Stanford



Crystal M. Botham, Ph.D.

Director of Grant Writing Academy & Office of Research Development, Pediatrics

Bio

BIO

Crystal Botham, Ph.D. is Director of the Office of Pediatric Research Development in the Department of Pediatrics at Stanford University (https://med.stanford.edu/pediatrics/research/PedsRDTeam.html). Dr. Botham provides strategic advice to faculty and others to enable competitive funding applications and productive research programs.

Dr. Botham is also the Director & Founder of the Biosciences Grant Writing Academy (https://grantwriting.stanford.edu). The Grant Writing Academy supports graduate and postdoctoral trainees in developing and articulating research strategies to tackle important scientific questions.

CURRENT ROLE AT STANFORD

• Providing individualized grantsmanship assistance to postdoctoral fellows and faculty

• Editing and critically evaluating grant applications to improve funding potential

• Interpreting sponsor requirements and providing strategic advice

• Identifying a diverse portfolio of funding opportunities

• Designing and facilitating courses to enable postdoctoral fellows to develop competitive Career Development applications

• Developing and presenting at workshops on grant writing and proposal submission

• Coordinating completion of subcontracts and large collaborative projects

INSTITUTE AFFILIATIONS

- Member (Staff), Cardiovascular Institute

HONORS AND AWARDS

- Amy J. Blue Award, Stanford University (2026)
- Collaboration Award, Department of Pediatrics, Stanford University (2021)
- Trainee Abstract Award, American Association of Immunologists (2011)
- Tashia and John Morgridge Endowed Postdoctoral Fellow, Child Health Research Institute (CHRI) at Stanford University (2009-2011)
- Ruth L. Kirschstein National Research Service Award (F32AI082936), NIH, NIAID (2009-2010)
- Winning image for Journal cover, May issue of PLoS Pathogen (2008)
- Predoctoral Fellowship Award, American Heart Association- Pacific Mountain (2005-2006)
- Summer Research Award, Department of Biology, University of the Pacific (2002)
- Award for Summer Research, Max and Victoria Dreyfus Foundation at the University of the Pacific (2001)

- Participant, Colgate University's Study Group at NIH (2001)
- Outstanding recognition for poster presentation, Pacific Undergraduate Research Conference (2000)
- Outstanding recognition for speech presentation, West Coast Biological Sciences Undergraduate Research Conference (2000)

EDUCATION AND CERTIFICATIONS

- Certification, Stanford University , Strategic Decision and Risk Management (2016)
- Certification, Stanford University , Stanford Advanced Project Management (2014)
- Postdoctoral Fellow, Stanford University , Immunology (2011)
- Ph.D., University of Oregon , Biology (2007)
- B.S., University of the Pacific , Biology (2001)

Publications

PUBLICATIONS

- **Ten simple rules for writing compelling recommendation letters.** *PLoS computational biology*
  Kong, J. H., Steele, L. J., Botham, C. M.
  2021; 17 (2): e1008656
- **Biosciences Proposal Bootcamp: Structured peer and faculty feedback improves trainees' proposals and grantsmanship self-efficacy.** *PloS one*
  Botham, C. M., Brawn, S. n., Steele, L. n., Barrón, C. B., Kleppner, S. R., Herschlag, D. n.
  2020; 15 (12): e0243973
- **How to design a winning fellowship proposal.** *Nature*
  Botham, C. M., Evans, T. M.
  2018; 563 (7730): 283
- **Ten simple rules for scientists: Improving your writing productivity.** *PLoS computational biology*
  Peterson, T. C., Kleppner, S. R., Botham, C. M.
  2018; 14 (10): e1006379
- **Ten simple rules for writing a career development award proposal** *PLOS COMPUTATIONAL BIOLOGY*
  Botham, C. M., Arribere, J. A., Brubaker, S. W., Beier, K. T.
  2017; 13 (12): e1005863
- **Ten Simple Rules for Writing a Postdoctoral Fellowship** *PLOS COMPUTATIONAL BIOLOGY*
  Yuan, K., Cai, L., Ngok, S., Ma, L., Botham, C. M.
  2016; 12 (7): e1004934
- **Clinical trials of adult stem cell therapy for peripheral artery disease.** *Methodist DeBakey cardiovascular journal*
  Botham, C. M., Bennett, W. L., Cooke, J. P.
  2013; 9 (4): 201-205
- **Endothelial Cells Derived From Nuclear Reprogramming** *CIRCULATION RESEARCH*
  Wong, W. T., Huang, N. F., Botham, C. M., Sayed, N., Cooke, J. P.
  2012; 111 (10): 1363-1375
- **Identification of genetic modifiers of CagA-induced epithelial disruption in Drosophila.** *Frontiers in cellular and infection microbiology*
  Reid, D. W., Muyskens, J. B., Neal, J. T., Gaddini, G. W., Cho, L. Y., Wandler, A. M., Botham, C. M., Guillemin, K.
  2012; 2: 24-?
- **Cationic Lipid/DNA Complex-Adjuvanted Influenza A Virus Vaccination Induces Robust Cross-Protective Immunity** *JOURNAL OF VIROLOGY*
  Hong, D. K., Chang, S., Botham, C. M., Giffon, T. D., Fairman, J., Lewis, D. B.
  2010; 84 (24): 12691-12702

- **A transgenic Drosophila model demonstrates that the Helicobacter pylori CagA protein functions as a eukaryotic Gab adaptor** *PLOS PATHOGENS*
  Botham, C. M., Wandler, A. M., Guillemin, K.
  2008; 4 (5)

- **Helicobacter pylori CagA induces AGS cell elongation through a cell retraction defect that is independent of Cdc42, Rac1, and Arp2/3** *INFECTION AND IMMUNITY*
  Bourzac, K. M., Botham, C. M., Guillemin, K.
  2007; 75 (3): 1203-1213