

## USF IVF and Reproductive Endocrinology's Research

Research endeavors at USF IVF and CFERT (Center for Fibroid and Endometriosis Research and Treatment) involve a variety of clinical and scientific initiatives. Members of our division have recently authored or co-authored a diverse set of scholarly articles ranging from preimplantation genetic testing, to national trends in minimally invasive surgery, to ethical considerations in infertility research in the era of electronic health records. Clinically, we recently completed participation in a multi-center trial of a novel oral GnRH antagonist in the treatment of endometriosis. In the near future we will start recruiting for additional GnRH antagonist studies in the treatment of fibroids and endometriosis. We are working with Dr. Judette Louis's team in the Maternal Fetal Medicine Division to study sleep apnea in women with Polycystic Ovary Syndrome.

At USF and at prior institutions, our team has published on embryo transfer technique, predicting embryo implantation, the role of elevated estrogen in IVF outcomes, fertility preservation, preimplantation genetic diagnosis, ovulation induction, intrauterine insemination, fibroids, minimally invasive surgery techniques, and management of pregnancy of unknown location.

Below is a list of publications available through PUBMED, that USF IVF team members have been involved in over the past decade.

1. Al Sawah E, **Plosker SM**, Mikhail E. Laparoscopic Hemi-hysterectomy and Trachelectomy in a Case of Herlyn-Werner-Wunderlich Syndrome. *Surg Technol Int.* 2016, Jul 29;XXIX. pii: sti29/755. [Epub ahead of print]. PMID:27466877
2. **Imudia AN**, **Plosker S**. The Past, Present, and Future of Preimplantation Genetic Testing. *Clin Lab Med.* 2016 Jun; 36(2):385-99. doi: 10.1016/j.cl.2016.01.012. Epub 2016 Mar 14. Review. PubMed PMID: 27235919.
3. **Mikhail E**, Salemi JL, Hart S, **Imudia AN**. Comparing Single and Dual Console Systems in the Robotic Surgical Training of Graduating OB/GYN Residents in the United States. *Minim Invasive Surg.* 2016; 2016: 5190152. doi: 10.1155/2016/5190152. Epub 2016 Feb 3. PubMed PMID: 26955485; PubMed Central PMCID: PMC4756193.
4. **Mikhail E**, Scott L, Miladinovic B, **Imudia AN**, Hart S. Association between Fellowship Training, Surgical Volume, and Laparoscopic Suturing Techniques among Members of the American Association of Gynecologic Laparoscopists. *Minim Invasive Surg.* 2016; 2016: 5459147. doi: 10.1155/2016/5459147. Epub 2016 Jan 18. PubMed PMID: 26885389; PubMed Central PMCID: PMC4739463.
5. **Mikhail E**, Salemi JL, Mogos MF, Hart S, Salihu HM, **Imudia AN**. National trends of adnexal surgeries at the time of hysterectomy for benign indication, United States, 1998-2011. *Am J Obstet Gynecol.* 2015 Nov; 213(5):713.e1-13. doi: 10.1016/j.ajog.2015.04.031. Epub 2015 Apr 30. PubMed PMID: 25935772.
6. **Mikhail E**, Miladinovic B, Velanovich V, Finan MA, Hart S, **Imudia AN**. Association between obesity and the trends of routes of hysterectomy performed for benign indications. *Obstet Gynecol.* 2015 Apr; 125(4):912-8. doi: 10.1097/AOG.0000000000000733. PubMed PMID: 25751208.

7. Wells KJ, Gordon JR, Su HI, **Plosker SM**, Quinn GP. Ethical considerations for informed consent in infertility research: The use of electronic health records. *Adv Med Ethics*. 2015; 2. pii: 7. Epub 2015 Dec 21. PubMed PMID: 27066591; PubMed Central PMCID: PMC4824403.
8. **Mikhail E**, Scott L, **Imudia AN**, Hart S. Total laparoscopic hysterectomy in the obese patient. *Surg Technol Int*. 2014 Nov; 25:167-74. PubMed PMID: 25419953.
9. **Plosker SM**. Effect of gastric bypass surgery on endocrine and metabolic abnormalities in polycystic ovary syndrome-preliminary findings and future challenges. *Surg Obes Relat Dis*. 2014 Sep-Oct; 10(5):792-4. doi: 10.1016/j.soard.2014.05.006. Epub 2014 May 16. PubMed PMID: 25264333.
10. Ying LY, **Ying Y**, **Mayer J**, **Imudia AN**, **Plosker SM**. Embryo Transfer Catheter Contamination With Intravaginal Progesterone Preparations in a Simulated Embryo Transfer Model Impairs Mouse Embryo Development: Are There Implications for Human Embryo Transfer Technique? *Reprod Sci*. 2014 Feb 10; 21(8):1000-1005. [Epub ahead of print] PubMed PMID: 24516042.
11. Schickler RL, Hoffman MS, **Plosker SM**. Elevated human chorionic gonadotropin and hyperandrogenemia in a woman with Müllerian agenesis. *Obstet Gynecol*. 2014 Feb; 123(2 Pt 2 Suppl 2):465-8. doi: 10.1097/AOG.000000000000004. PubMed PMID: 24413227.
12. Brady P, **Imudia AN**, Awonuga AO, Wright DL, Styer AK, Toth TL. Pregnancies of unknown location after in vitro fertilization: minimally invasive management with Karman cannula aspiration. *Fertil Steril*. 2014 Feb; 101(2):420-6. doi: 10.1016/j.fertnstert.2013.10.056. Epub 2013 Dec 12. PubMed PMID: 24331836.
13. **Imudia AN**, Goldman RH, Awonuga AO, Wright DL, Styer AK, Toth TL. The impact of supraphysiologic serum estradiol levels on peri-implantation embryo development and early pregnancy outcome following in vitro fertilization cycles. *J Assist Reprod Genet*. 2014 Jan; 31(1):65-71. doi: 10.1007/s10815-013-0117-8. Epub 2013 Nov 6. PubMed PMID: 24193696; PubMed Central PMCID: PMC3909127.
14. **Imudia AN**, Wang N, Tanaka Y, White YA, Woods DC, Tilly JL. Comparative gene expression profiling of adult mouse ovary-derived oogonal stem cells supports a distinct cellular identity. *Fertil Steril*. 2013 Nov; 100(5):1451-8. doi: 10.1016/j.fertnstert.2013.06.036. Epub 2013 Jul 19. PubMed PMID: 23876535.
15. Kessler LM, Craig BM, **Plosker SM**, Reed DR, Quinn GP. Infertility evaluation and treatment among women in the United States. *Fertil Steril*. 2013 Oct; 100(4):1025-32. doi: 10.1016/j.fertnstert.2013.05.040. Epub 2013 Jul 10. PubMed PMID: 23849845; PubMed Central PMCID: PMC3814221.
16. **Imudia AN**, Awonuga AO, Kaimal AJ, Wright DL, Styer AK, Toth TL. Elective cryopreservation of all embryos with subsequent cryothaw embryo transfer in patients at risk for ovarian hyperstimulation syndrome reduces the risk of adverse obstetric outcomes: a preliminary study. *Fertil Steril*. 2013 Jan; 99(1):168-73. doi: 10.1016/j.fertnstert.2012.08.060. Epub 2012 Sep 29. PubMed PMID: 23025881.
17. **Imudia AN**, Awonuga AO, Doyle JO, Kaimal AJ, Wright DL, Toth TL, Styer AK. Peak serum estradiol level during controlled ovarian hyperstimulation is associated with increased risk of small for gestational age and preeclampsia in singleton pregnancies after in vitro fertilization. *Fertil Steril*. 2012 Jun; 97(6):1374-9. doi: 10.1016/j.fertnstert.2012.03.028. Epub 2012 Apr 10. PubMed PMID: 22494926.

18. Hobson DT, **Imudia AN**, Al-Safi ZA, Shade G, Kruger M, Diamond MP, Awonuga AO. Comparative analysis of different laparoscopic hysterectomy procedures. *Arch Gynecol Obstet.* 2012 May; 285(5):1353-61. doi: 10.1007/s00404-011-2140-2. Epub 2011 Nov 29. PubMed PMID: 22124531.
19. Chang TC, Eddy CA, **Ying Y**, Liu YG, Holden AE, Brzyski RG, Schenken RS. Ovarian stimulation, in vitro fertilization, and effects of culture conditions on baboon preimplantation embryo development. *Fertil Steril.* 2011 Mar 15; 95(4):1217-23. doi: 10.1016/j.fertnstert.2010.06.095. Epub 2010 Aug 11. PubMed PMID: 20701907.
20. Lee MC, Gray J, Han HS, **Plosker SM**. Fertility and reproductive considerations in premenopausal patients with breast cancer. *Cancer Control.* 2010 Jul; 17(3):162-72. Review. PubMed PMID: 20664513.
21. Awonuga AO, Shavell VI, **Imudia AN**, Rotas M, Diamond MP, Puscheck EE. Pathogenesis of benign metastasizing leiomyoma: a review. *Obstet Gynecol Surv.* 2010 Mar; 65(3):189-95. doi: 10.1097/OGX.0b013e3181d60f93. Review. PubMed PMID: 20214834.
22. **Imudia AN**, Kumar S, Diamond MP, DeCherney AH, Armant DR. Transcervical retrieval of fetal cells in the practice of modern medicine: a review of the current literature and future direction. *Fertil Steril.* 2010 Apr; 93(6):1725-30. doi: 10.1016/j.fertnstert.2009.11.022. Epub 2010 Jan 13. Review. PubMed PMID: 20056202; PubMed Central PMCID: PMC2847626.
23. Awonuga AO, **Imudia AN**, Shavell VI, Berman J, Diamond MP, Puscheck EE. Failed female sterilization: a review of pathogenesis and subsequent contraceptive options. *J Reprod Med.* 2009 Sep; 54(9):541-7. Review. PubMed PMID: 19947030.
24. **Imudia AN**, Suzuki Y, Kilburn BA, Yelian FD, Diamond MP, Romero R, Armant DR. Retrieval of trophoblast cells from the cervical canal for prediction of abnormal pregnancy: a pilot study. *Hum Reprod.* 2009 Sep; 24(9):2086-92. doi: 10.1093/humrep/dep206. Epub 2009 Jun 4. PubMed PMID: 19497946; PubMed Central PMCID: PMC2727404.
25. **Imudia AN**, Suzuki Y, Kilburn BA, Yelian FD, Diamond MP, Romero R, Armant DR. Retrieval of trophoblast cells from the cervical canal for prediction of abnormal pregnancy: a pilot study. *Hum Reprod.* 2009 Sep; 24(9):2086-92. doi: 10.1093/humrep/dep206. Epub 2009 Jun 4. PubMed PMID: 19497946; PubMed Central PMCID: PMC2727404.
26. **Imudia AN**, Kumar S, Saed GM, Diamond MP. Pathogenesis of Intra-abdominal and pelvic adhesion development. *Semin Reprod Med.* 2008 Jul; 26(4):289-97. doi: 10.1055/s-0028-1082387. Review. PubMed PMID: 18756406.
27. **Imudia AN**, Kilburn BA, Petkova A, Edwin SS, Romero R, Armant DR. Expression of heparin-binding EGF-like growth factor in term chorionic villous explants and its role in trophoblast survival. *Placenta.* 2008 Sep; 29(9):784-9. doi: 10.1016/j.placenta.2008.06.013. Epub 2008 Aug 8. PubMed PMID: 18691754; PubMed Central PMCID: PMC2576289.

28. Awonuga AO, Rotas M, **Imudia AN**, Choi C, Khulpateea N. Recurrent benign metastasizing leiomyoma after hysterectomy and bilateral salpingo-oophorectomy. *Arch Gynecol Obstet*. 2008 Oct; 278(4):373-6. doi: 10.1007/s00404-008-0581-z. Epub 2008 Feb 8. PubMed PMID: 18259767.
29. **Imudia AN**, Detti L, Puscheck EE, Yelian FD, Diamond MP. The prevalence of ureaplasma urealyticum, mycoplasma hominis, chlamydia trachomatis and Neisseria gonorrhoeae infections, and the rubella status of patients undergoing an initial infertility evaluation. *J Assist Reprod Genet*. 2008 Jan; 25(1):43-6. doi: 10.1007/s10815-007-9192-z. Epub 2008 Jan 18. PubMed PMID: 18202910; PubMed Central PMCID: PMC2582106.
30. Padidas, K. **Ying, Y.** and Keefe, D. (2008). Predictive value of preimplantation genetic diagnosis for aneuploidy screening in repeated IVF-ET cycles among women with recurrent implantation failure. *Journal of Assistant Reproduction and Genetics* 25: 103-106.
31. Silberstein T, Saphier O, van Voorhis BJ, **Plosker SM**. Endometrial polyps in reproductive-age fertile and infertile women. *Isr Med Assoc J*. 2006Mar; 8 (3):192-5. Review. PubMed PMID: 16599056.