

**Laurie A. Minns, PhD**

The University of North Carolina at Wilmington School of Nursing  
 Clinical Research Program  
 Curriculum Vitae

**Education**

- Ph.D. Microbiology and Immunology  
 2005  
 Geisel School of Medicine at Dartmouth College Hanover, NH  
 Dissertation: Immunomodulation and the prevention of *Toxoplasma gondii*-induced acute ileitis  
 Committee: Lloyd H. Kasper (PI), Randolph J. Noelle, Edward Usherwood, Dominique Buzoni-Gatel, Nicholas Mantis
- B.S. Microbiology  
 1999  
 University of Montana Missoula, MT
- B.A. Psychology *honors*  
 1997  
 University of Montana Missoula, MT

**Post-Doctoral Training**

- Postdoctoral Scientist-Immunology Dartmouth Center for 2005-  
 2007  
 Translational Medicine at the Dartmouth Hitchcock Medical Center Lebanon, NH  
 Mentors: Randolph J. Noelle, Lloyd H. Kasper  
 Clinical Immune Monitoring of Autoimmune Immunotherapy Phase I and II Clinical Trials
- Postdoctoral Scientist- Immunology GSK-Vaccines Hamilton, MT 2007-  
 2009  
 Mentors: Jory R. Baldrige, Melinda H. Hutton, Jay T. Evans  
 Preclinical vaccine development to support IND filing requirements

**Academic Appointments**

- Assistant Professor, University of North Carolina Wilmington 2021-present  
 School of Nursing; Clinical Research Program
- Assistant Professor, Division of Biological Sciences; University of Montana 2019-2021
- Lecturer, Division of Biological Sciences; University of Montana 2010-2019
- Adjunct Instructor, School of Health Sciences; Kaplan University 2009-2015
- Adjunct Instructor, Chamberlain School of Nursing 2009-2010
- Adjunct Instructor, Community College of Vermont 2005-2006
- Guest Lecturer, Colby Sawyer College 2002
- Teaching Assistant, Dartmouth College 2002

## Research Experience

Investigator, Immunology Totem BioSciences Hamilton, MT Sept. 2016-Sept. 2017  
 Animal Health pre-clinical development of innate immune  
 stimulants

Scientific Director: Jory R. Baldrige

2009- June 2010

Staff Scientist- Immunology Immune Design Corp. Seattle, WA  
 Project Lead: Clinical Immune Monitoring of Vaccine Phase I Clinical  
 Trials

Scientific Advisory Board: Rafi Ahmed, **David Baltimore\***, **Lawrence  
 Corey, Carl June\***, Steven Reed, Inder Verma, Ralph Steinman\*<sup>1</sup>

Stagiaire, Institut Pasteur, Paris France

Department of Parasitology

Mentor: Dominique Buzoni-Gatel

2004

\*Nobel Prize in Physiology or Medicine (DBaltimore 1975, R  
 Steinman 2011, C June 2018 ), <sup>1</sup>deceased

## Teaching Experience

University of North Carolina at Wilmington (online and hybrid) 2021-present

- CLR310 (Clinical Research Writing and Communication)
- CLR597 (Master's Project)

University of Montana (face-to-face with online supplements; hybrid, remote) 2010-2021

- BIOB160 (Principles of Biological Systems)
- BIOB161 (Principles of Biological Systems Laboratory)
- BIOB260 (Cellular and Molecular Biology)
- BIOH365 (Human A&P for Health Professions I)
- BIOH366 Laboratory Oversight (Cadaver lab)
- BIOH370 (Human A&P for Health Professions II)
- BIOH371 Laboratory Oversight (Cadaver lab)
- BIOH460 (Lecture Peer Leaders in Human A&P for Health Prof I, Honors)
- BIOH461 (Lecture Peer Leaders in Human A&P for Health Prof II, Honors)
- BIOH456 Oversight (Cadaver Dissection 1, Honors)
- BIOH457 Oversight (Cadaver Dissection 2, Honors)
- BIOH462 (Principles of Medical Physiology/UD Writing Course/Capstone)
- BIOH480 (Lab Peer Leaders in Human A&P for Health Prof I, Honors)
- BIOH481 (Lab Peer Leaders in Human A&P for Health Prof II, Honors)
- BIOB498 (Independent Studies)
- BIOB499 (Independent Research/Honors College Thesis)

Kaplan University School of Health Sciences (online, synchronous and  
 asynchronous)

- PU120 (Intro. to Public Health)
- HS130 (Human A&P)
- HS305 (Research Methods in Health Science)
- HS320 (Microbiology)

2009-  
 2015

- PU340 (Intro. to Public Health Law)
- HS499 (Bachelor's Capstone in Health Science)

**Chamberlain School of Nursing**

(online, asynchronous)

- NR281 (Pathophysiology) 2009-2010

**Community College of Vermont**

(online/in-class condensed laboratories hybrid)

- MBIO300 (Medical Microbiology) 2005-2006

**Dartmouth College** (face-to-face)

- Cellular Biology for Biology majors (Teaching Asst.) 2002

**Colby Sawyer College** (face-to-face)

- Microbiology (Guest Lecturer) 2002

**Research Funding, Fellowships and Patent Awards**

MT INBRE Use of VR to Enhance Neuroscience and Anatomy Education, PI: Richard Bridges and Laurie Minns \$30, 120 (unfunded)	2020
Student Instructional Equipment Fund Grant, University of Montana \$12, 480	2019
USDA/SBIR Phase I: Totem BioSciences: Development of immunostimulant treatment for bovine scours (10/2017 re-submission; not funded)	2017
Montana Board of Research and Commercialization Technology: Development of immunostimulant treatment for bovine scours (reviewed, not funded)	2016
USDA/SBIR Phase I: Totem BioSciences: Development of immunostimulant treatment for bovine scours (Submitted 10/2016, reviewed, not funded)	2016
NIH/NIAID U01 (1U01AI125612-01), Mucosal Immunology Studies Team Co-Investigator, Lead Immunologist (submitted 10/15, PI Jay T. Evans; not funded)	2015
NIH/NIAID HHSN266200400008C, PI Jay T. Evans for Corixa Corp (of GSK) \$9,030,000; co-authored the immunology studies section	2009-2015
US PATENT US2015/0004180A1 Method for Inducing a TRIF-bias	Filed 2008, granted 2015
NIH/NIAID R01 AI061938-04, PI Lloyd Kasper Dartmouth,	2005-2007

## Postdoctoral Fellow

Centocor Sponsored Study: Anti-IL12p40 Phase II Clinical Study, Dartmouth; Postdoctoral Fellow	2005-2007
NIH/NIAID R01 AI30568, PI Lloyd Kasper, Dartmouth; Postdoctoral fellow	2005-2007
NIH NIAID R01 AI01961320-22, PI Lloyd Kasper, Dartmouth; postdoctoral fellow	2005-2007
NIH/NIAID T32 AI007363, PI William R. Green, Dartmouth Pre-doctoral Training Grant fellow	2002-2005

### Leadership and Awards

Executive Board Member, Glioblastoma Support Network	2019-2021
UM Outstanding Performance Award for Teaching (\$2500)	2019
UM Professor of the Week	2017
UM Outstanding Performance Award for Teaching (\$2500)	2017
UM Pedagogy Project Leadership Team	2014-2021
UM Merit Recognition for excellence in teaching and service	2011-2017
UM Pedagogy Project Fellow	2011-2014
Eur. Com. For the Treatment and Research in MS, Young Investigator Award (\$2500)	2006
Fed. Clinical and Immunological Societies (FOCIS) Young Investigator Award (\$2000)	2006
First Annual Dartmouth Immunotherapy in Autoimmunity Symposia Meeting Organizer ( <a href="http://geiselmed.dartmouth.edu/sia/">http://geiselmed.dartmouth.edu/sia/</a> )	2006
Keystone Symposium on Immunotherapy, Young Investigator Award (\$3000)	2005
FOCIS Centers of Excellence Trainee Award (\$2000)	2005
FOCIS Centers of Excellence Trainee Award (\$2000)	2004
Dartmouth MCB Graduate Program Research Symposia	2002-2005
Dartmouth Immunology Journal Club Organizer	2002-2003
Western Undergraduate Exchange Scholarship	1993-1999

### Professional Memberships

American Association of Immunologists	2009-2021
Human Anatomy and Physiology Society	2011-2021
Federation of Clinical and Immunological Societies (FOCiS)	2003-2021
Society of Mucosal Immunology	2001-2005
New York Academy of Sciences	2003-2004

### University and Departmental Service

UM Faculty Senate	2018-2021
UM Committee on Undergraduate Research	2018-2021
Division of Biological Sciences Scholarship Committee	2015-2021
Division of Biological Sciences Senior Awards Committee	2015-2021
George L. Card Freshman Scholarship Committee	2015
Pedagogy Project Faculty Classroom Observation	2014-2021

Pedagogy Project Mid-Semester Small Group Analysis 2011-2021

### Undergraduate Research Mentoring

Audrey Broffman and Carley Carpenter, "Etiology of muscle abnormalities on a cadaver- a differential diagnosis." UM Human Biology Major/Honors Thesis	2020
Kyana Tolwi, "Peer-led group activities enhances biology student engagement" UM Human Biology Major/Capstone Project	2020
Sydney Ladas, "Evidence of arthritis on a female cadaver" UM Human Biology/ Honors College Thesis	2019
Marissa Ginnett, "Health and the Homeless Population in Missoula- a Housing first solution" UM Human Biology/ Global Leadership Initiative/ Honors Scholar Thesis	2016
Erin Burt, "The use and misuse of stimulants by UM students" UM Human Biology Honors Thesis (D Nursing Univ. Utah)	2012
Melissa Jenkins, "Promoting a healthy body image in middle school girls- a curriculum" UM Human Biology Honors Thesis (DPT from UM)	2012
Sheena Paddock, UM American Arthritis Association Internship	2011
Jaffre Althman, "Nuclear localization of NFkappaB after TLR4 ligation" Undergraduate Internship GSK Vaccines (now PhD student at Case Western Reserve University)	2008
Gladys Mouton, "Quantification of mRNA from the inflamed intestine". Dartmouth (Science Middle school teacher)	2004

### Graduate Committees

Shae Gurney, " Metabolic and cardiovascular marker alterations during critical training in wildland firefighters" MS Exercise Science, Thesis Committee member	2019-2020
Brendan Hogg, "IL-6 and Exercise: early evidence of a novel myokine" MS Exercise Science; Professional Paper committee member	2018

### K-12 Educational Outreach

Big Sky High School, Missoula MT Cadaver Lab Visit	2011-2021
Browning High School Cadaver Lab Visit	2011-2021
Sentinel High School Cadaver Lab Visit	2011-2021
Daly Elementary School Cow Eye Dissection	2011

## Publications

- Desautles, L, Sontag, M-A, Minns LA GBM Caregiver burden needs more attention from palliative medicine. *In Preparation, 2021*
- Desautles, L, Sontag, M-A, Minns LA Clinical staff need to provide more resources and support regarding what to expect for GBM patients and their caregivers. *In Preparation, 2021*
- Mix, K, Minns, L.A., Brodsky, E. Leveraging bioinformatics to enhance remote learning during Covid-19. *In Preparation, 2021*
- Minns, LA. Measures of Student Academic Performance, Effort and Challenges of Remote Delivery during the Covid-19 pandemic in Human A&P Students at an open enrollment public University. *In Preparation, 2021*
- Bowen, W.S\*. Minns, L.A.\*, Johnson, D.A., Mitchell, TC, Hutton, M.M., Evans, J.T. Selective TRIF-Dependent Signaling by a Synthetic Toll-Like Receptor Agonist. 14 February 2012 *Science Signaling*, Vol. 5, Issue 211, p. ra13 (\*co- first authorship)
- Segal BM, Constantinescu CS, Raychaudhuri A, Kim L, Fidelus-Gort R, Kasper LH; Ustekinumab MS Investigators. Repeated subcutaneous injections of IL12/23 p40 neutralising antibody, ustekinumab, in patients with relapsing-remitting multiple sclerosis: a phase II, double-blind, placebo-controlled, randomised, dose-ranging study. *Lancet Neurol*. 2008 Sep;7(9):796-804.
- Menard, L.C., L.A. Minns, S. Darche, D.W. Mielcarz, D.M. Foureau, D. Roos, F. Dzierszynski, L.H. Kasper, and D. Buzoni-Gatel. 2007. B cells amplify IFN-gamma production by T cells via a TNF-alpha-mediated mechanism. *J Immunol* 179:4857-4866.
- Minns, L.A., L.C. Menard, D.M. Foureau, S. Darche, C. Ronet, D.W. Mielcarz, D. Buzoni-Gatel, and L.H. Kasper. 2006. TLR9 is required for the gut-associated lymphoid tissue response following oral infection of *Toxoplasma gondii*. *J Immunol* 176:7589-7597.
- Rachinel, N., D. Buzoni-Gatel, C. Dutta, F.J. Mennechet, S. Luangsay, L.A. Minns, M.E. Grigg, S. Tomavo, J.C. Boothroyd, and L.H. Kasper. 2004. The induction of acute ileitis by a single microbial antigen of *Toxoplasma gondii*. *J Immunol* 173:2725-2735.
- Minns, L.A., D. Buzoni-Gatel, K.H. Ely, N. Rachinel, S. Luangsay, and L.H. Kasper. 2004. A novel triterpenoid induces transforming growth factor beta production by intraepithelial lymphocytes to prevent ileitis. *Gastroenterology* 127:119-126.
- Mennechet, F.J., L.H. Kasper, N. Rachinel, L.A. Minns, S. Luangsay, A. Vandewalle, and D. Buzoni-Gatel. 2004. Intestinal intraepithelial lymphocytes prevent pathogen-driven inflammation and regulate the Smad/T-bet pathway of lamina propria CD4+ T cells. *Eur J Immunol* 34:1059-1067.
- Kasper, L., N. Courret, S. Darche, S. Luangsay, F. Mennechet, L. Minns, N. Rachinel, C. Ronet, and D. Buzoni-Gatel. 2004. *Toxoplasma gondii* and mucosal immunity. *Int J Parasitol* 34:401-409.
- Luangsay, S., L.H. Kasper, N. Rachinel, L.A. Minns, F.J. Mennechet, A. Vandewalle, and D. Buzoni-Gatel. 2003. CCR5 mediates specific migration of *Toxoplasma gondii*-primed CD8 lymphocytes to inflammatory intestinal epithelial cells. *Gastroenterology* 125:491-500.

Channon, J.Y., K.A. Miselis, L.A. Minns, C. Dutta, and L.H. Kasper. 2002. Toxoplasma gondii induces granulocyte colony-stimulating factor and granulocyte-macrophage colony-stimulating factor secretion by human fibroblasts: implications for neutrophil apoptosis. *Infect Immun* 70:6048-6057.

### Selected Invited Seminars and Presentations

“How did Covid-19 impact student experiences in Human A&P Lecture? Measures of Student Academic Performance, Effort and Challenges of Remote Delivery” Human Anatomy and Physiology Society Regional Meeting. Poster presentation, November 2020 (accepted, not presented)

“Leveraging bioinformatics to enhance remote learning during Covid-19.” Kimberlee Mix, Laurie Minns, Elia Brodsky. International Society for Computational Biology Meeting. July 14, 2020. Poster presentation. doi: [10.7490/f1000research.1118058.1](https://doi.org/10.7490/f1000research.1118058.1))

“Evidence of Arthritis in a 92 Year Old Female Cadaveric Specimen” Sydney Ladas \* and Laurie Minns, *Oral presentation* National Conference on Undergraduate Research, Bozeman, MT March 26-28 Cancelled due to Covid-19 Pandemic Travel Restrictions \*undergraduate

“The effect of active learning and student engagement on academic performance” Kyana Tolwi\* and Laurie Minns *Oral Presentation* UM Conference on Undergraduate Research, Missoula MT, April 2020 (Student did not present in the virtual conference due to internet issues and Covid-19). \*undergraduate

“Facilitating Learning in Big Classes”, Laurie Minns, speaker, UM Pedagogy Project and UM Faculty Development Office, Missoula, Montana Oct. 11, 2018

UM Writing Assessment Workshop, Laurie Minns, Analyst University of Montana, Missoula Montana February, 2018

McGraw Hill Education Learning Science Symposium for Anatomy and Physiology. Invited Participant. Austin, TX Jan, 2017

“High Stakes Assessments versus low stakes assessments” Pedagogy Project Microtalk, Pedagogy Project Faculty Facilitator, Sept. 2015

“The Art of Writing on the Board in the Age of Digital Presentations”. Pedagogy Project Microtalk, Pedagogy Project Faculty Facilitator, Sept, 2014

“Not on the Same Page?: Defining your Assignment Expectations and Using Rubrics to Communicate Them” University of Montana Writing Center October, 2014

“Teaching Up, Down and to the Middle”, Laurie Minns, Speaker, University of Montana Pedagogy Project. Sept. 2013

“Induction of GALT responses”, University of Montana Immunology Departmental Seminar, Sept. 2011

"IL-6 induces IL-17 production by human CD4+CD45RO+ cells" ECTRIMS Trainee Award. Poster

Presentation. September, 2006.

"Modulation of the inflammatory response to *T. gondii* by B cells". New England Immunology Conference. Poster Presentation. November, 2005.

"PS A is a capsular polysaccharide with immuno-modulatory properties". New England Immunology Conference. Poster Presentation. November, 2005.

"TLR9 is required for the GALT response following oral *T. gondii* infection." New England Immunology Conference. Poster Presentation. November 2005.

"TLR9 is required for the GALT response following oral *T. gondii* infection." Society of Mucosal Immunology, Oral Presentation. June, 2005.

"TLR9 is required for the GALT response following oral *T. gondii* infection". FOCiS Center of Excellence Meeting. Poster Presentation. May 2005.

"Polysaccharide A from *Bacteroides fragilis* activates Regulatory T cells to modulate the Immune response in the GALT following oral infection with *T. gondii*" Keystone Symposia Translational Medicine and Autoimmunity. Oral Presentation. Big Sky, Montana. January, 2005.

."Polysaccharide A from *Bacteroides fragilis* modulates the GALT response with the potential to prevent pathogen driven acute ileitis." FOCiS Center of Excellence Satellite Meeting Poster Presentation. July 2004

"Two novel immune modulating agents prevent *T. gondii* induced acute ileitis by activating distinct cellular targets." Dartmouth Medical School Department of Microbiology and Immunology Seminar. Oral Presentation. March 2004

"Two novel immune modulating agents prevent *T. gondii* induced acute ileitis." Dartmouth College Molecular and Cellular Biology Research in Progress Seminar. Oral Presentation February 2004.

"The role of commensal bacterial in preventing *T. gondii* induced acute ileitis- a new class of immune modulating drugs." Dartmouth Medical School Molecular Pathogenesis Retreat. Oral Presentation. January 2004

"A novel triterpenoid prevents *T. gondii* induced acute ileitis by inducing TGF- $\beta$  production by Intraepithelial lymphocytes". New York Academy of Sciences Oral Tolerance Meeting Poster Presentation. October 2003.

"A novel triterpenoid prevents *T. gondii* induced acute ileitis by inducing TGF- $\beta$  production by Intraepithelial lymphocytes." Molecular and Cellular Biology Program at Dartmouth Annual Retreat. Poster Presentation. September 2003.

"A synthetic oleanane triterpenoid, CDDO (2-cyano-3,12-di,oxoolean-1,9-dien-28-oic acid) has protective effects against *Toxoplasma gondii*-induced inflammatory bowel disease, potential interaction with TGF- $\beta$ . New England Immunology Conference, Woods Hole, MA. Poster Presentation. November, 2002.

"A synthetic oleanane triterpenoid, CDDO (2-cyano-3,12-di,oxoolean-1,9-dien-28-oic acid) has protective effects against *Toxoplasma gondii*-induced inflammatory bowel disease."



International Meeting for Mucosal Immunology, Orlando FL Abstract and poster presentation. June 2002.

“CCR5 Mediates Specific Migration of *Toxoplasma gondii*-Primed CD8+ Lymphocytes into Inflammatory Intestinal Epithelial Cells.” International Meeting for Mucosal Immunology, Orlando FL. Abstract and poster presentation. June 2002.

“Targeting a novel vector for breast cancer gene therapy.” U.S. Army Era of Hope Published Abstract. 2002.