

## DR. AMBER A. MCBRIDE

OAK RIDGE NATIONAL LABORATORY, BIOSCIENCES DIVISION  
1 BETHEL VALLEY RD. OAK RIDGE, TN 37831  
PH: (865) 241-6429 EMAIL: MCBRIDEAA@ORNL.GOV

### EDUCATION

---

2010 – 2013 PhD, University of New Mexico, Nanoscience and Microsystems Engineering  
2009 – 2010 MS, University of New Mexico, Nanoscience and Microsystems Engineering  
2005 – 2007 BS, Kansas State University, Biology  
2000 – 2004 BA, University of Kansas, Political Science

### PROFESSIONAL APPOINTMENTS

---

2018 – Staff Scientist, Biosciences Division, Oak Ridge National Laboratory (ORNL)  
2015 – 2018 Postdoctoral Research Associate, Sandia National Laboratories  
2014 – 2015 Postdoctoral Research Fellow, University of New Mexico  
2013 International Research Scholar, Technical University of Munich  
2010 – 2014 Graduate Research Assistant, University of New Mexico, Pharmaceutical Sciences  
2009 Research Technologist, University of New Mexico, Human Tissue Repository  
2008 – 2009 Research Associate, Biomoda Inc.  
2005 – 2007 Undergraduate Research Assistant, Kansas State University

### GRANTS, FELLOWSHIPS and AWARDS (selected)

---

2019 – **ORNL Laboratory Directed Research & Development (LDRD):** Advanced Genetic Techniques for Biological and Chemical detection.  
PI: A. McBride. \$765,000  
2016 Washington Fellow, American Society for Pharmacological Experimental Therapeutics  
2015 – 2016 **SANDIA LDRD** Exploratory Express: Increasing reaction time of immunoassays utilizing triaxial magnetic force. Postdoctoral Research Associate and Co-PI: A. McBride. \$160,000  
2014 Outstanding Poster, National Cancer Institute PI Meeting  
2010 – 2012 **National Cancer Institute New Mexico Cancer Nanotech Training Center (CNTC)** Graduate Fellowship  
2012 – 2014 **National Science Foundation Integrative Graduate Education and Research (IGERT)** Integrating Nanotechnology with Cell Biology and Neuroscience (INCBN) Graduate Fellowship  
2011 Graduate Student Research Travel Grant, UNM, \$1000  
2011 Research Project Travel Grant, UNM, \$750  
2007 Terry S. Johnson Center Award for Basic Cancer Research, KSU, \$1500

## REFEREED PUBLICATIONS

---

**McBride AA**, Corbin WC, Johnston RK, Gomez A, Rohwer LS, Watt J, Boykin J, Nouredine A, Butler KS, Hernandez-Sanchez BA. (in preparation) Therapeutic and Bioimaging Efficacy of Levofloxacin-loaded CdSTe@MSN Nanocarriers for Inhaled Theranostics. Target journal: *ACS Applied Nanomaterials*

Sava-Gallis DF, Butler KS, Agola JO, Pearce CJ. and **McBride AA**. Antibacterial Countermeasures via MOF-supported sustained therapeutic release. **2019**. *ACS Applied Materials & Interfaces*.

Sava-Gallis DF, Butler KS, Rohwer LE, **McBride AA**, Vincent G, Chong CV, Pearce CJ and Luk TS. **2018**. Biocompatible MOFs with high absolute quantum yield for bioimaging in the second near infrared window. *CrystEngComm*. pp.5919-5924.

**McBride AA**, Price DN, and Muttill P. Pulmonary delivery of magnetically targeted nano-in-microparticles. *Cancer Nanotechnology: Methods and Protocols*. **2017**. pp. 369-378.

**McBride AA**, Price DN, and Muttill P. Preparation and Characterization of Magnetic Nano-in-Microparticles for Pulmonary Delivery. *Cancer Nanotechnology: Methods and Protocols*. **2017**. pp. 99-108.

Price DN\*, **McBride AA\***, Anton M, Kusewitt DF, Norenberg JP, MacKenzie DA, Thompson TA, and Muttill P. Longitudinal Assessment of Lung Cancer Progression in Mice Using the Sodium Iodide Symporter Reporter Gene and SPECT/CT Imaging. *PloS one* 11.12. **2016**.: e0169107.  
**\*Authors contributed equally to first authorship.**

Price, Dominique N., Nitesh K. Kunda, **McBride, Amber A.**, and Pavan Muttill. "Vaccine Preparation: Past, Present, and Future." *Delivery Systems for Tuberculosis Prevention and Treatment (2016)*: 69.

Price DN, Kusewitt DF, Lino CA, **McBride AA**, and Muttill P. Oral tolerance to environmental mycobacteria interferes with intradermal but not pulmonary, immunization against tuberculosis." *PLoS Pathog* 12, no. 5. **2016**. pp e1005614.

**McBride AA**, Price DN, Lamoureux DR, Elmaoued AA, Vargas JM, Adolphi NA, and Muttill P. Preparation and characterization of novel magnetic nano-in-microparticles for site-specific pulmonary drug delivery. *Molecular Pharmaceutics* 10.10. **2013**. pp. 3574-3581.

**McBride AA** and Muttill P. A Pilot Study Targeting Nano-in-Microparticles (NIMs) in Rat Lungs Ex Vivo. *Respiratory Drug Delivery*. **2013**. pp. 423-428.

**McBride AA**, Lamoureux LR, Price DN and Muttill P. Novel Preparation and Characterization of Magnetic Nano-in-Microparticle Dry Powders for Directed Drug Delivery: An Application to Lung Cancer. *Respiratory Drug Delivery*. no.3. **2012**. pp. 815-820.

Kueth, DO, **McBride A**, and Altobelli S. Velocity of mist droplets and suspending gas imaged separately." *Journal of Magnetic Resonance* 216. **2012**. pp. 88-93.

Palikij J, Ebert D, Preston M, **McBride AA**, and Jander R. Evidence of the honeybee's place knowledge in the vicinity of the hive. *Journal of insect physiology*. 58 (10). **2012**. pp. 1289-1298.

Muttill P, Price DN, **McBride, AA**. Pulmonary immunization for TB with live cell-based vaccines: the importance of the delivery route. *Therapeutic Delivery* Vol. 2, No. 12. **2011**. 1519-1522.

Vargas JM, **McBride AA**, Plumley JB, Fichou Y, Memon TA, Shah B, Cook NC, Akins BA, Rivera AC, Genady AS, O'Brien JR, Adolphi NL, Smyth DC and Osiski M. Synthesis and characterization of core/shell Fe<sub>3</sub>O<sub>4</sub>/ZnSe fluorescent magnetic nanoparticles. *Journal of Applied Physics*. **2011**.

#### CONFERENCE PRESENTATIONS (selected)

---

- 2015 Invited Conference Talk: "Inhalational Delivery of Protocells: A Potential Treatment Strategy against Tularemia" Gordon Research Seminar: Chemical and Biological Terrorism Defense
- 2014 Invited Speaker, School of Engineering Convocation, University of New Mexico
- 2013 Invited Conference Talk: "Directed Drug Delivery: Inhalable Nano-in-Microparticles" Mountain West Society of Toxicology Annual Meeting
- 2013 Invited Seminar Speaker: "A Novel Inhalable and Magnetically Directed Therapy for Lung Cancer" Technical University of Munich Oncology and Therapy Research Seminar
- 2012 Invited Seminar Speaker: "The Route of Delivery: Inhalable Chemotherapy" Science on Tap Seminar Series hosted by UNM, National Museum of Nuclear Science
- 2011 Invited Conference Talk: "Inhalable Microparticles for Site-specific Drug Delivery for Lung Cancer" Nanoscience and Emerging Technology in Cancer Research Conference

#### PROFESSIONAL/HONORARY ASSOCIATION

---

American Association for the Advancement of Science - AAAS

#### PROFESSIONAL SERVICE AND OUTREACH

---

- 2019 WDVX Secret City Radio Show, Oak Ridge, TN, Invited Scientist Speaker
- 2015 – 2018 Sandia Postdoctoral Development (SPD), Board member and Special Projects Chair
- 2010 – 2012 Pioneering officer of the Nanoscience and Microsystems Graduate Student Assn.

Manuscript reviewer: *Chemistry – A European Journal, Acta Biomaterialia, Environmental Science and Technology Letters*

#### INVITED COURSES AND WORKSHOPS

---

- 2019 Shipley proposal writing workshop, Oak Ridge National Laboratory
- 2019 Oak Ridge National Laboratory Workshop for Radiobiology, Metagenomics and Microdosimetry of Systemic and Targeted Radiotherapies
- 2018 Sandia National Laboratories Workshop for CRISPR in Biodefense Applications