

# EXHIBIT O

UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

COMMONWEALTH OF  
PENNSYLVANIA,

Plaintiff,

v.

No. 2:17-cv-04540-WB

DONALD J. TRUMP, *et al.*,

Defendants.

**DECLARATION OF SAMANTHA F. BUTTS, M.D., MSCE<sup>1</sup>**

I, Samantha F. Butts, hereby submit this declaration in support of the Motion for Preliminary Injunction filed by the Commonwealth of Pennsylvania in the above-captioned matter and, in support thereof, I state as follows:

**I. My Background and Experience**

1. I am a doctor, teacher, and clinical researcher in the area of women's reproductive health. Of the time I spend working, I spend approximately 15% on education and administration, 10%-15% on clinical research, and 70%-75% on patient care.

***A. My Education, Licensure and Board Certifications***

2. I earned a Bachelor of Arts degree, *cum laude*, from Harvard University, in 1994, and a Medical Degree from the Harvard University School of Medicine, in 1998.

3. I completed both my residency in Obstetrics and Gynecology (1998-2002) and a Fellowship in Reproductive Endocrinology and Infertility (2002-2005) at the Hospital of the University of Pennsylvania.

4. After that, I earned a Masters of Science in Epidemiology (MSCE) from the

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<sup>1</sup> I attach a true and correct copy of my curriculum vitae hereto as Exhibit A.

University of Pennsylvania School of Medicine in 2006.

5. I have been licensed to practice medicine in Pennsylvania since 2001.

6. I have also been certified by the American Board of Obstetrics and Gynecology with a specialty in Obstetrics and Gynecology since 2006 and subspecialty in Reproductive Endocrinology & Infertility since 2009.

***B. My Teaching, Research and Additional Qualifications***

7. I have held a faculty position at the University of Pennsylvania School of Medicine since 2005.

8. I started as an Assistant Professor and, since 2014, I have served as an Associate Professor of Obstetrics and Gynecology, in the Division of Reproductive Endocrinology and Infertility (REI). From 2014-2016, I was honored to serve as the Ombudsman for the Students at the University of Pennsylvania School of Medicine, Perelman School of Medicine.

9. As an Associate Professor of Obstetrics and Gynecology, I am actively involved in the clinical training of medical students, residents and fellows. I participate in didactic education programs and mentor resident-driven clinical research projects.

10. I also developed the first comprehensive reproductive endocrinology and infertility curriculum for trainees at the Hospital of the University of Pennsylvania and supervise resident training in reproductive endocrinology and infertility. In 2011, my achievements in resident education were recognized with a National Faculty Teaching Award from the American College of Obstetricians and Gynecologists and the Council on Resident Education in Obstetrics and Gynecology.

11. I also spend a meaningful amount of my time acting as a clinical researcher.

12. In this capacity, I serve and have served as an investigator and principal

investigator on a number of studies and projects regarding women's healthcare, many of which have been fully funded by grants. For example, I was one of the first people to receive a National Institute of Health training grant as part of the NIH's National Training Program in Reproduction (NIH T32 grant), and I was the inaugural recipient of the New Investigator Award from the Center of Excellence in Environmental Toxicology at the University of Pennsylvania.

13. I have published more than 100 scholarly articles, abstracts, research publications, reviews, book chapters, and committee reports related to women's reproductive healthcare. Among these, I have researched and written peer-reviewed articles about treating hormonal disorders, such as polycystic ovary syndrome, using contraceptives as a first-line medication. *See, e.g., Polycystic Ovary Syndrome: How Best to Manage?*, *Consultant*, 46:745-749, (2006) and *Abnormal Uterine Bleeding*, *NMS Series for Independent Study: Obstetrics and Gynecology*, Chap. 23, (6<sup>th</sup>. Ed. 2008).

14. I am often engaged to consult and collaborate with academic and private institutions. Recently, for example, as a member of the American College of Obstetricians and Gynecologists' Committee on Gynecologic Practice (ACOG Committee), I was asked to develop an opinion regarding treatment of Primary Ovarian Insufficiency. In connection with my work on this issue, the ACOG Committee published an opinion in May of 2017 recommending that contraceptives be considered among the options to provide as hormone replacement therapy to treat Primary Ovarian Insufficiency. *See Opinion 698, Hormone Therapy for Primary Ovarian Insufficiency*, *Obstetrics and Gynecology*, 129(5): 963-964 (May 2017).

15. In connection with my work, I have lectured throughout the country, by invitation, about reproductive health. For example, at the 2016 Women in Statistics Conference in Charlotte, North Carolina, I delivered a presentation called "Reproductive Decision Making

and Your Career: Embracing Biology, Debunking Myths, and Gaining Control.”

16. I have also organized and moderated multiple scientific meetings throughout my career, including annual meetings of the American Society of Reproductive Medicine.

17. I have held various professional appointments, as well. Among these, I have been a Member of the Center for Research on Reproduction and Women’s Health since 2005; an Associate Scholar for the Center for Clinical Epidemiology and Biostatistics at the University of Pennsylvania since 2006; and a Member of the Center for Excellence in Environmental Toxicology, Endocrine Disruptors Core, since 2008.

18. I also maintain memberships in a number of professional, academic, and scientific societies, both nationally and internationally, including the American Society for Reproductive Medicine (since 2002), the Society for Reproductive Endocrinology and Infertility (since 2002), the American College of Obstetricians and Gynecologists (since 1998) and the Endocrine Society (since 2012). I have received many professional accolades, awards, and honor society memberships throughout my career.

### ***C. My Medical Practice***

19. In addition to my academic work, I maintain an active medical practice and, in 2017, was listed as one of *Philadelphia Magazine*’s “Top Doctors”.

20. Since 2005, I have served as an Attending Physician in the Department of Obstetrics and Gynecology, and also in the Reproductive Surgical Facility at the Hospital of the University of Pennsylvania.

21. Last year I saw and treated approximately 1,500 to 2,000 patients.

22. Some of my patients travel thousands of miles for the specialty medical treatment I can provide at Penn Medicine.

23. But in many ways, my medical practice reflects the reality that the Hospital of the University of Pennsylvania is also the community hospital of West Philadelphia.

24. In addition to specialty patients and residents of West Philadelphia, I also treat many members of the academic community at the University of Pennsylvania.

25. My clinical expertise includes reproductive endocrinology, with a focus on managing hormonal disorders such as polycystic ovary syndrome, primary ovarian insufficiency/premature ovarian failure, amenorrhea, dysmenorrhea/chronic pelvic pain, and abnormal uterine bleeding, as well as in infertility, in vitro fertilization, and reproductive surgery.

26. Many of these medical conditions and disorders are common among women.

27. As part of my practice, I regularly prescribe contraceptives for both contraceptive and non-contraceptive purposes.

## **II. Benefits of Contraceptive Use**

### ***A. Contraceptives Are Effective and Approved for Uses Other Than Preventing Pregnancy***

28. Contraceptives are effective, and approved, to be used as medication for purposes other than preventing pregnancy. Indeed, I regularly use all kinds of contraceptives for non-contraceptive uses, including for the treatment of life-threatening problems.

29. For example, contraceptives are the standard first-line of care for a number of hormonal, and other, disorders, including poly-cystic ovarian syndrome, primary ovarian insufficiency/premature ovarian failure, amenorrhea, dysmenorrhea/chronic pelvic pain, and abnormal uterine bleeding.

30. These conditions greatly impact the quality of life of the many women who suffer from them. In fact, about 10% percent of all women have irregular periods caused by poly-cystic

ovarian syndrome or other hormonal disorders which can significantly harm well-being and quality of life. Extreme cases of heavy menstrual bleeding due to hormonal or anatomic problems of the uterus that I see and treat can at times be life-threatening.

31. I frequently use contraceptives to treat these conditions in my own medical practice and, in fact, prescribe "birth control pills" more for these other purposes than to prevent pregnancy given the population of patients who make up my practice.

32. Throughout my career, I have been required to perform non-operative blood transfusions for at least 50 women due to loss of blood caused by heavy periods and acute menstrual bleeding that can cause anemia.

33. In 2009, the FDA approved use of the Mirena Inter-Uterine Device (IUD) to treat women with heavy bleeding and hemophilia. Among my patients who use the Mirena IUD, the vast majority (90%-95%) use it for purposes other than birth control.

34. The hormonal and other disorders I treat inflict direct and indirect personal and financial costs upon the women who suffer from them; they prevent women from participating fully in the workplace and, more broadly in society.

35. Contraceptives are a cost-effective and clinically proven way to treat these often debilitating disorders.

***B. Contraceptives Are Effective in Preventing Unintended and Ill-Advised Pregnancies, and Their Use Causes Other Long-Term Health Benefits***

36. Contraceptives also play an important role in preventing unintended pregnancy.

37. For some women, this treatment is not optional – it is necessary to prevent serious illness and even death.

38. There are multiple high risk conditions for which pregnancy is relative or absolutely contraindicated. These conditions include cardiac problems and history of stroke.

39. For survivors of breast cancer, pregnancy hormones can cause serious medical harm until the patient is well into remission.

40. Contraceptives help patients avoid unintended pregnancies in such situations; they prevent medical harm and save lives.

41. Contraceptives use also carries long-term health benefits for women.

42. For instance, it has been shown that long-term users of the standard oral contraceptive pill (at least 5-10 years of usage) are 50-80% less likely to develop ovarian or uterine cancer.

### **III. My Opinion on the "Religious Exemption Rule" and "Moral Exemption Rule"**

43. I have reviewed both the "Religious Exemption Rule" and the "Moral Exemption Rule" (together, the "Rules"), as well as the Complaint filed by the Commonwealth of Pennsylvania in the above-captioned matter that challenges them.

44. Based upon my knowledge, education, training and experience, it is my professional opinion that the Rules will cause immediate and irreversible harm because they will cause women to lose preventive contraceptive care under their employer group health plans.

#### ***A. Cost is a Barrier to Contraceptive Access***

45. It is my understanding, and it has been my experience, that cost is a barrier to patient access to contraceptives.

46. Prior to passage of the Affordable Care Act (the "Affordable Care Act" or "ACA"), before preventative contraceptive care was provided at no additional cost under the ACA's contraceptive mandate, I regularly counseled my patients about the cost related to their recommended contraceptive choices.

47. I would estimate that, prior to the ACA, about 10-20% of the patients for whom I



had prescribed contraceptives would come back from the pharmacy without filling their prescriptions; they would, instead, request that I prescribe a less effective, but cheaper, method of contraception. Or they would forego use of contraception altogether.

48. Such requests were most frequent when I had prescribed an IUD because, pre-ACA, IUDs were one of the most expensive forms of contraception for patients. But they are also a much more effective method of contraceptive care than are birth control pills.

49. And, for therapeutic reasons, some patients cannot take estrogen birth control pills, at all.

50. After the ACA passed and the contraceptive mandate was instituted, however, I saw that my patients were free to make contraceptive choices on the basis of their medical needs and concerns, alone, without the burden of having to weigh the cost of the preferred medical choice. Post-ACA, the only concern has been what is best for the patient.

51. As a result, I have seen my patients making more medically informed contraceptive choices and have not had the experience of patients rejecting the contraceptives I prescribed due to their cost under private insurance plans.

***C. Because Patients Will Lose Contraceptive Coverage under the New Rules, They Will Make Less Medically Sound Contraceptive Choices and, Therefore, Will Be Harmed***

52. It is apparent, however, that under the new Rules this post-ACA focus on what is best for the patient will change.

53. This is so because, as a result of the Rules, some women will lose insurance coverage for preventative contraceptive care.

54. As a result, their cost for contraceptive care will rise.

55. Based upon my own experience and existing scientific and empirical information that I have reviewed and am aware of, under the new Rules, cost will, again, become a barrier to

women's access to and use of the contraceptive that is medically recommended for them.

56. Many of these women who will no longer receive contraceptive coverage will not only face financial harm, but will also face medical harm.

57. This harm will manifest itself in the disruption of these patients' medical treatment, whether by substituting a less effective but cheaper method of contraception or by being forced to stop using contraceptives at all, due to financial reasons.

58. Some of these women will face unintended pregnancy and other adverse medical consequences.

***D. The New Rules Are Not Based Upon Sound Scientific or Empirical Evidence***

59. It is also my opinion that the new Rules are not based upon sound scientific or empirical evidence.

60. The Rules indicate, among other things, that contraceptives are not effective in preventing unintended pregnancy, that they are harmful to women's health, and that they promote promiscuity. This is false.

61. These representations conflict with peer-reviewed and medically-accepted data, and are not credible.

62. For these reasons, I believe that an injunction of the Rules is necessary to prevent immediate and irreparable harm to women in Pennsylvania and around the Country, who will otherwise lose ongoing preventive care coverage under their group health plans due to the Rules.

I hereby affirm that the foregoing is true and correct based upon my knowledge, information and belief, and I make these statements subject to the penalty of perjury.

Date: 10/25/17

By: 

SAMANTHA F. BUTTS, M.D., MSCE

# EXHIBIT A

UNIVERSITY OF PENNSYLVANIA - PERELMAN SCHOOL OF MEDICINE  
Curriculum Vitae

Samantha F. Butts, MD, MSCE

Address: Penn Fertility Care  
Center for Reproductive Medicine and Surgery  
University of Pennsylvania Medical Center  
3701 Market Street, 8th Floor  
Philadelphia, PA 19104 US

Education:

1994	BA	Harvard University, Cambridge MA (History and Science-cum laude)
1998	MD	Harvard University School of Medicine, Boston, MA
2006	MSCE	University of Pennsylvania School of Medicine, Philadelphia, PA

Postgraduate Training and Fellowship Appointments:

1998-2002	Resident in Obstetrics and Gynecology, The Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania
2002-2005	Fellow in Reproductive Endocrinology and Infertility, The Hospital of the University of Pennsylvania, Philadelphia, PA

Faculty Appointments:

2005-2014	Assistant Professor of Obstetrics and Gynecology at the Hospital of the University of Pennsylvania, University of Pennsylvania School of Medicine
2014-present	Associate Professor of Obstetrics and Gynecology at the Hospital of the University of Pennsylvania, University of Pennsylvania School of Medicine

Hospital and/or Administrative Appointments:

2005-present	Attending Physician, Department of Obstetrics and Gynecology, Division of REI, Hospital of the University of Pennsylvania, Philadelphia, PA
2005-present	Attending Physician, Reproductive Surgical Facility, Hospital of the University of Pennsylvania, Philadelphia, PA
2014-2016	Ombudsman for the Students at the University of Pennsylvania School of Medicine, Perelman School of Medicine

Other Appointments:

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2005-Present	Member, Center for Research on Reproduction and Women's Health
2006-present	Associate Scholar, Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania
2008-present	Member, Center for Excellence in Environmental Toxicology, Endocrine Disruptors Core

Specialty Certification:

2006	American Board of Obstetrics and Gynecology
2009	American Board of Obstetrics and Gynecology, subspecialty board of Reproductive Endocrinology & Infertility

Licensure:

2001-Present	Pennsylvania - MD074255-L
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Awards, Honors and Membership in Honorary Societies:

2003	National Institutes of Health Post-Doctoral Research Training Grant (T32)
2004-2006	National Institutes of Health Contraception and Infertility Loan Repayment Program Award
2004	The Stewart Scholarship for Research in Public Health awarded by the Association of Reproductive Health Professionals
2005	The Emily B. Hartshorne Mudd Award for Contributions to Family Health
2006	AAMC Early Career Women Faculty Professional Development Seminar
2009	Philadelphia Magazine's Best Physicians Age 40 and Under
2009	Center for Excellence in Environmental Toxicology New Investigator Award
2010-2012	National Institutes of Health Contraception and Infertility Loan Repayment Program Award (renewal)
2011	National Faculty Award, The American College of Obstetricians and Gynecologists and The Council on Resident Education in Obstetrics and Gynecology
2011	Invitation to attend the White House Business Leaders' Briefing, sponsored by the White House Business Council and Business Forward, December 7 <sup>th</sup> , 2011
2011	American Association of Obstetricians and Gynecologists Foundation James W. Kennedy Award to attend The American Gynecological and Obstetrical Society Meeting
2011	Faculty Teaching Award for Excellence in Resident Education, Department of Obstetrics and Gynecology
2012	The Network Journal's "40 Under 40" Achievement Award
2014	SREI Strategic Planning Retreat

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| 2014 | Mentor to Dr. Nyia Noel, Recipient of 2014 Resident Research Award for Excellence in Research for " <i>Risk Factors for Hospital Readmissions for Patients Undergoing Benign Gynecologic Surgery</i> " |
| 2015 | ASRM Access to Care Reproductive Summit, Invited Participant   |
| 2016 | NIH Study Section, Integrative and Clinical Endocrinology and Reproduction -- Ad Hoc Member  |
| 2017 | Dr. Edward S. Cooper Wharton Leadership Training Program   |
| 2017 | Philadelphia Magazine's Top Doctors  |

Memberships in Professional and Scientific Societies and Other Professional Activities:International:

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| 2012-Present | The Endocrine Society <ul style="list-style-type: none"> <li>• Member, Advocacy and Public Outreach Core Committee, 2014-2016</li> </ul> |
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National:

- |              |  |
|--------------|--|
| 1998-Present | American College of Obstetricians and Gynecologists <ul style="list-style-type: none"> <li>• Fellow, 2006-present</li> <li>• Chair, Gynecologic Practice Subcommittee on Reproductive Endocrinology, 2014-2017</li> <li>• Member, Committee on Gynecologic Practice, Subcommittee on Reproductive Endocrinology, 2011-2017</li> <li>• Ex-Officio Member, Committee on Gynecologic Practice, 2014-2017</li> </ul>   |
| 2002-Present | American Society for Reproductive Medicine <ul style="list-style-type: none"> <li>• ASRM Practice Committee, ACOG Representative, 2014-2017</li> <li>• Society for Assisted Reproductive Technologies-Clinical Outcomes Reporting System Research Committee, 2012-2016</li> <li>• Health Disparities Special Interest Group, 2009-present</li> <li>• Environment and Reproduction Special Interest Group, 2010-present</li> <li>• Reviewer, E-learn Modules for Continuing Education Committee 2016</li> <li>• Nutrition Special Interest Group, 2012-present</li> <li>• Poster Prize Award Committee ASRM Annual Meeting 2011 and 2013</li> </ul> |
| 2002-Present | Society for Reproductive Endocrinology and Infertility   |
| 2007-2012    | National Medical Association   |
| 2011-2014    | Pacific Coast Reproductive Society   |

Editorial Positions:

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| 2008-present | Ad Hoc Editorial Board/Abstract Grading Committee, American Society of Reproductive Medicine |
| 2008-Present | Peer Reviewer, Human Reproduction Journal  |

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2008-Present	Peer Reviewer, Fertility and Sterility Journal
2008-Present	Peer Reviewer, Consultant Journal
2011-Present	Peer Reviewer American Journal of Obstetrics and Gynecology
2011-Present	Peer Reviewer, Journal of Clinical Endocrinology and Metabolism
2013-Present	Peer Reviewer, Journal of the American Medical Association (JAMA)
2017-present	Editorial Board, Journal of Clinical Endocrinology and Metabolism

Academic and Institutional Committees:

2002-2003	Mudd Professorship Suite for Women's Health Research
2004-2005	Advisor to the Obstetrics and Gynecology Resident Journal Club
2006-present	Director, Research in Progress Meetings for Division of Infertility and Reproductive Endocrinology
2007-2009	Chair, Information Technology Committee -- Women's Health Clinical Research Center
2012-2013	Selection Committee, Medical Student Research Paper Prize Awards, Perelman School of Medicine
2013-present	MSCE Comprehensive Exam Committee, Center for Clinical Epidemiology and Biostatistics
2013	Ad Hoc Reviewer, University Research Foundation Review Committee
2014-present	Faculty Coordinator, Grand Rounds, Department of Obstetrics and Gynecology
2014-2015	Member of the Committee to Review the Department of Orthopedic Surgery, Hospital of the University of Pennsylvania
2014-present	Member, University of Pennsylvania Provost's Academic Planning and Budget Committee – <i>This committee provides advice on academic policies and procedures, interdisciplinary and cross-school efforts, strategic planning issues, research support and regulations, budgetary issues, and such matters as faculty and minority gender equity, early retirement, and personnel benefits. It also advises the Provost on school and center external review recommendations and proposed new academic degrees and new research institutes</i>
2017-present	Member, Search Committee for the Senior Vice Dean for Medical Education, Perelman School of Medicine
2017-present	Ad Hoc Reviewer, Penn Presbyterian Harrison Award Committee
2017-present	Unit Based Care Leadership Committee – This committee of physicians and nurses oversees quality initiatives for gynecologic surgical patients at the Hospital of the University of Pennsylvania

Major Academic and Clinical Teaching Responsibilities:

2004	Eritrean Fistula Project: United Nations Population Fund-Sponsored Clinical Mission to Eritrea to Treat Birth-Related Fistulas and Investigate Causes of Secondary Amenorrhea
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2004-Present	Lecturer for BSTA 510 a course for the Biostatistics Graduate School Curriculum, Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania
2005-Present	Faculty in the Reproduction Module for First Year Medical Students
2005-Present	Mentor, Residents and Fellows in Ob/Gyn Research
2005-2008	Advisor and Lecturer, Ob/Gyn Medical Student Interest Group, Eritrean Fistula Project, 2008
2005-Present	Clinical Instructor, Students, Resident, Fellows in Ambulatory, OR and In-Patient Settings
2006-Present	Faculty in Reproductive Epidemiology Course, Center for Clinical Epidemiology and Biostatistics
2006-Present	Mentor, Clinical Epidemiology Master's Students with Theses in Reproduction
2006-Present	Faculty, Obstetrics and Gynecology Core Clerkship Didactics -- Lecturer on Ectopic Pregnancy, Eight Lectures per Year
2007-2008	Faculty Advisor, Recipient of FOCUS Medical Student Fellowship in Women's Health
2007-Present	Education Committee, Department of Obstetrics and Gynecology
2007-Present	Director, Medical Student Elective in Reproductive Endocrinology and Infertility
2007	"Obesity, Weight Loss and Reproductive Outcomes: Characterizing the Impact on Adults and the Risks to their Offspring", Grand Rounds for the Division of Medical Endocrinology, University of Pennsylvania Medical School, Philadelphia, PA
2009-2010	"Maternal and Child Health and the Provision of Infertility Treatments: An Ethical Debate", Guest Faculty Lecture for Healthcare Ethics: Policy, Management and Law, Columbia University School of Public Health, New York, NY
2009-present	Invited Faculty, Case Presentation Series for Underrepresented Minority Students in preparation for OB/Gyn Clerkship, Perelman School of Medicine
2010-Present	Director, Resident Education in Infertility and Reproductive Endocrinology
2010-Present	Faculty Coordinator, Resident Preoperative Conference
2010-Present	Faculty, Penn Academy for Reproductive Science: An outreach program that educates female high school students in Philadelphia about reproductive science and women's health through workshops, lectures, and hands-on lab experience
2010	"Disparities in Assisted Reproductive Technologies: Do They Exist, and Could Endocrine Disruptors Play a Role?", Grand Rounds, Division of Endocrinology, Department of Internal Medicine, University of Pennsylvania Medical School, Philadelphia, PA
2011, 2017	Mentor, STEER Summer Undergraduate Environmental Health Scholar Program, Center for Excellence in Environmental Toxicology



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2011	Guest Faculty, Obstetrical Society of Philadelphia Annual Resident Education Day
2011-Present	Didactic Lecturer, Department of Family Practice on Infertility and Reproductive Endocrine Topics
2011	Lecturer, "Polycystic Ovary Syndrome" Department of Student Health
2012-2013	Mentor, Research Rotation, Pharmacology Graduate Program
2012-2013	Invited Faculty, Roundtable Discussion with Students on Careers and Training in Obstetrics and Gynecology, Harvard Medical School
2013	Faculty Coordinator and Presenter at "Nutrition and Pregnancy", a Patient Oriented Educational Seminar Addressing Nutritional Guidelines before and Early in Pregnancy. Perelman School of Medicine, University of Pennsylvania
2013	"Primary Ovarian Insufficiency", Grand Rounds for the Division of Medical Endocrinology, University of Pennsylvania Medical School, Philadelphia, PA
2013-present	Mentor, University of Pennsylvania Summer Pre-Med Enrichment Program for Minority Undergraduate Students sponsored by the Center of Excellence for Diversity in Health Education and Research (COE) and the School of Medicine
2014	Faculty, Center of Excellence for Diversity in Health Education and Research Annual Meeting, One on One mentoring of Junior Faculty, June 3, 2014
2014-present	Faculty Mentor for OB/Gyn Resident Research Projects of Nyia Noel, Joan Price, Lilli Zimmerman, Sevelle Holder

Lectures by Invitation:

Sep, 2004	"Premature Ovarian Aging and Infertility", The Steward Award Presentation at the Association of Reproductive Health Professionals Annual Meeting, Washington, DC
Feb, 2005	"Novel Approaches to the Understanding of Premature Ovarian Aging", Grand Rounds, department of Obstetrics and Gynecology, Meharry Medical College, Nashville, TN
Jul, 2005	"Assisted Reproductive Technologies Update: Recent Trends in Success and Emerging Challenges Concerning Outcomes", National Medical Association Annual Convention and Scientific Assembly, New York, NY
Oct, 2005	"Telomere Length and Telomerase Activity in Developing Follicles: Correlation with Premature Ovarian Aging and Outcomes in IVF", Special Research Presentations Session at the 61st Annual Meeting of the American Society for Reproductive Medicine, New Orleans, LA
Jan, 2008	"The Obesity Epidemic and Reproduction: Insights on Maternal, Fetal and Childhood Risks", Grand Rounds, Department of Obstetrics and Gynecology, Emory University School of Medicine, Atlanta, GA

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- Aug, 2008 "The Northeast Consortium for Minority Faculty Development: A Collaborative Approach among New Jersey Medical School, the University of Pennsylvania School of Medicine, Mount Sinai School of Medicine and Albert Einstein College of Medicine of Yeshiva University", AAMC Group on Faculty Affairs Professional Development Conference, Pittsburgh, PA
- May, 2009 "Early Ovarian Aging: Defining Populations at Risk", Annual Retreat, Center for Research on Reproduction and Women's Health, Philadelphia, PA
- Jul, 2009 "Environmental Reproductive Toxicants", National Medical Association Annual Convention and Scientific Assembly, Las Vegas, NV
- Mar, 2010 "Reproductive Aging Update: Investigating Novel Markers of Senescence and Threats to Ovarian Reserve", Grand Rounds, Department of Obstetrics and Gynecology, Lankenau Hospital/Main Line Health, Bryn Mawr, PA
- May, 2010 "Disparities in Assisted Reproductive Technology Outcomes and Access to Infertility Treatment", Grand Rounds, Department of Obstetrics and Gynecology and Women's Health, Albert Einstein College of Medicine of Yeshiva University and Montefiore Medical Center, Bronx, NY
- Mar, 2011 "Disparities in Reproductive Outcomes: Exploring the Impact of Nutrition", The Annual Hunger Conference in Delaware County, Chester PA
- Apr, 2011 "Reproductive Outcomes in ART: Exploring the Impact of Race and Ethnicity", Pacific Coast Reproductive Society Annual Meeting, Palm Springs, CA
- Apr, 2011 "Environmental Toxins and Gametes", Pacific Coast Reproductive Society Annual Meeting, Palm Springs, CA
- Jul, 2011 "Obstetrics and Gynecology: How I Got there and What's in Store for the Specialty", National Youth Leadership Forum on Medicine, Villanova University, Villanova, PA
- Sep, 2011 "From the First Nine Months to the Rest of Your Life: The Role of Maternal Nutrition and Environment on Fetal Growth and Adult Disease Risk", Grand Rounds Drexel University College of Medicine, Philadelphia, PA
- Aug, 2012 "Smoking and Genetic Variation in Metabolism of Environmental Chemicals: A Model for Environmental Reproductive Toxicology", The 45th Annual Meeting of the Society for the Study of Reproduction, Pennsylvania State University, State College, PA
- Sep, 2012 "In Vitro Fertilization (IVF): Methods to Prevent Multiple Births", OptumHealth Conference, Philadelphia, PA
- Oct, 2012 "Smoking, Genetic Variation, and Reproductive Aging: Exploring Links in a Population Based Cohort", Grand Rounds, Department of Obstetrics and Gynecology, Massachusetts General Hospital, Harvard Medical School, Boston, MA

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- Oct, 2012 "Infertility 2012: Current Evaluations, Treatments and Controversies", National Association of Nurse Practitioners in Women's Health Annual Conference, Orlando, Florida.
- Oct, 2012 "Premature Ovarian Insufficiency", Roundtable Discussion, Annual Meeting of the American Society for Reproductive Medicine, San Diego, CA
- Feb, 2013 "Ancestry, Geography, and Reproductive Health: How Race, Ethnicity, and Environment Impact Outcomes Across the Lifecourse", Grand Rounds, Department of Obstetrics and Gynecology, Lehigh Valley Hospital, Allentown, PA
- Mar, 2013 "Roe After 40: The Ethics of Fertility and Reproduction: A Fresh Look", Panel Discussion, University of Pennsylvania Law School, Philadelphia, PA
- Mar, 2013 "Reproductive Health, Nutrition, and the Environment: Exploring the Impact of Exposures Across the Female Lifecourse", Grand Rounds, Department of Obstetrics and Gynecology, University of Washington School of Medicine, Seattle, WA
- Jul, 2013 "State Mandated Coverage for Infertility: Current and Future Impact on Treatment Outcomes and Reproductive Potential", Grand Rounds, Department of Obstetrics and Gynecology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA
- Aug, 2013 "Reproductive Functioning and Potential Across the Female Lifespan: Considering the Impact of Ethnicity and Race", Grand Rounds, Department of Obstetrics and Gynecology, Maimonides Medical Center, Brooklyn, NY
- Oct, 2013 "The Environment and Reproduction", The American Gynecological Club Annual Meeting, Philadelphia, PA
- Oct, 2013 "Ovarian Function after Gastric Bypass Surgery", Annual Meeting of the Androgen-Excess and Polycystic Ovary Syndrome Society, Newport, RI
- Oct, 2013 "Vasomotor Symptoms and Alternatives to Hormonal Therapy", Roundtable discussion at the IFFS/ASRM 2013 Conjoint Meeting, Boston, MA
- Mar, 2014 "Reproductive Aging and the Environment: Dissecting Interactions between Chemical Exposures, Race, and Genetic Background", Women's Health Research Seminar Series, Washington University, St. Louis, MO
- Mar, 2014 "The Environment and Human Reproductive Health", Web based lecture sponsored by The Health Resources and Services Administration/Maternal and Child Health Bureau, Philadelphia, PA
- Apr, 2014 "The Road Less Traveled: Triplets Reflect on Service, Mentorship, and their Professional Journeys", The Annual Helen O. Dickens Commemorative Lecture in Medicine, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA

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- Mar, 2015 "Female Fertility - The Reproductive Endocrinologist's Perspective", at Fertility and Family Building: Medical, Psychosocial, and Financial Issues sponsored by the Penn Forum for Women Faculty, Philadelphia, PA
- Oct, 2016 "Reproductive Decision Making and Your Career: Embracing Biology, Debunking Myths, and Gaining Control", Women in Statistics Conference, Charlotte, NC
- Nov, 2016 "Current Practice in Ambulatory Gynecologic Surgery: A Case Based Approach", 7th Annual Peri-operative Conference, Penn Presbyterian Medical Center, Philadelphia, Pennsylvania

Organizing Roles in Scientific Meetings:

- Oct, 2008 Moderator, Oral Abstract Session, American Society of Reproductive Medicine Annual Meeting  
San Francisco, California
- Mar, 2009 Moderator, Reproductive Biology Oral Abstract Session, Society for Gynecologic Investigation Annual Meeting  
Glasgow, Scotland UK
- Aug, 2010 Program Co-Chair, Reproductive Endocrinology and Infertility Session, Obstetrics and Gynecology Section, National Medical Association Annual Convention and Scientific Assembly  
Orlando, FL
- Jul, 2011 Moderator, Abstract Session, Obstetrics and Gynecology Section, National Medical Association Annual Convention and Scientific Assembly  
Washington, DC
- Jul, 2011 Program Co-Chair, Reproductive Endocrinology and Infertility Session, Obstetrics and Gynecology Section, National Medical Association Annual Convention and Scientific Assembly  
Washington, DC
- Oct, 2012 Moderator, Reproductive Biology Oral Abstract Session, American Society of Reproductive Medicine Annual Meeting  
San Diego, CA
- Sep, 2013 Steering Committee, Mid-Atlantic Center for Children's Health and the Environment Conference on Environmental Health for Obstetricians and Gynecologists  
Washington, DC
- Oct, 2013 Moderator, Reproductive Endocrinology and Infertility Fellows Research Abstract Session, Conjoint Meeting of the International Federation of Fertility Societies and the American Society for Reproductive Medicine  
Boston, MA
- Oct, 2014 Moderator, Reproductive Biology Oral Abstract Session, American Society of Reproductive Medicine Annual Meeting  
Honolulu, HI

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Oct, 2015	Moderator, Oral Abstract Session, American Society of Reproductive Medicine Annual Meeting Baltimore, MD
Aug, 2016	Faculty Representative for Perelman School of Medicine Office of Inclusion and Diversity at the National Medical Association Annual Meeting Los Angeles, CA
Apr, 2017	Faculty Representative for Perelman School of Medicine Office of Inclusion and Diversity at the American Medical Women's Association Annual Meeting San Francisco, CA

Grants:Past:

Maternal Vitamin D Status and Outcomes in Pregnancy, Penn Presbyterian Harrison Fund, 7/2015-6/2016 (Samantha Butts, MD MSCE, PI: David Seifer MD, Andrea Kelly MD MSCE, Co-Investigator. The main goal of this investigation is to evaluate the association between preconception vitamin D status and fertility treatment outcomes in women with polycystic ovary syndrome and with unexplained infertility), \$50,000/annual direct costs, 2% effort.

Prenatal Environmental Exposures and Reproductive Hormone Concentrations (PERCH), SEATTLE CHILDREN'S HOSPITAL RESEARCH INSTITUTE, R21-ES-023883-01, 4/2014-3/2016 (Sathyanarayana, PI: Butts, Co-Investigator), \$11,842/annual direct costs, 5% effort (PERCH aims to examine the relationship between phthalate and BPA exposures in relation to hormone concentrations and subsequent infant reproductive outcomes.)

Basser Research Center for BRCA 1&2, University of Pennsylvania, 7/2012-6/2014 (Domchek, PI), \$8,992/annual direct costs, 5% effort (Role in grant: investigator. The major goal of this project is to examine symptoms and risks in women after risk reducing bilateral salpingoophorectomy (BRCA1/2) carriers.)

Department of Health & Human Services, Center of Excellence for Diversity in Health Education and the Health Resources and Services Administration, D34-HP-24459, 7/2012-6/2013 (Jerry Johnson, PI), \$45,048/annual direct costs, 5% effort (Role in grant: Scholar. The main goal of this project is to support scholarly activity related to research efforts and career development.)

Penn Center for Study of Epigenetics in Reproduction (Pilot Study), NIH/NICHD, U54-HD-068157, 5/2011-3/2015 (M.Bartolomei/C.Coutifaris, PI), \$78,889/annual direct costs, 10% effort (Role in grant: Pilot Study PI. The major goal of this project is to test the association between preconception and mid-gestation levels of endocrine disruptors and micronutrients and reproductive outcomes.)

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Center of Excellence in Environmental Toxicology (CEET)  
NIH/NIEHS (ARRA), 3P30ES013508-04S1, 9/2009-3/2010 (Trevor Penning, PhD, PI),  
\$25,000/annual direct costs, 10% effort (Role in grant: Pilot PI)

Center of Excellence in Environmental Toxicology (CEET), NIH/NIEHS,  
5P30ES013508-04 , 1/2008-12/2009 (Trevor Penning, PI), \$22,616/annual direct costs,  
15% effort (Role in grant: Pilot PI)

Macy Foundation Scholar Award, Macy Foundation, 8/2007-7/2008 (Samantha Butts,  
MD MSCE, PI), \$25,000/annual direct costs, 10% effort (Role in grant: PI)

Telomere Homeostasis in Granulosa Cells: A Novel Molecular Approach to  
Reproductive Senescence, The McCabe Fund, 7/2007-6/2010 (Samantha Butts, MD  
MSCE, PI), \$23,416/annual direct costs, 10% effort (Role in grant: PI)

Improvements in Reproductive Status Following Bariatric Surgery, American Society for  
Bariatric Surgery , 7/2007-6/2009 (Kelly Allison, PhD, PI), \$25,000/annual direct costs,  
10% effort (Role in grant: Co-Investigator)

Markers of Senescence in Granulosa Cells: Relationship to Ovarian Reserve and  
Outcomes in In Vitro Fertilization, University Research Foundation , 3/2006-2/2007  
(Samantha Butts, MD, PI), \$25,000/annual direct costs, 10% effort (Role in grant:  
Principal Investigator)

Building Interdisciplinary Research Careers In Women's Health (BIRCWH K12),  
NIH/NICHHD; K12 HD043459-, 1/2006-3/2008 (Strauss/Freeman, PI), \$92,392/annual  
direct costs, 75% effort (Role in grant: K12 Scholar)

Oxidative Stress and the Human Egg: Correlation of Telomere Length and Telomerase  
Activity in Developing Follicles with Outcomes in IVF, NIH T32 Grant, 7/2004-6/2005  
(Kurt Barnhart, MD, MSCE, PI), 70% effort (Role in grant: investigator)

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#### Research Publications, peer reviewed (print or other media):

1. Torigian DA, Siegelman ES, Terhune KP, **Butts SF**, Blasco L, Shlansky-Goldberg RD: Case report: MRI of uterine necrosis after uterine embolization for treatment of uterine leiomyomata. Amer J Roentgenology 184(2):555-59, 2005. PMCID: 15671379
2. Wrotniak BH, Shults J, **Butts S**, Stettler N: Gestational weight gain and risk of overweight in the offspring at age seven years in a multicenter, multiethnic cohort study. Amer J Clin Nutr 87(6):1818-24, June 2008. PMCID: 18541573



3. **Butts S**, Riethman HR, Ratcliffe S, Coutifaris C, Shaunik A, Barnhart K: Correlation of telomere length and telomerase activity with primary ovarian insufficiency. J Clin Endocrinol Metabol 94(12):4835-34, December 2009. PMCID: 19864453
4. **Butts SF**, Gibson E, Sammel SD, Shaunik A, Rudick B, Barnhart KT: Race, socioeconomic status and response to methotrexate treatment of ectopic pregnancy in an urban population. Fertil Steril 94(7):2789-92, December 2010. PMCID: 20674907
5. Shlansky-Goldberg R, Coryell L, Stavropoulos SW, Trerotola SO, Mondschein J, Beshara M, **Butts SF**, Sondheimer S, Tureck RW, Rosen M: Outcomes following fibroid expulsion after uterine artery embolization. J Vasc Interv Radiol 22: 1586-1593, 2011. PMCID: 22024118
6. **Butts SF**, Freeman EW, Sammel MD, Queen K, Lin H, Rebbeck T: The joint effect of smoking and gene variants involved in sex steroid metabolism on hot flashes in late reproductive age women. J Clin Endocrinol Metabol 97 (6): E1032-E1042, June 2012. PMCID: 22466345
7. **Butts SF**, Ratcliffe S, Dokras A, Seifer DB: Diagnosis and treatment of diminished ovarian reserve in ART cycles of women up to age 40: The role of insurance mandates. Fertil Steril 99:382-88, February 2013. PMCID: 409153
8. **Butts SF**, Shaunik A, Guo Wensheng, Cary MS, Chung K, Takacs P, Sammel MD, Barnhart KT: Predicting the decline in serum human chorionic gonadotropin in miscarriage: Redefining the normal curve in a diverse population Obstet Gynecol 122(2): 337-343, August 2013. PMCID: PMCID: PMC3752097
9. Sathyanarayana S, Barrett E, **Butts S**, Wang C, Swan S: Phthalate exposure and reproductive hormone concentrations in pregnancy. Reproduction 147: 401-409, April 2014. PMCID: 24196015
10. Roe A, Hillman J, **Butts S**, Smith M, Playford M, Rader D, Mehta NN, Dokras A: Decreased cholesterol efflux capacity and atherogenic lipid profile in young women with PCOS. J Clin Endocrinol Metab 99(5): E841-E847 May 2014. PMCID: 24512495
11. **Butts S**, Sammel MD, Greer C, Rebbeck TR, Boorman DW, Freeman EW: Cigarettes, genetic background and early menopause: The presence of single nucleotide polymorphisms in cytochrome P450 genes hastens the onset of natural menopause in European American Smokers. Menopause 21(7): 694-701, July 2014. PMCID: 24448104

12. McLaren JF, Barnhart KT, Sammel MD, Appleby DH, **Butts SF**: Success of the two-dose methotrexate protocol for treatment of ectopic pregnancy in women with a history of prior ectopic pregnancy. J Reprod Med 59(4): 379-384, August 2014. PMID: 25098028
13. **Butts SF**, Owen C, Mainigi M, Senapati S, Seifer D, Dokras A: Assisted hatching and intracytoplasmic sperm injection are not associated with improved outcomes in ART cycles for diminished ovarian reserve: An Analysis of US Cycles from 2004-2011. Fertil Steril 102: 1041-1047, October 2014. PMID: 617996
14. Wishall KM, Price J, Pereira N, **Butts S**, Della Badia C: Postablation risk factors for pain and subsequent hysterectomy. Obstet Gynecol 124(5): 904-910, 2014 Notes: Editors pick for November 2014 issue of Obstetrics and Gynecology PMID: 25437717
15. Hansen K, He ALW, Styer AK, Wild RA, **Butts S**, Engmann L, Diamond MP, Legro RS, Coutifaris C, Alvero R, Robinson RD, Casson P, Christman GM, Huang H, Santoro N, Eisenberg E, Zhang H: Predictors of pregnancy and live-birth in couples with unexplained infertility following ovarian stimulation-intrauterine insemination Fertil Steril 105(6): 1575-1583. 2016.
16. Senapati S, Sammel MD, **Butts SF**, Takacs P, Chung K, Barnhart KT: Predicting first trimester pregnancy outcome: Derivation of a multiple marker test. Fertility and Sterility 106: 1725-1732, 2016.
17. Feldman RA, O'Neill K, **Butts SF**, Dokras A: Antimullerian hormone levels and cardiometabolic risk in young women with polycystic ovary syndrome. Fertil Steril 107(1): 276-281, January 2017.
18. Garin M, **Butts SF**, Sarwer DB, Allison KC, Dokras A: Ghrelin is independently associated with Anti-Müllerian Hormone levels in overweight and obese but not lean women with polycystic ovary syndrome. Clinical Endocrinology 55(3): 907-913, March 2017.
19. Sathyanarayana S, **Butts S**, Wang C, Barrett E, Nguyen R, Schwartz SM, Haaland W, Swan S: Early pregnancy phthalate exposure in relation to sex steroid hormone concentrations and birth outcomes. Journal of Clinical Endocrinology and Metabolism (102), March 2017.
20. Chan JL, Senapati S, Johnson LNC, DiGiovanni L, Voong C, **Butts SF**, Domchek SM: Risk factors for sexual dysfunction in BRCA mutation carriers following risk-reducing salpingo-oophorectomy. Menopause submitted.



21. Price JT, Zimmerman LD, Lee S, **Butts SF**: Social determinants of access to minimally invasive hysterectomy: Re-evaluating the relationship between race, SES, ethnicity, and route of hysterectomy for benign disease. American Journal of Obstetrics and Gynecology published online August 4, 2017.

Research Publications, peer-reviewed reviews:

1. Patrizio P, **Butts SF**, Caplan A: Ovarian tissue preservation and future fertility: Emerging technologies and ethical considerations. J Nat Cancer Inst Monogr 32:107-110, 2005. PMCID: 15784838
2. **Butts S**, Seifer D: 6 office tests to assess ovarian reserve, and what they tell you. OBG Management 20(11):29-40, November 2008.
3. **Butts SF**, Seifer DB: Racial and ethnic differences in reproductive potential across the lifecourse. Fertil Steril 93(3):681-690, February 2010. PMCID: 19939362
4. **Butts, SF**: Obesity, fertility and contraception: disparities among women, clinical practitioner perspective. Endocrine News 37(6):22-9, June 2012.
5. Meldrum DR, Fisher AR, **Butts SF**, Su HI, Sammel MD: Acupuncture - help, harm, or placebo? Fertil Steril 99(7):1821-24, Jun 2013. PMCID: 23357452
6. **Butts S**, Guidotti T: What are some potential reproductive hazards in the hospital environment? J Occupational Environ Med 56(12): e163-165, December 2014. PMCID: 24423700

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1. **Butts SF**, Shaunik A, Wei J, Barnhart KT, Reithman HC, Coutifaris C: Decreased telomerase activity in patients with diminished ovarian reserve: A novel theory of premature aging. Oral presentation, American Society for Reproductive Medicine Annual Meeting, Philadelphia, PA, 2004.
2. Lin K, Barnhart K, Shaunik A, **Butts S**, Fitzgerald GA, Coutifaris C: Follicular fluid F2-isoprostanes: A novel assessment of oxidative stress in IVF patients. Oral presentation, American Society for Reproductive Medicine Annual Meeting, Montreal, Quebec, 2005.
3. Su I, **Butts SF**, Ratcliffe S, Coutifaris C, Barnhart KT, Williams CJ: Plasma and follicular fluid taurine levels and granulosa cell taurine receptor mRNA expression in unexplained infertility. Poster presentation, Society for Gynecologic Investigation Annual Meeting, San Diego, CA, 2005.

4. **Butts S**, Shaunik A, Menon S, Coutifaris C, Riethman H, Barnhart K: Telomere length and the aging granulosa cell: Correlation with diminished ovarian reserve. Poster presentation, American Society for Reproductive Medicine Annual Meeting, New Orleans, LA, 2006.
5. Shaunik A, **Butts S**, Menon S, Coutifaris C, Barnhart KT: Discrepancies in diagnosis of infertility as perceived by the patient, physician and researcher in women undergoing in-vitro-fertilization. Poster presentation, American Society for Reproductive Medicine Annual Meeting, New Orleans, LA, 2006.
6. Stettler N, Wrotniak B, Shults J, **Butts S**: Fetal growth only partially explains the increased risk for obesity in children of women who gain excessive weight during pregnancy: A large multi-center, multi-ethnic cohort study. Experimental Biology Annual Meeting, San Francisco, CA, 2006.
7. Wrotniak B, Shults J, **Butts S**, Stettler N: Association of gestational weight gain with overweight in offspring at seven years of age in a multicenter cohort study. Annual Scientific Meeting of the Obesity Society, New Orleans, LA, 2007.
8. **Butts SF**, Gibson E, Sammel MD, Shaunik A, Rudick B, Barnhart KT: Racial differences in response to methotrexate: A health disparity reconsidered. Poster presentation, American Society of Reproductive Medicine Annual Meeting, San Francisco, CA, 2008.
9. **Butts S**, Mesaros C, Chavkin D, Barnhart K, Coutifaris C, Blair I: Biomarkers of premature ovarian insufficiency: Use of chiral lipidomic analysis of human follicular fluid to characterize intrafollicular oxidative stress. Poster presentation, NIEHS Environmental Health Science Core Centers Meeting, Milwaukee, WI, 2009.
10. **Butts SF**, Mesaros C, Chavkin D, Barnhart K, Coutifaris C, Shaunik A, Blair I: Chiral lipidomic analysis of human follicular fluid: A novel approach to intrafollicular oxidative stress assessment and its association with diminished ovarian reserve. Poster presentation, Society for Gynecologic Investigation Annual Meeting, Glasgow, Scotland, 2009.
11. McLaren JF, Barnhart KT, Sammel M, Appleby D, Shaunik A, **Butts SF**: Methotrexate failure in women with prior ectopic: Our experience with the two-dose methotrexate protocol. Oral presentation, American Society for Reproductive Medicine Annual Meeting, Atlanta, GA, 2009.
12. Allison K, **Butts S**, Eisenberg M, Dokras A, Sarwar D: Examination of reproductive and psychosocial functioning: A comparative study of women seeking bariatric surgery and behavioral weight loss. Oral presentation at the American Society for Metabolic and Bariatric Surgery Annual Meeting, Las Vegas, NV, 2010.

13. **Butts SF**, Rebbeck T, Sammel MD, Lin H, Freeman E: Estrogen-metabolizing genes, smoking, and vasomotor symptoms - A putative model for gene-environment interactions in reproductive aging. Oral presentation, Society for Gynecologic Investigation Annual Meeting, Orlando, FL, 2010.
14. Kondopalli LA, Allison K, Sarwer D, Spitzer J, Dokras A, **Butts SF**: Ovarian reserve in extremely obese women undergoing weight loss intervention: Interplay between reproductive biomarkers, adipokines, and measures of adiposity. Oral presentation, American Society for Reproductive Medicine Annual Meeting, Denver, CO, 2010.
15. Kondopalli LA, Allison K, Sarwer DB, Spitzer JC, Dokras A, **Butts SF**: Reproductive functioning in extremely obese women after weight loss: Twelve month follow up after surgical versus non-surgical intervention. Poster presentation, Annual Meeting of the American Society for Reproductive Medicine, Orlando, FL, 2011.
16. Roe A, **Butts S**, Smith M, Rader D, Dokras A: Novel biomarkers of coronary artery disease in young women with PCOS. Poster presentation, American Society for Reproductive Medicine Annual Meeting, San Diego, CA, 2012.
17. Spitzer JC, Sarwer DB, Allison KC, **Butts S**, Dokras A, Coutifaris C: Changes in reproductive and psychosocial functioning in obese women following bariatric surgery or lifestyle modification. Oral presentation, American Society for Metabolic and Bariatric Surgery Annual Meeting, San Diego, CA, 2012.
18. Bachman E, Senapati S, Sammel MD, **Butts SF**, Mainigi M, Coutifaris C: The effect of in vitro oxygen tension and days in culture on human trophoblast differentiation. Oral presentation, Joint International Federation of Fertility Societies/American Society of Reproductive Medicine Meeting, Boston, MA, 2013.
19. **Butts S**, Purkiss D, Prabhu A, Jeffers S, Bartolomei M, Coutifaris C: Maternal awareness of BPA: Divergence of knowledge and avoidant behaviors depends on fertility status. Poster presentation, The Endocrine Society 95th Annual Meeting, San Francisco, CA, 2013.
20. **Butts S**, Sammel MD, Greer C, Rebbeck TR, Freeman EW: Anti-Mullerian Hormone decline in smokers is modified by genetic background in a race-specific fashion: Results from a population-based longitudinal study. Oral presentation, Joint International Federation of Fertility Societies/American Society of Reproductive Medicine Meeting, Boston, MA, 2013.

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15. Practice Committee of the American Society for Reproductive Medicine: Treatment of pelvic pain associated with endometriosis: A committee opinion. Fertil Steril 101(4): 927-935, Apr 2014.
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17. Practice Committees of the American Society for Reproductive Medicine, Society for Assisted Reproductive Technology: Role of assisted hatching in in vitro fertilization: A guideline. Fertil Steril 102(2): 348-351, Aug 2014.
18. Practice Committees of the American Society for Reproductive Medicine Society of Reproductive Biology and Technology: Revised minimum standards for practices offering assisted reproductive technologies: A committee opinion. Fertil Steril 102(3): 682-686, Sept 2014.
19. Practice Committees of the American Society for Reproductive Medicine, Society for Assisted Reproductive Technology: Repetitive oocyte donation: A committee opinion. Fertil Steril 102(4): 964-966, Oct 2014.
20. Practice Committees of the American Society for Reproductive Medicine, Society for Assisted Reproductive Technology, Society of Reproductive Biologists and Technologists: Recommended practices for the management of embryology, andrology, and endocrinology laboratories: A committee opinion. Fertil Steril 102(4): 960-963, Oct 2014.
21. Practice Committees of the American Society for Reproductive Medicine and Society for Male Reproductive and Urology: Report on varicocele and infertility: A committee opinion. Fertil Steril 102(6): 1556-1560, Dec 2014.
22. Practice Committees of the American Society for Reproductive Medicine and Society for Assisted Reproductive Technology : Recommendations for practices utilizing gestational carriers: A committee opinion. Fertil Steril 103(1): e1-e8, Jan 2015.
23. Practice Committee of the American Society for Reproductive Medicine: Testing and interpreting measures of ovarian reserve: A committee opinion. Fertil Steril 103(3): e9-e17, Mar 2015.
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27. Practice Committee of the American Society for Reproductive Medicine: Role of tubal surgery in the era of assisted reproductive technology: A committee opinion. Fertil Steril 103(6): e37-e43, June 2015.

28. Practice Committee of the American Society for Reproductive Medicine: Diagnostic evaluation of the infertile female: A committee opinion. Fertil Steril 103(6): e44-e50, June 2015.
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46. **Butts S:** Polycystic Ovary Syndrome: Update on the Pros and Cons of Treatment Options. Consultant for Pediatricians Epub September 19, 2013.
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Alternative Media (selected media):

1. "Women's health update" Radio Interview on HealthQuest Live, WURD Radio April 2007.

2. "Only in America? The U.S. Health system and the California octuplets" Radio interview on "The Takeaway" a co-production of WNYC Radio and Public Radio International, in collaboration with the BBC World Service, New York Times Radio and WGBH Boston February 2009.
3. WPVI network: "The California octuplets" Interview on "Visions" television program February 2009.
4. "The next generation of great Philadelphia doctors" Cover article in Philadelphia Magazine featuring 64 top doctors in the region age 40 or less, Philadelphia Magazine, April 2009.
5. "Think about your health men; Because making babies is men's work too" The Plain Dealer Cleveland Newspaper April 2009.
6. "When parents can't conceive" Interview with MetroKids newspaper January 2010.
7. "When to see a fertility specialist" Interview for University of Pennsylvania Health System Women's Health Newsletter December 2011.
8. "Menopause: Smokers have more hot flashes, genes can play an additional role too, study finds" Interview with WebMD Health News May 2012.
9. "Doctors' group sounds warning on freezing eggs to buy time on your biological clock" Interview with NBC News Health/Today.com December 2013.
10. "Smoking Can Speed Menopause for Some Women" Interview with NBC News.com February 2014.
11. Sister 2 Sister Magazine: "Motherhood on Reserve: Why Some Women Have Decided to Freeze Their Eggs" Interview with Sister 2 Sister Magazine February 2014.

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12. "The Age Your Fertility Really Begins To Decline -- And Why You Shouldn't Freak Out" Interview with The Huffington Post, February 2014.
13. "Sisters, triplets, colleagues in medicine" Interview with WHYY (Philadelphia PBS affiliate), June 2014.
14. "How Fear Fuels the Business of Egg Freezing" Interview with The Washington Post, March 2015.
15. "Three Steps to Freezing Your Eggs" Interview on The Dr. Oz Show, October 2015.
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