Sophia M.R. York, Ph.D.

Assistant Professor
University of Alabama at Birmingham

CONTACT

(570)-447-8818
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Birmingham, AL
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EDUCATION

Post-doctoral Fellowship
April 2021-January 2023
Seattle Children's Research Institute

Ph.D. in Immunology
June 2016-February 2021
University of Pennsylvania

B.A. in Biology/French & Francophone Studies, with honors
August 2012-May 2016
Bucknell University

PROFESSIONAL DEVELOPMENT

Advancing Learning through Evidence-based STEM Teaching (2022)
Center for the Integration of Research, Teaching, and Learning

The Inclusive STEM teaching project (2022)
Boston University EdX

CAREER OBJECTIVE

To help my students grow as learners and as conscientious members of society. I have designed and delivered curriculum, assisted students in their learning, and developed courses with a firm basis in active learning and student-centered pedagogies. I believe in centering the whole student, connecting with them about their career goals and how my courses can help them meet those goals, as well as building scientific literacy and reading, writing, and oral communication skills.

TEACHING EXPERIENCE

Assistant Professor **January 2025-Current**
University of Washington, Department of Biology
- Physiology
- Immunology

Lecturer **September 2023-March 2024**
University of Washington, Department of Biology
- Immunology
- Fabulous Fungi

Teaching Associate **September 2022-June 2023**
University of Washington, Department of Biology
- Biology of Vaccines
- Immune Mediated Diseases
- Techniques in Cell & Molecular Biology

Instructor **Summers, 2022 & 2023**
University of Washington, Math & Science Upward Bound Summer Academy
- Immunology
- Medical Microbiology
- Emerging Infectious Diseases

Instructor **March 2022-June 2022**
University of Washington, Department of Pathobiology
- Heterogeneity of Infection

Teaching Assistant **July-August 2021**
University of Pennsylvania, Immunology Graduate Group
- Immunology Prep Course

Peer Tutor & Study Group Facilitator **2013-2016**
Bucknell University
- Organic Chemistry, Cell & Molecular Biology

Sophia M.R. York, Ph.D.

Lecturer, University of Washington

PUBLICATIONS

Tursi, N.J., **Reeder, S.M**., Flores-Garcia, Y. et al. Engineered DNA-encoded monoclonal antibodies targeting Plasmodium falciparum circumsporozoite protein confer single dose protection in a murine malaria challenge model. Sci Rep 12, 14313 (2022).

Glennon, EKK, Tongogara, T, Primavera, VI, **Reeder, SM**, Wei, L, Kaushansky, A. 2022. Elucidating Spatially-Resolved Changes in Host Signaling During Plasmodium Liver-Stage Infection. Frontiers in Cellular and Infection Microbiology. 11: 804186, DOI: 10.3389/fcimb.2021.804186

Reeder SM, Bah MA, Tursi NJ, Brooks RC, Patel A, Esquivel R, Eaton A, Jhun H, Chu J, Kim K, Xu Z, Zavala F, Weiner DB. Strategic Variants of CSP Delivered as SynDNA Vaccines Demonstrate Heterogeneity of Immunogenicity and Protection from Plasmodium Infection in a Murine Model. Infect Immun. 2021 Sep 16;89(10):e0072820

Gary EN, Warner BM, Parzych EM, Griffin BD, Zhu X, Tailor N, Tursi NJ, Chan M, Purwar M, Vendramelli R, Choi J, Frost KL, **Reeder SM**, Liaw K, Tello E, Ali AR, Yun K, Pei Y, Thomas SP, Rghei AD, Guilleman MM, Muthumani K, Smith T, Wootton SK, Patel A, Weiner DB, Kobasa D. A novel mouse AAV6 hACE2 transduction model of wild-type SARS-CoV-2 infection studied using synDNA immunogens. iScience. 2021 Jul 23;24(7):102699.

Smith TRF, Patel A, … **Reeder SM,** … Kulp DW, Humeau LMPF, Weiner DB, Broderick KE. Immunogenicity of a DNA vaccine candidate for COVID-19. Nat Commun. 2020 May 20;11(1):2601.

Kgoroebutswe TK, Ramatlho P, **Reeder SM**, Makate N, Paganotti GM. Distribution of Anopheles mosquito species, their vectorial role and profiling of knock-down resistance mutations in Botswana. Parasitol Res. 2020 Apr;119(4):1201-1208.

Reeder SM, Reuschel EL, Bah MA, Yun K, Tursi NJ, Kim KY, Chu J, Zaidi FI, Yilmaz I, Hart RJ, Perrin B, Xu Z, Humeau L, Weiner DB, Aly ASI. Synthetic DNA Vaccines Adjuvanted with pIL-33 Drive Liver-Localized T Cells and Provide Protection from Plasmodium Challenge in a Mouse Model. Vaccines (Basel). 2020 Jan 10;8(1):21.

Ignatius MS, Hayes MN, Moore FE, Tang Q, Garcia SP, Blackburn PR, Baxi K, Wang L, Jin A, Ramakrishnan A, **Reeder SM**, Chen Y, Nielsen GP, Chen EY, Hasserjian RP, Tirode F, Ekker SC, Langenau DM. tp53 deficiency causes a wide tumor spectrum and increases embryonal rhabdomyosarcoma metastasis in zebrafish. Elife. 2018 Sep 7;7:e37202

Reeder SM, Palmer JM, Prokkola JM, Lilley TM, Reeder DM, Field KA. Pseudogymnoascus destructans transcriptome changes during white-nose syndrome infections. Virulence. 2017 Nov 17;8(8):1695-1707. doi: 10.1080/21505594.2017.1342910. Epub 2017 Jul 13.

Ignatius MS, Hayes MN, Lobbardi R, Chen EY, McCarthy KM, Sreenivas P, Motala Z, Durbin AD, Molodtsov A, **Reeder SM**, Jin A, Sindiri S, Beleyea BC, Bhere D, Alexander MS, Shah K, Keller C, Linardic CM, Nielsen PG, Malkin D, Khan J, Langenau DM. The NOTCH1/SNAIL1/MEF2C Pathway Regulates Growth and Self-Renewal in Embryonal Rhabdomyosarcoma. Cell Rep. 2017 Jun 13;19(11):2304-2318. doi: 10.1016/j.celrep.2017.05.061. PMID: 28614716; PMCID: PMC5563075.

Rausch K, Hackett BA, Weinbren NL, **Reeder SM**, Sadovsky Y, Hunter CA, Schultz DC, Coyne CB, Cherry S. Screening Bioactives Reveals Nanchangmycin as a Broad Spectrum Antiviral Active against Zika Virus. Cell Rep. 2017 Jan 17;18(3):804-815.

Field KA, Johnson JS, Lilley TM, **Reeder SM**, Rogers EJ, Behr MJ, Reeder DM. The White-Nose Syndrome Transcriptome: Activation of Anti-fungal Host Responses in Wing Tissue of Hibernating Little Brown Myotis. PLoS Pathog. 2015 Oct 1;11(10):e1005168.

*Complete list of published work in my Bibliography

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Lecturer, University of Washington

PROFESSIONAL PRESENTATIONS

Reeder, S.M, Reuschel, E.L., Weiner, D.B. (2019). Targeting liver stage malaria with a synthetic DNA vaccine results in protection in a mouse model of malaria. Presented at Keystone Symposia: B cell-T cell Interactions/Molecular Approaches to Vaccines and Immune Monitoring, Keystone, CO USA

Reeder, S.M, Reuschel, E.L., Weiner, D.B. (2018). Developing a DNA Vaccine for Canine Distemper Virus. Presented at the 2018 International Society for Vaccines Annual Congress, Atlanta, GA, USA

Reeder, S.M, Reuschel, E.L., Weiner, D.B (2018). Targeting liver stage malaria with a synthetic DNA vaccine results in sterilizing protection in a mouse model of malaria. Presented at Woods Hole Immunoparasitology Meeting, Woods Hole, MA, USA

Reeder, S.M., Rogers, E.J., Field K.A. (2016) The White Nose Syndrome Transcriptome: Anti-fungal Immune Responses. Presented at the Society for Integrative & Comparative Biology Conference, Portland, OR, USA

Reeder, S.M., Rogers, E.J., Field K.A. (2014) The White Nose Syndrome Transcriptome: Anti-fungal Immune Responses. Presented at the American Association of Immunologists Annual Meeting, Pittsburg, PA, USA

AWARDS & HONORS

2020-Rugart Family Award
2017-NSF GRFP Honorable Mention
2016- Mortar Board Honor Society
2016- Phi Sigma Biological Sciences Honor Society
2016-Magna Cum Laude Bucknell Class of 2016

GRANTS

2021-2023 Postdoctoral Fellowship, 5T32HD007233-39, NIH
2018-2019 Predoctoral Fellowship, 2T32CA115299-11, NIH
2017 Botswana-UPenn Partnership Travel Fellowship

PROFESSIONAL SERVICE

Committee Member, Undergraduate Program Committee (2023-Present)
University of Washington, Department of Biology
Board Member, Post-Doc Advisory Board (2021-2023)
Seattle Children's Hospital, Office of Teaching, Education and Research
Chair (2019-2020), Chair of Academic Affairs (2017-2019), Penn Graduate Women in Science & Engineering
University of Pennsylvania

ORGANIZATION MEMBERSHIPS

American Society for Microbiology
ImmunoReach: Immunology Education Consortium
American Association of Immunologists