

BIOGRAPHICAL SKETCH

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NAME: Amy Beth Wisniewski

eRA COMMONS USER NAME (credential, e.g., agency login): Awisnie1

POSITION TITLE: Director of Research

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Oberlin College	BA	1994	Neuroscience
Johns Hopkins University	MA	1996	Psychology
Johns Hopkins University	PhD	1999	Psychology

A. Personal Statement

The goal of the proposed research is to develop an internet-delivered intervention for parents of children with Disorders of Sex Development (DSD). I have extensive experience in training and overseeing personnel to conduct research in this under-studied clinical population. In 2007 I spearheaded an effort to start an interdisciplinary clinic for patients with DSD at OUHSC, known as the SUCCEED Clinic. This clinic has grown dramatically since its beginning, thus providing appropriate access to patients with DSD – a collection of rare disorders. Our clinic is now being used as a model for other academic medical institutions both nationally and internationally. My original research training at Johns Hopkins was in the area of hormones and human behavior. Since my postdoctoral fellowship training, I have worked in clinical centers that specialize in treating DSD patients. As a result of this work, I have published several papers on behavioral, medical and surgical outcomes of people affected by DSD. I have also successfully managed personnel in conducting clinical studies including ensuring that regulatory issues are appropriately addressed, developing study designs, collecting and analyzing data. This application is a natural extension of my currently funded study of short-term outcomes of genitoplasty with Dr. Larry Mullins as my Co-PI. By the start of the proposed studies we will have recruited 100 children and 163 parents from 10 clinical sites across the United States for further study.

1. Suorsa, K. I., Mullins, A. J., Tackett, A. P., Scott, K., Austin, P., Baskin, L., Bernabe, K., Cheng, E., Fried, A., Frimberger, D., Galan, D., Gonzalez, L., Greenfield, S., Kropp, B., Meyer, T., Myer, S., Nokoff, N., Palmer, B., Poppas, D., Paradis, A., Yerkes, E., **Wisniewski, A. B.**, & Mullins, L. L. (2015). Characterizing early psychosocial functioning of parents of children with moderate to severe genital ambiguity due to a disorder of sex development (DSD). *Journal of Urology*, PMID 26196734.
2. Wisniewski AB (2012). Gender development in 46,XY DSD: Influences of nature and nurture. *Scientifica*, doi: 10.6064/2012/834967. PMID 24278745.
3. Fedele D, Kirk K, Wolfe-Christensen C, Phillips T, Mazur T, Mullins L, Chernausek SD, Wisniewski AB (2010). Primary caregivers of children affected by disorders of sex development (DSD): mental health and caregiver characteristics in the context of genital ambiguity and genitoplasty. *Intl J Ped Endocrinol*, doi: 10.1155/2010/6906714. PMID 20628508.
4. Wisniewski AB, Migeon CJ, Meyer-Bahlburg HFL, Gearhart JP, Berkovitz GD, Brown TR and Money J (2000). Complete Androgen Insensitivity Syndrome: Long-term medical, surgical and psychosexual outcome. *Journal Clinical Endocrinology & Metabolism*, 85; 2664-2669, PMID 10946863.

B. Positions and Honors

Employment and Employment

1999 - 2002	Postdoctoral Fellow	Johns Hopkins School of Medicine, Pediatrics
2002	Instructor	Johns Hopkins School of Medicine, Pediatrics
2003	Assistant Professor	Johns Hopkins School of Medicine, Pediatrics
2004 - 2007	Assistant Professor	Drake University, Department of Biology
2007 - 2009	Associate Professor	University of Oklahoma Health Sciences Center, Pediatrics
2010 - 2016	Associate Professor	University of Oklahoma Health Sciences Center, Urology
2014- 2016	Professor	University of Oklahoma Health Sciences Center, Urology
2016 -	Director of Research	Cook Children's Medical Center

Other Experiences and Professional Memberships

1999 -	Member, Society for Behavioral Neuroendocrinology (SBN)
2000 -	Member, Lawson Wilkins Pediatric Endocrine Society (LWPES) <ul style="list-style-type: none">• Member, DSD Educational Program Committee 2007-
2002 -	Member, International Academy of Sex Research (IASR)
2007 -	Member, Organization for the Study of Sex Differences (OSSD) <ul style="list-style-type: none">• Member, Scientific Program Committee member 2007-• Chair, Scientific Program Committee 2010 - 2011• Member, Publications Committee 2008-• Secretary (2015-2017)
2009 -	Member, Society for Pediatric Research (SPR)
2010-	Director of Clinical Research, University of Oklahoma Health Sciences Center, Urology

Honors

1998	Hewlett Packard Teaching Award
1999	Johns Hopkins University Dean's Teaching Award
2001	LWPES Travel Award
2004	Drake University Teacher of the Year
2015 – 2017	I-DSD Steering Committee

C. Contribution to Science

1. My early publications focused on long-term gender development in adults with DSD with consideration of the impact of prenatal hormone exposure and the sex chromosome complement on psychosexual development. This work revealed a negligible influence of sex chromosomes on gender behavior in adults with DSD. However, prenatal androgen exposure influenced gender development in a dose-dependent manner, particularly in women with 46,XX DSD due to 21-hydroxylase deficiency. I served as the primary or co-investigator on these studies of biological influences on human psychosexual differentiation.

1. Migeon CJ, Wisniewski AB, Gearhart JP, Meyer-Bahlburg HFL, Rock JA, Brown TR et al. (2002). Ambiguous genitalia with perineo-scrotal hypospadias in 46,XY individuals: Long-term medical, surgical and psychosexual outcome. *Pediatrics*, 110; e31.
2. Wisniewski AB, Migeon CJ, Gearhart JP, Rock JA, Berkovitz GD, Plotnick LP et al. (2001). Congenital micropenis: Long-term medical, surgical and psychosexual follow-up of individuals raised male or female. *Hormone Research*, 56; 3-11.
3. Wisniewski AB, Migeon CJ, Meyer-Bahlburg HFL, Gearhart JP, Berkovitz GD, Brown TR and Money J (2000). Complete Androgen Insensitivity Syndrome: Long-term medical, surgical and psychosexual outcome. *Journal Clinical Endocrinology & Metabolism*, 85; 2664-2669.
4. Migeon CJ and Wisniewski AB (2000). Human sex differentiation: From transcription factors to gender. *Hormone Research*, 53; 111-119.

2. My studies of gender in people with DSD evolved into investigation of long-term medical outcomes as I investigated what medical and surgical therapies resulted in optimized outcomes for patients including quality of life and satisfaction with sex of rearing. I served as the primary or co-investigator on these studies.

5. Wisniewski AB and Mazur T (2009). 46,XY DSD with female or ambiguous external genitalia at birth due to androgen insensitivity syndrome, 5 α -reductase-2 deficiency, or 17 β -hydroxysteroid dehydrogenase deficiency: a review of quality of life outcomes. *Intl J Ped Endocrinol*, article ID 567439.
6. Wisniewski AB, Migeon CJ, Malouf MA and Gearhart JP (2004). Psychosexual outcome in women affected by congenital adrenal hyperplasia due to 21-hydroxylase deficiency: an emphasis on long-term surgical results. *Journal of Urology*, 171, 2497-2501.
7. Meyer-Bahlburg HFL, Migeon CJ, Berkovitz GD, Gearhart JP, Dolezal C and Wisniewski AB (2004). Attitudes among adult 46,XY intersex persons to clinical management policies. *Journal of Urology*, 171, 1615-1619.
8. Migeon CJ, Wisniewski AB, Brown TR, Rock JA, Meyer-Bahlburg HFL, Money J and Berkovitz GD (2002). 46,XY intersex subjects: Phenotypic and etiologic classification, knowledge of condition and satisfaction with knowledge in adulthood. *Pediatrics*, 110; e32.

3. Another extension of my initial research on DSD are investigations of how parents' responses to having a child with DSD impact the psychological outcome of affected individuals. I serve as primary investigator for these studies along with my collaborator Dr. Larry Mullins.

9. Wolfe-Christensen C, Fedele DA, Kirk K, Mullins LL, Lakshmanan Y, Wisniewski AB (2014). Caregivers of children with a disorder of sex development: associations between parenting capacities and psychological distress. *J Ped Urol*, PMID 24613141.
10. Wolfe-Christensen C, Fedele DA, Kirk K, Phillips TM, Mazur T, Mullins LL, Chernausek SD, Lakshmanan Y, Wisniewski AB (2012). Degree of external genital malformation at birth in children with DSD and subsequent caregiver distress. *J Urol*, 188: 1596-600.
11. Hullmann SE, Fedele DA, Wolfe-Christensen C, Mullins LL, Wisniewski AB* (2011). Differences in Adjustment by Child Developmental Stage among Caregivers of Children with Disorders of Sex Development, *Intl J Ped Endocrinology*, 2011: 16.
12. Fedele D, Kirk K, Wolfe-Christensen C, Phillips T, Mazur T, Mullins L, Chernausek SD, Wisniewski AB (2010). Primary caregivers of children affected by disorders of sex development (DSD): mental health and caregiver characteristics in the context of genital ambiguity and genitoplasty. *Intl J Ped Endocrinol*, article ID 690674.

4. Finally, my most recent research in the field of DSD is identifying novel bioassays for predicting early brain/behavioral masculinization in patients with DSD. For this work, I have focused on measuring patterns of otoacoustic emissions (OAEs) for predicting gender in people with 46,XY or 46,XX DSD.

13. **Wisniewski AB**, Espinoza-Varas B, Aston CE, Edmundson S, Champlin CA, Pasanen EG, McFadden D (2014). Otoacoustic emissions, auditory evoked potentials and self-reported gender in people affected by disorders of sex development (DSD). *Hormones & Behavior*, doi: 10.1016/j.yhbeh.2014.07.004, PMID 25038289

Complete List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/pubmed?term=wisniewski+ab&cmd=DetailsSearch>

D. Research Support

1R01HD074579-01A1 (Mullins, Co-PI)
NIH/NICHD R01
Short-term outcomes of interventions for reproductive dysfunction

07/05/13-04/30/2018 3.0 calendar
\$2,300,000

The major goals of this study are to describe the medical/surgical outcomes of children newly diagnosed with a disorder of sexual development and document psychosocial outcomes in their parents.

PENDING

P20 (Hurst) 12/1/2016-11/30/2018 0.60 calendar months
NIH/NIDDK \$200,000

Organ Crosstalk in Bladder Dysfunction

By increasing bladder permeability with a brief treatment with dilute protamine sulfate, we demonstrate an immediate increase in bowel permeability without producing major damage to the bladder. Likewise, inducing bowel inflammation induces an immediate increase in bladder permeability without manipulating the bladder at all. Our hypothesis is that with these two models we can learn much about the etiology of bladder and bowel pathology in these linked disorders. Our aims are to test the hypothesis that a sequence of molecular changes accompany increased permeability of the bladder and bowel, and that they are the same whether induced directly or indirectly through organ crosstalk.

The goal of this project is to assess 5 year outcomes including adverse events and mental health in children receiving interventions for reproductive dysfunction due to ambiguous genitalia. We have established a research network with 10 children's hospitals for data collection with OUHSC being the lead site.

Role: PI

Completed Research Support

R21 HD067718 Wisniewski (PI) 07/01/11 – 06/30/13

Improving Outcomes in DSD

The goal of this project was to determine if OAEs were better predictors of gender than genital phenotype in adults with DSD. In fact, OAEs are better predictors. Data from this project provide the theoretical basis for the current research application.

Role: PI