

**CURRICULUM VITAE**  
**JOSEPH M. BLISS, M.D., Ph.D.**

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**EDUCATION**

Undergraduate	Ithaca College, Ithaca, New York Major Field: Biology B.A. with Honor, 1990, Summa cum Laude
Medical School	University of Rochester, Rochester, New York August 1990 – May 1998 M.D. with Honor, 1998, Alpha Omega Alpha
Advanced Degrees	University of Rochester, Rochester, New York August 1990 – May 1998 Major Field: Microbiology and Immunology M.S., 1994; Ph.D., 1998

**POSTGRADUATE TRAINING**

Residency	University of Rochester, Children's Hospital at Strong, Rochester, NY Pediatric Residency (Special Alternative Pathway), July 1998 – June 2000
Fellowship	University of Rochester, Children's Hospital at Strong, Rochester, NY Fellowship in Neonatal-Perinatal Medicine, July 2000 – June 2003

**POSTGRADUATE HONORS AND AWARDS**

Eastern Society for Pediatric Research Faculty Young Investigator Award, Finalist, 2007  
 Morning Report Most Valuable Resident, Children's Hospital at Strong, 2000  
 Award for Excellence in Neonatology, Children's Hospital at Strong, 1999  
 Alpha Omega Alpha, University of Rochester, 1998  
 Robert Kates Award for Excellence in Clinical Medicine and Research, University of Rochester, 1998

**ACADEMIC APPOINTMENTS**

Assistant Professor of Pediatrics, Brown Medical School  
 July 1, 2003 to present.

**MEMBERSHIP IN SOCIETIES**

American Academy of Pediatrics, 1998-present  
 American Society for Microbiology, 1994-present  
 Eastern Society for Pediatric Research, 2004-present  
 Society for Pediatric Research, 2006-present

**ORIGINAL PUBLICATIONS IN PEER-REVIEWED JOURNALS**

Laforce-Nesbitt, S.S., Sullivan, M.A., Hoyer, L.L., and **Bliss, J.M.** Inhibition of *Candida albicans* Adhesion by Recombinant Human Antibody Single-Chain Variable Fragment Specific for Als3p. *FEMS Immunol. Med. Microbiol.* In Press, 2008.

Kochilas, L., Gundogan, F., Atalay, M., **Bliss, J.M.**, Vatta, M, Pena, L.S., and Abuelo, D. A Novel Mutation of the Fibrillin-1 (*FBNI*) Gene in a Newborn with Severe Marfan Syndrome. *J. Perinatol.* **28**: 303-305, 2008.

**Bliss, J.M.**, Basavegowda, K.P., Watson, W.J., Sheikh, A.U., and Ryan, R.M. Vertical and Horizontal Transmission of *Candida albicans* in VLBW Infants Using DNA Fingerprinting Techniques. *Pediatr. Infect. Dis. J.* **27**: 231-235, 2008.

**Bliss, J.M.** and Laforce-Nesbitt, S.S. Toxicity to *Candida albicans* mediated by human serum and peripheral blood mononuclear cells, *FEMS Immunol. Med. Microbiol.* **46**: 452-460, 2006.

**Bliss, J.M.**, Bigelow, C.E., Foster, T.H., and Haidaris, C.G. Susceptibility of *Candida* species to photodynamic effects of Photofrin®. *Antimicrob. Agents Chemother.* **48**: 2000-2006, 2004.

Wellington, M., **Bliss, J.M.**, and Haidaris, C.G. Enhanced phagocytosis of *Candida* species mediated by opsonization with a recombinant human antibody single chain variable fragment. *Infect. Immun.* **71**: 7228-7231, 2003.

**Bliss, J.M.**, Sullivan, M.A., Malone, J., and Haidaris, C.G. Differentiation of *Candida albicans* and *Candida dubliniensis* by using recombinant human antibody single chain variable fragments specific for hyphae. *J. Clin. Microbiol.* **41**: 1152-1160, 2003.

Haidaris, C.G., Malone, J., Sherrill, L.A., **Bliss, J.M.**, Gaspari, A.A., and Sullivan, M.A. Recombinant human single chain variable fragments (scFv) reactive with *Candida albicans* surface antigens. *J. Immunol. Meth.*, **257**: 185-202, 2001.

**Bliss, J.M.**, and Silver, R.P. Evidence that KpsT, the ATP-binding component of an ATP-binding cassette transporter, is exposed to the periplasm and associates with polymer during translocation of the polysialic acid capsule of *Escherichia coli* K1. *J. Bacteriol.* **179**:1400-1403, 1997.

**Bliss, J.M.**, Garon, C.F., and Silver, R.P. Polysialic acid export in *Escherichia coli* K1: the role of KpsT, the ATP-binding component of an ABC transporter, in chain translocation. *Glycobiology* **6**: 445-452, 1996.

Wunder, D.E., Aaronson, W., Hayes, S.F., **Bliss, J.M.**, and Silver, R.P. Nucleotide sequence and mutational analysis of the gene encoding KpsD, a periplasmic protein involved in transport of polysialic acid in *Escherichia coli* K1. *J. Bacteriol.* **176**: 4025-4033, 1994.

**OTHER PEER-REVIEWED PUBLICATIONS**

**Bliss, J.M.**, Wellington, M., and Gigliotti, F. Antifungal pharmacotherapy for neonatal candidiasis. *Sem. Perinatol.* **27**: 365-374, 2003.

**Bliss, J.M.**, and Silver, R.P. Coating the surface: a model for expression of capsular polysialic acid in *Escherichia coli* K1. *Mol. Microbiol.* **21**: 221-231, 1996.

**Bliss, J.M.** Isolation of a nuclear suppressor of a yeast mitochondrial mutation. *Proceedings of the Third National Conference on Undergraduate Research* **2**: 309-314, 1989.

### **OTHER NON-PEER REVIEWED PUBLICATIONS**

**Bliss, J.M.** Lighten the load. Letters to the Editor. *Medical Economics* July, 2005.

### **ABSTRACTS**

1. 6<sup>th</sup> International Neonatal Hematology and Immunology Meeting, Boston, MA, July 2008  
Platform Presentation: Destin, K.D., Maccani, M.A., Laforce-Nesbitt, S.S., and Bliss, J.M. Phagocytosis and Oxidative Burst of Neonatal Neutrophils Confronted with *Candida albicans* and *Candida parapsilosis*
2. 9<sup>th</sup> ASM Conference on *Candida* and Candidiasis, Jersey City, NJ, March 2008  
Poster Presentation: Laforce-Nesbitt, S.S., Sullivan, M.A., Hoyer, L.L., and Bliss, J.M. Inhibition of *Candida albicans* Adhesion by Recombinant Human Antibody Single-Chain Variable Fragment Specific for Als3p
3. 9<sup>th</sup> ASM Conference on *Candida* and Candidiasis, Jersey City, NJ, March 2008  
Poster Presentation: Al-Rawi, N. and Bliss, J.M. *Candida albicans* SPT6: Proposed Target of a Human Single-Chain Variable Fragment Specific for Hyphae
4. Pediatric Academic Societies' Annual Meeting, Toronto, ON, May 2007  
Platform Presentation: Bliss, J.M. and Laforce-Nesbitt, S.S. Effect of Human Single Chain Variable Fragments (scFv) Specific to the *Candida albicans* Adhesin, Als3, on Adherence to Endothelial Cells
5. Eastern Society for Pediatric Research Annual Meeting, Philadelphia, PA, March 2007  
Platform Presentation: Bliss, J.M. and Laforce-Nesbitt, S.S. Effect of Human Single Chain Variable Fragments (scFv) Specific to the *Candida albicans* Adhesin, Als3, on Adherence to Endothelial Cells
6. 23<sup>rd</sup> Interdisciplinary Neonatal Nutrition and Gastroenterology Symposium, Sunny Isles Beach, FL, December 2006  
Platform Presentation: Bliss, J.M. and Laforce-Nesbitt, S.S. Toxicity to Opsonized *Candida albicans* Mediated by Peripheral Blood Mononuclear Cells
7. 32<sup>nd</sup> Annual New England Conference on Perinatal Research, Newport, RI, September 2006  
Platform Presentation: Bliss, J.M. and Laforce-Nesbitt, S.S. Deficiency of Neonatal Cord Blood Mononuclear Cells in Mediating Toxicity to Opsonized *Candida albicans*
8. Pediatric Academic Societies' Annual Meeting, San Francisco, CA, April 2006  
Poster Presentation: Bliss, J.M. and Laforce-Nesbitt, S.S. Deficiency of Neonatal Cord Blood Mononuclear Cells in Mediating Toxicity to Opsonized *Candida albicans*
9. 8<sup>th</sup> ASM Conference on *Candida* and Candidiasis, Denver, CO, March 2006

Poster Presentation: Bliss, J.M. and Laforce-Nesbitt, S.S. Deficiency of Neonatal Cord Blood Mononuclear Cells in Mediating Toxicity to Opsonized *Candida albicans*

10. American Society for Microbiology General Meeting, Atlanta, GA, June 2005

Poster Presentation: Bliss, J.M. and Laforce-Nesbitt, S.S. Inhibition of *Candida albicans* Mediated by Human Serum and Peripheral Blood Mononuclear Cells

11. Pediatric Academic Societies' Annual Meeting, San Francisco, CA, May 2004

Poster Presentation: Bliss, J.M. and Laforce-Nesbitt, S.S. Rapid Toxicity to *Candida albicans* Mediated by Human Peripheral Blood Mononuclear Cells

12. Eastern Society for Pediatric Research Annual Meeting, Old Greenwich, CT, March 2004

Poster Presentation: Bliss, J.M. and Laforce-Nesbitt, S.S. Rapid Toxicity to *Candida albicans* Mediated by Human Peripheral Blood Mononuclear Cells

13. Pediatric Academic Societies' Annual Meeting, Baltimore, MD, May 2002

Poster Symposium: Bliss, J.M., Sullivan, M.A., and Haidaris, C.G. Characterization of Recombinant Human Immunoglobulin Fragments Reactive with *Candida albicans* Germ Tube Surface Antigens.

14. 6<sup>th</sup> ASM Conference on *Candida* and Candidiasis, Tampa, FL, January 2002

Poster Presentation: Bliss, J.M., Sullivan, M.A., and Haidaris, C.G. Recombinant Human Immunoglobulin Single Chain Variable Fragments Reactive with *Candida albicans* Germ Tube Surface Antigens.

15. 58<sup>th</sup> Perinatal & Developmental Medicine Symposium, Aspen, CO, June 2001

Platform Presentation: Bliss, J.M., Sullivan, M.A., and Haidaris, C.G. Human Monoclonal Antibodies Directed Against *Candida albicans*.

16. American Society for Microbiology General Meeting, New Orleans, LA, May 1996

Poster Presentation: Bliss, J.M. and Silver, R.P. The Role of KpsT in Transport of the Polysialic Acid Capsular Polysaccharide of *Escherichia coli* K1.

17. American Society for Microbiology General Meeting, Washington, DC, May 1995

Poster Presentation: Bliss, J.M. and Silver, R.P. A Dominant Negative Mutation of *kpsT* Inhibits Polysialic Acid Transport in *Escherichia coli* K1.

## **INVITED PRESENTATIONS**

1. Pediatric Research Colloquium, Brown University, Providence, RI, September 2002, Regional: "Human Monoclonal Antibody Fragments Directed Against *Candida* Surface Antigens"

2. Perinatal Seminar, Women & Infants Hospital of Rhode Island, Providence, RI, December 2003, Regional: "Candidiasis and Immunocompromise in the Neonate"

3. Pathobiology Graduate Program Seminar, Brown University, Providence, RI, February 2004, Regional: "Human Monoclonal Antibody Fragments Directed Against Surface Antigens of *Candida albicans*"

4. Pediatric Grand Rounds, Hasbro Children's Hospital, Providence, RI, July 2004, Regional: "*Candida* Infection in the Newborn: Mechanisms of Immune Compromise and Novel Approaches to Therapy"
5. Division of Surgical Research Seminar Series, Rhode Island Hospital, Providence, RI, April 2005, Regional: "The Role of Antibody in Host Defense Against *Candida albicans*"
6. Perinatal Seminar, Women & Infants Hospital of Rhode Island, Providence, RI, May 2005, Regional: "Early Nutrition for Premature Infants: When and Why?"
7. Pediatric Research Colloquium, Brown University, Providence, RI, March, 2006, Regional: "Antibody in Host Defense Against *Candida albicans*"
8. Perinatal Seminar, Women & Infants Hospital of Rhode Island, Providence, RI, May 2006, Regional: "Erbs Palsy & Diaphragm Paralysis: Management and Outcomes"
9. Problems in Pediatrics CME Conference, Colby College, Waterville, ME, July, 2006, National: "Evaluation and Management of the Symptomatic Newborn"
10. Perinatal Seminar, Women & Infants Hospital of Rhode Island, Providence, RI, August 2007, Regional: "Fluconazole as a NICU Prophylaxis Agent – Ready for Prime Time?"
11. Microbiology and Immunology Seminar Series, East Carolina University, Brody School of Medicine, Greenville, NC, October 2007, Regional: "Candidiasis in the Neonate: Host Defense and Investigations into the Role of Antibody"
12. Pediatric Research Colloquium, Brown University, Providence, RI, November, 2007, Regional: "*Candida* and the Neonatal Host: Progress in Development of Antibody-Based Immunotherapy"
13. Pediatric Grand Rounds, University of Minnesota Children's Hospital, Minneapolis, MN, January 2008, Regional: "Fluconazole as a NICU Prophylaxis Agent – Ready for Prime Time?"
14. Fellows' Conference, University of Minnesota Children's Hospital, Minneapolis, MN, January 2008, Regional: "Candidiasis in the Neonate: Host Defense and Investigations into the Role of Antibody"

## **GRANTS**

1. "COBRE for Perinatal Biology", NCRR/NIH, \$175,000/yr, 7/1/08-6/30/13, Principal Investigator for Project 1: "Neonatal Candidiasis and Immune Compromise during Development"
2. "The Role of Specific Antibody in Host-Defense Against Neonatal Candidiasis" Basil O'Connor Starter Scholar Research Award, March of Dimes, \$75,000/yr, 2/1/06-1/31/08, Principal Investigator
3. 1 K08 AI064919-01 "Antibody in Defense Against Neonatal *Candida* Infections" NIH/NIAID, \$95,000/yr, 3/15/05-2/28/09, Principal Investigator.
4. "Host-Pathogen Interactions in the Pathogenesis of *Candida albicans*" Rhode Island Foundation, \$10,000, 2/1/04 to 2/28/05, Principal Investigator.