Curriculum Vitae

Scott M. Baliban, Ph.D.
Postdoctoral Fellow
University of Maryland School of Medicine
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Contact Information

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Education

2008-2014	Ph.D., Microbiology & Immunology	Drexel University, Philadelphia, PA
2004-2008	B.S., Biological Sciences	University of Delaware, Newark, DE

Post Graduate Education and Training

2014-present Postdoctoral Fellowship, University of Maryland School of Medicine, Center for Vaccine Development, Baltimore, MD

Professional Experience

2014-present Postdoctoral Fellowship, University of Maryland School of Medicine, Center for Vaccine Development, Baltimore, MD

- Fellowship in the laboratory of Raphael Simon exploring the development of pediatric glycoconjugate vaccines to prevent non-typhoidal *Salmonella* infection.
- Research incorporates infant mouse models, which mimic the target population for these vaccines, to understand how protective immunity can be induced and the mechanisms involved.
- Primary areas of interest are carbohydrate-based vaccines, neonatal and infant immunology, carbohydrate immunology, adjuvants, and the influence of maternal immunity on infant immune responses to glycoconjugate vaccines.

2008-2014 Graduate Student, Drexel University College of Medicine, Philadelphia, PA

- Graduate studies in the laboratory of Michele Kutzler exploring the development of DNA vaccines to prevent *C. difficile*-associated disease.
- Research studied protective immunity elicited by DNA vaccines using adult and geriatric mouse models, in addition to host-pathogen interactions.
- Primary areas of interest were DNA vaccines, vaccine delivery systems, and geriatric immunology.

Professional Memberships

2016-present Postdoctoral Advisory Committee, University of Maryland, Baltimore
2013-present Member, American Association of Immunologists

Honors and Awards

2018 – present T32 Vaccinology Fellow, University of Maryland, Baltimore

2018	Travel Award, National Postdoctoral Association Annual Conference, Cleveland, OH
2017	"Elevator Talk", Abstract selected to present as brief oral pitch to scientific audience, NIH & FDA Glycoscience Day, Bethesda, MD
2014	Travel Award, AAI Immunology 2014, Pittsburgh, PA
2012	Senior Graduate Student Best Poster Award, Discovery Day, Drexel University
2008	General Honors Award, University of Delaware
2008	Honors Degree with Distinction, University of Delaware
2006-2007	McNair Scholar
2004	Eagle Scout

Institutional Service

2018-present	Co-President, Postdoctoral Advisory Committee, University of Maryland School of Medicine
2017-2018	Vice-President, Postdoctoral Advisory Committee, University of Maryland School of Medicine
2017	Reviewer, GPILS and OPS Awards Selection Committee, University of Maryland, Baltimore

Reviewer Service

2018	*Immunology*
2018	*mSphere*
2015-2016	*Infection and Immunity*

Mentoring

2018	Jessica Allen, Department of Microbiology & Immunology Graduate Student, Serum bactericidal assays to evaluate rabbit responses to *Salmonella* conjugate vaccines, 5 hours/week

Grant Support

Active

07/2018-06/2019	Scott M. Baliban (T32 Fellow; PI: K. Neuzil) Fellowship training program in vaccinology T32 postdoctoral fellowship training grant NIH-2T32AI007524-21
08/2014-07/2019	Scott M. Baliban (Postdoctoral Fellow; PI: R. Simon) "Exploration of the protective immunity induced by *Salmonella* COPS:FliC conjugates" NIH/NIAID-5R01-AI110627

Completed

2013-2014	Scott M. Baliban (Graduate Student; PI: M. Kutzler) Aging Initiative Graduate Student Fellowship Drexel University, College of Medicine, Philadelphia, PA

Patents

2016	"Novel Clostridium Difficile DNA Vaccine" Australian patent No. 201232317 US patent No. 9,446,112

Career Development Opportunities

2017	Vaccinology Course, University of Maryland, Baltimore

2016 Leadership and Business of Science Course, University of Maryland, Baltimore
2015 NRSA Grant Writing Workshop, University of Maryland, Baltimore
2015 Vaccinology Course, University of Maryland, School of Medicine

Publications

Peer-Reviewed Journal Articles

1. **Baliban SM**, Allen JC, Curtis B, Amin MN, Lees A, Rao RN, Naidu G, Venkatesan R, Rao Y, Mohan VK, Ella KM, Levine MM, Simon R. "Immunogenicity and induction of functional antibodies in rabbits immunized with a trivalent typhoid-invasive nontyphoidal *Salmonella* glycoconjugate formulation. *Molecules.* 2018; 23(7). pii: E1749
2. **Baliban SM**, Curtis B, Toema D, Tennant SM, Levine MM, Pasetti MF, Simon R. "Immunogenicity and efficacy following sequential parenterally-administered doses of *Salmonella* Enteritidis COPS:FliC glycoconjugates in infant and adult mice." *PLoS Negl Trop Dis*. 2018; 12(5):e0006522.
3. **Baliban SM**, Yang M, Ramachandran G, Curtis B, Shridar S, Laufer RS, Wang JY, Van Druff J, Higginson EE, Hegerle N, Varney KM, Galen JE, Tennant SM, Lees A, MacKerrel AD Jr, Levine MM, Simon R. "Development of a glycoconjugate vaccine to prevent invasive *Salmonella* Typhimurium infections in sub-Saharan Africa." *PLoS Negl Trop Dis*. 2017; 11(4):e0005493.
4. **Baliban SM**, Michael A, Shammassian B, Mudakha S, Khan AS, Cocklin S, Zentner I, Latimer BP, Bouillaut L, Hunter M, Marx P, Sardesai NY, Welles SL, Jacobson JM, Weiner DB, Kutzler MA. "An optimized, synthetic DNA vaccine encoding the toxin A and toxin B receptor binding domains of *Clostridium difficile* induces protective antibody responses *in vivo*." *Infect Immun*. 2014;82(10):4080-4091.

Submitted or In-Revision Peer-Reviewed Journal Articles

1. **Baliban SM**, Curtis B, Amin M, Levine MM, Pasetti MF, Simon R. "Maternally-transferred antibodies elicited by immunization with COPS:FliC glycoconjugates confer passive protection of infant mice against lethal *Salmonella* Typhimurium infection." Submitted to *Front Immunol*.

Abstracts

1. **Baliban SM**, Curtis B, Toema D, Tennant SM, Levine MM, Pasetti MF, Simon R. "Immunogenicity and efficacy following sequential parenterally-administered doses of *Salmonella* Enteritidis COPS:FliC glycoconjugates in infant and adult mice." Poster presentation at the Annual Conference for Vaccine Research, Bethesda, MD, 2018.
2. **Baliban SM**, Laufer RS, Curtis B, Levine MM, Pasetti MF, Simon R. **"**Long-lived humoral immune responses in infant and adult mice immunized with a *Salmonella* Enteritidis COPS:FliC glycoconjugate.", Boston, MA. Poster presentation at International Precision Vaccines, Boston, MA, 2017.
3. **Baliban SM**, Yang M, Ramachandran G, Curtis B, Shridar S, Laufer RS, Wang JY, Van Druff J, Higginson EE, Hegerle N, Varney KM, Galen JE, Tennant SM, Lees A, MacKerrel AD Jr, Levine MM, Simon R. "Development of a glycoconjugate vaccine to prevent invasive *Salmonella* Typhimurium infections in sub-Saharan Africa." Poster presentation at NIH & FDA Glycoscience Day, 2017.
4. **Baliban SM**, Curtis B, Levine MM, Pasetti MF, Simon R. **"**Effect of adjuvant formulation on the immunogenicity and protective efficacy of *Salmonella* Enteritidis core-OPS (COPS) conjugates with flagellin in infant and adult mice." Poster presentation at the Vaccine Congress, Amsterdam, NLD, 2016.
5. **Baliban SM**, Curtis B, Levine MM, Pasetti MF, Simon R. **"**Effect of adjuvant formulation on the immunogenicity and protective efficacy of *Salmonella* Enteritidis core-OPS (COPS) conjugates with flagellin in infant and adult mice." Poster presentation at the Annual Conference for Vaccine Research, Bethesda, MD, 2016.
6. **Baliban** SM, Michael A, Shammassian B, Mudakha S, Khan AS, Cocklin S, Zentner I, Latimer BP, Bouillaut L, Hunter M, Marx P, Sardesai NY, Welles SL, Jacobson JM, Weiner DB, Kutzler MA. "An optimized, synthetic DNA vaccine encoding the toxin A and toxin B receptor binding domains of

Clostridium difficile induces protective antibody responses *in vivo*." Poster presentation at AAI Immunology 2014, Pittsburgh, PA, 2014.

7. **Baliban** SM, Michael A, Shammassian B, Mudakha S, Khan AS, Cocklin S, Zentner I, Latimer BP, Bouillaut L, Hunter M, Marx P, Sardesai NY, Welles SL, Jacobson JM, Weiner DB, Kutzler MA. "An optimized, synthetic DNA vaccine encoding the toxin A and toxin B receptor binding domains of *Clostridium difficile* induces protective antibody responses *in vivo*." Oral presentation at the Infection and Immunity Forum, Philadelphia, PA, 2013.
8. Bernui M, **Baliban S**, Jacobson JM, Kutzler MA. "Immunogenicity of a *Clostridium difficile* DNA-based vaccine in an aging mouse model". Poster presentation at the 15th International Congress of Immunology, Milan, Italy, 2013.
9. **Baliban** SM, Michael A, Shammassian B, Mudakha S, Khan AS, Cocklin S, Zentner I, Latimer BP, Bouillaut L, Hunter M, Marx P, Sardesai NY, Welles SL, Jacobson JM, Weiner DB, Kutzler MA. "An optimized, synthetic DNA vaccine encoding the toxin A and toxin B receptor binding domains of *Clostridium difficile* induces protective antibody responses *in vivo*." Oral presentation at the International Symposium on Molecular Medicine and Infectious Disease, Philadelphia, PA, 2012.
10. **Baliban** SM, Michael A, Shammassian B, Mudakha S, Khan AS, Cocklin S, Zentner I, Latimer BP, Bouillaut L, Hunter M, Marx P, Sardesai NY, Welles SL, Jacobson JM, Weiner DB, Kutzler MA. "An optimized, synthetic DNA vaccine encoding the toxin A and toxin B receptor binding domains of *Clostridium difficile* induces protective antibody responses *in vivo*." Poster presentation at Anaerobe, San Francisco, CA, 2012.
11. **Baliban** SM, Michael A, Shammassian B, Mudakha S, Khan AS, Cocklin S, Zentner I, Latimer BP, Bouillaut L, Hunter M, Marx P, Sardesai NY, Welles SL, Jacobson JM, Weiner DB, Kutzler MA. "An optimized, synthetic DNA vaccine encoding the toxin A and toxin B receptor binding domains of *Clostridium difficile* induces protective antibody responses *in vivo*." Poster presentation at DNA Vaccines, San Diego, CA. 2011.
12. **Baliban** SM, Michael A, Shammassian B, Mudakha S, Khan AS, Cocklin S, Zentner I, Latimer BP, Bouillaut L, Hunter M, Marx P, Sardesai NY, Welles SL, Jacobson JM, Weiner DB, Kutzler MA. "An optimized, synthetic DNA vaccine encoding the toxin A and toxin B receptor binding domains of *Clostridium difficile* induces protective antibody responses *in vivo*." Poster presentation at the Infection and Immunity Forum, Philadelphia, PA, 2011.
13. **Baliban SM** and van Golen KL. "The role of Rho GTPases during prostate cancer bone metastasis". Poster presentation at the McNair Scholars Research Conference, Newark, DE, 2007.