OMB No. 3145-0279 (Expiration Date 10/31/2026)

NIH Biographical Sketch Common Form

Name: Ramsey, Deborah

Persistent Identifier (PID) of the Senior/Key Person: https://orcid.org/0009-0009-1513-1015

Position Title: Research Grants Writer

Organization and Location:University of Alabama at Birmingham, Birmingham, Alabama, United States

PROFESSIONAL PREPARATION

INSTITUTION AND LOCATION	DEGREE	Start Date	Completion Date	FIELD OF STUDY
Washington University in St. Louis, St. Louis, Missouri, United States	Postdoctoral Fellowship	11/2005	05/2008	Microbial Pathogenesis
Wake Forest University, Winston-Salem, North Carolina, United States	Doctor of Philosophy (PHD)	08/1999	05/2005	Microbiology and Immunology
University of Alabama in Huntsville, Huntsville, Alabama, United States	Bachelor of Science (BS)	08/1994	12/1998	Biological Sciences

Appointments and Positions

2025 - present	Research Grants Writer, University of Alabama at Birmingham, Birmingham, Alabama, United States
2023 - 2025	Director, Scientific Development, SynVivo, Inc., Huntsville, Alabama, United States
2021 - 2022	Senior Scientist, Exploratory R&D Group, Integra Lifesciences, Columbia, Maryland, United States
2016 - 2021	Principal Scientist, Biomedical Sciences Division, CFD Research Corporation, Huntsville, Alabama, United States
2014 - 2016	Senior Research Scientist, Conversant Biologics LLC, Huntsville, Alabama, United States
2011 - 2014	Research Associate, University of New South Wales, Kensington, Not Applicable, N/A, Australia
2008 - 2011	Senior Research Technologist, Institute for Cellular Therapeutics, University of Louisville, Louisville, Kentucky, United States

Products

Products Closely Related to the Proposed Project

1. Xu B, Ju Y, Soukup RJ, Ramsey DM, Fishel R, Wysocki VH, Wozniak DJ. The Pseudomonas aeruginosa AmrZ C-terminal domain mediates tetramerization and is required for its activator and repressor functions. Environ Microbiol Rep. 2016 Feb;8(1):85-90. PubMed Central PMCID: PMC4769699.
2. Ramsey DM, Amirul Islam M, Turnbull L, Davis RA, Whitchurch CB, McAlpine SR. Psammaplysin F: a unique inhibitor of bacterial chromosomal partitioning. Bioorg Med Chem Lett. 2013 Sep 1;23(17):4862-6. PubMed PMID: 23891184.
3. Xu H, Ramsey DM, Wu S, Bozulic LD, Ildstad ST. Simultaneous bone marrow and composite tissue transplantation in rats treated with nonmyeloablative conditioning promotes tolerance. Transplantation. 2013 Jan 27;95(2):301-8. PubMed Central PMCID: PMC3549055.
4. Ramsey DM, McConnell JR, Alexander LD, Tanaka KW, Vera CM, McAlpine SR. An Hsp90 modulator that exhibits a unique mechanistic profile. Bioorg Med Chem Lett. 2012 May 1;22(9):3287-90. PubMed Central PMCID: PMC3337333.
5. Ramsey DM, Baynham PJ, Wozniak DJ. Binding of Pseudomonas aeruginosa AlgZ to sites upstream of the algZ promoter leads to repression of transcription. J Bacteriol. 2005 Jul;187(13):4430-43. PubMed Central PMCID: PMC1151789.

Other Significant Products, Whether or Not Related to the Proposed Project

1. Mirnajafizadeh F, Ramsey D, McAlpine S, Wang F, Stride JA. Nanoparticles for Bioapplications: Study of the Cytotoxicity of Water Dispersible CdSe(S) and CdSe(S)/ZnO Quantum Dots. Nanomaterials (Basel). 2019 Mar 20;9(3) PubMed Central PMCID: PMC6474084.
2. Mirnajafizadeh F, Ramsey D, McAlpine S, Wang F, Reece P, Stride JA. Hydrothermal synthesis of highly luminescent blue-emitting ZnSe(S) quantum dots exhibiting low toxicity. Mater Sci Eng C Mater Biol Appl. 2016 Jul 1;64:167-172. PubMed PMID: 27127041.

3. Tantisantisom W, Ramsey DM, McAlpine SR. Mechanistic studies of sanguinamide B derivatives: a unique inhibitor of eukaryotic ribosomes. Org Lett. 2013 Sep 20;15(18):4638-41. PubMed PMID: 24001354.
4. Kim SJ, Ramsey DM, Boyer C, Davis TP, McAlpine SR. Effectively delivering a unique hsp90 inhibitor using star polymers. ACS Med Chem Lett. 2013 Jul 25;4(10):915-20. PubMed Central PMCID: PMC3873631.
5. Waligora EA, Ramsey DM, Pryor EE Jr, Lu H, Hollis T, Sloan GP, Deora R, Wozniak DJ. AmrZ beta-sheet residues are essential for DNA binding and transcriptional control of Pseudomonas aeruginosa virulence genes. J Bacteriol. 2010 Oct;192(20):5390-401. PubMed Central PMCID: PMC2950516.

Certification:

I certify that the information provided is current, accurate, and complete. This includes but is not limited to information related to domestic and foreign appointments and positions.

I also certify that, at the time of submission, I am not a party to a malign foreign talent recruitment program.

I also certify that, as senior/key personnel listed within this application, I have taken the required research security training consistent and in compliance with Section 10634 of the CHIPS and Science Act of 2022.

Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§ 3729-3733 and 3802.

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NIH BIOGRAPHICAL SKETCH SUPPLEMENT

Name: Ramsey, Deborah

Persistent Identifier (PID) of the Senior/Key Person: https://orcid.org/0009-0009-1513-1015

Position Title: Research Grants Writer

Organization and Location: University of Alabama at Birmingham, Birmingham, Alabama, United States

Personal Statement

I am currently a Research Grants Writer at the University of Alabama at Birmingham. My graduate work characterized virulence factors in Pseudomonas aeruginosa involved in biofilm formation and pathogenesis in cystic fibrosis. My postdoctoral fellowship studied bacterial pneumonia using small animal models, where I examined microbial pathogenesis within a physiologically relevant in vivo system. I worked extensively with cell lines and primary cells in my postdoctoral fellowship and at the University of Louisville, where I characterized immune cell tolerance in animal models receiving MHC disparate allografts and kidney transplant recipients participating in a Phase I clinical trial. I built on this work at the University of New South Wales, where I built tissue culture-based or microbial-based in vitro models to measure the therapeutic potential of novel natural products. I continued developing novel cell-based assays after transitioning from academia to industry. At CFD Research and its spin-off company (SynVivo), I conducted grant-funded research for the development of 3D microfluidic platforms (organ-on-a-chip) for anti-cancer, antimicrobial, and toxicology applications. Over the past 20 years, I have written successful grants to support a wide range of research initiatives, including projects involving in vitro tissue interfaces that replicate the body's vasculature, organization, and cellular diversity for toxicology testing and therapeutic development. My grant writing experience spans nonprofit organizations (including an AHA fellowship award), national agencies such as the NIH, DoD, BARDA, and ARPA-H, and international bodies including the Australian Research Council (ARC) and the National Health and Medical Research Council (NHMRC).

Honors

2023 Certified Associate in Project Management (CAPM), Project Management Institute

Contribution to Science

1. In Vitro Microfluidic Model Development With the funding support of the NIH and the Department of Defense, my research efforts focused on: a. Developing an integrated experimental and computational air-liquid interface platform for inhalation nanotoxicology studies. b. Developing breast cancer microfluidic models that track metastatic spread and tumor-associated immune cell migration. c. Developing vascular models for quantitatively monitoring endothelial barrier function in response to inflammatory cytokines or metastatic tumors. d. Developing organ-on-a-chip platforms to predict primary tumor cell drug responses to support future drug development, toxicity and efficacy studies. e. Non-Publication Research Product: i. Fewell GD, Ramsey DM, and Rosano JM. Multi-organ Microfluidic Chip. U.S. Provisional Patent Application (Attorney Docket No. S5914.10001US01). Filed June 7, 2024.

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