course Coordinator and Lecturer, Program in Infectious Disease, Tamuning, Guam | 1982 |
| 3. Lecturer, Fifth Annual Guam Medical Symposium, Tamuning, Guam | 1982 |
| 4. Physician Preceptor, Nurse Practitioner Program of Harbor General Hospital, Tamuning, Guam | 1982 |
| 5. Instructor, Labor and Delivery In-service Program, Columbia Hospital for Women, Washington DC | 1983–1988 |
| 6. Program Director and Speaker, Clinical Issues in Reproductive Toxicology Washington DC, March | 1988 |
| 7. Lecturer, Embryology Course, Georgetown University School of Medicine | 1988–1999 |
| 8. Lecturer, Third Year Clerkship Lectures in Obstetrics and Gynecology, Georgetown University School of Medicine | 1989–present |
| 9. Lecturer, Human Reproductive Biology, Georgetown University School of Medicine | 1990–1995 |
| 11. Course Organizer, Topics in Advanced Reproductive Biology, Georgetown University School of Medicine | 1990–1995 |
| 13. Lecturer, Lactation Consultant Training Program, Georgetown University School of Medicine (now Washington Families First) | 1991–2000 |
| 14. Fellowship Director, Reproductive Toxicology Department of Obstetrics and Gynecology, Georgetown University Medical Center | 1991–1993 |
| 15. Lecturer, Graduate School Course in Environmental Toxicology, Foundation of Advanced Education in the Sciences at the National Institutes of Health | 1993–1996 |
| 16. Lecturer, Reproductive Hazards in the Workplace (Selected Topics in Occupational Health), Uniformed Services University of Health Sciences | 1994–1999 |
| 17. Lecturer, Fetal Alcohol Syndrome course, Georgetown University School of Medicine | 1994 |
| 18. Lecturer, Advanced Concepts in Pathophysiology, School of Nursing Graduate Program, Georgetown University | 1994 |
| 19. Lecturer, Advanced Concepts in Pharmacology, Georgetown University School of Nursing, Washington DC | 1995 |
| 20. Lecturer, Physiology and Toxicology of Reproduction CDER Staff College, Food and Drug Administration | 1995–1997 |
| 21. Lecturer, Incorporation of Genetics into Clinical Practice, Child Development Center, Georgetown University Medical Center | 1995 |
| 22. Lecturer, Environmental effects on human semen quality and on reproductive development, American Society of Andrology Postgraduate Course, Raleigh NC | 1995 |
| 23. Lecturer, The International Training in Breastfeeding, LAM, and Postpartum Reproductive Health, The Institute for Reproductive Health, Georgetown University Medical Center | 1995, 1997 |

24. Lecturer, Reproductive and Developmental Toxicology, Toxicology Program, University of Maryland at Baltimore, Baltimore MD 1995
25. Lecturer, Introduction to Medical Genetics course, Foundation of Advanced Education in the Sciences at the National Institutes of Health 1995
26. Lecturer, Medical Genetics: Implications for Neonatology, Georgetown University Medical Center Washington DC 1995
27. Faculty, Genetics Information Superhighway, Middle Atlantic Regional Human Genetics Network Educational Conference, Washington DC 1996
28. Course Cochair and Faculty, Management of Gynecologic Disorders for the Next Millennium: Improving outcomes; Medical Education Collaborative, New York NY, September 1997
29. Workshop Director, Management of Chronic Pelvic Pain, New Directions in Management of the Female Patient, Medical Education Collaborative, Fajardo, Puerto Rico, January 1998
30. Course Director and Faculty, Management of Gynecologic Disorders for the Next Millennium: Improving outcomes; Medical Education Collaborative, Houston TX, March 1998
31. Course Director and Faculty, Challenges in Gynecologic Care; Medical Education Collaborative, Dearborn MI, April 1998
32. Course Director, Controversies in Gynecology: An Update; Medical Education Collaborative, Kansas City MO, June 1998
33. Faculty, Training Course in Human Pregnancy Outcome Data, US Food and Drug Administration, Rockville MD 1998–present
34. Course Director, Gynecologic Surgery: Doing It Well and Avoiding It Well, Medical Education Collaborative, Washington DC, August 1998
35. Program Chair, Fourth Biennial Symposium on Women's Health after Menopause. International Osteoporosis Foundation, Washington DC, April 1999
36. Course Director, Making a Difference: New Strategies for Difficult Gynecologic Disorders, Medical Education Collaborative, Chicago IL, June 1999
37. Course Director, New Methods in Screening for Prenatal Risks, American College of Obstetricians and Gynecologists, Toronto Ontario, August 1999
38. Course Director, Making a Difference: New Strategies for Difficult Gynecologic Disorders, Medical Education Collaborative, Minneapolis MN, August 1999
39. Course Director, The Estrogen Question, Department of Obstetrics and Gynecology, Georgetown University Medical Center, Washington DC, October 1999
40. Course Director, Changing Perspectives; a New Outlook on Gynecologic Disorders, Dearborn MI, March 2000
41. Course Director, Changing Perspectives; a New Outlook on Gynecologic Disorders, Syracuse NY, April 2000
42. Visiting Professor, Kaiser Permanente Medical Center, Santa Clara CA, September
43. Course Director, Changing Perspectives; a New Outlook on Gynecologic Disorders, Atlanta GA, February 2001
44. Course Director, Changing Perspectives; a New Outlook on Gynecologic Disorders, Boston MA, March 2001
45. Course Director, Changing Perspectives; a New Outlook on Gynecologic Disorders, Chicago IL, September 2001
46. Lecturer, Johns Hopkins University-NIH Genetic Counseling Graduate Program, Bethesda MD 2002–present

47. Principles of Teratology, Fourth year medical student lecture series, Department of Pharmacology, Georgetown University School of Medicine, Washington DC 2002–2010
48. Course Director, Changing Perspectives; a New Outlook on Gynecologic Disorders, Philadelphia PA, March 2002
49. Course Director, Changing Perspectives; a New Outlook on Gynecologic Disorders, Dearborn MI, June 2002
50. Course Director, Changing Perspectives; a New Outlook on Gynecologic Disorders, Pentagon City VA, June 2002
51. Course Director, Changing Perspectives; a New Outlook on Gynecologic Disorders, Atlanta GA, September 2002
52. Course Director, Changing Perspectives; a New Outlook on Gynecologic Disorders, Boston MA, October 2002
53. Course Director, Advances in Management of Chronic Pelvic Pain, San Juan PR, April 2003
54. Course Director, Changing Perspectives; a New Outlook on Gynecologic Disorders, Nashville TN, June 2003
55. Workshop chair, Hormone Replacement Therapy: A Challenge of Risks and Benefits. Society of Toxicology 43rd Annual Meeting, Baltimore MD, March 2003
56. Faculty, Pregnancy Exposure Registries: Evaluating the Teratogenic Potential of Pharmaceutical Products Used at Clinical Doses, Drug Information Association, Washington DC, May 2004
57. Faculty, Third-year clerkship symposia in Obstetrics and Gynecology, Georgetown University School of Medicine 2004–present
58. Chair, Public Affairs Committee Platform Session, Teratology Society 45th Annual Meeting, St Pete beach FL, June 2005
59. Visiting professor, Residents' Journal Club, Department of Obstetrics and Gynecology, University of California at Los Angeles, Los Angeles CA, March 2006
60. Faculty, Monitoring and Evaluating the Fetal Effects of Drug Exposure During Pregnancy, Drug Information Association, Washington DC, May 2006
61. Faculty, Human Teratology course, Department of Pediatrics, University of California, San Diego CA, October 2006
62. Faculty, Human Teratogens course, Massachusetts General Hospital Department of Pediatrics, Boston MA, April 2008, 2012, 2013, 2014, 2017
63. Faculty, Physiology Forum, Graduate program, Department of Physiology and Biophysics, Georgetown University School of Medicine 2008
64. Faculty, Third-year clerkship in Obstetrics and Gynecology, George Washington University School of Medicine and Health Sciences 2008–2019
65. Visiting Professor, Department of Pharmacology and Therapeutics, McGill University, Montréal, November 2012
66. Faculty, Special Masters Program, Department of Pharmacology and Physiology, Georgetown University School of Medicine 2012–present
67. Faculty, Pregnancy and Lactation in Women with Autoimmune Diseases: Sharing Knowledge Across Disciplines, University of California at San Diego, San Diego CA, February 2015
68. Faculty, Second year medical student course in reproduction, George Washington University School of Medicine and Health Sciences 2015–present
69. Chairperson, Embryology and developmental toxicity testing, Continuing Education 2016

- Course, Society of Toxicology, New Orleans LA, March
70. Faculty, Physician assistant student course in reproduction, George Washington University School of Medicine and Health Sciences 2016–present
 71. Faculty, Master of Science in Health and the Public Interest, Georgetown University Graduate School of Arts & Sciences, Washington DC 2018–present
 72. Faculty, Developmental Toxicity of the Skeletal System: Interpretation of Findings in DART Studies and Implications for Risk Assessment, Continuing Education Course, Society of Toxicology 58th Annual meeting, Baltimore MD, March 2019

INVITED LECTURES/SYMPOSIA

1. Information Systems in Reproductive Toxicology, National Federation of Abstracting and Information Services, Arlington VA, March 1984
2. Reproductive Toxicity of Fertility Medications. Grand Rounds, Columbia Hospital for Women, Washington DC 1984
3. Lecture: Smoking and Reproductive Risks, Society for Occupational and Environmental Health Conference on Smoking Washington DC, April 1985
4. Smoking and Reproductive Risks. Society for Occupational and Environmental Health Conference on Smoking Washington DC, April 1985
5. Occupational Risks to Reproduction. American Industrial Hygiene Association Central Pennsylvania Section York PA, November 1985
6. Guest Faculty, Postgraduate Course in Teratology and Prenatal Diagnosis, George Washington University, Washington DC, March 1986
7. Paternally Mediated Adverse Pregnancy Effects. Eleventh Annual Meeting, American Society of Andrology, Grand Rapids MI, April 1986
8. Drugs and Pregnancy, American College of Obstetricians and Gynecologists, Annual Clinical Meeting, New Orleans LA, May 1986
9. Drugs in Pregnancy. Spring Seminar in OB/GYN, Columbia Hospital for Women Medical Center Washington DC, May 1987
10. Principles of Developmental Toxicology. Comprehensive Review of Clinical Obstetrics and Gynecology, Georgetown University, Washington DC, November 1988
11. Speaker, American College of Nurse Midwives Washington DC, May 1988
12. Drugs in Pregnancy and Lactation. Fifth Annual Sinai Hospital of Baltimore Symposium in Obstetrics and Gynecology, Baltimore MD, November 1988
13. Keynote address, VDT Planning Meeting NICHD, National Institutes of Health Bethesda MD, November 1988
14. Drugs in Pregnancy. Grand Rounds, Department of Obstetrics, Greater Baltimore Medical Center, Baltimore MD, April 1989
15. Speaker, Seventeenth Annual Conference, American Academy of Physician Assistants, Washington DC, November 1989
16. Lecturer, Frontiers in Pharmacology, Department of Pharmacology, George Washington University Medical Center Washington DC, February 1990
17. Paternally Induced Adverse Pregnancy Effects. Grand Rounds, Columbia Hospital for Women Medical Center Washington DC, March 1990
18. Pelvic Infection. Grand Rounds, Department of Obstetrics and Gynecology, St. Joseph's Hospital, Baltimore MD, March 1990

19. Estrogen Replacement Therapy. Grand Rounds:, Greater Baltimore Medical Center, Baltimore MD, April 1990
20. Visiting Professor, Medical Center of Delaware, Newark DE, December 1990
21. Keynote Speaker, Fourth International Conference of Teratogen Information Services, Chicago IL, April 1991
22. Pelvic Infections. Grand Rounds:, York Hospital, York PA, May 1991
23. Pelvic Infections. DC Academy of Family Physicians, Washington DC, June 1991
24. Fetal Protection Policies. BP America Health, Safety, and Environmental Quality Annual Meeting, Cincinnati OH, July 1991
25. Drugs in Pregnancy: General Principles and Clinical Applications. American College of Allergy and Immunology, New York NY, November 1991
26. Communicating Preclinical Reproductive Toxicity Test Data to Clinicians, Pharmaceutical Manufacturers Association, Cherry Hill NJ, December 1991
27. Drugs and Toxicants in Breast Milk. Neonatal Pharmacology Workshop, Georgetown University Medical Center, Washington DC, March 1992
28. Drugs in Breast Milk. Grand Rounds, Department of Obstetrics and Gynecology, University of Maryland School of Medicine, Baltimore MD, March 1992
29. Use of Toxicology Information by Clinicians. Developmental Toxicology Division Seminar Series, Environmental Protection Agency, Research Triangle Park NC, April 1992
30. Environmental Hazards and Reproductive Toxicity, Iowa Public Health Association Annual Meeting, Des Moines IA, May 1992
31. Drugs and Chemicals in Breast Milk. Center for Health Effects of Environmental Contamination, University of Iowa, Iowa City IA, May 1992
32. Causation in Science and the Law. Grand Rounds, Department of Obstetrics and Gynecology, University of Iowa, Iowa City IA, May 1992
33. Ectopic Pregnancy. DC Academy of Family Physicians, Washington DC, June 1992
34. Preclinical Toxicology Testing: The Clinician as the Ultimate Consumer. 78th Meeting of the Middle Atlantic Teratology Association, Philadelphia PA, July 1992
35. Hazards of the FDA Drugs in Pregnancy Categories, Merck Sharp & Dohme Research Laboratories, West Point PA, July 1992
36. Reproductive Risks. Grand Rounds, Department of Obstetrics and Gynecology, Howard University, Washington DC, August 1992
37. Drugs and Breastfeeding. Grand Rounds, Department of Obstetrics and Gynecology, Georgetown University, Washington DC, September 1992
38. Use of Animal Tests in Evaluating Development Toxicity of Drugs. Food, Drug, and Law Institute, Washington DC, October 1992
39. Drugs in Pregnancy. American College of Rheumatology 56th Annual Meeting, Atlanta GA, October 1992
40. Drugs in Pregnancy. Grand Rounds, Division of Rheumatology, Georgetown University Medical Center, Washington DC, November 1992
41. Use of Toxicology Information by Clinicians. Visiting Professor, Thomas Jefferson University, Department of Anatomy and Developmental Biology, Philadelphia PA, November 1992
42. Reproductive Toxicology. Grand Rounds, Department of Obstetrics and Gynecology, Holy Cross Hospital, Silver Spring MD, January 1993
43. Visiting Professor, Department of Obstetrics and Gynecology, George Washington University, Washington DC, February 1993

44. Hazards of Drug in Pregnancy Labeling. Grand Rounds, Department of Obstetrics and Gynecology, Fairfax Hospital, Fairfax VA, February 1993
45. Teratology. Northern Virginia Obstetrical Society, Arlington VA, March 1993
46. Add-back Therapy. Grand Rounds, Department of Obstetrics and Gynecology, Washington Hospital Center, Washington DC, June 1993
47. Toxicokinetics in Clinical Practice. European Teratology Society, Lyon, France, September 1993
48. Pharmacokinetics of Pregnancy. Grand Rounds, Department of Obstetrics and Gynecology, Georgetown University Medical Center Washington DC, December 1993
49. Add-back Estrogen with GnRH Agonist Therapy. Grand Rounds, Department of Obstetrics and Gynecology, George Washington University Medical Center, January 1994
50. Add-back Estrogen with GnRH Agonist Therapy. Walter Reed Army Medical Center, Washington DC, March 1994
51. GnRH Agonist/Addback Therapy. Georgetown University, Department of Obstetrics and Gynecology postgraduate course, Washington DC, April 1994
52. Causation in Science and the Law, Seventh International Meeting of the Organization of Teratology Information Services, Woods Hole MA, April 1994
53. GnRH Agonist/Addback Therapy. Fairfax Hospital, Fairfax VA, April 1994
54. Drugs and Toxicants in Breast Milk. Shore Education Health Centers, Atlantic City Medical Center, Atlantic City NJ, May 1994
55. Pelvic Infection. Grand Rounds, St Agnes Hospital Baltimore MD, July 1994
56. Medical and Obstetric Aspects of Reproductive Toxicology. American Chemical Society Meeting, Washington DC, August 1994
57. GnRH Agonist/Addback Therapy. Grand Rounds, Department of Obstetrics and Gynecology, Malcolm Grow Hospital, Andrews Air Force Base MD, September 1994
58. Drugs and Toxicants in Breast Milk, Maryland Breastfeeding Promotion Project, Columbia MD, September 1994
59. Evaluating Reproductive Toxicants. FDA Science Forum on Regulatory Sciences, Washington DC, September 1994
60. Hazards of the FDA Drug in Pregnancy Classification. Northeastern Ohio Universities College of Medicine, Current Topics in Obstetrics and Gynecology, Rootstown OH, September 1994
61. Labeling Challenges. Focus on Women's Health, US Food and Drug Administration, Crystal City VA, November 1994
62. Hormone Replacement Therapy. Internal Medicine Grand Rounds, Maryland General Hospital, Baltimore MD, November 1994
63. Visiting Professor, University of Maryland Medical Center, Baltimore MD, November 1994
64. Developmental Toxicology. Grand rounds, Washington Hospital Center, Washington DC, December 1994
65. GnRH Agonist/Addback Therapy. Grand Rounds, Department of Obstetrics and Gynecology, The Pennsylvania Hospital, Philadelphia PA, December 1994
66. Pharmaceutical Labeling for Pregnancy Effects. Grand Rounds, Genetics and Teratology Division, The Pennsylvania Hospital, Philadelphia PA, December 1994
67. GnRH Agonist/Addback Therapy. Grand Rounds, Department of Obstetrics and Gynecology, Jersey Shore Medical Center, Neptune NJ, January 1995
68. GnRH Agonist/Addback Therapy. Grand Rounds, Department of Obstetrics and Gynecology, Monmouth Medical Center, Long Branch NJ, January 1995

69. Hormone Replacement Therapy. Grand Rounds, St. Joseph Medical Center, Towson MD, January 1995
70. Nonsurgical Management of Leiomyomata Uteri. Grand Rounds, Columbia Hospital for Women Medical Center, Washington DC, February 1995
71. Endometriosis. Grand Rounds, Holy Cross Hospital, Silver Spring MD, February 1995
72. Drugs in Pregnancy. Grand Rounds, Montgomery General Hospital, Olney MD, February 1995
73. GnRH Agonist/Addback Therapy. Grand Rounds, Department of Obstetrics and Gynecology, St. Luke's Hospital, Bethlehem PA, February 1995
74. Controversies in Estrogen Replacement Therapy. Maryland Academy of Family Physicians, 47th Annual Meeting, Ocean City MD, May 1995
75. Controversies in Vaginitis. Grand Rounds, Department of Internal Medicine, Dewitt Army Medical Center, Fort Belvoir MD, August 1995
76. Nonsurgical Management of Leiomyomata Uteri. Department of Obstetrics and Gynecology, Northern Westchester Medical Center, Mount Kisco NY, October 1995
77. Hormone Replacement Therapy. Maryland Nurse Practitioners Association, Towson MD, October 1995
78. Adverse outcomes of drugs in pregnancy. Laurel Regional Hospital, Laurel MD, December 1995
79. What is a human teratogen? Risk assessment in the 90s. Seminar, Department of Cell Biology, Georgetown University Medical Center, Washington DC, January 1996
80. Nonsurgical management of uterine leiomyomata. Grand Rounds, Department of Obstetrics and Gynecology, Holy Cross Hospital, Silver Spring MD, January 1996
81. Myths & Realities in Teratology. Maricopa Medical Center Annual Mid-Winter Symposium, Phoenix AZ, March 1996
82. Causation in Science & the Law. Maricopa Medical Center Annual Mid-Winter Symposium, Phoenix AZ, March 1996
83. Women in Clinical Trials, a Clinician's Perspective. Annual Meeting, Society of Toxicology, Anaheim CA, March 1996
84. Environmental Hazards. Teratology Information Services. Maryland Department of Health and Mental Hygiene and the March of Dimes, Towson MD, March 1996
85. Identifying Teratogens: The Tyranny of Lists. Jefferson Medical College, Philadelphia PA, April 1996
86. Reproductive Toxicology. Grand Rounds, Department of Obstetrics and Gynecology, College of Physicians & Surgeons of Columbia University, New York NY, April 1996
87. Closing in on Birth Defects. Sigma Xi Scientific Research Society, Annual Dinner, Washington DC, April 1996
88. Nonsurgical Management of Uterine Leiomyomata. DeWitt Army Medical Center Dewitt Army Medical Center, Fort Belvoir MD, May 1996
89. Drugs in Breastmilk. Advanced Lactation Education for WIC Professionals, Columbia MD, June 1996
90. Contemporary Management of Leiomyomata Uteri. GTE Symposium, Bethesda MD, June 1996
91. How Not to Publish a Scientific Paper. Union Memorial Hospital, Baltimore MD, June 1996
92. Fertility Control in Women Exposed to Teratogenic Drugs. Teratology Society, Keystone CO, June 1996

93. Medical Management of Women with Leiomyomata. Postgraduate course: Management of Women with Benign Gynecologic Conditions, Philadelphia PA, August 1996
94. Risk Communication. European Teratology Society Education Course, Principles and Criteria of Risk Assessment in Developmental Toxicology, Rome, Italy, September 1996
95. The Use of Experimental Data in the Design and Interpretation of Human Studies. European Teratology Society, Rome, Italy, September 1996
96. Alternatives to Hysteroscopy and Hysterectomy. Hands on Hysteroscopy Course. Robert Wood Johnson-New Jersey College of Medicine and Dentistry, New Brunswick NJ, September 1996
97. Hormone replacement therapy. Laurel Regional Hospital, Laurel MD, October 1996
98. Counseling Women on Hormone Replacement Therapy. Healthy Approaches to Menopause, sponsored by the Jacobs Institute of Women's Health, Washington DC, January 1997
99. Risk Assessment in Reproductive Toxicology. Seminars in Reproductive Biology Series, The University of Texas Health Sciences Center, Houston TX, May 1997
100. Medical Management of Leiomyomata Uteri. Making Medical Decisions in the 90s, Medical Education Collaborative, Pittsburgh PA, June 1997
101. Management of Leiomyomata Uteri. Management of Gynecologic Disorders for the Next Millennium: Improving outcomes; Medical Educational Collaborative, New York NY, September 1997
102. Chronic Pelvic Pain. Management of Gynecologic Disorders for the Next Millennium: Improving outcomes; Medical Educational Collaborative, New York NY, September 1997
103. Alternatives to Hysterectomy. Third Annual Conference of the World Foundation for Medical Studies in Female Health, Key Biscayne FL, October 1997
104. Add-back hormone replacement therapy: Is it safe and does it work? Endometriosis: Deep Disease and Side Effect Management, Greenbelt MD, November 1997
105. Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, Georgetown University, Washington DC, March 1998
106. Evaluation of Chronic Pelvic Pain. Management of Gynecologic Disorders for the Next Millennium: Improving outcomes. Medical Educational Collaborative, Houston TX, March 1998
107. Long-term Use of GnRH: Add-Back Therapy. Management of Gynecologic Disorders for the Next Millennium: Improving outcomes; Medical Educational Collaborative, Houston TX, March 1998
108. Medical Treatment of Uterine Fibroids. Management of Gynecologic Disorders for the Next Millennium: Improving outcomes; Medical Educational Collaborative, Houston TX, March 1998
109. The Mystery Pain Patient. Management of Gynecologic Disorders for the Next Millennium: Improving outcomes; Medical Educational Collaborative, Houston TX, March 1998
110. Chronic Pelvic Pain. Challenges in Gynecologic Care; Medical Education Collaborative, Dearborn MI, April 1998
111. Long-term Use of GnRH Agonist: Add-Back Therapy. Challenges in Gynecologic Care; Medical Education Collaborative, Dearborn MI, April 1998

112. The Mystery Pain Patient. Challenges in Gynecologic Care; Medical Education Collaborative, Dearborn MI, April 1998
113. Medical Management of Uterine Fibroids. Challenges in Gynecologic Care; Medical Education Collaborative, Dearborn MI, April 1998
114. Chronic Pelvic Pain. Controversies in Gynecology: An Update; Medical Education Collaborative, Kansas City MO, June 1998
115. The Mystery Pain Patient, Controversies in Gynecology: An Update; Medical Education Collaborative, Kansas City MO, June 1998
116. Medical Management of Uterine Fibroids. Controversies in Gynecology: An Update; Medical Education Collaborative, Kansas City MO, June 1998
117. New Initiatives in Labeling of Drugs for Use in Pregnancy. Drug Information Association, 34th Annual Meeting, Boston MA, June 1998
118. Evaluation of Chronic Pelvic Pain, Gynecologic Surgery: Doing It Well and Avoiding It Well, Medical Education Collaborative, Washington DC, August 1998
119. The Mystery Pain Patient, Gynecologic Surgery: Doing It Well and Avoiding It Well, Medical Education Collaborative, Washington DC, August 1998
120. Miscarriage and Disinfection By-products. World Chlorine Council: Science Research Forum, Washington DC, September 1998
121. Management of menopause. Grand rounds, Reston Hospital Department of Obstetrics and Gynecology, Reston VA, October 1998
122. Pregnancy labeling of medications. First International Conference on Nausea and Vomiting of Pregnancy, Toronto, Ontario, Canada, November 1998
123. Treatment Options for Postmenopausal Women. Civista Hospital, La Plata MD, November 1998
124. Drugs in Pregnancy. Johns Hopkins University Department of Obstetrics and Gynecology, Baltimore MD, November 1998
125. Add-Back Hormone Replacement and GnRH Agonist Therapy. Grand Rounds, Department of Obstetrics and Gynecology, University of Virginia, Charlottesville VA, December 1998
126. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, Holy Cross Hospital, Silver Spring MD, February 1999
127. Hospital, Silver Spring MD, February 1999
128. Medications in Pregnancy: Making Therapeutic Choices. Contemporary Forums, Washington 1999
129. Non-Bone Health-Related Benefits of SERMs. Fourth Biennial Symposium on Women's Health after Menopause. International Osteoporosis Foundation, Washington DC, April 1999
130. Deep Disease and Postoperative Treatment of Endometriosis. Grand Rounds, Department of Obstetrics and Gynecology, Waterbury Hospital, Waterbury CT, April 1999
131. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, St Luke Roosevelt Hospital Center, New York NY, May 1999
132. Clinical Diagnosis in the Evaluation of Chronic Pelvic Pain, Making a Difference: New Strategies for Difficult Gynecologic Disorders, Medical Education Collaborative, Chicago IL, June 1999
133. Alternatives to Hysterectomy for Uterine Fibroids, Making a Difference: New Strategies for Difficult Gynecologic Disorders, Medical Education Collaborative, Chicago IL, June 1999

134. SERMs: Are They the Answer for Menopause? Making a Difference: New Strategies for Difficult Gynecologic Disorders, Medical Education Collaborative, Chicago IL, June 1999
135. Clinical Diagnosis in the Evaluation of Chronic Pelvic Pain. Making a Difference: New Strategies for Difficult Gynecologic Disorders, Medical Education Collaborative, Charleston SC, June 1999
136. Extending the Safety and Efficacy of GnRH Agonists in Gynecology: Steroidal and Nonsteroidal Add-Back Therapy. Making a Difference: New Strategies for Difficult Gynecologic Disorders, Medical Education Collaborative, Charleston SC, June 1999
137. Testing a Test: How Do We Know If a Screen Is Reliable? New Methods in Screening for Prenatal Risks, American College of Obstetricians and Gynecologists, Toronto Ontario, August 1999
138. Principles of Teratology. New Methods in Screening for Prenatal Risks, American College of Obstetricians and Gynecologists, Toronto Ontario, August 1999
139. Evaluating Pregnancy Exposures for Risk. New Methods in Screening for Prenatal Risks, American College of Obstetricians and Gynecologists, Toronto Ontario, August 1999
140. Doing Tests, Not Doing tests: Where is the Liability? New Methods in Screening for Prenatal Risks, American College of Obstetricians and Gynecologists, Toronto Ontario, August 1999
141. Chronic Pelvic Pain. Making a Difference: New Strategies for Difficult Gynecologic Disorders, Medical Education Collaborative, Minneapolis MN, August 1999
142. The Use of Add-Back Therapy in Treating Common Gynecologic Disorders. Making a Difference: New Strategies for Difficult Gynecologic Disorders, Medical Education Collaborative, Minneapolis MN, August 1999
143. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, University Hospitals of Cleveland (Case Western Reserve University), Cleveland OH, September 1999
144. Osteoporosis: Is Estrogen Enough? The Estrogen Question, Department of Obstetrics and Gynecology, Georgetown University Medical Center, Washington DC, October 1999
145. Hormone Therapies: Are There Alternatives That Work? The Estrogen Question, Department of Obstetrics and Gynecology, Georgetown University Medical Center, Washington DC, October 1999
146. Drugs and Environmental Factors. Improving Birth Outcomes in Developing Countries Workshop, Institute of Medicine, Washington DC, October 1999
147. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, Ohio State University, Columbus OH, October 1999
148. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, Johns Hopkins University, Baltimore MD, October 1999
149. Management of the Chronic Pelvic Pain Patient. Medical College of Ohio, Toledo OH, November 1999
150. Medical and Surgical Alternatives for Uterine Fibroids. Grand Rounds, Department of Obstetrics and Gynecology, Olive View-UCLA Medical Center, Sylmar CA, December 1999
151. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, St Joseph's Hospital and Medical Center, Phoenix AZ, January 2000

152. Add-back Hormone Replacement Therapy. Grand Rounds, Department of Obstetrics and Gynecology, Downstate Medical Center, Brooklyn NY, January 2000
153. Chronic Pelvic Pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, Philadelphia PA, February 2000
154. Causation in Science and the Law. Changing Perspectives; a New Outlook on Gynecologic Disorders, Philadelphia PA, February 2000
155. Chronic Pelvic Pain. Brooklyn Hospital Medical Center, Department of Obstetrics and Gynecology, Brooklyn NY, February 2000
156. Chronic Pelvic Pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, New York NY, February 2000
157. Causation in Science and the Law. Changing Perspectives; a New Outlook on Gynecologic Disorders, New York NY, February 2000
158. Chronic Pelvic Pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, Dearborn MI, March 2000
159. Causation in Science and the Law. Changing Perspectives; a New Outlook on Gynecologic Disorders, Dearborn MI, March 2000
160. What's New in Fibroids? Changing Perspectives; a New Outlook on Gynecologic Disorders, Dearborn MI, March 2000
161. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, Creighton University School of Medicine, Omaha NE, March 2000
162. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, University of Nebraska Medical Center, Omaha NE, March 2000
163. Menopause Management. Washington Business Group for Health, Washington DC, March 2000
164. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, New Britain Hospital, New Britain CT, March 2000
165. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, The Hartford Hospital, Hartford CT, March 2000
166. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, University of Medicine and Dentistry of New Jersey, Newark NJ, March 2000
167. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, York Hospital, York PA, April 2000
168. Chronic Pelvic Pain, Grand Rounds, Department of Obstetrics and Gynecology, Durham Regional Hospital, Durham NC, April 2000
169. Chronic Pelvic Pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, Orlando FL, April 2000
170. Causation in Science and the Law. Changing Perspectives; a New Outlook on Gynecologic Disorders, Orlando FL, April 2000
171. Chronic Pelvic Pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, Syracuse NY, April 2000
172. Causation in Science and the Law. Changing Perspectives; a New Outlook on Gynecologic Disorders, Syracuse NY, April 2000
173. Chronic Pelvic Pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, Charlotte NC, May 2000
174. Addback Hormone Replacement Therapy. Changing Perspectives; a New Outlook on Gynecologic Disorders, Charlotte NC, May 2000
175. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, Baylor University Medical Center, Dallas TX, May 2000

176. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, University of Texas Southwestern Medical School, Dallas TX, May 2000
177. Alternatives to Hysterectomy for Uterine Fibroids. Grand Rounds, Department of Obstetrics and Gynecology, The Reading Hospital and Medical Center, Reading PA, June 2000
178. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, St. Louis University, St Louis MO, September 2000
179. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, Vanderbilt University, Nashville TN, September 2000
180. The Mystery Pain Patient: Evaluation of the Patient with Chronic Pelvic Pain. Medical Association of Puerto Rico, San Juan PR, October 2000
181. Pregnancy Labeling Challenges. Grand Rounds, Department of Obstetrics and Gynecology, Georgetown University Hospital, Washington DC, October 2000
182. Enrollment of Women of Childbearing Potential in Clinical Trials, Clinical Perspective. Middle Atlantic Regional Teratology Association, Kenilworth NJ, October 2000
183. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, Hershey Medical Center, Hershey PA, November 2000
184. Nonhysterectomy Alternatives for Fibroids. Grand Rounds, Department of Obstetrics and Gynecology, Washington Hospital Center, Washington DC, November 2000
185. Evaluation and Management of the Woman with Chronic Pelvic Pain: Reducing Her Frustration...and Yours. Changing Perspectives; a New Outlook on Gynecologic Disorders, Atlanta GA, February 2001
186. Avoiding Hysterectomy: Conservative Management of Fibroids. Changing Perspectives; a New Outlook on Gynecologic Disorders, Atlanta GA, February 2001
187. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, Robert Wood Johnson Medical School, New Brunswick NJ, February 2001
188. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, Metrowest Medical Center, Framingham MA, February 2001
189. Evaluation and Management of the Woman with Chronic Pelvic Pain: Reducing Her Frustration...and Yours. Changing Perspectives; a New Outlook on Gynecologic Disorders, Jackson Hole WY, March 2001
190. Managing Uterine Fibroids: A New Perspective. Changing Perspectives; a New Outlook on Gynecologic Disorders, Jackson Hole WY, March 2001
191. Evaluation and Management of the Woman with Chronic Pelvic Pain: Reducing Her Frustration...and Yours. Changing Perspectives; a New Outlook on Gynecologic Disorders, Boston MA, March 2001
192. Enhancing Compliance with Therapy. Changing Perspectives; a New Outlook on Gynecologic Disorders, 2001
193. Chronic pelvic pain. Grand rounds, Department of Obstetrics and Gynecology, Olive View-UCLA Medical Center, Sylmar CA, March 2001
194. Chronic pelvic pain. Grand rounds, Department of Obstetrics and Gynecology, University of California, Los Angeles CA, March 2001
195. Chronic pelvic pain. Grand rounds, Department of Obstetrics and Gynecology, Los Angeles County Harbor-UCLA Medical Center, Torrance CA, March 2001
196. I Don't Want A Hysterectomy: Alternatives for the Gynecologist. Changing Perspectives; a New Outlook on Gynecologic Disorders, St. Petersburg FL, April 2001

197. Evaluation and Management of the Woman with Chronic Pelvic Pain: Reducing Her Frustration...and Yours. Changing Perspectives; a New Outlook on Gynecologic Disorders, St. Petersburg FL, April 2001
198. Managing the Mystery Pain Patient. Alabama Section, American College of Ob/Gyn, Spring meeting, Destin FL, May 2001
199. Leiomyomata uteri. Alabama Section, American College of Ob/Gyn, Spring meeting, Destin FL, May 2001
200. Salmonella sepsis and second-trimester pregnancy loss. Teratology Society Annual Meeting, Montreal, Quebec, June 2001
201. Monitoring the effectiveness of pregnancy prevention programs. Teratology Society Annual Meeting, Montreal, Quebec, June 2001
202. Chronic pelvic pain. Recent Advances in Obstetrics and Gynecology, the University of Cincinnati College of Medicine, Department of Obstetrics and Gynecology, Cincinnati OH, August 2001
203. Causation in science and the law. Recent Advances in Obstetrics and Gynecology, the University of Cincinnati College of Medicine, Department of Obstetrics and Gynecology, Cincinnati OH, August 2001
204. Evaluation and Management of the Woman with Chronic Pelvic Pain: Reducing Her Frustration...and Yours. Changing Perspectives; a New Outlook on Gynecologic Disorders, Dearborn MI, August 2001
205. If a little is good, is more better? Extending the benefit and improving compliance with medical treatment for women with pelvic pain and endometriosis. Changing Perspectives; a New Outlook on Gynecologic Disorders, Dearborn MI, August 2001
206. Managing uterine fibroids: a new perspective. Changing Perspectives; a New Outlook on Gynecologic Disorders, Dearborn MI, August 2001
207. Evaluation and Management of the Woman with Chronic Pelvic Pain: Reducing Her Frustration...and Yours. Changing Perspectives; a New Outlook on Gynecologic Disorders, Chicago IL, September 2001
208. If a little is good, is more better? Extending the benefit and improving compliance with medical treatment for women with pelvic pain and endometriosis. Changing Perspectives; a New Outlook on Gynecologic Disorders, Chicago IL, September 2001
209. Conservative management of fibroids. Changing Perspectives; a New Outlook on Gynecologic Disorders, Chicago IL, September 2001
210. Pregnancy labeling challenges. Grand Rounds, Department of Obstetrics and Gynecology, Wilford Hall Medical Center, San Antonio TX, September 2001
211. Pregnancy labeling challenges. Changing Perspectives; a New Outlook on Gynecologic Disorders, San Francisco CA, October 2001
212. Evaluation and Management of the Women with Chronic Pelvic Pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, San Francisco CA, October 2001
213. Conservative management of fibroids. Changing Perspectives; a New Outlook on Gynecologic Disorders, San Francisco CA, October 2001
214. Chronic pelvic pain. Visiting faculty lecture series, Monmouth Medical Center, Long Branch NJ, October 2001
215. Chronic pelvic pain. 41st Annual Symposium, Shufelt Gynecologic Society of Santa Clara Valley, San Jose CA, October 2001
216. She doesn't want a hysterectomy: alternative management of symptomatic fibroids. 41st Annual Symposium, Shufelt Gynecologic Society of Santa Clara Valley, San Jose CA, October 2001

217. Evaluation and Management of the Women with Chronic Pelvic Pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, Farmington PA, November 2001
218. Conservative management of fibroids. Changing Perspectives; a New Outlook on Gynecologic Disorders, Farmington PA, November 2001
219. Chronic pelvic pain. Division of Reproductive Endocrinology and Infertility, Brigham and Women's Hospital, Harvard Medical School, Boston MA, November 2001
220. Chronic pelvic pain. Grand Rounds, Department of Obstetrics and Gynecology, The Mayo Medical Center, Rochester MN, December 2001
221. Chronic pelvic pain. GI Update and Clinical Reasoning. The University of Kansas Medical Center, Kansas City KS, February 2002
222. She doesn't want a hysterectomy. Grand Rounds, Department of Obstetrics and Gynecology, University of Iowa Hospitals and Clinics, Iowa City IA, February 2002
223. Chronic pelvic pain. Grand Rounds, Department of Obstetrics and Gynecology, University of Wisconsin Medical School, Sinai Samaritan Medical Center, Milwaukee WI, February 2002
224. The menopause myth. Grand Rounds, Department of Obstetrics and Gynecology, Georgetown University Hospital, March 2002
225. Solving the mystery of chronic pelvic pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, Philadelphia PA, March 2002
226. The menopause myth. Changing Perspectives; a New Outlook on Gynecologic Disorders, Philadelphia PA, March 2002
227. Pregnancy Labeling Challenges. Grand rounds, North Shore Hospital, Manhasset NY, March 2002
228. Solving the mystery of chronic pelvic pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, Chicago IL, April 2002
229. The menopause myth. Changing Perspectives; a New Outlook on Gynecologic Disorders, Chicago IL, April 2002
230. Medical therapy for endometriosis: setting and achieving goals. Changing Perspectives; a New Outlook on Gynecologic Disorders, Chicago IL, April 2002
231. Compliance. Grand rounds, St. Peter's University Hospital, New Brunswick NJ, April 2002
232. Solving the mystery of chronic pelvic pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, New York NY, April 2002
233. The menopause myth. Changing Perspectives; a New Outlook on Gynecologic Disorders, New York NY, April 2002
234. Uterine Fibroids: An Overview. Uterine Artery Embolization for Leiomyomata: A series of tutorials for practicing interventionalists. Georgetown University, Washington DC, May 2002
235. Solving the mystery of chronic pelvic pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, Houston TX, May 2002
236. Pregnancy labeling. Changing Perspectives; a New Outlook on Gynecologic Disorders, Houston TX, May 2002
237. Solving the mystery of chronic pelvic pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, Dearborn MI, June 2002
238. The menopause myth. Changing Perspectives; a New Outlook on Gynecologic Disorders, Dearborn MI, June 2002
239. Fibromyalgia. Changing Perspectives; a New Outlook on Gynecologic Disorders, Pentagon City VA, June 2002

240. Solving the mystery of chronic pelvic pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, Pentagon City VA, June 2002
241. The menopause myth. Changing Perspectives; a New Outlook on Gynecologic Disorders, Pentagon City VA, June 2002
242. Chronic pelvic pain: New approaches to an old problem. The 65th Annual Meeting of the North Dakota Society of Obstetrics and Gynecology, Bismarck ND, August 2002
243. Solving the mystery of chronic pelvic pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, Atlanta GA, September 2002
244. Medical therapy for endometriosis: setting and achieving goals. Changing Perspectives; a New Outlook on Gynecologic Disorders, Atlanta GA, September 2002
245. The menopause myth. Changing Perspectives; a New Outlook on Gynecologic Disorders, Atlanta GA, September 2002
246. Solving the mystery of chronic pelvic pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, Boston MA, October 2002
247. The menopause myth. Changing Perspectives; a New Outlook on Gynecologic Disorders, Boston MA, October 2002
248. Chronic pelvic pain. Grand Rounds, Department of Obstetrics and Gynecology, North Shore University Hospital, Manhasset NY, October 2002
249. Chronic pelvic pain. Department of Obstetrics and Gynecology, Carolinas Medical Center, Charlotte NC, November 2002
250. Chronic pelvic pain. Department of Obstetrics and Gynecology, Gwinnett Medical Center, Lawrenceville GA, December 2002
251. Chronic pelvic pain. Grand Rounds, Department of Obstetrics and Gynecology, St John's Mercy Medical Center, St Louis MO, January 2003
252. Chronic pelvic pain. Grand Rounds, Department of Obstetrics and Gynecology, Ohio State University, Columbus OH, February 2003
253. Fibroids—What are the choices? Grand rounds, Department of Obstetrics and Gynecology, Loyola University Medical Center, Maywood IL, March 2003
254. Drugs in Pregnancy. Grand Rounds, Department of Obstetrics and Gynecology, North Shore University Hospital, Manhasset NY, March 2003
255. Medical therapy for endometriosis: setting and achieving goals. Changing Perspectives; a New Outlook on Gynecologic Disorders, Miami FL, April 2003
256. Chronic Pelvic Pain. Advances in Management of Chronic Pelvic Pain, San Juan PR, April 2003
257. Enhancing compliance with medication therapy. Advances in Management of Chronic Pelvic Pain, San Juan PR, April 2003
258. Chronic pelvic pain. Changing Perspectives; a New Outlook on Gynecologic Disorders, Nashville TN, June 2003
259. Medical therapy for endometriosis: setting and achieving goals. Changing Perspectives; a New Outlook on Gynecologic Disorders, Nashville TN, June 2003
260. A clinical introduction to ART. Teratology Society 43rd Annual Meeting, Philadelphia PA, June 2003
261. Chronic Pelvic Pain. Grand rounds, Department of Obstetrics and Gynecology, Wright State University at Miami Valley Hospital, August 2003
262. Chronic pelvic pain. Grand rounds, Department of Obstetrics and Gynecology, Sparrow Health System, Lansing MI, September 2003

263. Chronic pelvic pain. Grand rounds, Department of Obstetrics, Gynecology, and Reproductive Medicine, Stony Brook University Health Sciences Center, Stony Brook NY, January 2004
264. Hormone replacement therapy in menopause: The clinical context. Presented at the Society for Toxicology 43rd Annual Meeting, Baltimore MD, March 2004
265. Critical factors in evaluating data on the effects of drug exposure in pregnancy and data use in signal detection, presented in the course, Pregnancy Exposure Registries: Evaluating the Teratogenic Potential of Pharmaceutical Products Used at Clinical Doses, Drug Information Association, Washington DC, May 2004
266. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, York Hospital, York PA, September 2004
267. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, Community University Hospital, Tampa FL, September 2004
268. Chronic Pelvic Pain. The Pittsburgh Ob-Gyn Society, Pittsburgh PA, October 2004
269. Leiomyomata uteri—What Are The Choices? Grand rounds, Department of Obstetrics and Gynecology, Magee-Women’s Hospital of the University of Pittsburgh, Pittsburgh PA, October 2004
270. The Pregnancy Label is Not Your Friend. Grand Rounds, Department of Obstetrics and Gynecology, Robert Wood Johnson-New Jersey College of Medicine and Dentistry, New Brunswick NJ, October 2004
271. Grammar, Syntax, and Sentence Construction. National Capital Area Chapter Society of Toxicology Career Enhancement Day, Bethesda MD, November 2004
272. Chronic Pelvic Pain. Grand Rounds, Department of Obstetrics and Gynecology, Brookdale University Hospital and Medical Center, Brooklyn NY, November 2004
273. Principles and resources for assessing fetal risk from exposures in medically complicated pregnancies. 25th Annual Meeting of the Society of Maternal-Fetal Medicine, Reno, February 2005
274. Diagnostic x-ray exposure and fetal outcome. 25th Annual Meeting of the Society of Maternal-Fetal Medicine, Reno, February 2005
275. The beasts and the children. The Thomas H. Shepard lecture, Organization of Teratology Information Services 18th International Conference, St. Pete Beach, June 2005
276. Clinicians. The Josef Warkany lecture, Teratology Society 45th Annual Meeting, St. Pete Beach, June 2005
277. Fibroids: evolving therapies. North Dakota Society of Obstetrics and Gynecology, Bismarck ND, August 2005
278. Enigma of endometriosis. North Dakota Society of Obstetrics and Gynecology, Bismarck ND, August 2005
279. The myth of menopause. Northside Hospital Twelfth Annual Perspectives on Women’s Health: Issues and Controversies, Atlanta GA, October 2005
280. Principles and resources for assessing fetal risk from exposures in medically complicated pregnancies. Grand Rounds, Department of Obstetrics and Gynecology, St. Vincent’s Hospital, Staten Island NY, November 2005
281. The enigma of endometriosis. Nebraska Obstetric and Gynecology Society annual meeting, Las Vegas NV, December 2005
282. Non-hysterectomy treatment of symptomatic fibroids. Grand rounds, Department of Obstetrics and Gynecology, Cedars Sinai Hospital, Los Angeles CA, March 2006

283. Critical factors in evaluating data on the effects of drug exposure in pregnancy, presented in the course, Pregnancy Exposure Registries: Evaluating the Teratogenic Potential of Pharmaceutical Products Used at Clinical Doses, Drug Information Association, Washington DC, May 2006
284. Preclinical evaluation of reproductive and developmental toxicity, presented in the course, Human Teratology, Department of Pediatrics, University of California, San Diego CA, October 2006
285. Bringing information to the clinician and the public, presented in the course, Human Teratology, Department of Pediatrics, University of California, San Diego CA, October 2006
286. The use of experimental animal studies in reproductive toxicology. Seminar, Department of Physiology and Biomechanics, Georgetown University, March 2007
287. Risk communication: a clinical perspective. Northern California Society of Toxicology Spring Symposium, San Francisco CA, June 2007
288. What's the best way to fund medical education? Panelist, 5th Annual MedEd Forum, Philadelphia PA, November 2007
289. Information Resources in Teratology, Massachusetts General Hospital, Boston, April 2008
290. Use of Experimental Animal Studies in Birth Defect Research, Slone Epidemiology Unit, Boston University, Boston MA, April 2008
291. Prescribing in Pregnancy, Annual Founders' Lecture, Kane-King-Dodek Obstetrical Honor Society, Washington DC, May 2008
292. The challenge of reproductive and developmental toxicology under REACH, Academy of Certified Hazardous Materials Managers National Conference, Minneapolis MN, September 2008
293. Drugs and Chemicals in Milk, Grand Rounds, Holy Cross Hospital, Silver Spring MD, October 2008
294. Principles of Teratology, Grand Rounds, George Washington University Department of Obstetrics and Gynecology, Washington DC, October 2008
295. Teratogen Information Highway, Lyn M. Dick Lecture on Clinical Teratology, University of California at San Diego, November 2008
296. Bringing Information to the Clinician and Patient, Grand Rounds, Department of Obstetrics and Gynecology, Georgetown University, Washington DC, February 2009
297. Myths of Teratology, New Jersey Maternal Fetal Medicine Society, Jamesburg NY, February 2009
298. Myths of Teratology, Grand Rounds, Department of Obstetrics and Gynecology, UMDNJ-Robert Wood Johnson Medical School, New Brunswick NJ, February 2009
299. Female Reproductive System: Anatomy, Physiology, and Endocrine Regulation; Society of Toxicology Continuing Education Course, Baltimore MD, March 2009
300. Postnatal Consequences of Maternal Toxicity; Society of Toxicology Workshop, Baltimore MD, March 2009
301. REACH Legislation: Hazard Versus Risk; 15th Annual Green Chemistry and Engineering Conference, American Chemical Society, Washington DC, June 2011
302. REACH: Still many unanswered questions. Current Trends in Developmental and Reproductive Toxicology, MPI Research Symposium, Kalamazoo MI, August 2011
303. What's New in Teratology? Grand rounds, Department of Obstetrics and Gynecology, Sibley Memorial Hospital, Washington DC, October 2011

304. Chemical and Nonchemical Occupational Risks to Reproductive Health, Society of Toxicology Annual Meeting, San Francisco CA, March	2012
305. Principles of Embryology, Human Teratogens course, Massachusetts General Hospital Department of Pediatrics, Boston MA, April	2012
306. Animal Models, Human Teratogens course, Massachusetts General Hospital Department of Pediatrics, Boston MA, April	2012
307. How to communicate data from the National Birth Defects Prevention Study, Teratology Society/Organization of Teratology Information Specialists Annual Meeting, Baltimore MD, June	2012
308. Animal models of toxicology: The rabbit. Middle Atlantic Reproduction and Teratology Association Meeting, Lahaska PA, October	2012
309. Hazard versus Risk. REACH as a case study. Seminar, Department of Pharmacology and Therapeutics, McGill University, Montréal, November	2012
310. The National Birth Defects Prevention Study, Grand rounds, Georgetown University Department of Obstetrics and Gynecology, December	2012
311. Why Lunch Matters, Grand rounds, George Washington University Department of Obstetrics and Gynecology, March	2013
312. Counseling Options, Human Teratogens course, Massachusetts General Hospital Department of Pediatrics, Boston MA, April	2013
313. Information resources, Grand Rounds, Department of Obstetrics and Gynecology, University of Maryland St. Joseph Medical Center, Towson MD, April	2014
314. Insecticides, Human Teratogens course, Massachusetts General Hospital Department of Pediatrics, Boston MA, April	2014
315. Drugs in semen, presented at U.S. FDA, September	2014
316. The National Birth Defects Prevention Study, Grand Rounds, Department of Obstetrics and Gynecology, George Washington University School of Medicine and Health Sciences, October	2014
317. Information resources for clinicians and researchers, Pregnancy and Lactation in Women with Autoimmune Diseases: Sharing Knowledge Across Disciplines, University of California at San Diego, San Diego CA, February	2015
318. Interpretation of nonclinical studies, Pregnancy and Lactation in Women with Autoimmune Diseases: Sharing Knowledge Across Disciplines, University of California at San Diego, San Diego CA, February	2015
319. How to find information, Human Teratogens course, Massachusetts General Hospital Department of Pediatrics, Boston MA, April	2015
320. Mycophenolate, Human Teratogens course, Massachusetts General Hospital Department of Pediatrics, Boston MA, April	2015
321. Clinical considerations, Labeling without categories: A workshop on FDA's pregnancy and lactation labeling rule, ILSI Health and Environmental Sciences Institute, Arlington VA, May	2015
322. Pregnancy and lactation labeling: Patient and provider expectations. Drug Information Association 51 st Annual Meeting, Washington DC, June	2015
323. Causation in teratology. Grand Rounds, Department of Pediatrics, Nemours Alfred I. duPont Hospital for Children, Wilmington DE, September	2015
324. Principles of Validation, Embryology and developmental toxicity testing, Continuing Education course, Society of Toxicology, New Orleans LA, March	2016
325. Causation. Grand round, Department of Obstetrics and Gynecology, George Washington University School of Medicine and Health Sciences, November	2016

326. Male veterans, Human Teratogens course, Massachusetts General Hospital Department of Pediatrics, Boston MA, April	2017
327. How to find information, Human Teratogens course, Massachusetts General Hospital Department of Pediatrics, Boston MA, April	2017
328. Reprotox. The 9 th Philadelphia Prenatal Conference, Philadelphia PA, June	2017
329. Co-chair, ILSI-HESI Workshop, Redesigning the embryofetal developmental toxicity study: Evolution or revolution? Teratology Society 57 th Annual Meeting, Denver CO, June	2017
330. Preventing the next thalidomide. Scientific Liaison Coalition webinar. December	2017
331. Normal and abnormal skeletal development, Middle Atlantic Reproduction and Teratology Association Annual meeting, Montgomeryville PA, October	2018
332. Principles of embryology. Human Teratogens Course, University of South Florida, Tampa FL, February	2019
333. Workplace exposures. Human Teratogens Course, University of South Florida, Tampa FL, February	2019
334. Paternal exposures. Human Teratogens Course, University of South Florida, Tampa FL, February	2019
335. Obtaining sources of information. Human Teratogens Course, University of South Florida, Tampa FL, February	2019
336. Interpretation of Skeletal Anomalies in Laboratory Animals, Continuing Education Course, Society of Toxicology 58 th Annual meeting, Baltimore MD, March	2019
337. Species comparison of maternal-embryo/fetal disposition of compounds, Annual meeting, Middle Atlantic Reproduction and Teratology Association, Montgomeryville PA, October	2019
338. Endocrine Disruptors, Human Teratogens, a Live Virtual Course, University of South Florida, Tampa FL, November	2021
339. Can experimental animal results be used in counseling patients? Society for Birth Defects Research and Prevention 62 nd Annual meeting, Vancouver BC, June	2022
340. Ethical considerations in the prevention and treatment of disease in pregnant persons. Society for Birth Defects Research and Prevention 62 nd Annual meeting, Vancouver BC, June	2022
341. Introduction to teratology, Human Teratogens, a Live Virtual Course, University of South Florida, Tampa FL, November	2023

EDITORIAL ACTIVITIES

Associate Editor, Reproductive Toxicology: a Medical Letter on Environmental Hazards to Reproduction, Published by Reproductive Toxicology Center, Washington, DC	1983–1987
Editor-in-Chief, Reproductive Toxicology, Published by Elsevier Science, New York NY; now Founding Editor	1987–2003
Editorial Board, Issues and Reviews in Teratology, Plenum Press, New York NY	1986–1994
Advisory Board, National Women's Health Report, National Women's Health Resource Center, Washington DC	1990–1996
Editorial Advisory Board, Alternative Therapies in Women's Health, American Health Consultants, Atlanta GA	1999–2002
Guest Editor, Birth Defects Research, volume 112, number 5	2020

Reviewer for

Acta Biochimica et Biophysica Sinica
Acta Paediatrica
ALTEX – Alternatives to Animal Experimentation
American Family Physician
American Journal of Hypertension
American Journal of Medical Genetics
American Journal of Obstetrics and Gynecology (top 100 reviewers 2005–2006; top 10% 2016)
American Journal of Perinatology
Bioelectromagnetics
Birth Defects Research
BMC Pharmacology and Toxicology
BMC Public Health
British Journal of Clinical Pharmacology
Cell Death and Differentiation
Clinical Microbiology and Infection
Critical Reviews in Toxicology
Current Research in Toxicology
Diabetologia
Ecotoxicology and Environmental Safety
Environmental Geochemistry & Health
Environmental Health Perspectives
Environmental Research
Environmental Toxicology and Pharmacology
Evidence-Based Complementary and Alternative Medicine
Experimental Biology and Medicine (Outstanding Reviewer Award, 2020)
Food and Chemical Toxicology
Fundamental and Applied Toxicology
Indian Heart Journal
Infection and Drug Resistance
International Journal of Environmental Research and Public Health
International Journal of General Medicine
International Journal of Gynecology and Obstetrics
International Journal of Toxicology
International Journal of Women's Health
International Journal of Tropical Diseases and Health
International Medical Case Reports Journal
JAMA, Journal of the American Medical Association
JAMA Pediatrics
JAMWA, Journal of the American Medical Women's Association
Journal of Allergy and Clinical Immunology
Journal of Clinical Psychiatry
Journal of Law, Medicine & Ethics
Journal of Pediatric Genetics
Journal of Perinatal Medicine
Journal of Respiratory Diseases

Journal of Scientific Practice and Integrity
 Journal of Sexual Medicine Obstetrics and Gynecology
 Journal of Scientific Practice and Integrity
 Journal of the Society for Gynecological Investigation
 Journal of the American Pharmaceutical Association
 Journal of Toxicology and Environmental Health
 Journal of Women's Health
 Life Sciences
 Microscopy Research and Technique
 Proceedings of the National Academy of Sciences, India Section B: Biological Sciences
 NeuroToxicology
 Neurotoxicology and Teratology
 Obstetrics and Gynecology (top 10% 2004–2014, 2017)
 Paediatric and Perinatal Epidemiology
 Prenatal Diagnosis
 Regulatory Toxicology and Pharmacology (Outstanding Reviewer 2017)
 Reproductive Sciences
 Reproductive Toxicology (top reviewer 2009, 2010)
 Risk Analysis
 Science and the Total Environment
 Scientific Reports (Nature)
 Sokoto Journal of Veterinary Sciences
 Teratology (now Birth Defects Research)
 The Medical Letter on Drugs and Therapeutics
 The New England Journal of Medicine
 Therapeutic Innovation & Regulatory Science
 Toxicological Sciences
 Toxicology
 Women's Health in Primary Care
 World Journal of Pediatrics

LIST OF PUBLICATIONS

SCIENTIFIC PAPERS IN PEER-REVIEWED PUBLICATIONS

1. Scialli AR, Neugebauer DL, Fabro S. The microbiology of the endocervix in patients undergoing chorionic villi sampling. In: Fraccaro M, Simoni G, Brambati B (eds) First Trimester Fetal Diagnosis. Berlin: Springer-Verlag, 1985:69-73.
2. Scialli AR. A computerized consultation service in reproductive toxicology: Summary of the first five years. *Obstet Gynecol* 1988; 72:195–199.
3. Scialli AR, Goeringer GC. Perfluorocarbon-based medium for culture of the early chick embryo heart. *In Vitro Cell Devel Biol* 1990; 26:507–510.
4. Scialli AR, Rarick TL. Salmonella sepsis and midtrimester pregnancy loss. *Obstet Gynecol* 1992; 79:820–821.
5. Scialli AR, Jestila KJ, Simon JA. Leuprolide acetate and bone mineral density measured by quantitative digitized radiography. *Fertil Steril* 1993; 59:674–676.
6. Scialli AR, Flynn TJ, Gibson RR. Rat embryo culture to detect nutritional deficiency in women with poor reproductive histories. *Reprod Toxicol* 1993;7:581–587.

7. Scialli AR, DeSesso JM, Goeringer GC. Taxol and embryonic development in the chick. *Teratogenesis Carcinog Mutagen* 1994;14:23–30.
8. DeSesso JM, Scialli AR, Goeringer GC. D-Mannitol, a specific hydroxyl free radical scavenger, reduces the developmental toxicity of hydroxyurea in rabbits. *Teratology* 1994;49:248–59.
9. Scialli AR. Data availability in reproductive and developmental toxicology. *Obstet Gynecol* 1994;83:652–6.
10. Moore JA, Daston GP, Faustman E, Golub MS, Hart WL, Hughes C Jr, Kimmel CA, Lamb JC IV, Schwetz BA, Scialli AR. An evaluative process for assessing human reproductive and developmental toxicity of agents. *Reprod Toxicol* 1995;9:61–95.
11. Stovall TG, Muneyirci-Delale O, Summitt RL Jr, Scialli AR, for the Leuprolide Acetate Study Group. GnRH agonist and iron versus placebo and iron in the anemic patient before surgery for leiomyomas: a randomized controlled trial. *Obstet Gynecol* 1995;86:65–71.
12. Scialli AR, Jestila KJ. Sustained benefits of leuprolide acetate with or without subsequent medroxyprogesterone acetate in the nonsurgical management of leiomyomata uteri. *Fertil Steril* 1995;64:313–320.
13. Scialli AR, DeSesso JM, Rahman A, Husain SR, Goeringer GC. Embryotoxicity of free and liposome-encapsulated taxol in the chick. *Pharmacology* 1995;51:145–151.
14. Scialli AR, Waterhouse TB, DeSesso JM, Rahman A, Goeringer GC. The protective effect of liposome encapsulation on paclitaxel developmental toxicity in the rat. *Teratology* 1997;56:305–10.
15. Chahoud I, Buschmann J, Clark R, Druga A, Falke H, Faqi A, Hansen E, Heinrich–Hirsch B, Hellwig J, Link W, Parkinson M, Paumgarten FJR, Pfeil R, Platzek T, Scialli AR, Seed J, Stahlmann R, Ulbrich B, Wu X, Yasuda M, Younes M, Solecki R. Classification terms in developmental toxicology: Need for harmonisation. Report of the Second Workshop on the Terminology in Developmental Toxicology, Berlin, 27–28 August 1998. *Reprod Toxicol* 1999;13:77–82.
16. Abbara S, Spies JB, Scialli AR, Jha RC, Lage JM, Nikolic B. Transcervical expulsion of a fibroid as a result of uterine artery embolization for leiomyomata. *J Vasc Interv Radiol* 1999;10:409–11.
17. Spies JB, Scialli AR, Jha RC, Imaoka I, Ascher SM, Fraga VM, Barth KH. Initial results from uterine fibroid embolization for symptomatic leiomyomata. *JVIR* 1999;10:1149057.
18. Barnard ND, Scialli AR, Hurlock D, Bertron P. Diet and sex-hormone binding globulin, dysmenorrhea, and premenstrual symptoms. *Obstet Gynecol* 2000;95:245–50.
19. Barnard ND, Scialli AR, Bertron P, Hurlock D, Edmonds k, Talev l. Effectiveness of a low-fat vegetarian diet in altering serum lipids in healthy premenopausal women. *Am J Cardiol* 2000;85:969–972.
20. Scialli AR, Levi AJ. Intermittent leuprolide acetate in the nonsurgical management of women with leiomyomata uteri. *Fertil Steril* 2000;74:540–6.
21. Ghia N, Spong CY, Starbuck VN, Scialli AR, Ghidini A. Magnesium sulfate therapy affects attention and working memory in patients undergoing preterm labor. *Am J Obstet Gynecol* 2000;183:940–4.
22. Barnard N, Scialli AR, Bertron P, Hurlock D, Edmonds K. Acceptability of a therapeutic low-fat vegan diet in premenopausal women. *J Nutr Educ* 2000;32:314–9.
23. DeSesso JM, Jacobson CF, Scialli AR, Goeringer GC. Hydroxylamine moiety of developmental toxicants is associated with early cell death: a structure-activity analysis. *Teratology* 2000;62:346–355.
24. Rainford M, Adair R, Scialli AR, Ghidini A, Spong CY. Amniotic fluid index in the uncomplicated term pregnancy. Prediction of outcome. *J Reprod Med* 2001;46:589–92.

25. Barnard ND, Scialli AR, Bobela S. The Current Use of Estrogens for Growth-Suppressant Therapy in Adolescent Girls. *J Pediatr Adolesc Gynecol* 2002; 15:23–6.
26. Gambone JC, Mittman BS, Munro MG, Scialli AR, Winkel CA, and the Chronic Pelvic Pain/Endometriosis Working Group. Consensus statement for the management of chronic pelvic pain and endometriosis: proceedings of an expert-panel consensus process. *Fertil Steril* 2002;78:761–72.
27. Barnard ND, Scialli AR, Turner-McGrievy GM, Lanou AJ. Acceptability of a very-low-fat, vegan diet compares favorably to a more moderate low-fat diet in a randomized, controlled trial. *J Cardiopulm Rehab* 2004;24:229–35.
28. Turner-McGrievy GM, Barnard ND, Scialli AR, Lanou AJ. Effects of a low-fat, vegan diet and a Step II diet on macro- and micronutrient intakes in overweight, postmenopausal women. *International Journal of Applied and Basic Nutrition Science* 2004;20:738–746.
29. Jahnke GD, Iannucci AR, Scialli AR, Shelby MD. Center for the Evaluation of Risks to Human Reproduction—The first five years. *Birth Defects Research (Part B)* 2005;74:1–8.
30. Barnard N, Scialli AR, Turner-McGrievy G, Lanou AJ, Glass J. The effect of a low-fat, plant-based dietary intervention on body weight, metabolism, and insulin sensitivity. *Am J Med* 2005;118:991–997.
31. Turner-McGrievy GM, Barnard ND, Scialli AR. A 2-year randomized weight loss trial comparing a vegan diet to a more moderate low-fat diet. *Obesity* 2007;15:2276–2281.
32. Scialli AR, Iannucci A, Turim J. Combining perfluoroalkane acid exposure levels for risk assessment. *Regul Toxicol Pharmacol* 2007;49:199–202.
33. Scialli AR. The challenge of reproductive and developmental toxicology under REACH. *Regul Toxicol Pharmacol* 2008;51:244–250.
34. Scialli AR, Bonde JP, Brüske-Hohlfeld I, Culver D, Li Y, Sullivan FM. An overview of male reproductive studies of boron with an emphasis on studies of highly exposed Chinese workers. *Reprod Toxicol* 2010;29:10–24.
35. Fugh-Berman AJ, Scialli AR, Bell AM. Why lunch matters: Assessing physicians' perceptions about industry relationships. *J Cont Ed Health Prof* 2010;30(3):197–204.
36. Daston GP, Chapin RE, Scialli AR, Piersma AH, Carney EW, Rogers JM, Friedman JM. A different approach to validating screening assays for developmental toxicity. *Birth Defects Res (Part B)* 2010;89:526–530.
37. Beyer BK, Chernoff N, Danielsson B, Davis-Bruno K, Harrouk W, Hood RD, Janer G, Liminga UW, Kim J, Rocca M, Rogers J, Scialli AR. ILSI/HESI Maternal Toxicity Workshop Summary: Maternal toxicity and its impact on study design and data interpretation. *Birth Defects Res (Part B)* 2011;92:36–51.
38. Fugh-Berman A, McDonald CP, Bell AM, Bethards EC, Scialli AR, 2011 Promotional tone in reviews of menopausal hormone therapy after the Women's Health Initiative: An analysis of published articles. *PloS Med* 8(3): e1000425. doi:10.1371/journal.pmed.1000425.
39. Carney EW, Ellis AL, Tyl RW, Foster PMD, Scialli AR, Thompson K, Kim J. Critical evaluation of current developmental toxicity testing strategies: A case of babies and their bathwater. *Birth Defects Res (Part B)* 2011; 92(5):395–403.
40. Laufersweiler MC, Gadagbui B, Baskerville-Abraham IM, Maier A, Willis A, Scialli AR, Carr GJ, Felter SP, Blackburn K, Daston G. Correlation of chemical structure with reproductive and developmental toxicity as it relates to the use of the threshold of toxicological concern. *Regul Toxicol Pharmacol*; 2012; 62:160–182.
41. Scialli AR, Guikema AJ. REACH and reproductive and developmental toxicology: Still questions. *Syst Biol Reprod Med* 2012;58(1):63–69.

42. Hyoun SC, Običan SG, Scialli AR. Teratogen update: Methotrexate. *Birth Defects Res (Part A)* 2012; 94(4):187–207.
43. Gupta S, Fugh-Berman A, Scialli AR. Ethics and eplerenone. *J Med Ethics* 2013;39:110–114.
44. Scialli AR, The National Birth Defects Prevention Study: How to communicate data, *Seminars in Fetal & Neonatal Medicine* 2014;19(3):170–176. <http://dx.doi.org/10.1016/j.siny.2013.09.007>
45. Goodman M, Mandel JS, DeSesso JM, Scialli AR. Atrazine and pregnancy outcomes: A systematic review of epidemiologic evidence. *Birth Defects Res (Part B)* 2014; 11(3):215–236.
46. Scialli AR, DeSesso JM, Breckenridge CB. Developmental toxicity studies with atrazine and its major metabolites in rats and rabbits. *Birth Defects Res (Part B)* 2014; 101(3):199–214.
47. DeSesso JM, Scialli AR, White TEK, Breckenridge CB. Multigeneration reproduction and male developmental toxicity studies on atrazine in rats. *Birth Defects Res (Part B)* 2014;101(3):237–253.
48. Daston GP, Beyer BK, Carney EW, Chapin RE, Friedman JM, Piersma AH, Rogers JM, Scialli AR. Exposure-based validation list for developmental toxicity screening assays. *Birth Defects Res (Part B)* 2014;101:423–428.
49. Scialli AR, Watkins DK, Ginevan ME. Agent Orange exposure and 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) in human milk. *Birth Defects Res (Part B)*. 2015; 104:129–139.
50. Jean PA, Plotzke KP, Scialli AR. Chronic toxicity and oncogenicity of decamethylcyclopentasiloxane in the Fischer 344 rat. *Regul Toxicol Pharmacol* 2016; 74:S57–S56.
51. Klaunig JE, Dekant W, Plotzke K, Scialli AR. Biological relevance of decamethylcyclopentasiloxane (D5) induced rat uterine endometrial adenocarcinoma tumorigenesis: Mode of action and relevance to humans. *Regul Toxicol Pharmacol* 2016;74:S44–S56.
52. Scialli AR, Bailey G, Beyer BK, Bøgh IB, Breslin WJ, Chen CL, DeLise AM, Hui JY, Moffat GJ, Stewart J, Thompson KE. Potential seminal transport of pharmaceuticals to the conceptus. *Reprod Toxicol* 2015;58:213–221.
53. Huo S, Scialli AR, McGarvey S, Hill E, Tügettimur B, Hogenmiller A, Hirsch AI, Fugh-Berman A. Treatment of men for “low testosterone”: A systematic review. *PLOS ONE* 2016; DOI:10.1371/journal.pone.0162480.
54. Dekant W, Scialli AR, Plotzke K, Klaunig JE. Biological relevance of effects following chronic administration of octamethylcyclotetrasiloxane (D4) in Fischer 344 rats, *Toxicol Lett* 2017;279S:42–53.
55. Scialli AR, Clark RV, Chapin R. The predictivity of non-clinical male reproductive findings for human effects. *Birth Defects Res* 2017; doi: 10.1002/bdr2.1102
56. Dekant W, Bridges J, Scialli AR. A quantitative weight of evidence assessment of confidence in modes-of-action and their human relevance. *Regul Toxicol Pharmacol* 2017;90:51–71.
57. Scialli AR, Daston G, Chen C, Coder PS, Euling SY, Foreman J, Hoberman AM, Hui J, Knudsen T, Makris SL, Morford L, Piersma AH, Stanislaus D, Thompson KE. Rethinking developmental toxicity testing: Evolution or revolution. *Birth Defects Res* 2018; 110:840–850. DOI: 10.1002/bdr2.1212.
58. DeSesso JM, Scialli AR. Bone development in laboratory mammals used in developmental toxicity studies. *Birth Defects Res* 2018;110:1157–1187. <https://doi.org/10.1002/bdr2.1350>
59. Garey JD, Lusskin SI, Scialli AR. Teratogen update: Amphetamines. *Birth Defects Res* 2020;112:1161–1182. doi: 10.1002/bdr2.1774
60. Scialli AR, Saavedra K, Fugh-Berman A. The benefits and risks of adherence to medical therapy. *JoSPI (Journal of Scientific Practice and Integrity)*. 2021; <https://doi.org/10.35122/001c.21386>

61. DeSesso J, Harris S, Scialli A, Williams A. Systematic assessment of quaternary ammonium compounds (QUATS) for the potential to elicit developmental and reproductive effects. *Birth Defects Res* 2021;113:1484–1511 DOI: 10.1002/bdr2.1963
62. Robinson C, Obery J, van Boxmeer J, Albano J, Tilson H, Scialli A, Vanchiere JA, Ides E, Sawlwin D, Hohenboken M, Edelman J. A prospective cohort study on pregnancy outcomes of persons immunized with a seasonal quadrivalent inactivated influenza vaccine during pregnancy. *Vaccines* 2022;10:1577. <https://doi.org/10.3390/vaccines10101577>.
63. Robinson C, Van Boxmeer J, Tilson H, Scialli A, Vanchiere JA, Ides E, Sawlwin D, Molrine D, Hohenboken M, Edelman J, Albano J. Outcomes in pregnant persons immunized with a cell-based quadrivalent inactivated influenza vaccine: A prospective observational cohort study. *Vaccines* 2022;10:1600. <https://doi.org/10.3390/vaccines10101600>
64. Wyszynski SD, Bhattacharya M, Martinez-Perez O, Scialli AR, Tassinari M, Bar-Zeev N, Renz C, Hernández-Díaz S. The COVID-19 Vaccines International Pregnancy Exposure Registry (C-VIPER): Protocol and methodological considerations. *Drug Safety* 2023; <https://doi.org/10.21007/s40264-022-01271-3>.

ABSTRACTS

1. Flynn TJ, Scialli AR, Gibson RR. Cultured organogenesis-staged rat embryos as biomarkers for nutritional factors in human reproductive failure. *Teratology* 1991;43:468.
2. Flynn TJ, Scialli AR, Gibson RR. The specificity of neural tube defects (NTDs) in cultured rat embryos as biomarkers for nutritional factors in human reproductive failure. *Teratology* 1992; 45:492–493.
3. Scialli AR, DeSesso JM, Goeringer GC. Taxol toxicity in the developing chick. *Teratology* 1992; 45:478.
4. Scialli AR. Adverse effects of the FDA use in pregnancy ratings. *Teratology* 1992; 45:497–498.
5. DeSesso JM, Scialli AR, Goeringer GC. Hydroxyl free radicals cause early hydroxyurea cell death. *Teratology* 1993;47:397.
6. Scialli AR. The state of the literature base in reproductive and developmental toxicology. *Teratology* 1993;47:403.
7. DeSesso JM, Scialli AR, Goeringer GC. Azo-bis-(cyclohexanecarbonitrile), a free radical initiator, causes early cellular changes in rabbit embryos. *Teratology* 1993;47:417.
8. Scialli AR. Toxicokinetics in clinical practice. *Teratology* 1993;48:18A.
9. Scialli AR. Use of drug label information by practicing obstetricians. *Teratology* 1994;49:367.
10. Goeringer GC, Scialli AR, DeSesso JM. Developmental toxicity in rabbits induced by aminopterin is decreased by 1-(p-tosyl)-3,4,4-trimethylimidazoline (TTI), a functional analog for tetrahydrofolate-mediated one-carbon transfer. *Teratology* 1994;49:368.
11. DeSesso JM, Scialli AR, Goeringer GC. Developmental toxicity of 5-fluorouracil and amelioration by folate analogs in the New Zealand white rabbit embryo. *Teratology* 1994;49:369.
12. Scialli AR, DeSesso JM, Husain SR, Rahman A, Goeringer GC. Taxol and liposome toxicity in the embryonic chick. *Teratology* 1994;49:404–5.
13. DeSesso JM, Harris SB, Scialli AR, Goeringer GC. New observations on the developmental toxicity and histopathogenesis of thalidomide in the New Zealand white rabbit. *Teratology* 1995;51:167.
14. Scialli AR, DeSesso JM, Rahman A, Husain SR, Goeringer GC. Dose-response comparison of free and liposome-encapsulated taxol. *Teratology* 1995;51:169.

15. DeSesso JM, Scialli AR, Goeringer GC. Observations on the histopathogenesis of 5-fluorouracil developmental toxicity in New Zealand white rabbits and its amelioration by TTI, a functional analog of one carbon metabolism. *Teratology* 1995;51:172.
16. Goeringer GC, DeSesso JM, Rahman A, Scialli AR. The effect of liposome encapsulation on taxol developmental toxicity in the rat. *Teratology* 1996;53:100.
17. Goeringer GC, Scialli AR, DeSesso JM, Crisp T. Effects of methotrexate on progesterone production by cultured rat granulosa cells and the potential ameliorative effects of leucovorin. *Teratology* 1996;53:110.
18. Scialli AR. The use of experimental data in the design and interpretation of human studies. *Teratology* 1996;53:17A.
19. DeSesso JM, Jacobson CF, Scialli AR, Farr CH, Holson JF. Inorganic arsenic is not likely to be a developmental toxicant at environmentally relevant exposures. *Teratology* 1998;57:216–7.
20. Scialli AR. Proposed changes to the pregnancy section of US drug labels. *Teratology* 1998;58:18A.
21. Scialli AR. Labeling medications for use in pregnancy. *Can J Clin Pharmacol* 1998;5:187–8.
22. Winkel CA, Scialli AR. Safety of medical and surgical management of chronic pelvic pain and endometriosis. *Obstet Gynecol* 2001;97(Suppl):28S.
23. Scialli AR. Monitoring the effectiveness of pregnancy prevention programs. *Teratology* 2001;63:270.
24. Scialli AR. Salmonella sepsis and second trimester pregnancy loss. *Teratology* 2001;63:271.

BOOKS WRITTEN OR EDITED

1. Fabro S, Scialli AR, editors. *Drug and Chemical Action in Pregnancy*. New York: Marcel Dekker; 1986.
2. Berger EJ, Tardiff RG, Scialli AR, Zenick H, editors. *Sperm measures and reproductive success*. New York, NY, Alan R. Liss, Inc., 1989.
3. Scialli AR. *Clinical Guide to Reproductive and Developmental Toxicology*. Boca Raton FL: CRC Press; 1992.
4. Scialli AR, Clegg E, editors. *Reversibility in Male Reproductive Toxicology*. Boca Raton FL: CRC Press; 1992.
5. Scialli AR, Zinaman M. *Clinical Reproductive Toxicology and Infertility*. New York: McGraw Hill; 1992.
6. Scialli AR. *Pregnancy and the Workplace*. (Seminars in Perinatology, volume 17, number 1, pp 1–58). Philadelphia PA: WB Saunders Company; 1993.
7. Scialli AR, Lione A, Padgett GKB. *Reproductive Effects of Chemical, Physical, and Biologic Agents REPROTOX®*. Baltimore MD: Johns Hopkins University Press; 1995.
8. Scialli AR, Editor-in-Chief. *The National Women's Resource Center Book of Women's Health*. New York: William Morrow; 1999.

REVIEWS AND BOOK CHAPTERS WRITTEN

1. Scialli AR. Obstetrical forceps. *Lawyers Med J* 1979;8:63–73.
2. Scialli AR. Cesarean section. *Lawyers Med J* 1980;9:111–121.
3. Scialli AR, Fabro S. Evaluation of fetal growth and development in the high risk obstetrical patient. In Kimmel CA and Buelke-Sam J (eds): *Developmental Toxicology* New York: Raven Press, 1981; pp 121–143.

4. Scialli AR, Fabro S. Detection and intrauterine management of the fetus at high risk. In Scanlon JW and Dazé AM, eds. *Code Pink: A Practical System for Neonatal/Perinatal Resuscitation* Baltimore:University Press, 1981; pp 21–26.
5. Fabro S, Brown NA, Scialli AR. Marihuana in pregnancy. *Reprod Toxicol med lett* 1983;2(1):1–3.
6. Fabro S, Brown NA, Scialli AR. Neural tube defects and vitamin supplementation. *Reprod Toxicol med lett* 1983;2(1):3–4.
7. Fabro S, Brown NA, Scialli AR. Genetic predisposition to chemically induced birth defects. *Reprod Toxicol med lett* 1983;2(2):5–7.
8. Fabro S, Brown NA, Scialli AR. Valproic acid and birth defects. *Reprod Toxicol med lett* 1983;2(3):9–11.
9. Fabro S, Brown NA, Scialli AR. Lindane. *Reprod Toxicol med lett* 1983;2(3):11–12.
10. Scialli AR. Vaginal discharge: what's normal and what's not? *Mod Med* 1983;51:128–134.
11. Scialli AR. Safe medications during pregnancy. *Contemp OB/GYN* 1983; 22(5):40–66.
12. Fabro S, Brown NA, Scialli AR. Hyperthermia and the developing central nervous system. *Reprod Toxicol med lett* 1983;2(4):13–15.
13. Fabro S, Brown NA, Scialli AR. Adverse effects of lithium therapy during pregnancy. *Reprod Toxicol med lett* 1983;2(4):15–16.
14. Fabro S, Brown NA, Scialli AR. Is there a fetal solvent syndrome? *Reprod Toxicol med lett* 1983;2(5):17–19.
15. Fabro S, Brown NA, Scialli AR. Sperm tests in toxicology. *Reprod Toxicol med lett* 1983;2(6):21–24.
16. Scialli AR, Fabro S. Fertility as a measurement in reproductive toxicology. *Teratogen Carcinogen Mutagen* 1984;4(1):59–66.
17. Fabro S, Brown NA, Scialli AR. Video display terminals and human reproduction. *Reprod Toxicol med lett* 1984;3(1):1–3.
18. Fabro S, Brown NA, Scialli AR. Agent orange and dioxin. *Reprod Toxicol med lett* 1984;3(2):5–7.
19. Fabro S, Brown NA, Scialli AR. Is AIDS a reproductive hazard? *Reprod Toxicol med lett* 1984;3(3):9–12.
20. Scialli AR, Fabro S. What drugs are safe during nursing? *Contemp OB/GYN* 1984;23(6): 211–222.
21. Fabro S, Brown NA, Scialli AR. Paternally-induced adverse pregnancy effects. *Reprod Toxicol ed lett* 1984;3(4):13–16.
22. Fabro S, Brown NA, Scialli AR. Ultrasound in industry and medicine. *Reprod Toxicol med lett* 1984;3(5):17–20.
23. Fabro S, Brown NA, Scialli AR. Alternative tests for teratogens. *Reprod Toxicol med lett* 1984;3(6):21–24.
24. Fabro S, Brown NA, Scialli AR. Drugs and male sexual function. *Reprod Toxicol med lett* 1985;4(1):1–4.
25. Fabro S, Scialli AR. The role of the obstetrician in the prevention and treatment of birth defects. In: Kalter H, ed. *Issues and Reviews in Teratology*, vol.3. New York: Plenum Publishing Corp 1985; p 1–20.
26. Fabro S, Brown NA, Scialli AR. Insecticides. *Reprod Toxicol med lett* 1985; 4(2):5–10.
27. Fabro S, Brown NA, Scialli AR. Ovarian function and cancer chemotherapy. *Reprod Toxicol med lett* 1985;4(3):11–14.
28. Scialli AR. Adverse sexual effects of liver disease in women. *Med Aspects Hum Sexuality* 1985; 9:70–76.

29. Fabro S, Brown NA, Scialli AR. Reproductive toxicity of the glycol ethers. *Reprod Toxicol med lett* 1985;4(4):15–18.
30. Fabro S, Brown NA, Scialli AR. Do fertility drugs adversely affect reproduction? *Reprod Toxicol med lett* 1985;4(5):19–22.
31. Fabro S, Scialli AR. The perinatal environment. In: Colon AR, Ziai M (eds). *Pediatric Pathophysiology*. Boston: Little, Brown; 1985:129–134.
32. Fabro S, Brown NA, Scialli AR. Cryopreservation of human gametes and embryos. *Reprod Toxicol med lett* 1985;4(6):23–26.
33. Scialli AR, Fabro S. The toxicokinetics of anesthetics and analgesics during labor and delivery. In Scanlon JW, ed. *Perinatal Anesthesia*. Boston: Blackwell Scientific Publications; 1985:1–26.
34. Fabro S, Brown NA, Scialli AR. Pregnant women at work. *Reprod Toxicol med lett* 1986;5(1):1–4.
35. Fabro S, Scialli AR. Risk assessment for teratogenesis due to chorionic villus sampling. In Brambati B, Simoni G, Fabro S, eds. *Chorionic Villus Sampling: Fetal Diagnosis of Genetic Diseases in the First Trimester*. New York: Marcel Dekker; 1986:205–211.
36. Scialli AR. The reproductive toxicity of ovulation induction. *Fertil Steril* 1986;45(3):315–323.
37. Brown NA, Scialli AR. The teratogenicity of retinoids. *Reprod Toxicol med lett* 1986;5(2):5–8.
38. Brown NA, Scialli AR. The developmental toxicity of cadmium. *Reprod Toxicol med lett* 1986;5(3):9–12.
39. Scialli AR, Fabro S. The stages of reproduction. In Fabro S, Scialli AR, eds. *Drug and Chemical Action in Pregnancy*. New York: Marcel Dekker; 1986:191–204.
40. Scialli AR. Sources of information on drugs in pregnancy. In Fabro S, Scialli AR, eds. *Drug and Chemical Action in Pregnancy*. New York: Marcel Dekker; 1986:465–475.
41. Brown NA, Scialli AR. Vaginal spermicides. *Reprod Toxicol med lett* 1986;5(4):13–16.
42. Brown NA, Scialli AR. Radionuclides in pregnancy. *Reprod Toxicol med lett* 1986;5(5):17–22.
43. Fabro S, Scialli AR. Drug abuse and pregnancy. *ACOG Technical Bulletin*, Number 96, September, 1986.
44. Brown NA, Scialli AR. Phthalic acid ester plasticizers. *Reprod Toxicol med lett* 1986;5(6):23–28.
45. Brown NA, Scialli AR. Congenital "brain damage." *Reprod Toxicol med lett* 1987;6(1):1–6.
46. Brown NA, Scialli AR. Ethylene oxide). *Reprod Toxicol med lett* 1987;6(2):7–12.
47. Scialli AR, Fabro S. Nausea and vomiting. In Queenan JT, Hobbins JC, eds. *Protocols for High Risk Pregnancy*, Oradell, NJ: Medical Economics Books; 1987:259–263.
48. Brown NA, Scialli AR. Update on caffeine, ed. *Reprod Toxicol med lett* 1987;6(3):13–18.
49. Scialli AR. Anticonvulsants in pregnancy. In Niebyl JR, ed. *Drug Use In Pregnancy*. Philadelphia, PA: Lea & Febiger; 1988:45–54.
50. Scialli AR. Is stress a developmental toxin? *Reprod Toxicol* 1988;1(3):163–171.
51. Scialli AR. Developmental effects of progesterone and its derivatives. *Reprod Toxicol* 1988; 2(1):3–11.
52. Scialli AR. The reproductive toxicity of ovulation induction. In Wallach EE, Kempers RD, eds. *Modern Trends in Infertility and Conception Control*. Chicago, IL: Year Book Medical Publishers; 1988:81–89.
53. Scialli AR. Environmental toxicants and adverse pregnancy outcome. *Contemp OB/GYN* 1989;34:120–129.
54. Scialli AR. Who should paint the nursery? *Reprod Toxicol* 1989;3(3):159–164.
55. Scialli AR, Lione A. The reproductive effects of medications for asthma and allergy. In Schatz M, Zieger RS, eds. *Asthma and Allergy in Pregnancy and Early Infancy*. New York: Marcel Dekker, Inc.; 1993:127–186.

56. Scialli AR. Advances in reproductive toxicology. *Curr Opin Obstet Gynecol* 1992;4:359–364.
57. Scialli AR. Assessing reproductive potential in women. In Scialli AR, Zinaman M, eds. *Clinical Reproductive Toxicology and Infertility*. New York: McGraw Hill; 1992:295–306.
58. Scialli AR. Fetal protection policies in the United States. *Semin Perinatol* 1993;17:50–57.
59. Scialli AR, Lione A. Environmental toxicants and adverse pregnancy outcome. In Queenan JT, ed. *Management of High-Risk Pregnancy*. Boston: Blackwell Scientific Publishers; 1994:25–30.
60. Scialli AR. Clinical care: pre- and postconception. In Kimmel CA, Buelke-Sam J, eds. *Developmental Toxicology*, 2nd edition. New York: Raven Press; 1994:307–331.
61. Robert E, Scialli AR. Topical medications during pregnancy. *Reprod Toxicol* 1994;8:197–202.
62. Scialli AR. Reproductive toxicology. In Willett GD., ed. *Laboratory Testing in Ob/Gyn*. Boston: Blackwell Scientific Publications; 1994:47–52.
63. Scialli AR, Lemasters GK. Epidemiologic aspects of reproductive toxicology. In Witorsch RJ, ed. *Reproductive Toxicology*, 2nd edition. New York: Raven Press; 1995:241–263.
64. Scialli AR. Teratology. In Craighead JE, ed. *Pathology of environmental and occupational disease*. Philadelphia PA: Mosby-Year Book; 1995:573–588.
65. Lione A, Scialli AR. The developmental toxicity of indomethacin and sulindac. *Reprod Toxicol*. 1995;9:7–20.
66. Moore JA and an IEHR Expert Scientific Committee. An assessment of lithium using the IEHR evaluative process for assessing human developmental and reproductive toxicity of agents. *Reprod Toxicol*. 1995;9:175–210.
67. Scialli AR. Toxicology. In Queenan JT (ed). *Protocols for High-Risk Pregnancy*, 3rd edition. Cambridge MA: Blackwell Science Inc; 1996:9–13.
68. Scialli AR. Nausea and Vomiting. In Queenan JT (ed). *Protocols for High-Risk Pregnancy*, 3rd edition. Cambridge MA: Blackwell Science Inc; 1996:452–6.
69. Lione A, Scialli AR. The developmental toxicity of the H₁ histamine antagonists. *Reprod Toxicol*. 1996;10:247–55.
70. Scialli AR, Lione A. Pregnancy effects of specific medications used to treat asthma and immunological diseases. In Schatz M, Zieger RS, Claman HN, eds. *Asthma and Immunological Diseases in Pregnancy and Early Infancy*. New York: Marcel Dekker, Inc.; 1997:157–227.
71. Scialli AR, Swan SH, Amler RW, Baird DD, Eskenazi B, Gist G, Hatch MC, Kesner JS, Lemasters GK, Marcus M, Paul ME, Schulte P, Taylor Z, Wilcox AJ, Zahniser C. Assessment of reproductive disorders and birth defects in communities near hazardous chemical sites. II. Female reproductive disorders. *Reprod Toxicol*. 1997;11:231–42.
72. Scialli AR. Identifying teratogens: the tyranny of lists. *Reprod Toxicol* 1997;11:555–9.
73. Scialli AR, Colie CF. Female reproductive toxicology. In Massaro EJ, ed. *Handbook of human toxicology*. Boca Raton FL: CRC Press; 1997:981–1006.
74. Lione A, Scialli AR. Perinatal exposure to measles virus and the risk of inflammatory bowel disease. *Reprod Toxicol* 1997;11:647–52.
75. DeSesso JM, Jacobson CF, Scialli AR, Farr CH, Holson JF. An assessment on the developmental toxicity of inorganic arsenic. *Reprod Toxicol* 1998;12:385–433.
76. Scialli AR, Lione A. Variability in human response to reproductive and developmental toxicity. In Neumann DA, Kimmel CA, eds. *Human variability in response to chemical exposures. Measures, modeling, and risk assessment*. Boca Raton FL: CRC Press; 1998:87–137.
77. Scialli AR. Alternatives to hysterectomy for benign conditions. *Int J Fertil Womens Med* 1998;43:186–91.
78. Schardein JL, Scialli AR. The legislation of toxicologic safety factors: the Food Quality Protection Act with chlorpyrifos as a test case. *Reprod Toxicol* 1999;13:1–14.
79. Scialli AR. Clinical diagnosis in the evaluation of chronic pelvic pain. *Am J Managed Care*

- 1999;5(Suppl):S327–36.
80. Scialli AR, Lione A. Environmental agents and reproductive risk. In Queenan JT, Management of High Risk Pregnancy, Fourth edition. Malden MA: Blackwell Science; 1999:33–42.
 81. DeSesso JM, Scialli AR, Holson JF. Apparent lability of neural tube closure in laboratory animals and humans. *Am J Med Genet* 1999;87:143–62.
 82. Scialli AR for the Pelvic Pain Expert Working Group. Evaluating Chronic Pelvic Pain. A Consensus Recommendation. *J Reprod Med* 1999;44:945–52.
 83. Scialli AR. Teratogenic exposures. In *Précis Obstetrics*, second edition. Washington DC: American College of Obstetricians and Gynecologists 2000:27–32.
 84. Winkel CA, Scialli AR. Medical and surgical therapies for pain associated with endometriosis. *J Women's Health Gend Based Med* 2001;10:137–162.
 85. Scialli AR. Tampons, dioxins, and endometriosis. *Reprod Toxicol* 2001;15:231–238.
 86. Scialli AR, Buelke-Sam JL, Chambers CD, Friedman JM, Kimmel CA, Polifka JE, Tassinari MS. Communicating risks during pregnancy: a workshop on the use of data from animal developmental toxicity studies in pregnancy labels for drugs. *Birth Defects Research (Part A)*. 2004;70:7–12.
 87. Scialli AR. Update on chronic pelvic pain. New insight on an enduring enigma. *OBG Management* 2004;16:49–54.
 88. Carney EW, Scialli AR, Watson RE, DeSesso JM. Mechanisms regulating toxicant disposition to the embryo during early pregnancy: an interspecies comparison. *Birth Defects Research (Part C)*. 2004;72:345–360.
 89. Scialli AR. Maybe it's nerves: Common pathway may explain pain. *OBG Management* 2005;17:40–51.
 90. Klemmt L, Scialli AR. The transport of chemicals in semen. *Birth Defects Res (Part B)* 2005;74:119–131.
 91. Fugh-Berman A, Scialli AR. Gynecologists and estrogen. An affair of the heart. *Persept Biol Med* 2006;1:115–130.
 92. Scialli AR. Chronic pelvic pain. *OBG Management* 2006;18:45–48.
 93. Običan SG, Finnell RH, Mills JL, Shaw GM, Scialli AR. Folic acid in early pregnancy. A public health success story. *FASEB J* 2010; 24:4167–4174.
 94. Scialli AR, Ang R, Breitmeyer J, Royal MA. A review of the literature on the effects of acetaminophen on pregnancy outcome. *Reprod Toxicol* 2010; 495–507.
 95. Scialli AR, Ang R, Breitmeyer J, Royal MA. Childhood asthma and use during pregnancy of acetaminophen. A critical review. *Reprod Toxicol* 2010; 508–519.
 96. Kim J, Scialli AR. Thalidomide: The tragedy of birth defects and the effective treatment of disease *Toxicological Sciences* 2011; 122(1):1–6. doi: 10.1093/toxsci/kfr088
 97. Običan SG, Scialli AR. Teratogenic exposures. *Am J Med Genet (Part C)* 2011;157(3):150–169.
 98. Scialli AR. Developmental and reproductive toxicity evaluation under the European Union REACH regulations. In Hood RD, ed., *Developmental and Reproductive Toxicology*, Third Ed. New York: Informa Healthcare; 2012:730–735.
 99. Običan SG, Jahnke GD, Soldin OP, Scialli AR. Teratology Society Public Affairs Committee position paper: Iodine deficiency in pregnancy. *Birth Defects Res (Part A)* 2012; 94(9):677–682.
 100. Chambers C, Scialli AR. Teratogenesis and environmental exposure. In Creasy RK, Resnik R, Iams JD, Lockwood CJ, Moore TR, Greene MF. *Creasy & Resnik's Maternal-Fetal Medicine* 7th ed. Philadelphia: Elsevier Saunders; 2014: 465–472.
 101. Fugh-Berman A, Scialli AR. Testosterone and sexual function. *Curr Op Urol* 2017;27(6):516–518.
 102. Običan SG, Scialli AR. Teratology. In Pranav PP, Oepkes D, Sebire NJ, Wapner RJ. *Fetal*

EDITORIALS

1. Scialli AR. Editor's introduction. *Reprod Toxicol* 1987;1(1):1–2.
2. Scialli AR. Editorial. *Reprod Toxicol* 1987/88;1(2):91–92.
3. Scialli AR. Old teratogens: Are they still important? *Reprod Toxicol* 1987/88;1(4):241.
4. Scialli AR. How safe is safe for hormones? *Reprod Toxicol* 1988;2(1):1.
5. Scialli AR. Clinical tests and statistics. *Reprod Toxicol* 1988;4(2):81–82.
6. Scialli AR. Reproductive hazards of the workplace. *Reprod Toxicol* 1988;2(3/4):151.
7. Scialli AR. Proposition 65. *Reprod Toxicol* 1989;3(1):1.
8. Scialli AR. Bendectin, science, and the law. *Reprod Toxicol* 1989;3(3):157–158.
9. Scialli AR. Sexism in toxicology. *Reprod Toxicol* 1989;3(4):219–220.
10. Scialli AR. Making information work. *Reprod Toxicol* 1990;4(4):249–250.
11. Scialli AR. Congratulations to us. *Reprod Toxicol* 1991;5(1):1–2.
12. Scialli AR. Convulsions and anticonvulsants—how far have we come? *Reprod Toxicol* 1991;5(4):279–280.
13. Scialli AR. Bias in news reporting. *Reprod Toxicol* 1992;6(2):113–114.
14. Scialli AR. Structured abstracts. *Reprod Toxicol* 1992;6(3):203–204.
15. Scialli AR. Confidence and the null hypothesis. *Reprod Toxicol* 1992;6(5):383–384.
16. Scialli AR. Inadequate response from the FDA. *Reprod Toxicol* 1992;6(6):465–466.
17. Scialli AR. Serving a larger community of scientists. *Reprod Toxicol* 1993;7(1):1.
18. Scialli AR. Arbitrary limits in scientific journals. *Reprod Toxicol* 1993;7(2):93–94.
19. Scialli AR. Paternally mediated effects and political correctness. *Reprod Toxicol* 1993;7(3):189–190.
20. Scialli AR. Risk assessment uncertainties. *Reprod Toxicol* 1993;7(4):295–296.
21. Scialli AR. Animal studies and human risk. *Reprod Toxicol* 1993;7(6):533–534.
22. Scialli AR. Imagine having to read the Physicians' Desk Reference. *Reprod Toxicol* 1994;8(5):381–382.
23. Scialli AR. Drugs and lactation—another failure of product labeling. *Reprod Toxicol* 1996;10:91–2.
24. Scialli AR. Is hysterectomy obsolete? *Am Fam Physician* 2000;61:3559–60.
25. Scialli AR. New directions. *Reprod Toxicol* 2003;17:363.
26. Scialli AR. Paroxetine exposure during pregnancy and cardiac malformations. Commentary. *Birth Defects Res (Part A)* 2010;29:10–24.
27. Scialli AR. Teratogen? *Birth Defects Res* 2020;112(15):1103–1104. DOI: 10.1002/bdr2.1746

LETTERS TO THE EDITOR

1. Scialli AR. Maternal hyperglycemia and intrauterine tachypnea (letter). *Obstet Gynecol* 1983;61:399.
2. Scialli AR. Intrapartum management of twin gestation (letter). *Obstet Gynecol* 1986;67(1):149.
3. Scialli AR. The cascade effect in the clinical care of patients (letter). *N Engl J Med* 1986;315(5):320.
4. Scialli AR. Perinatal antecedents of cerebral palsy (letter). *Obstet Gynecol* 1989;73(1):138–139.
5. Scialli AR. The relationship of one abnormal glucose tolerance test value and pregnancy complications (letter). *Obstet Gynecol* 1989;74(1):134–135.

6. Scialli AR, Lione A. Teratogenic effects of carbamazepine (letter). *N Engl J Med* 1989;321(21):1480.
7. Scialli AR, Lione A, Jones KL. Solvents and color vision. *Teratology* 2002;65:151.
8. Scialli A, Fugh-Berman A. Letter to the editor. *Maturitas* 2003;45:147.
9. Scialli AR. Clues as to the molecular basis for uterine fibroids. *Fertil Steril* 2004;81:1432.
10. Scialli AR, Gibb H. Trichloroethylene exposure and congenital heart defects. *Birth Defects Res Part A Clin Mol Teratol* 2005;73:255.
11. Gibb H, Scialli AR. Statin drugs and congenital anomalies. *Am J Med Gen* 2005;135A:230–231.
12. Fugh-Berman A, Lione A, Scialli AR. Do no harm: Avoidance of herbal medicines during pregnancy. *Obstet Gynecol* 2005;106:409–410.
13. Scialli AR, Lione A. Ace inhibitors and major congenital malformations. *N Engl J Med* 2006;355.
14. Scialli AR. Perfluoroalkane acids and fetal growth. *Environ Health Perspect* 2008;116:A238.
15. Scialli AR, Iannucci AR. Whole embryo culture and the identification of “teratogenicity.” *Reprod Toxicol* 2010;29: 247–248.
16. Scialli AR. Reproductive effects of the parabens. *Reprod Toxicol* 2011;32:138–140.
17. Scialli AR. Serotonin reuptake inhibitors and heart defects. *Reprod Toxicol* 2016;63:140–141.
18. Boffetta P, Scialli AR. TCDD and birth weight of Vietnamese infants. *Environ Sci Pollution Res* 2016;23:17857–17858.
19. Damkier P, Scialli AR, Lusskin SI. Acetaminophen in pregnancy and adverse childhood neurodevelopment. *JAMA Pediatrics* 2017; doi:10.1001/jamapediatrics.2016.5049
20. Bridges J, Dekant W, Klaunig JE, Scialli AR. Comments on the safety assessment of decamethylcyclopentasiloxane (D5). *Regul Toxicol Pharmacol* 2017;89:305–306.
21. Scialli AR. Induction of labor at term. *Am J Obstet Gynecol* 2019; 221(1):79. <https://doi.org/10.1016/j.ajog.2019.04.006>.
22. Wise LD, Scialli AR. Ivermectin for COVID-19: Concerns during pregnancy. *Reprod Toxicol* 2022;107:43.
23. Alwan S, Conover EA, Harris-Sugaribay L, Lamm SH, Lavigne SV, Lusskin SI, Obican SG, Romeo AN, Scialli AR, Wisner KL. Paracetamol use in pregnancy – caution over causal inference from available data. *Nat Rev Endocrinol* 2021 <https://doi.org/10.1038/s41574-021-00606-x>
24. Scialli AR. Decamethylcyclopentasiloxane (D5) should not be considered toxic to reproduction. *Toxics*. 2023 preprint DOI: 10.20944/preprints202307.1454.v1
25. Scialli AR. Decamethylcyclopentasiloxane developmental neurotoxicity testing. *Reprod Toxicol* 2024;123:108521 <https://doi.org/10.1016/j.reprotox.2023.108521>