

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
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NAME Alperin, Marianna, MD MS	POSITION TITLE Adjunct Assistant Professor		
eRA COMMONS USER NAME malperin			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Missouri, St. Louis, Missouri	B.A.	1992-1997	Psychology; Minors: biology, chemistry
St. Louis University School of Medicine, St. Louis, Missouri	M.D.	1997-2001	Medicine
Thomas Jefferson University Hospital, Philadelphia, Pennsylvania		2001-2003	Obstetrics and Gynecology
Brigham and Women's / Massachusetts General Hospitals, Harvard University School of Medicine, Boston, Massachusetts		2003-2005	Obstetrics and Gynecology
Magee-Womens Hospital, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania		2005-2008	Female Pelvic Medicine and Reconstructive Surgery
Clinical Research Training Program, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania	M.S.	2005-2007	Clinical Research Design

A. PERSONAL STATEMENT

The primary focus of my research is to gain understanding of the structure and function of the skeletal muscles of the pelvic floor, as well as to determine muscular architectural changes due to vaginal deliveries. Epidemiologic studies indicate that vaginal childbirth is the primary risk factor for the development of pelvic floor disorders (PFD). Despite the common occurrence of these disorders, the specific effects of parturition on the pelvic floor muscles have not been identified. This gap in our knowledge results in an inability to mechanistically link vaginal deliveries with the development of PFD later in life. This, in turn, precludes development of effective preventative and treatment strategies. I hope that the knowledge gained from this study will allow for a significant leap forward in the field of female pelvic medicine through determination of the structure-function relationships in the main constituents of the pelvic floor support: skeletal muscles.

Upon completion of my fellowship in FPMRS, I became the Director of the Division of Urogynecology at Kaiser Permanente West Los Angeles, where I had established a state-of-the-art facility for the treatment of pelvic floor disorders. While at Kaiser, I took advantage of the busy clinical practice and inclusive electronic medical records to conduct retrospective and prospective clinical trials. Despite the fulfillment from my clinical practice and research, I was eager to return to the basic science research. This led me to apply for the NICHD funded Women's Reproductive Health Research Award (WRHR) Scholar position at the University of California, San Diego (UCSD). I am privileged to be a recipient of the above award at the University of California San Diego, where the rich and collaborative environment provided me with access to an interdisciplinary team with

expertise in biomechanical engineering, biochemistry, ultrastructural analysis, and novel microscopic techniques. I am fortunate to have established collaboration with Dr. Rick Lieber, a world-renowned scientist in the field of muscle physiology who has a successful track record of publications, extramural funding, and mentoring scientists at all levels of their careers. Through this collaboration and alliances with other experts, I will be able to study pelvic floor muscles in a novel way; however utilizing well established and validated methods. My previous experience in basic science research has prepared me for this undertaking and my expertise as a practicing Urogynecologist places me in a unique position where my clinical/surgical understandings help guide the directions of my basic science work to answer the most relevant clinical questions. In addition, being a recipient of the NIH WRHR K12 award allows me to dedicate the vast majority of my time to research. Ultimately, the data obtained from this proposal will facilitate a tremendous advancement towards my future research with the goal of identifying factors that mediate adaptations during pregnancy and the postpartum period, correlating findings with clinical data, and finally identifying strategies to optimize adaptations necessary to minimize trauma at the time of delivery and enhance recovery following birth injury. With over 3 million vaginal deliveries annually in the United States, new insights into the mechanism of injury and repair of pelvic floor support have the potential to improve quality of life and reduce medical costs of thousands of women each year.

B. POSITIONS AND HONORS

Positions and Employment

1996-1997	Teaching Assistant, Dept. of Chemistry, St. Louis Community College
2000-2001	Instructor in Women's Health Issues, Jewish Family and Children Services. St. Louis, MO
2008-7/2012	Director, Division of Female Pelvic Medicine and Reconstructive Surgery. Department of Obstetrics and Gynecology. Kaiser Permanente West Los Angeles, Los Angeles, CA
8/2012-current	Adjunct Assistant Professor, Department of Reproductive Medicine, University of California, San Diego, CA

Other Experience, Professional Memberships

1998	Member	American Medical Association
2001	Member	American College of Obstetrics and Gynecology
2004	Member	American Society of Urogynecology
2005	Reviewer	American Society of Urogynecology
2006	Reviewer	American Journal of Obstetrics and Gynecology
2006	Reviewer	Neurourology and Urodynamics
2007	Reviewer	Gynecologic and Obstetric Investigation
2008	Reviewer	Obstetrics and Gynecology Journal
2008	Reviewer	International Urogynecology Journal
2006-2008		Clinical Research Center, Scientific Reviewer, Magee-Womens Hospital, University of Pittsburgh, Pittsburgh, PA
2009-2011		Chair, Peer Review Committee for Gynecology, Department of Ob/Gyn, Kaiser Permanente, West Los Angeles
2009-current		Research Committee, American Urogynecological Society
2010-2011		Surgical Service Line Quality Improvement Committee, Kaiser Permanente, West Los Angeles

Honors

1992-1996	Dean's Honor Roll, University of Missouri, St. Louis, MO
1993,1994	University Scholarship for Academic Achievement, University of Missouri, St. Louis, MO
1993	Jewish Light Society Scholarship for Academic Achievement
1996	Golden Key National Honor Society
1996	Who is Who Among Students of American Universities
1997	Magna cum laude, University of Missouri, St. Louis, MO
1999	Honors in Internal Medicine and Psychiatry, St. Louis University School of Medicine
2000	Tom Dooley Scholarship for Excellence in Community Services, St. Louis University School of Medicine, St. Louis, MO

2001	Distinction in Community Service, St. Louis University School of Medicine, St. Louis, MO
2001, 2002	Excellence in Teaching, awarded three times, Thomas Jefferson University Hospital, Philadelphia, PA
2003	Best Second Year Resident Award, Thomas Jefferson University Hospital, Philadelphia, PA
2004	Excellence in Teaching Award, Brigham and Women's Hospital, Harvard University School of Medicine, Boston, MA
2006	National Institute of Health Research Award
2006	Irene McLenehan Young Investigator's Research Award, Magee-Womens Research Institute and Foundation, University of Pittsburgh, Pittsburgh, PA
2007	AUGS Foundation Astellas Grant Award for Basic Science, AUGS
2007	Outstanding Poster Presentation Award, Clinical and Translational Research Day, University of Pittsburgh, Pittsburgh, PA
2007	June Allyson Foundation Special Award, AUGS
2008	Best Poster Award, Research Day, University of Pittsburgh, Pittsburgh, PA
2008	Best Fellow Basic Science Award, AUGS
2009	Above and Beyond, Certificate of Excellence, Kaiser Permanente, West Los Angeles
2012	Women's Reproductive Health Research Award (NIH K12), University of California, San Diego

C. PEER-REVIEWED PUBLICATIONS

1. **Alperin M**, Kivnick S, Poon KYT. Outpatient Laparoscopic Hysterectomy for Large Uteri. *JMIG*. 2012 Nov; 19(6): 689-94
 2. Feola A, Moalli P, **Alperin M**, Duerr R, Gandley RE, Abramowitch S. Impact of Pregnancy and Vaginal Delivery on the Passive and Active Mechanics of the Rat Vagina. *Ann Biomed Eng*. 2010 Sep. PMID 20824342
 3. Shepherd JP, **Alperin M**, Meyn L, Frankman E, Zyczynski H. Now or Later...Does Timing Outcomes at 1 Year? *FPMRS*. 2010 16(5):299-303.
 4. **Alperin M**, Feola A, Duerr R, Meyn L, Abramowitch SD, Moalli PA. Collagen Scaffold: A Treatment for Simulated Maternal Birth Injury in the Rat Model. *Am J Obstet Gynecol*. 2010 Jun;202(6):589.e1-8. PMID 20510960
 5. **Alperin M**, Feola A, Duerr R, Moalli PA, Abramowitch SD. Pregnancy and Delivery Induced Biomechanical Changes in Rat Vagina Persist Postpartum. *Int Urogynecol J Pelvic Floor Dysfunct*. 2010 Sep;21(9):1169-74. PMID 20424824
 6. Sutkin G, **Alperin M**, Ellison R, Meyn L, Weisenfeld H, Zyczynski H. Symptomatic Urinary Tract
 7. Infections after Surgery for Prolapse and/or Incontinence. *Int Urogynecol J Pelvic Floor Dysfunct*. 2010 Aug;21(8):955-61. PMID 20354678
 8. **Alperin M**, Mantia-Smaldone G, Sagan ER. Conservative Management of Postoperatively Diagnosed Cystotomy: a case-series. *Urology* 2009; 73: 1163.e17-1163.e19. PMID 18514295
 9. **Alperin M**, Krohn MJ, Parviainen K. Episiotomy and Increase in the Risk of Obstetric Laceration in a Subsequent Vaginal Delivery. *Obstet Gynecol* 2008; 111:1274-1278. PMID 18515508
 10. **Alperin M**, Debes KM, Abramowitch SD, Moalli PA. LOXL1 deficiency affects the biomechanical properties of vagina and supportive tissues. *Int Urogynecol J* 2008;19:977-986. PMID 18265927
 11. **Alperin M**, Abraham-Gessel S, Wakamatsu M. Development of De Novo Urge Incontinence in Women Post Sling: the Role of Preoperative Urodynamics in Assessing the Risk. *Neurourol Urodynam* 2008; 27:407-411. PMID 17985373
 12. **Alperin M**, Sutkin G, Ellison R, Meyn L, Moalli P, Zyczynski H. Perioperative Outcomes of the Prolift® Pelvic Floor Repair Systems Following Introduction to a Urogynecology Teaching Service. *Int Urogynecol J* 2008; 19:1617-1622. PMID 18712268
 13. **Alperin M**, Moalli P. Remodeling of vaginal connective tissue in patients with prolapse. Review article, *Curr Opin Obstet Gynecol* 18:544-550. PMID 16932050
 14. **Alperin M**, Quaas A, Johnson NR, Hornstein MD. Endometrial Ablation in a Patient with Persistent Uterine Hemorrhage due to Acute Promyelocytic Leukemia. *J Reprod Med* June 2007; 548-50. PMID 17694980
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