

Curriculum Vitae

Kinta Serve, D.A.

Assistant Professor of Biology
Idaho State University
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WORK EXPERIENCE

- Assistant Professor of Biology, Idaho State University 2018-Present
Department of Biological Sciences
Research field: Cellular biology and Immunotoxicology
- Assistant Professor of Biology, Mars Hill University 2014-2018
Department of Natural Sciences
Research field: Cellular biology and toxicology
- Postdoctoral Research Fellow, Idaho State University 2013-2014
Laboratory of JC Pfau, Ph.D., Department of Biological Sciences
Research field: Immunotoxicology

EDUCATION

- D.A. in Biology May 2013
Idaho State University, Pocatello, Idaho
Dissertation: Mesothelial cell autoantibodies induce collagen deposition *in vitro* &
Using a case study to introduce undergraduates to bioinformatics
- M.S. in Molecular Biosciences February 2010
Washington State University, Pullman, Washington
Thesis: Evaluating the Effect of Prodrug Metabolism on the Bystander Effect in Cancer
Gene Therapy
- B.S. in Biology May 2005
Colorado Mesa University *, Grand Junction, Colorado
Minors in Chemistry and English Literature
Cum Laude
Honor's Program Graduate
*Previously Mesa State College

UNIVERSITY-LEVEL TEACHING EXPERIENCE

- Assistant Professor, Idaho State University 2018- Present
BIOL2206: Cell Molecular Biology, Lecture and Laboratory
BIOL3305: Introduction to Pathobiology, Lecture

Curriculum Vitae

Kinta Serve, D.A.

Page 2 of 8

Assistant Professor, Mars Hill University 2014-2018

BIO121: Introductory Biology: Cells and Genetics
for majors, Lecture and Laboratory
BIO215: Cellular and Molecular Biology, Lecture and Laboratory
BIO216: Genetics, Lecture and Laboratory
BIO329: Special Topics: Toxicology, Lecture and Laboratory
BIO450: Senior Seminar, Lecture
HON212: Toxicology All Around Us, Honor's Mini-course Lecture
HON300: Honor's Junior Seminar, Lecture

Lecturer, Idaho State University 2013-2014

BIO2206L: Cell Biology, Laboratory
BIO1101H: General Biology, Honors Section, Lecture

Supervised Teaching Internships, Idaho State University 2011-2012

BIO4413/5513: Biology Teaching Methods, Lecture
BIO2206L: Cell Biology, Laboratory
BIO3302: Human Anatomy and Physiology II, Lecture
BIO1101H: General Biology, Honors Section
Lecture and Laboratory sections
BIO3301: Human Anatomy and Physiology, I Lecture

PUBLICATIONS

* Undergraduate students

Pfau JC, Barbour C, Black B, **Serve KM**, and Fritzler MJ. Analysis of Autoantibody Profiles in Two Asbestiform Fiber Exposure Cohorts. *J of Tox and Environ Health, Part A*. Accepted Aug 2018.

Gilmer J, **Serve K**, Woods L*, Davis C*, Harding T*, and Pfau JC. (2016) Libby Amphibole Induced Mesothelial Cell Autoantibodies Promote Collagen Deposition in Mice. *Am J of Physiology: Lung*. 310:L1071-L1077.

Pfau JC, **Serve K**, Woods L*, and Noonan C. (2016) Asbestos Exposure and Autoimmunity. In: Otsuke T, Yoshioka Y, and Holian A, editors. *Biological Effects of Fibrous and Particulate Substances*. Springer. p.181-194.

Pfau, JC, **Serve KM**, and Noonan C. (2014) Autoimmunity and Asbestos Exposure. *Autoimmune Diseases*. E-pub 2014:782045.

Curriculum Vitae

Kinta Serve, D.A.

Page 3 of 8

Serve KM, Black B, Szeinuk J, and Pfau JC. (2013) Asbestos-induced mesothelial cell auto-antibodies promote collagen matrix formation *in vitro*. *Inhalation Toxicology*. 25(14):774-784.

Serve KM⁺, Clements N⁺, Heinrich KK⁺, Smith RJ. (2013) The tale of two degrees: the need and power of the Doctor of Arts. *College Teaching*. 61(4):113-115.

⁺Authors contributed equally to publication.

Ardiani A, Johnson AJ⁺, Ruan H⁺, Sanchez-Bonilla M⁺, **Serve K**⁺, Black ME. (2012) Enzymes to die for: exploiting nucleotide metabolizing enzymes for cancer gene therapy. *Curr Gene Ther*. 12(2):77-91.

⁺Authors contributed equally to publication.

Marchand LS, St-Hilaire S, Putnam EA, **Serve KM**, and Pfau JC. (2012) Mesothelial cell and anti-nuclear autoantibodies associated with pleural abnormalities in an asbestos exposed population of Libby MT. *Toxicol Lett*. 208:168-173.

Serve KM, Darnell JL*, Takemoto JK, Davies N, and Black ME. (2010) Validation of an isocratic HPLC method to detect 2-fluoro-beta-alanine for the analysis of dihydropyrimidine dehydrogenase activity. *J Chromatog B Analyt Technol Biomed Life Sci*. 878(21):1889-92.

Serve KM, Yanez JA, Davies N, and Black ME. (2010) Development and Validation of a Rapid and Sensitive HPLC Method for the Detection of 5FC Its Metabolites. *Biomed. Chrom*. 24(5):556-61.

Fuichita M, Ardiani A, Zhao L, **Serve KM**, Stoddard BL, and Black ME. (2009) Bacterial cytosine deaminase mutants created by molecular engineering demonstrate improved 5FC-mediated cell killing *in vitro* and *in vivo*. *Cancer Res*. 69(11):4791-4799.

INVITED LECTURES/ORAL PRESENTATIONS

Presenter

Serve KM and **Pfau JC**. Examination of local and systemic autoimmune responses following exposure to chrysotile or amphibole asbestos. *Grand Rounds in the Pulmonary Department at Mount Sinai Hospital*. Invited Speaker (New York, NY 2013).

Serve KM, Clayton N, and Thomas MA. Using a Case Study to Introduce Bioinformatics to Undergraduate Students. *Idaho Academy of Science Annual Meeting*. Platform Presentation (Pocatello, ID 2013).

Curriculum Vitae
Kinta Serve, D.A.
Page 4 of 8

Serve KM and Pfau JC. Asbestos-Induced Mesothelial Cell Auto-Antibodies Promote Collagen Matrix Formation. *Idaho INBRE Summer Research Conference*. Platform Presentation (Moscow, ID 2012).

Pfau JC and Serve KM. The Role of Anti-mesothelial Cell Antibodies in Asbestos-Induced Pleural Disease. *American Association for the Advancement of Science, Pacific Division Annual Meeting*. Platform Presentation (Boise, ID 2012).

POSTER PRESENTATIONS

* Undergraduate students

Presenter

Salmon A*, McLawnhorn MT*, and Serve KM. Examining Cytokine Production from Mouse Macrophages Exposed to Amphibole Fibers. *State of North Carolina Undergraduate Research and Creativity Symposium*. Poster Presentation. (Campbell University, NC 2017)

Serve KM. Using Research and SOT Resources to Promote Student Engagement in Undergraduate Toxicology Courses at a Small Liberal Arts College. *Society of Toxicology Annual Meeting*. Poster Presentation (Baltimore, MD 2017)

McLawnhorn MT*, Salmon A*, and Serve KM. Evaluating Cytokine and ROS Production by Macrophages Exposed to Arizona and Libby Amphibole. *Society of Toxicology Annual Meeting*. (Baltimore, MD 2017)

Gilmer J, Serve K, Davis C*, Anthony M*, Hanson R, Pfau JC. Libby amphibole-induced mesothelial cell autoantibodies promote collagen deposition in mice. *Society of Toxicology Annual Meeting*. Poster Presentation (New Orleans, LA 2016)

Hanson RL, Gilmer J*, Serve K, Pfau JC. Asbestos-induced pleural fibrosis involves autoantibody-mediated protein tyrosine phosphorylation pathway. *Society of Toxicology Annual Meeting*. Poster Presentation (San Diego, CA 2015)

Serve KM, Santin A, and Pfau JC. Mechanistic Comparison of Mesothelial Cell Auto-antibodies Associated with Asbestos Exposure. *Society of Toxicology Annual Meeting*. Poster Presentation (San Antonio, TX 2013).

Serve KM, Crouch RC*, and Pfau JC. Asbestos-Induced Mesothelial Cell Auto-Antibodies Promote Collagen Matrix Formation. *Society of Toxicology Annual Meeting*. Poster Presentation (San Francisco, CA 2012).

Curriculum Vitae

Kinta Serve, D.A.

Page 5 of 8

Birch EC*, Serve KM, Ng K*, and Pfau JC. Comparison of Serum Autoantibody Prevalence in Asbestos-Exposed Populations. *Society of Toxicology Annual Meeting*. Poster Presentation (San Francisco, CA 2012).

Birch EC*, **Serve KM**, Ng K*, and Pfau JC. Comparison of Serum Autoantibody Prevalence in Asbestos-Exposed Populations. *National Conference on Undergraduate Research*. Poster Presentation (Ogden, UT 2012).

GRANTS

Institutional Development Grant Proposal Aug. 2017
North Carolina Biotechnology Center
Role: Supporting PI
Grantee: Dr. Thomas Meigs, University of North Carolina Asheville
Award Amount: \$76,527
Acquisition of a Flow Cytometer for Cell Biological Research at UNC-Asheville and Surrounding Institutions, and for Collaboration with F(x) Immune Diagnostics

George T. Barthalmus Undergraduate Research Grant Oct. 2016
State of North Carolina Undergraduate Research & Creativity Symposium
Role: Undergraduate Researcher Supervisor
Grantee: Avery Salmon, sophomore at Mars Hill University
Awarded Amount: \$284
Evaluating macrophage production of TGF-beta following amphibole asbestos exposure

Randolph Research Award, Undergraduate Student Grant May 2016
Mars Hill University
Role: Undergraduate Researcher Supervisor
Grantee: Michael McLawhorn, senior at Mars Hill University
Award Amount: \$490
Examining the effects of asbestos exposure on the production of IL-6 and TGF- β cytokines by macrophage cells

Ruth L. Kirschstein National Research Service Awards (NRSA) for Individual Postdoctoral Fellows (F32)
National Institutes of Health
Role: PI
Status: Not Funded
Evaluating disease outcomes of immunomulation by different asbestos fibers

Parker B. Francis Foundation Fellowship
Role: PI

Curriculum Vitae
Kinta Serve, D.A.
Page 6 of 8

Status: Not Funded

Evaluating immune contribution to asbestos-associated pleural disease outcomes

University Research Committee, Graduate Student Award May 2012

Idaho State University

Role: PI

Award Amount: \$1945.22

Using RNA-Sequencing to Evaluate the Potential Contribution of Asbestos-Induced Autoantibodies to Pleural Fibrosis

Molecular Research Core Facility, Graduate Student Seed Grant May 2011

Idaho State University

Role: PI

Award Amount: \$500

Investigating the Contribution of Asbestos-Induced Autoantibodies to Pleural Fibrosis

UNDERGRADUATE RESEARCHER MENTEES

- **Avery Salmon**, Mars Hill University Dec. 2016-Dec. 2017
Received Research Award to fund research.
Poster presenter at 54th annual Society of Toxicology conference.
Poster presenter at 2017 State of North Carolina Undergraduate Research and Creativity Symposium.
- **Michael McLawhorn**, Mars Hill University Aug. 2016-Dec. 2016
Senior Thesis Research;
Received Randolph Research Award and Pfizer Travel Award.
Poster presenter at 54th annual Society of Toxicology conference.
- **Marti Anthony**, Idaho State University Jan. 2014- June 2014
- **John Gilmer**, Idaho State University Jan. 2014-June 2014
Poster presenter at 52nd annual Society of Toxicology conference.
- **Linda Woods**, Idaho State University Aug. 2013-June 2014
Co-author on two published manuscripts.
- **Emily Atkins**, Idaho State University Aug. 2012-Jan. 2014
- **Kizito Kyeremateng**, Idaho State University Aug. 2012-May 2013
- **Erin Birch**, Idaho State University June 2011-May 2013
Poster presenter at the 26th National Conference on Undergraduate Research.
- **Kok-Whei (Tristan) Ng**, Idaho State University Aug. 2011-Dec. 2012
- **Yao Zhang**, Idaho State University Jan. 2011-May 2011
Honor's research paper.
- **Jennifer Darnell**, Washington State University June 2009-Feb. 2010
Honor's Thesis; Co-author on published manuscript; Award recipient for poster presented at the Pharmacy department annual Research Day.

Curriculum Vitae

Kinta Serve, D.A.

Page 7 of 8

- **Brina Lewis**, Washington State University

June 2009-Dec. 2009

PROFESSIONAL SERVICE/DEVELOPMENT

Visiting Artists and Lecturers Committee, Mars Hill University	2016-2018
Faculty Search Committees, Mars Hill University	
Nursing Asst/Assoc Professor, Dept. of Nursing	2015-2016
Nursing Simulation Lab Coordinator, Dept. of Nursing	2015-2016
Human Biology, Dept. of Natural Sciences	2014-2015
Professional Development Participant, Mars Hill University	
Crisis Prevention Training	Spring 2016
<u>Learner-Centered Teaching</u> Book Group	Spring 2015
Writing in the Disciplines Workshop	Spring 2015
Peer reviewer, <i>Toxicology Letters</i> , <i>Inhalation Toxicology</i> , <i>Toxicology and Applied Pharmacology</i> , <i>J. of Hazardous Materials</i> , <i>J. of Toxicology and Environmental Health Part A</i>	2011-Present
Society of Toxicology: Immunotoxicology Specialty Section	
Postdoctoral Representative	2013-2014
Graduate Student Representative	2012-2013
Tenure and Promotion Committee, Idaho State University	
Graduate Student Representative	Fall 2012
Biology Graduate Student Association, Idaho State University	
Vice-President	2011-2013
Fundraising Committee, Chair	2010-2013
Idaho Science and Engineering Festival, Idaho State University	
Planning Committee, K-12 Outreach Sub-committee	2011-2013
Molecular Biosciences Graduate Student Association, Washington State University	
Mentoring Committee, Chair	2008-2009
Invited Speaker Committee, Co-chair	2008-2009

AWARDS AND FELLOWSHIPS

Conferred on a Competitive Basis

Outstanding Student Award, Doctoral Recipient, Idaho State University, Office of Alumni Relations	2013
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**Curriculum Vitae
Kinta Serve, D.A.
Page 8 of 8**

Doctor of Arts Fellowship Idaho State University	2010-2013
Sue Harriet Monroe Mullen Graduate Fellowship Washington State University	2008 2007

COMMUNITY OUTREACH

<i>Science Leader</i> , SoQua Cub Scout Day Camp, Daniel Boone Council, NC	2017 & 2018
<i>Den Leader</i> , Cub Scouts Pack 15, Weaverville, NC	2016-Present
<i>MIND² Assistant</i> , Mars Hill University, NC • Community engagement event focused on neuroscience	April 2016
<i>Judge</i> : Science Fair, Grace Lutheran School, Pocatello, ID	2012 & 2013
<i>Presenter</i> : Idaho Science and Engineering Festival, Pocatello, ID	April 2013
<i>Presenter</i> : Research Rally, Libby, MT Center for Asbestos Related Disease	2011 & 2013
<i>Section Leader</i> : Cougar Quest- Genes, Chromosomes, and DNA Washington State University	July 2009