

Stanford



Brett Babin

Postdoctoral Research Fellow, Pathology

 Curriculum Vitae available Online

Bio

BIO

Brett received his B.S. in Chemical Engineering from the University of Massachusetts Amherst in 2009. There he worked in the lab of Dr. Neil Forbes developing microfluidic devices to study the interactions between bacteria and in vitro tumor models. He earned his Ph.D. in Chemical Engineering from the California Institute of Technology in 2016 where he worked with Dr. Dave Tirrell and Dr. Dianne Newman. His thesis focused on the development and application of a method for time- and cell-selective proteomic analysis in bacteria. He used this approach to study protein synthesis by the opportunistic pathogen *Pseudomonas aeruginosa* under dormancy and biofilm growth conditions. Brett joined the Bogyo lab at Stanford in the fall of 2016. His current focus is on the roles of serine hydrolases in the physiology of pathogenic bacteria.

HONORS AND AWARDS

- A. P. Giannini Postdoctoral Fellowship, A. P. Giannini Foundation (2018)
- Microbiology and Immunology Postdoctoral Fellowship, Stanford School of Medicine (2018)
- Dean's Fellowship, Stanford School of Medicine (2017)

PROFESSIONAL EDUCATION

- Bachelor of Science, University of Massachusetts Amherst (2009)
- Doctor of Philosophy, California Institute of Technology (2016)

STANFORD ADVISORS

- Matthew Bogyo, Postdoctoral Faculty Sponsor

Research & Scholarship

LAB AFFILIATIONS

- Matthew Bogyo, Bogyo Lab (9/1/2016)

Publications

PUBLICATIONS

- **The dormancy-specific regulator, SutaA, is intrinsically disordered and modulates transcription initiation in *Pseudomonas aeruginosa*.** *Molecular microbiology*
Bergkessel, M., Babin, B. M., VanderVelde, D., Sweredoski, M. J., Moradian, A., Eggleston-Rangel, R., Hess, S., Tirrell, D. A., Artsimovitch, I., Newman, D. K.
2019
- **Covalent Modifiers of Botulinum Neurotoxin Counteract Toxin Persistence** *ACS CHEMICAL BIOLOGY*

Garland, M., Babin, B. M., Miyashita, S., Loscher, S., Shen, Y., Dong, M., Bogyo, M.

2019; 14 (1): 76–87

- **Selective Proteomic Analysis of Antibiotic-Tolerant Cellular Subpopulations in *Pseudomonas aeruginosa* Biofilms.** *mBio*
Babin, B. M., Atangcho, L., van Eldijk, M. B., Sweredoski, M. J., Moradian, A., Hess, S., Tolker-Nielsen, T., Newman, D. K., Tirrell, D. A.
2017; 8 (5)
- **SutA is a bacterial transcription factor expressed during slow growth in *Pseudomonas aeruginosa*** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Babin, B. M., Bergkessel, M., Sweredoski, M. J., Moradian, A., Hess, S., Newman, D. K., Tirrell, D. A.
2016; 113 (5): E597-E605
- **In situ visualization of newly synthesized proteins in environmental microbes using amino acid tagging and click chemistry** *ENVIRONMENTAL MICROBIOLOGY*
Hatzenpichler, R., Scheller, S., Tavormina, P. L., Babin, B. M., Tirrell, D. A., Orphan, V. J.
2014; 16 (8): 2568-2590
- **State-selective Metabolic Labeling of Cellular Proteins** *ACS CHEMICAL BIOLOGY*
Ngo, J. T., Babin, B. M., Champion, J. A., Schuman, E. M., Tirrell, D. A.
2012; 7 (8): 1326-1330
- **Noninvasive characterization of in situ forming implants using diagnostic ultrasound** *JOURNAL OF CONTROLLED RELEASE*
Solorio, L., Babin, B. M., Patel, R. B., Mach, J., Azar, N., Exner, A. A.
2010; 143 (2): 183-190
- **A multipurpose microfluidic device designed to mimic microenvironment gradients and develop targeted cancer therapeutics** *LAB ON A CHIP*
Walsh, C. L., Babin, B. M., Kasinskas, R. W., Foster, J. A., McGarry, M. J., Forbes, N. S.
2009; 9 (4): 545-554