

University of Vermont
Department of Biology
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Curriculum Vitae

Bryan A. Ballif

Education

- 2001 Ph.D. Harvard University, Cambridge, MA, Cell and Developmental Biology
Dissertation Title: “Molecular Mechanisms Regulating MEK-MAP Kinase Cell Survival”
Advisor: Dr. John Blenis
- 1996 M.S. Brigham Young University, Provo, UT, Biochemistry
Thesis Title: “Interaction of Cyclooxygenases with an Apoptosis- and Autoimmunity-Associated Protein”
Advisor: Dr. Daniel L. Simmons
- 1993 B.S. Brigham Young University, Provo, UT, Microbiology, Emphasis: Molecular Biology

Academic Research and Administrative Positions

- 08/06-Present Assistant, Associate (‘12), Full (‘18) Professor, U. of Vermont, Dept. of Biology, Burlington, VT.
- 09/24-Present Co-Director (CAS), Biological Sciences Program, University of Vermont, Burlington, VT
- 07/21-06/24 Chair, Department of Biology, University of Vermont, Burlington, VT.
- 01/20-08/20 Acting Director, Undergraduate Program in Neuroscience, U. of Vermont, Burlington, VT
- 2016-2020 Director, NSF-REU, Summer Neuroscience Undergraduate Research Fellowship
- 2017-2018 Associate Director, Vermont Genetics Network (VGN), Vermont’s NIH INBRE program.
- 2015-2017 Director, VGN Bioinformatics Core, University of Vermont, Burlington, VT.
- 2010-2016 Co-Director, Immunobiology COBRE Proteomics Core, University of Vermont, Burlington, VT.
- 2008-2011 Co-Director, VGN Proteomics Facility, University of Vermont, Burlington, VT.
- 2003-2006 Postdoctoral Associate, Harvard Medical School, Boston, MA, Department of Cell Biology, Laboratory of Dr. Steven P. Gygi
- 2001-2003 Postdoctoral Fellow, Fred Hutchinson Cancer Research Center, Seattle, WA, Division of Basic Sciences, Laboratory of Dr. Jonathan A. Cooper
- 1995-2001 Doctoral Student, Harvard Medical School, Boston, MA, Department of Cell Biology, Laboratory of Dr. John Blenis
- 1993-1995 Master’s Student, Brigham Young University, Provo, UT, Department of Chemistry and Biochemistry, Laboratory of Dr. Daniel L. Simmons

Academic Teaching Positions

- 8/06-Present Assistant, Associate, and Full Professor, University of Vermont, Burlington, VT
Undergraduate courses taught: AS 096/1010 and Biology 096/1050, Nobel Prize Winning Science and first-year Biology Seminar; BCOR11/1400-12/1450, Introductory biology for majors; BCOR1425, Accelerated Biology; BCOR101/2300, Genetics; Biology 223/3560, Developmental Biology; Biology 205/4635, Advanced Genetics and Proteomics Lab; Neuroscience 111/2100-112/2105, Exploring Neuroscience.; Biology 190/3991, Internship; Undergraduate Research courses: Biology/Neuroscience 97-98, 191-192, 197-198, 297-298, 2995, 3995 and HON208-209/4996, 281-282/4996 (Honors Research); BIOL 4080, Senior Seminar in Cell and Developmental Biology.

Graduate courses taught: Biology 371-372/6025-6990, Graduate Colloquia, Foundations in Cell and Developmental Biology, and Special Topics (in proteomics, cell signaling, and development);

Biology 381/6005-6010, Biology and Graduate Seminar; Biology 391/6391, Master's Thesis Research; Biology/Neuroscience 491/7491, Doctoral Dissertation Research
 7/16-9/19 Undergraduate Internship Director, Dept. of Biology, U. of Vermont, Burlington, VT
 5/19-6/19 Summer Lecturer, College of Science and Mathematics, Norwich University, Northfield, VT
 Undergraduate course taught: Biology 399 (Developmental Biology—online)
 1/16-5/16 Visiting Professor, University of Puerto Rico-RP, Department of Biology San Juan, Puerto Rico.
 Graduate/Undergraduate course taught: Biology 5900 (Proteomics)
 6/14-5/15 Undergraduate Research and Internship Director, Dept. of Biology, U. of Vermont, Burlington, VT
 1/00-1/01 Teaching Fellow, Harvard College, Cambridge, MA: Biological Sciences 52, Molecular biology/biochemistry laboratory. Biological Sciences 11, Protein biochemistry laboratory.
 8/91-5/95 Teaching Fellow, Brigham Young University, Provo, UT: Chemistry 582, Biochemistry and molecular biology of nucleic acids and proteins. Chemistry 111/111H Introductory chemistry and lab for majors. Chemistry 251, Organic chemistry for nursing majors. Biology 100, Introductory biology.

Awards and Honors

2020 Elected Member, Vermont Academy of Science and Engineering
 2018 UVM Student Athlete "Favorite Teacher" recognition
 2015 Dean's Lecture Outstanding Scholar and Teacher Award, U. of Vermont, College of Arts and Sciences
 2012 Speaker, Chem. Engineering at the Life Science Interface (ChELSI institute), University of Sheffield, UK
 2010 Keynote Speaker, NSF and Ana G. Mendez Pre-college symposium, San Juan, Puerto Rico
 2010 Speaker Dahlem Colloquia in Molecular Genetics, Max Planck Institute, Berlin, Germany
 2007 Discovery Award, Best Paper in 2007, Fanconi Anemia Research Fund

University of Vermont Service

UVM Graduate College Executive Committee '12-'15
 UVM Graduate College Dean Search Committee '14
 UVM Neuroscience Graduate Program Review Committee '14
 UVM Graduate College Commencement Marshal '14-21
 UVM Faculty Senate '16-'17
 UVM CNHS Dept. of Biomed. and Health Sciences Tenure Review Committee '18; '24

UVM College of Arts Sciences Service

CAS Awards Committee '09-'13
 CAS Student Experience Committee '13-'14
 CAS Commencement Marshal '14-21
 CAS Study Abroad in the Sciences Committee '16
 CAS Academic Planning and Budget Committee '16-'19
 CAS Undergraduate Neuroscience Steering Committee '16-'23
 CAS Distribution Requirement Task Force Committee '18
 CAS Reorganization Exploration Task Force Committee '18-'19
 CAS Shared Services Advisory Committee '21-'24
 CAS Biology Department Chair '21-'24
 CAS Task Force on Program Metrics '22

UVM Biology Department Committee Service

Biology Dept. Advisory Committee '09-'13
 Biology Dept. Faculty Search Committees (11 total, 7 chaired) '10-'24
 Biology Dept. Staff Search Committees (7 total, 6 chaired, mult. ad hoc) '10-'24
 Biology Dept. Academic Affairs Committee (Interim Chair Spring '20) '14-'15; '17; '24-'25
 Biology Dept. Graduate Affairs Committee (Interim Chair Spring 2019) '18-'21
 Biology Dept. Faculty Affairs Committee '19-'21
 Biology *Ad hoc* RPT Guideline Review Committee '20-'21
 Biology Department Chair '21-'24

External Program Reviewer and External Service

Promotion and Tenure External Evaluator (multiple)	2013-present
Norwich University, Reviewer, Undergraduate Program in Biology and PE	2014
University of Puerto Rico-RP, Reviewer, Graduate Program in Biology	2016
Norwich University, Board of Fellows Member for the College of Science and Mathematics	2018-2021
University of Albany, Reviewer, Undergraduate and Graduate Biology Programs	2023
University of Massachusetts-Amherst, Undergraduate Biology Program	2024
Vermont NIH-INBRE (VBRN) Steering Committee Member	2020-present

Membership in Professional Societies

Society for Developmental Biology (current)
American Association for the Advancement of Science (past)
American Chemical Society (past)
American Society for Mass Spectrometry (past)
American Society for Biochemistry and Molecular Biology (past)
Human Proteome Organization (past)
International Society for Blood Transfusion (past)
Society for Neuroscience (past)
Vermont Chapter of the Society for Neuroscience (past)

Journal Referee and Grant Reviewer

Journal Referee for the following journals: *ACS-Chemical Biology, Analytical Chemistry, Biochemical Journal, Bioinformatics, Bioscience Reports, EMBO Journal, EMBO Molecular Medicine, European Journal of Pharmacology, Expert Review of Proteomics, FEBS Journal, Genes to Cells, International Society for Microbial Ecology Journal, Journal of Cellular Biochemistry, Journal of Drug Targeting, Journal of Proteome Research, Journal of Proteomics, Mass Spectrometry Reviews, Molecular and Cellular Biology, Molecular and Cellular Proteomics, Nature Communications, Neuroscience, Nucleic Acids Research, Parasite Epidemiology and Control, Proteomics, Proteomics-Clinical Applications, Scientific Reports, Trends in Biochemical Sciences.*

NSF Proposal Panelist; Ad Hoc Grant Referee for: Netherlands Innovational Research Incentives Scheme (Veni), NSF IOS-Neuroscience, BBSRC, UVM REACH, CASIS, MMC Cardiovascular Institute, Canada Research Chair, Rhode Island and Vermont INBRE faculty research awards study sections

Mentoring/Training (†co-advised)

Graduate Students	Year and Degree	Position(s) since leaving UVM
Violet Roskens†	'10 Biology M.S.	Res. Assoc. MBL, U.CO-Boulder, ArcherDx; Perkins, CO
Madhurima Saha	'11 Biology Ph.D.	Postdoc. Dartmouth/U. Florida; Assoc. Sci., FL
Mujeeburahiman Cheerathodi	'12 Biology Ph.D.	Postdoc. MD-Anderson/FL State U., FL
Bior Bior	'13 Biology Ph.D.	Asst. Prof. John Garang Mem. University; Postdoc. UVM; Dir. Natl. Health Lab, and NIHE, South Sudan
Ryan Joy	'15 Biology M.S.	Coord of Teaching and Learning., CCV, Winooski, VT
Federico Lopez-Osorio†	'16 Biology Ph.D.	Postdoc. AMNH, NY; Queen Mary U. of London, UK
Marion Weir	'16 Biology Ph.D.	Prod. Sci., CST, MA; Res. Sci., Mosaic Biosciences, CO
Brendan Chandler	'18 Biology M.S.	Scientist, Q2 solutions, Biosafety Specialist, Cornell, NY
Judith Keller†	'18 Biology Ph.D.	Senior Scientist, Sanofi Genzyme, Framingham, MA
Riley St. Clair	'19 Neurosc. Ph.D.	Postdoc. UBC; Asst. Prof., Quest U.; Med. Sci. Lias. BC
Anna Schmoker	'20 Biology, Ph.D.	Research Scientist, Dana Farber/Harvard; Dartmouth
Amanda Northrop†	'21 Biology Ph.D.	Lecturer, Norwich University, Northfield, VT
Phoebe Cousens	'24 Biology M.S.	Ph.D. student, University of Maryland, MD
Caroline Dumas Haney†	'24 Biology Ph.D.	Postdoc, Jackson Labs, CT

Shorter Term Graduate/Rotation Students: Anish Ali Sarkar, Jesse Sheeche, Emily Joyce, Steven Fortucci, Ally Morrissey

<u>Undergraduates</u>	<u>Year and Degree</u>	<u>Position(s) since leaving UVM:</u>
Gwen Buel	'09 Honors Biochemistry	Ph.D. Harvard; Postdoc. NCI; Sen. Sci. Ring Therap., MA
Steffanie Kelshaw	'09 Biology	M.S. George Washington U., Addictions Counselor, DC
Tyler Aten	'10 Honors Biology	D.D.S. program, U. of CT; Dentist, VT
Jeanine Maniscalco	'10 Biology	D.P.T. program UVM, VT; Physical Therapist, VT
Eva Luderowski	'10 Biology Carlton College	Tech. Rockefeller; M.D. Johns Hopkins, MD; Belle.H.NY
Aidan Smith	'11 Biology Vassar College	Technician MIT, M.S. Yale; Research Fell. UC-Berk., CA
Anh-Thu Lam	'12 Honors Biochemistry	Tech. Harvard Med; Ph.D. Johns-Hopkins; Law Firm, MD
Miranda Redmond	'12 Honors Pol.Sci.(Bio. Min.)	Pfizer, NJ, M.S./M.Ed. UVM; High School Teacher, VT
Kate Schlosser	'12 Biochemistry	Techn., Dartmouth; Res. Assoc., Berg Health; Agios, MA
Nick Thompson	'12 Biology	Ed. Asst, J. Cell. Biochem; Res. Rev. Asst. UVM, VT
Elizabeth Caron	'12 Biology	Technician UVM; Teacher St. Francis Xavier, VT
Ryan Joy	'12 Biology Johnson State	Biol. M.S. prog., UVM; Instruct./Faculty Cord. CCV, VT
Rachel Brooks	'12 Biology	Americorps, WA; Ph.D. program Virginia Tech., VA
Caroline Casals	'12 Biology	Cohen Cntr. Fellow Gulf of Maine Research Inst., MA
Marie Kenney	'12 Integrated Biol. Sci.	M.D. program UVM, VT
Peter Doubleday	'13 Honors Biology	Fulbright, M.S. Cardiff U. UK, Ph.D. Northwestern U., IL
Collin Love	'13 Biology	Amyaris and Pacific Med. CA; M.D. prog. UVM, VT
Leah Damon	'13 Biochem. St. Michael's	Tech. MGH/Harvard; Ph.D. program U. CO-Boulder, CO
Hailee Tenander	'13 Biology	Clin Associate, PAREXEL & M.S. prog. MAColPh. Health
Hayden Casali	'13 Biology	Crit. Care EMT; Quality Assurance Sci, Septodont, CO
Nicole George	'13 Biology	Techn. Haematologic Tech., VT; Tech. MA Eye and Ear
Aliya Lapp	'14 Chemistry	Ph.D. program, U. Texas at Austin. TX
Zach Silberman	'14 Honors Biol. Sciences	Clinical Associate MA; M.D. program UVM, VT
Giovanna Stein	'14 Biochemistry Norwich U.	Technician MGH/Harvard Medical School, MA
Cody Crawford	'14 Biological Sciences	Vet. techn., CA; Surg. Assist. Quartet Vet. Hosp., NC
Michael Kosofsky	'14 Biological Sciences	Tech. Haem. Tech., VT; M.D. program Temple U., PA
Rachael Bassett	'15 Biol. Sciences	2nd Lieut., Army Med. Serv. Corps, TX; PA School, MA
Hannah Johnson	'15 Honors Biology	M.D. program. UVM, VT
Kristen D'Elia	'15 Biol./Psych. Provid. Col.	Ph.D. program. New York University, NY
Kori Williams	'15 Biology GA Southern U.	Techn. GA Regents/Augusta; Ph.D. program U. of KY
Alice Karp	'15 Honors MMG	M.D. program, Jefferson University, PA
Liam Kelley	'16 Honors Biochemistry	Ph.D. program, Harvard, MA
Jaye Grundy	'16 Honors Biochemistry	M.S. prog. U. Pennsylvania; Research Scientist, GSK, PA
Sara Falconer	'16 Biological Sciences	Coach, Mansfield Nordic Club, VT
Anna Schmoker	'16 Chemistry	Ph.D. program, UVM, VT
Kyle Kellett	'17 Neuroscience	M.D. program, UVM, VT
Jennifer Hao	'17 Biology Harvard	M.D. program, U. CA, San Francisco
Sarah Bullock	'17 Honors Biological Sciences	M.D. program, Royal College of Surgeons, Ireland
Sam Scaduto	'17 Biological Sciences	Med. Asst., India; Scribe, MA; RN program, Bryant U., RI
Marjorie DesLauriers	'18 Honors Biological Sciences	M.S. (AMP) program, Pharmacology UVM, VT
Stefi Geiger	'18 Honors Biological Sciences	Res. Sci., Seattle CRI; M.D. program, UVM, VT
Jessica Souza	'19 Honors Biological Sciences	LNA, C.Med. Cntr., NH; M.D. program Temple U.
Caroline Dumas	'19 Neuroscience	Ph.D. program, Biology, UVM, VT
Mari Tomanelli	'19 Honors Molecular Genetics	M.S. program, Med. Lab. Sci., UVM, VT
Warren Yacawych	'19 Exercise Phys. Norwich U.	Ph.D. program U. Michigan, Ann Arbor
Charlotte Kearns	'20 Biology Holy Cross	Research Tech. at U. of Penn. Med. School, PA
Amila Šemić	'20 Bioch&Bioph. Amherst C.	Research Tech. Haematologic Tech., VT
Lily Keats	'20 Microbiology	Research Asst. Harvard SPHealth, MA

Brigitte Durieux	'20 Honors Biochemistry	Research Tech. Dana Farber Cancer Inst., Boston, MA
Fabiola Pagan-Torres	'21 Biology U. Puerto Rico-B	Tech. U. Puerto Rico-Bayamón; Ph.D student, UPR, PR
Leishla Pérez Pearson	'21 English U. Puerto Rico-RP	Customer Success Manager, BrainHI, PR
Lindsey Gleason	'21 Biology William and Mary	Research Assistant at Boston Medical Center, MA
Grace Skylstad	'21 Honors Biochemistry	Research Tech. Fluent BioSciences, MA
Noah Lind	'21 Honors Biochemistry	Research Tech. MDIBL ME
Samantha Rovetto	'21 Neuroscience	Research Tech. U. WI-Madison ; Tech. Labcorp, NY
Samantha Cilli	'21 Neuroscience	US Dept. Of Vet. Affairs, VT
Lynx Gottlieb	'21 Biological Sciences	Research Tech. UVM, Mem. Sloan Kettering, NY
Lyucheng Zou	'21 Neuroscience and Biology	M.S. Mt. Sinai, NY
Maeve Dillon-Martin	'22 Honors Biological Sciences	Technician Beth Israel Hospital, Boston, MA
Gillian Berglund	'23 Honors Neuroscience	Research Tech. Brandeis U., MA
Alyssa Saltz	'23 Neuroscience	Dental School, U. of Kentucky
Phoebe Cousens	'23 Neuroscience	M.S UVM Biology; Ph.D. Student U. MD, MD
Catherine Fauver	'24 Honors Neuroscience	Staff, UVM
Ely Remes	'24 Biology	Productions Analyst, CARM Sciences, MA
Taylor Bean	'24 Honors Biology	M.S student, UVM Biology
Meg Girardet	'25 Honors Biochemistry	(current student)
Elise Runnels	'26 Honors Biological Sciences	(current student)

Shorter Term Undergraduate Trainees: Anya Krymkowski '10 Honors Math; James Schreffler '12 Biology; Alex Lauzon '14 Biology; Alexandra Dansereau '17 Biological Sciences; Nathan Ballif Conservation Biology; Erin Murphy '20 Biology; Seneca Freyleue '19 Neuroscience; Katie Emberley '21 Neuroscience

<u>Additional Trainees</u>	<u>Position</u>	<u>Position after leaving lab</u>
Dr. Karen Hinkle	Visiting Scholar	Assoc. Professor/V.P. for Res., Norwich University, VT
Jonathan Aiwarzian	Technician	Technician, CDC-Puerto Rico; Trader FNY Capital Manage., CA
Melinda Vargus	Pre-College (PR)	U. de Puerto Rico '16 Comp.Math.; Soft. Develop. Rock Solid, PR,
Osvaldo Rivera	Pre-College (PR)	U. de Puerto Rico '16 Biology; Ph.D. Program U. of Pennsylvania
José Marrero	Pre-College (PR)	Syracuse University '17 Biochem.; Ph.D. Prog. U. CA Berkeley
Clark Deng	Pre-College (VT)	UVM '20 Engineering (VT Science Fair Biophysics award)
Kristal Roman-Roque	Pre-College (PR)	Universidad de Puerto Rico-RC '18 Biochemistry
Leishla Pérez Pearson	Pre-Col. & (PR) & REU	Universidad de Puerto Rico-RP '21 English
Claudia Cruz Santiago	Pre-College (PR)	Chemistry '23, U. Puerto Rico-RP
Camille Collazo Piñeiro	Pre-College (PR)	H.S. student in Puerto Rico (Metropolitan Science Fair 2 nd Place)
Nisha Shaw	Pre-College (VT)	S. Burlington H.S. (VT Science Fair Silver Medalist/Top Chem.)
Karmen Fonseca	Pre-College (PR)	High School student in Puerto Rico
Ashley Aldrich	Pre-College (VT)	Mount Abraham Union High School (VT)
Emily King	Pre-College (VT)	Missisquoi Valley Union High School (VT)

<u>Graduate Committees</u>	<u>Student (Degree)</u>	<u>Program</u>	<u>Role</u>
1/1/07—1/31/12	Mujeeburahiman Cheerathodi (Ph.D.)	Biology	Advisor
1/1/07—10/31/11	Madhurima Saha (Ph.D.)	Biology	Advisor
6/1/07—12/31/12	Bior K. Bior (Ph.D.)	Biology	Advisor
10/1/07—2/29/12	Sukanya Majumder (Ph.D.)	Biology	Member
12/1/07—5/1/10	Vincent Caloiero (M.S.)	Biology	Member
7/1/08—11/19/08	Lee Stirling (M.S.)	Pharmacology	Chair
9/1/08—5/1/10	Violet Roskens (M.S.)	Biology	Co-Advisor
10/1/08—5/1/11	Tatyana Svinkina (M.S.)	Biology	Member
10/1/08—8/31/12	Nabanita Mukherjee (Ph.D.)	Biology	Member
1/1/09—10/1/10	Ying Ruan (M.S.)	CMB	Chair
9/1/09—11/30/09	Greg Engel (Ph.D. Qual. Exam)	Neurosci.	Chair
6/1/11—5/1/12	Sanadan Banerjee (Ph.D.)	Chemistry	Chair
3/15/11—5/31/12	Jessica Eisenhauer (M.S.)	Chemistry	Chair

1/1/11—3/31/13	Jiangjiang Zhu (Ph.D.)	C&E Engin.	Member
9/1/09—2/28/13	Colleen Small (M.S.)	Chemistry	Member
10/1/08—3/31/13	Samya Chakravorty (Ph.D.)	Biology	Member
12/1/09—10/15/13	Jaqueline Leung (Ph.D.)	MMG	Member
10/1/08—1/10/14	Pedro Alvarez-Ortiz (Ph.D.)	Biology	Member
1/31/13—3/17/14	Catherine Westbom (M.S.)	Pathology	Member
4/1/14—5/1/14	Jason Gilmore (Ph.D.; Dartmouth)	Genetics	Exam Member
1/31/13—6/13/14	Laura Director (M.S.)	CMB	Chair
5/1/13—6/13/14	Alexandra Beattie (M.S.)	Biology	Member
10/1/10—8/19/14	Xi Qian (Ph.D.)	Anim. Sci.	Member
8/1/12—12/1/14	Andrew Nguyen (Ph.D.)	Biology	Member
5/6/10—12/12/14	Tyler Picariello (Ph.D.)	Biology	Member
9/1/13—3/19/15	Erin Wysolmerski (M.S.)	Biology	Member
5/10/14—5/21/15	Harold Bauerle (M.S.)	Psychology	Member
1/1/13—8/5/15	Gene Cilento (Ph.D.)	Neuroscience	Member
6/1/12—1/31/16	Ryan Joy (M.S.)	Biology	Advisor
9/1/10—5/22/16	Federico Lopez-Osorio (Ph.D.)	Biology	Co-Advisor
3/1/12—3/31/16	Rebecca Harvey (Ph.D.)	Chemistry	Chair/Member
4/1/12—3/31/16	Francis Ayombil (Ph.D.)	Biochemistry	Chair
1/1/11—5/22/16	Marion Weir (Ph.D.)	Biology	Advisor
5/12/15—4/30/17	Amanda Redmond (M.S.)	CMB	Member
9/1/11—4/30/17	Christopher Ziegler (Ph.D.)	CMB	Chair
10/10/16-7/27/17	Joseph Gallant (M.S.)	Pharmacology	Chair
12/4/13-4/1/18	Jamie Stern (Ph.D.)	CMB	Member
6/1/17-4/1/18	Helaina Stergas (M.S.)	Biology	Member
3/20/15-4/1/18	Brendan Chandler (M.S.)	Biology	Advisor
3/1/14—6/15/18	Jessica Sheehe (Ph.D.)	CMB	Chair
9/1/13—7/31/18	Suryatapa Jha (Ph.D.)	Plant Biology	Chair
9/1/13—8/15/18	Sanhita Chakraborty (Ph.D.)	Plant Biology	Chair
5/28/14—8/15/18	Md Ashikun Nabi (Ph.D.)	Biology	Member
8/15/14—12/15/18	Judith Keller (Ph.D.)	Biology	Co-Advisor
1/1/14—3/8/19	Riley St. Clair (Ph.D.)	Neuroscience	Advisor
12/1/14—3/22/19	Sarah Emerson (Ph.D.)	Biology	Member
5/28/19—6/20/19	Burcu Erdogan (Ph.D.) Boston College	Biology	Exam Member
3/1/15—8/31/19	Anish Ali Sarkar (M.S.)	Biology	Member
12/1/14—8/31/19	Ashley Waldron (Ph.D.)	Biology	Member
2/27/20—3/3/20	Molly Hurd (M.S.)	Pharmacology	Exam Chair
6/1/15—5/12/20	Anna Schmoker (Ph.D.)	Biology	Advisor
4/14/20—7/14/20	Eliana Moskovitz (M.S.)	Pharmacology	Exam Chair
7/28/20—8/13/20	Garrett Cammarata (Ph.D.) Boston Col.	Biology	Exam Member
5/25/18—9/15/20	Dan Haupt (M.S.)	Chemistry	Chair
1/31/13—10/31/20	Lynda Meynard (Ph.D.)	Biology	Member
1/31/13—11/4/20	Amanda Northrop (Ph.D.)	Biology	Co-Advisor
9/1/15—10/1/20	Raquel Lima (Ph.D.)	Biology	Member
8/15/20—5/15/21	Steven Fortucci (Ph.D.)	Biology	Advisor
9/1/19—2/3/21	Tyra Martinez (M.S.)	Biology	Dept. Advisor
09/23/21-10/31/21	Nick Fontaine	NGP	Exam Member
9/1/20—5/15/22	Francesca Carasi-Schwartz	Biology	Dept. Advisor
5/30/18—8/31/22	Kathryn Svec (Ph.D.)	CMB	Chair
4/5/17—12/15/22	Inessa Manuelyan (Ph.D.)	CMB	Chair
9/1/21—12/15/22	Jacqueline Guillemain (Ph.D.)	Biology	Member
6/22/18—1/17/23	Robert Rabelo (Ph.D.) U. Puerto Rico	Biology	Member
2/4/20—8/15/23	Katie Queen (Ph.D.)	CMB	Member
7/15/23-8/28/23	Juan Del Valle (Dartmouth Ph.D.)	Mol.Sys.Bio	External Examiner

9/1/19-5/15/24	Helaina Stergas (Ph.D.)	Biology	Member
9/1/22—5/15/24	Kylie Finnegan (M.S.)	Biology	Member
5/15/23—5/15/24	Phoebe Cousens (M.S.)	Biology	Advisor
10/10/23—5/15/24	John Cullen (M.S.)	Biochemistry	Chair
6/1/19—5/15/24	Caroline Dumas (Ph.D.)	Biology	Co-Advisor
5/7/19—Present	Bradley Cech (Ph.D.)	Chemistry	Chair
8/15/22—Present	Daniel Penados (Ph.D.)	Biology	Advisor
9/1/23—Present	Collin MacCleod (Ph.D.)	NGP	Member
6/1/24—Present	Taylor Bean (M.S.)	Biology	Member

Undergraduate Honors Thesis Committees

2007	Honors Thesis Member, Biology Major, Haddon Pantel
2008	Honors Thesis CAS Advisor, Biochemistry Major, Heather McLaughlin
2009	Honors Thesis CAS Advisor, Biology Major, Maggie Sager
2009	Honors Thesis Advisor, Biochemistry Major, Gwen Buel
2010	Honors Thesis CAS Advisor, Biology Major, Jared Hinrichs
2010	Honors Thesis Advisor, Biology Major, Tyler Aten
2010	Honors Thesis Member, Biology Major, Raymond Lee
2011	Honors Thesis Member, Biology Major, Alison Mercier
2011	Honors Thesis Advisor, Biochemistry Major, Anh-Thu Lam
2011	Honors Thesis CAS Advisor, Biology Major, Lauren Perry
2012	Honors Thesis CAS Advisor, Biology Major, Luke Neill
2012	Honors Thesis Advisor, Political Science Major, Miranda Redmond
2012	Honors Thesis CAS Advisor, Biological Sciences Major, Krist Aploks
2012	Honors Thesis Member, Biology Major, Margaux McConn
2012	Honors Thesis Member, Biology Major, Steven Philbin
2013	Honors Thesis CAS Advisor, Biological Sciences Major, Jenny Klein
2013	Honors Thesis Member, Biology Major, Alexandra Beattie
2013	Honors Thesis CAS Advisor, Biology Major, Jackie Mann
2013	Honors Thesis Advisor, Biology Major, Peter Doubleday
2014	Honors Thesis Advisor, Biological Sciences Major, Zach Silberman
2014	Honors Thesis CAS Advisor, Biological Sciences Major, Katie Bedard
2014	Honors Thesis CAS Advisor, Biological Sciences Major, Samantha Bissonette
2015	Honors Thesis Advisor, Biological Sciences Major, Alice Karp
2015	Honors Thesis CAS Advisor, Biological Sciences Major, Jordan Munger
2015	Honors Thesis Advisor, Biological Sciences Major, Hannah Johnson
2015	Honors Thesis Member, Neuroscience Major, Sarah Light
2015	Honors Thesis Member, Biology Major, Carlie Wilson
2015	Honors Thesis Member, Biochemistry Major, Ben Flinn
2016	Honors Thesis CAS Advisor, Biological Sciences Major, Jenna Todero
2016	Honors Thesis Advisor, Biochemistry Major, Jaye Grundy
2016	Honors Thesis Advisor, Biochemistry Major, Liam Kelley
2016	Honors Thesis CAS Advisor, Biology Major, Austin Merrill
2016	Honors Thesis Member, Neuroscience Major, Micaila Baroffio
2017	Honors Thesis CAS Advisor, Biology Major, Elise Mitchell
2017	Honors Thesis Advisor, Biological Sciences Major, Sarah Bullock
2017	Honors Thesis CAS Advisor, Biology Major, Sam Barritt
2017	Honors Thesis Member, Biology Major, Emi Eakin
2017	Honors Thesis Member, Neuroscience Major, Mickayla Royer
2017	Honors Thesis Member, Biology Major, Jenny Michael
2017	Honors Thesis Member, Biology Major, Matt Goldstein
2018	Honors Thesis Advisor, Biological Sciences Major, Stefi Geiger
2018	Honors Thesis CAS Advisor, Biology Major, Annie Glessner-Fischer
2018	Honors Thesis CAS Advisor, Biological Sciences Major, Lorraine Dang

2018 Honors Thesis Member, Biological Sciences Major, Claire Wilcox
 2018 Honors Thesis Member, Neuroscience Major, Julie Connor
 2018 Honors Thesis Member, Biochemistry Major, Gabriel Cohn
 2019 Honors Thesis Advisor, Molecular Genetics Major, Mari Tomanelli
 2019 Honors Thesis Member, Neuroscience Major, Michael Greenberg
 2019 Honors Thesis Advisor, Biological Sciences Major, Jessica Souza
 2020 Honors Thesis Advisor, Biochemistry Major, Brigitte Durieux
 2020 Honors Thesis CAS Advisor, Biology Major, Cali Murray
 2020 Honors Thesis Member, Biology Major, Emily MacDonald
 2020 Honors Thesis Member, Biological Sciences Major, Zoë Kalbag
 2020 Honors Thesis Member, Biological Sciences Major, Amara Chittenden
 2020 Honors Thesis CAS Advisor, Biology Major, Richard Thorpe
 2020 Honors Thesis CAS Advisor, Biological Sciences Major, Summer Barnes
 2020 Honors Thesis Advisor, Neuroscience Major, Nellie Stidham
 2021 Honors Thesis Advisor, Biochemistry Major, Grace Skylstad
 2021 Honors Thesis Advisor, Biological Sciences Major, Noah Lind
 2021 Honors Thesis CAS Advisor, Biological Sciences Major, Alex D'Amico
 2021 Honors Thesis CAS Advisor, Biology Major, Andrew Pieper
 2021 Honors Thesis Member, Neuroscience Major, Grace Ross
 2021 Honors Thesis Member, Biochemistry Major, Elora Buscher
 2021 Honors Thesis Member, Biological Science Major, Neel Patel
 2021 Honors Thesis Member, Biochemistry Major, Caitlin Hunt
 2021 Honors Thesis Member, Biology Major, Cory Raymond
 2021 Honors Thesis Member, Biology Major, Francesca Carasi-Schwartz
 2022 Honors Thesis Advisor, Biological Sciences Major, Maeve Dillon-Martin
 2022 Honors Thesis CAS Advisor, Biology Major, Patrick Flaherty
 2022 Honors Thesis Member, Biological Sciences Major, Kylie Finnegan
 2022 Honors Thesis Member, Neuroscience Major, Violet Bupp-Chickering
 2022 Honors Thesis Member, Neuroscience Major, Abby Sinascalco
 2022 Honors Thesis Member, Neuroscience Major, Daisy Powers
 2022 Honors Thesis CAS Advisor, Biological Sciences Major, Lauren Polk
 2022 Honors Thesis CAS Advisor, Biology Major, Joe Warren
 2023 Honors Thesis CAS Advisor, Biology Major, Noah Smith
 2023 Honors Thesis Advisor, Neuroscience Major, Gillian Berglund
 2023 Honors Thesis Member, Neuroscience Major, Emily Dean
 2024 Honors Thesis Advisor, Neuroscience Major, Catherine Fauver
 2024 Honors Thesis Advisor, Biology Major, Taylor Bean
 2024 Honors Thesis Member, Biology Major, Nicholas Bender
 2024 Honors Thesis Member, Biology Major, Ryan Davin
 2024 Honors Thesis Member, Biology Major, Maya Thomson

Speaking Invitations, Guest Lectures and Research Workshops (last several years)

2024 Speaker, Department of Microbiology, University of Puerto Rico Medical School, PR
 2024 Speaker and Proteomics Workshop Director, University of Puerto Rico Medical School, PR
 2023 Speaker, Northeast Society for Developmental Biology Conference, Woods Hole, MA
 2022 Public Outreach Speaker, Science on Tap, Burlington, Vermont
 2020 Participant, Forum of the Society for Developmental Biology for Teaching Developmental Biology Online
 2020 Speaker and Guest Lecturer, University of Puerto Rico Medical School, PR
 2020 Speaker, Neuroscience Behavior and Health Forum, NE Society for Neuroscience, University of Vermont
 2019 Guest Lecturer, Clinical Chemistry, Medical Laboratory Science 221, University of Vermont
 2019 Speaker, University of Vermont College of Arts and Sciences, Full Professor Lecture
 2019 Guest Lecturer, Immunology and Cell Biology, Department of Biology, University of Puerto Rico-RP
 2019 Speaker and Proteomics Workshop Director, University of Puerto Rico Medical School
 2018 Guest Lecturer, BIO 010 Biology first year seminar, University of Vermont

2018 Guest Lecturer, Clinical Chemistry (Fall), Medical Laboratory Science 221, University of Vermont
2018 Guest Lecturer, Big Data Topics course, Department of Biology, University of Puerto Rico-RP
2018 Speaker, Department of Microbiology, University of Puerto Rico Medical Campus
2018 Guest Lecturer, Clinical Chemistry (Spring), Medical Laboratory Science 221, University of Vermont
2018 Guest Lecturer, 1st-Year Neuroscience Seminar, NSCI 096, University of Vermont
2018 Guest Lecturer, Cell Biology, Biology 306, Norwich University

Grants and Research Support Received

• Major Extramural Awards and Support

09/01/24-08/31/27 NIH 1R15HL175494-01

Grant Title: TLT-1 intracellular function. **PI: Valance Washington; Role of Ballif: Subcontract PI**; Total Subcontract: \$55,561.

08/05/24-6/30/25 NIH 1R21AI175721-01A1

Grant Title: Mapping the virus-host interactions that determine interferon resistance of Seoul orthohantavirus. **PI: Alison Kell; Total: \$237,136. Subcontract PI: Jason Botten, Role of Ballif Co-I.**

08/19/22-07/31/25 NIH 5R01AI171408-03

Grant Title: The role of mammarenavirus defective interfering particles in protecting host fitness and the host-driven post-translational modifications that regulate their formation and function. **PI: Jason Botten; Role of Ballif: Co-I**; Total: \$613,623.

06/01/17-5/31/22 National Science Foundation Grant IOS 1656510

Grant Title: A Biochemical, Proteomic and Functional Delineation of Dcbl1 and 2 Signaling during Zebrafish Neural Retina Development. **PI: Bryan A. Ballif**; Total: \$540,000

06/01/18-5/31/21 NIH/NIAID ZIKV 1R21AI135265

Grant Title: Mapping the Zika Virus Phosphoproteome; **PI: Jason Botton; Role of Ballif: Co-I**; Total: \$232,137

4/1/16-3/31/21 NIH R01MH109651

Grant Title: Elucidating Mechanistic Connections Between Guidance Signaling, Microtubule Regulation, and Growth Cone Steering. **PI: Laura-Anne Lowery; Role of Ballif: subcontract PI**; Total Subcontract: \$50,000; Commitment of Ballif—0.6 calendar month (6/1/16-1/31/20)

07/15/15-6/30/19 National Science Foundation Grant IOS 1625154

Grant Title: Delineation of Semaphorin6a/PlexinA2 Signaling in Zebrafish Eye Development. **PI: Alicia Ebert; Role of Ballif: Co-PI**; Total: \$ 520,000

05/15/16-4/30/20 National Science Foundation Grant DBI 1560180

Grant Title: REU Site: Summer Neuroscience Undergrad. Research Fellowship Program at UVM. **PI: Bryan A. Ballif** (assumed PI status after retirement of former PI, Felix Eckenstein); Total: \$278,728

06/01/14-5/31/17 Beckman Scholar's Program

PI: Jim Vigoreaux; Role of Ballif: Key Personnel; Direct: \$130,000

9/1/12-8/31/17 National Science Foundation Grant DEB 1144045

Grant Title: Collaborative Research: Forecasting and Forestalling Tipping Points in an Aquatic Ecosystem. **PI: Nicholas Gotelli; Role of Ballif: Co-PI**; Total: \$547,191

1/1/2012-12/31/16 National Science Foundation Grant DEB 136703
Grant Title: Dimensions: Collaborative Research: The climate cascade: functional and evolutionary consequences of climatic change on species, trait, and genetic diversity in a temperate ant community. **PI: Nicholas Gotelli; Role of Ballif: Co-PI**; Total: \$687,559

8/15/10-7/31/15 National Science Foundation Grant IOS 1021795
Grant Title: Phosphotyrosine-dependent regulatory mechanisms of mammalian brain development: A large-scale phosphoproteomic and biochemical study. **PI: Bryan Ballif**; Total: \$510,729; ROA Supplement Total: \$24,995

7/1/10-6/30/13 National Institutes of Health R21. NIH/DHHS 5R21AI088059-02
Grant Title: Identification of Novel Arenavirus Protein-Host Cellular Protein Interactions. **PI: Jason Botten; Role of Ballif: Co-PI**; Total: \$227,126.

4/1/10-12/31/15 National Institutes of Health Parent R01. NIH/DHHS. 5R01NS069628-02
Grant Title: H1R Signaling and Immune Deviation in EAE. **PI: Cory Teuscher; Role of Ballif: Co-I**; Total: \$1,906,431

5/1/09-9/30/14 National Science Foundation Grant DEB 0843505
Grant Title: Taxonomy, Phylogenetics, Behavior And Proteomics Of The Social Wasp Superorganisms (Hymenoptera: Vespidae; Vespinae); **PI: Bryan Ballif (assumed full PI status after death of former PI Kurt Pickett)**. Total: \$385,432

9/1/07-8/31/12 National Science Foundation Grant DEB 0718417
Grant Title: Molecular Phylogeny of Flightin and the Evolution of Insect Flight. **PI: Jim O. Vigoreaux; Role of Ballif: Key Personnel**. Total: \$676,009

• **Extramural INBRE and COBRE Awards/Support**

7/1/11-6/30/16 National Institutes of Health/NCRR/NIGMS 8P20GM103496-07
Grant Title: Vermont Immunobiology/ Infectious Diseases Center (COBRE). **PI: Ralph Budd; Role of Ballif: Key Personnel/Co-Director Proteomics Core**; Total: \$7,499,998

6/1/15-5/31/20 National Institutes of Health/NCRR/NIGMS 8P20GM103449-11
Grant Title: Vermont Genetics Network—Vermont INBRE; **PI: Judith Van Houten; Role of Ballif: Key Person. Assoc. Director (past), Dir. Bioinformatics (past), Co-Director Proteomics (past), Proteomics outreach (past)**. Direct: ~\$ 14,000,000 (over 5 years). Additional Supplement: Total: \$69,791 (06/01/2016 – 05/31/2017). **PI: Judith Van Houten; Role of Ballif: Key Personnel**

6/1/10-5/31/15 National Institutes of Health/NCRR/NIGMS 8P20GM103449-11
Grant Title: Vermont Genetics Network—Vermont INBRE. **PI: Judith Van Houten; Role of Ballif: Key Person./Dir. Bioinformatics (past), Co-Director Proteomics (past), Proteomics outreach team member (past)**
Total: \$ 14,490,165

• **Intramural Awards/Support >\$1,000 (last several years)**

6/1/16-6/30/18 UVM College of Arts and Sciences Small Grant Research Award
Proposal Title: Identification of Proteins Interacting with Dcbl2: Implications for Vertebrate Eye Development
PI: Bryan A. Ballif. Award Amount: \$3,000

3/1/15-6/30/17 UVM College of Arts and Sciences Faculty Research Support Award
Proposal Title: Identification of Chagas Disease Vector Blood Meal Sources Using Protein Mass Spectrometry
PI: Bryan A. Ballif. Award Amount: \$6,976

• **Fellowships and Training Awards/Support**

9/1/01-7/31/03 NIH/NCI Chromosome Metabolism and Cancer Training Grant 5 T32 CA09657 postdoctoral fellowship, Fred Hutchinson Cancer Research Center, Seattle, WA. **PI: Meng-Chao Yao**

9/1/95-8/31/97 NIH Pharmacological Sciences Training Grant T32 GM07306 graduate student assistantship, Harvard Medical School, Boston, MA. **PI: Don Cohen**

Peer-Reviewed Publications (102 articles published, 1 book chapter)

Denotes Graduate Student Trainee of Ballif, @ Denotes Undergraduate or Pre-College Trainee of Ballif

[Complete listing of publications in PubMed](#)

1. Characterizing the tumor suppressor activity of FLCN in Birt-Hogg-Dubé syndrome through transcriptomic and proteomic analysis. Rachel-Ann Russell, Elaine A. Dunlop, Jesse D. Champion, Peter F. Doubleday@, Tijs Claessens, Zahra Jalali, Sara Seifan, Iain Perry, Peter Giles, Oliver Harrison, Barry J. Coull, Maurice A. van Steensel, Arjan C. Houweling, Arnim Pause, **Bryan A. Ballif**, Andrew R. Tee1. *Oncogene*. Accepted.
2. The intracellular domain of Sema6A is essential for development of the zebrafish retina. Dumas CM, St Clair RM, Lasseigne AM, **Ballif BA**, Ebert AM. *J Cell Sci*. 2024 Jul 15;137(14):jcs261469. doi: 10.1242/jcs.261469. Epub 2024 Jul 25.
3. CRK and NCK adaptors may functionally overlap in zebrafish neurodevelopment, as indicated by common binding partners and overlapping expression patterns. Stergas HR, Dillon-Martin M, Dumas CM, Hansen NA, Carasi-Schwartz FJ, D'Amico AR, Finnegan KM, Juch U, Kane KR, Kaplan IE, Masengarb ML, Melero ME, Meyer LE, Sacher CR, Scriven EA, Ebert AM, **Ballif BA**. *FEBS Lett*. 2024 Feb;598(3):302-320. doi: 10.1002/1873-3468.14781.
4. Long Noncoding RNA U90926 Is Induced in Activated Macrophages, Is Protective in Endotoxic Shock, and Encodes a Novel Secreted Protein. Sabikunnahar B, Caldwell S, Varnum S, Hogan T, Cooper A, Lahue KG, Bivona JJ, Cousens PM, Symeonides M, Ballif BA, Poynter ME, Kremontsov DN. *J Immunol*. 2023 Mar 15;210(6):807-819. doi: 10.4049/jimmunol.2200215.
5. @#Caroline M. Dumas†, #Anna M. Schmoker†, @Shannon R. Bennett‡, @Amara S. Chittenden‡, @Chelsea B. Darwin‡, @Helena K. Gaffney‡, @Hannah L. Lewis‡, @Eliana Moskovitz‡, @Jonah T. Rehak‡, @Anna A. Renzi‡, @Claire E. Rothfelder‡, @Adam J. Slamin‡, @Megan E. Tammaro‡, Leigh M. Sweet, and **Bryan A. Ballif***. Novel Interactors of the SH2 Domain of the Signaling Adaptors CRK and CRKL Identified in Neuro2A Cells. *American Journal of Undergraduate Research*. 2022, Accepted. † and ‡ equal contribution.
6. Daniel Penados, José P. Pineda, Elisa Laparra-Ruiz, Manuel F. Galvan, Anna M. Schmoker#, **Bryan A. Ballif**, M. Carlota Monroy, and Lori Stevens. Assessing risk of vector transmission of Chagas disease through blood source analysis using LC-MS/MS for hemoglobin sequence identification. *PLOS ONE*. 2021, Accepted.
7. Stergas HR, Kalbag Z, #St Clair RM, Talbot JC, **Ballif BA**, Ebert AM. Crk adaptor proteins are necessary for the development of the zebrafish retina. *Developmental Dynamics*. 2021 Jul 15. In press.
8. #Amanda C Northrop, Vanessa Avalone, Aaron M Ellison, **Bryan A Ballif**, Nicholas J Gotelli. Clockwise and counterclockwise hysteresis characterize state changes in the same aquatic ecosystem. *Ecology Letters*. 2021 Jan;24(1):94-101.
9. #Anna M. Schmoker*, @Jaye L. Weinert, Jacob M. Markwood, Kathryn S. Albretsen, Michelle L. Lunde, #Marion E. Weir, Alicia M. Ebert, Karen L. Hinkle and **Bryan A. Ballif***. FYN and ABL regulate the interaction networks of the DCBLD receptor family. *Corresponding authors. *Molecular and Cellular Proteomics*. 2020 Oct;19(10):1586-1601.

10. Burcu Erdogan, #Riley M. St. Clair, Garrett M. Cammarata, Timothy Zaccaro, **Bryan A. Ballif**, Laura Anne Lowery. Investigating the impact of the phosphorylation status of tyrosine residues within the TACC domain of TACC3 on microtubule behavior during axon growth and guidance. *Cytoskeleton*. 2020 Jul;77(7):277-291.
11. #Anna M. Schmoker*, @Leishla M. Perez Pearson, @Claudia Cruz, @Fabiola D. Pagán Torres, @Karmen Fonseca, Luis G. Colon Flores, Yadira Cantres, Carla Salgado Ramirez, Loyda Melendez, **Bryan A. Ballif***, A. Valence Washington*. Defining the TLT-1 Interactome from Resting and Activated Human Platelets. *Journal of Proteomics*. 2020 Mar 20;215:103638. ***Corresponding Authors**.
12. @Liam P. Kelley†, Anja Nylander†, Lionel Arnaud†, #Anna M. Schmoker, #Riley M. St. Clair, @Lindsey A. Gleason, @Jessica M. Souza, Jill Storry, Martin L. Olsson*, and **Bryan A. Ballif***. SMIM1 dimerization promotes presentation of the anti-VEL antigen. †Equal Contribution. *FEBS Letters*. 2020 Apr;594(8):1261-1270. ***Corresponding Authors**.
13. Christopher M. Ziegler, Loan Dang, Philip Eisenhauer, Jamie A. Kelly, Benjamin R. King, Joseph P. Klaus, Inessa Manuelyan, Ethan B. Mattice, David J. Shirley, #Marion E. Weir, Emily A. Bruce, **Bryan A. Ballif** and Jason Botten. NEDD4 family ubiquitin ligases associate with LCMV Z's PPXY domain and are required for virus budding, but not via direct ubiquitination of Z. *PLoS Pathogens*. 2019 Nov 11;15(11):e1008100.
14. Cheryl C. Collins, Ana Mafalda Santos, Yuan Lui, **Bryan A. Ballif**, Mahalya Gogerly-Moragoda, Heather Brouwer, Robin Ross, Kuberan Balagurunathan, Sumana Sharma, Gavin J. Wright, Simon Davis, and Ralph Budd. Detection of Cell Surface Ligands for Human Synovial $\gamma\delta$ T Cells. *Journal of Immunology*. 2019 Nov 1;203(9):2369-2376.
15. #Keller, Judith; Lima-Cordón, Raquel; Monroy, M.; #Schmoker, Anna; Zhang, Fan; Howard, Alan; **Ballif, Bryan***; Stevens, Lori*. Protein mass spectrometry detects multiple bloodmeals for enhanced Chagas vector ecology. *Infection, Genetics and Evolution*. 2019 Oct;74:103998. ***Corresponding Authors**.
16. #Riley M. St. Clair*, @Caroline M. Dumas, @Kori S. Williams†, Matthew T. Goldstein†, Elizabeth Stant, Alicia M. Ebert*, and **Bryan A. Ballif***. Natural Release of a Functional Ectodomain of the Transmembrane Guidance Cue Semaphorin6A. †Equal Contribution. *FEBS Letters*. 2019 Nov;593(21):3015-3028. ***Corresponding Authors**.
17. #Schmoker, AM*, Ebert, AM and **Ballif, BA***. The DCBLD receptor family: emerging signaling roles in development, homeostasis and disease. *Biochemical Journal*. 2019 Mar 22;476(6):931-950.***Corresponding Authors**.
18. Christopher M. Ziegler, Philip Eisenhauer, Inessa Manuelyan, #Marion E. Weir, Emily A. Bruce, **Bryan A. Ballif** and Jason Botten. Host-driven phosphorylation appears to regulate the budding activity of the Lassa virus matrix protein. *Pathogens*. 2018 Dec 9;7(4). pii: E97.
19. #Anna M. Schmoker†, Samuel L. Barritt†, #Marion E. Weir†, **Bryan A. Ballif***, and Paula B. Deming*. Fyn Regulates Binding Partners of cyclic-AMP Dependent Protein Kinase A. †Equal Contribution. ***Corresponding Authors**. *Proteomes*. 2018 Sep 29;6(4). pii: E37.
20. Jessica Sheehe, Adrian Bonev, #Anna M. Schmoker, **Bryan A. Ballif**, Mark Nelson, Thomas Moon, and Wolfgang Dostmann. Oxidation of cysteine 117 stimulates constitutive activation of the type Ia cGMP-dependent protein kinase. Revised and resubmitted. *Journal of Biological Chemistry*. 2018 Oct 26;293(43):16791-16802.
21. Burgess, E.J., Hoyt, L.R., Randall, M.J., Mank, M.M., Binova, J.J., Eisenhauer, P., Botten, J.W., **Ballif, B.A.**, Lam, Y.W., Wargo, M.J., Boyson, J.C., Ather, J.L., and M.E. Poynter. Bacterial lipoproteins constitute the TLR2-stimulating activity of Serum Amyloid A. *Journal of Immunology*. 2018 Oct 15;201(8):2377-2384.

22. #Judith I. Keller, Justin O. Schmidt, #Anna M. Schmoker, **Bryan A. Ballif**,* and Lori Stevens* Temporal variation of blood meal detection ability comparing protein mass spectrometry and DNA PCR in Chagas disease insect vectors. *Corresponding Authors. *Memórias do Instituto Oswaldo Cruz*. 2018 Aug 27;113(10):e180160.
23. #Anna M. Schmoker, Heather E. Driscoll, @Stefanie R. Geiger, Jim J. Vincent, Alicia M. Ebert and **Bryan A. Ballif***. Bioinformatic screen identifies novel CRKL-SH2 binding partners: an *in silico* motif-based approach to prioritize potential interacting partners. *Corresponding Author. *Bioinformatics*. 2018 Nov 15;34(22):3898-3906.
24. #Judith I. Keller, **Bryan A. Ballif***, Carlota Monroy, #Riley M. St. Clair, James J. Vincent, M., and Lori Stevens*. Chagas Disease vector blood meal sources identified by protein mass spectrometry. *PLoS ONE*. 2017 Dec 12;12(12):e0189647. *Corresponding Authors.
25. Christopher M. Ziegler, Philip Eisenhauer, Jamie A. Kelly, Loan N. Dang, Vedran Beganovic, Emily A. Bruce, Benjamin R. King, David J. Shirley, #Marion E. Weir, **Bryan A. Ballif**, and Jason Botten. A proteomic survey of Junín virus interactions with human proteins reveals host factors required for arenavirus replication. *J. Virology*. 2017 Nov 29. pii: JVI.01565-17.
26. #Riley M. St. Clair, Sarah E. Emerson, @Kristen P. D’Elia, #Marion E. Weir, #Anna M. Schmoker, Alicia M. Ebert*, and **Bryan A. Ballif***. Fyn phosphorylates PlexinA1 and PlexinA2 at conserved tyrosines essential for zebrafish eye development. *FEBS Journal*, 2018 Jan;285(1):72-86. *Corresponding Authors.
27. Dynamic multi-site phosphorylation by Fyn and Abl drives the interaction between CrkL and the novel scaffolding receptors Dcbld1 and Dcbld2. #Anna M. Schmoker†, @Jaye L. Weinert†, @Kyle J. Kellett, @Hannah E. Johnson, #Ryan M. Joy, #Marion E. Weir, Alicia M. Ebert and **Bryan A. Ballif*** *Biochemical Journal*, 2017 Nov 21;474(23):3963-3984. †Equal Contribution. *Corresponding Author.
28. #Amanda C. Northrop, @Rachel Brooks, Aaron M. Ellison, Nicholas J. Gotelli*, and **Bryan A. Ballif***. Environmental proteomics reveals taxonomic and functional changes in an enriched aquatic ecosystem. *Ecosphere*. 2017 Oct;8(10). pii: e01954. *Corresponding Authors
29. Thomas Corwin, Jonathan Woodsmith, Federico Apelt, Jean-Fred Fontaine, David Meierhofer, Johannes Helmuth, Arndt Grossmann, Miguel A. Andrade-Navarro, **Bryan A. Ballif**, Ulrich Stelzl. Interaction networks mediate human tyrosine kinase specificity. *Cell Systems*, 2017 Aug 23;5(2):128-139.e4.
30. Benjamin King, Dylan Hershkowitz, Philip Eisenhauer, #Marion Weir, Christopher Ziegler, Joanne Russo, Emily Bruce, **Bryan A. Ballif**, and Jason Botten. A map of the arenavirus nucleoprotein-host protein interactome reveals that Junín virus selectively impairs the antiviral activity of PKR. *Journal of Virology*. 2017, May 24. pii: JVI.00763-17.
31. Sarah E. Emerson, #Riley M. St. Clair, Ashley L. Waldron, Sierra R. Bruno, Anna Duong, Heather E. Driscoll, **Bryan A. Ballif**, Sarah McFarlane, Alicia M. Ebert. Identification of target genes downstream of Semaphorin6A/PlexinA2 signaling in zebrafish. *Developmental Dynamics*. 2017 Jul;246(7):539-549.
32. #Federico Lopez; Kurt M Pickett; James M Carpenter; **Bryan A Ballif** and Ingi Agnarsson, Phylogenomic analysis of yellowjackets and hornets (Hymenoptera: Vespidae, Vespinae). *Molecular Phylogenetics and Evolution*. 2017 Feb;107:10-15.
33. #Mujeeburahiman Cheerathodi, Naze G. Avci, Paola A. Guerrero, Leung K. Tang, John E. Morales, Zhihua Chen, Amancio Carnero, Frederick F. Lang, **Bryan A. Ballif**, Gonzalo M. Rivera, and Joseph H. McCarty. The Cytoskeletal Adapter Protein Spinophilin Regulates Invadopodia Dynamics and Tumor Cell Invasion in Glioblastoma. *Molecular Cancer Research*. 2016 Sep 21. pii: molcanres.0251.2016.

34. Christopher M Zielger, Philip Eisenhauer, Emily A Bruce, Vedran Beganovic, Benjamin R King, #Marion E Weir, **Bryan A Ballif** and Jason William Botten. A Novel Phosphoserine Motif in the LCMV Matrix Protein Z Regulates the Release of Infectious Virus and Defective Interfering Particles. *Journal of General Virology*, 2016 Jul 15. doi: 10.1099/jgv.0.000550.
35. Chunshui Zhou, Andrew E. H. Elia, Maria L. Naylor, Noah Dephoure, **Bryan A. Ballif**, Gautam Goel, Qikai Xu, Aylwin Ng, Danny M. Chou, Ramnik J. Xavier, Steven P. Gygi and Stephen J. Elledge. Profiling DNA damage induced phosphorylation in budding yeast reveals diverse signaling networks. *Proceedings of the National Academy of Sciences, USA*. 2016 Jun 28;113(26):E3667-75.
36. #Marion E. Weir, Jacqueline E. Mann, Thomas Corwin, @Zachary W. Fulton, @Jennifer M. Hao, @Jeanine F. Maniscalco, @Marie C. Kenney, @Kristal M. Roman Roque, @Elizabeth F. Chapdelaine, Ulrich Stelzl, Paula B. Deming, **Bryan A. Ballif**,* and Karen L. Hinkle*. Novel Src Family Kinase Autophosphorylation Sites Regulate Kinase Activity and SH2 Domain Binding Capacity. ***Corresponding Authors**. *FEBS Letters*. 2016 Apr; 590(8):1042-52.
37. Christopher Ziegler, Philip Eisenhauer, Emily A. Bruce, #Marion E. Weir, Benjamin King, Joseph Klaus, David J. Shirley, **Bryan A. Ballif** and Jason Botten. The Arenavirus Matrix Protein PPXY Late Domain Drives the Production of Defective Interfering Particles. *PLoS Pathogens*. 2016 Mar 24;12(3):e1005501.
38. Lemas D, Lekkas P, **Ballif BA**, Vigoreaux JO. Intrinsic disorder and multiple phosphorylations constrain the evolution of the flightin N-terminal region. *Journal of Proteomics*. 2016 Mar 1;135:191-200.
39. Arnaud L, @Kelley LP, Helias V, Cartron JP, **Ballif BA***. SMIM1 is a type II transmembrane phosphoprotein and displays the Vel blood group antigen at its carboxyl-terminus. *FEBS Letters*. 2015 Nov 30;589(23):3624-30. ***Corresponding Author**
40. #Cheerathodi M, Vincent JJ and **Ballif BA***. Quantitative Comparison of CrkL-SH3 Binding Proteins from Embryonic Murine Brain and Liver: Implications for Developmental Signaling and the Quantification of Protein Species Variants in Bottom-Up Proteomics. *J. Proteomics*. 2015 Jul 1;125:104-11. ***Corresponding Author**
41. Xie Y, Jin Y, Merenick BL, Ding M, Fetalvero KM, Wagner RJ, Mai A, Gleim S, Tucker DF, Birnbaum MJ, **Ballif BA**, Luciano AK, Sessa WC, Rzucidlo EM, Powell RJ, Hou L, Zhao H, Hwa J, Yu J, Martin KA. Akt2-specific phosphorylation of GATA-6 is required for vascular smooth muscle cell differentiation after mTORC1 inhibition. *Science Signaling*. 2015 May 12;8(376):ra44.
42. Daniels G, **Ballif BA**, Helias V, Saison C, Martin P, Grimsley S, Mannessier L, Bonny M, Hustinx H, Lee E, Cartron J-P, Peyrard T and Arnaud L. Lack of the nucleoside transporter SLC29A1/ENT1 is responsible for the Augustine-null blood type and is associated with ectopic mineralization. *Blood*. 2015 Jun 4;125(23):3651-4.
43. Perlini LE, Szczurkowska J, **Ballif BA**, Piccini A, Giovedì S, Benfenati F and Cancedda L. Synapsin III Acts Downstream of Semaphorin 3A/CDK5 to Regulate Radial Migration and Orientation of Pyramidal Neurons *in vivo*. *Cell Reports*. 2015 Apr 14;11(2):234-48.
44. Alayev A, @Doubleday PF, Berger SM, **Ballif BA***, Holz MK*. Phosphoproteomics Reveals Resveratrol-Dependent Inhibition of Akt/mTORC1/S6K1 Signaling. *Journal of Proteome Research*. 2014 Dec 5;13(12):5734-42. ***Corresponding Authors**.
45. @Doubleday PF, **Ballif BA***. Developmentally-Dynamic Murine Brain Proteomes and Phosphoproteomes Revealed by Quantitative Proteomics. *Proteomes*. 2014 Jun;2(2):197-207. ***Corresponding Author**
46. Tang Q, Andenmatten N, Deng B, Meissner M, **Ballif BA**, Ward GE. Calcium-dependent phosphorylation alters Class XIVa myosin function in the protozoan parasite *Toxoplasma gondii*. *Molecular Biology of the Cell*. 2014 Sep 1;25(17):2579-91.

47. Galan JA, Geraghty KM, Lavoie G, Kanshin E, Tcherkezian J, Calabrese V, Turke BE, **Ballif BA**, Blenis J, Thibault P, and Roux PP. Global Phosphoproteomic Analysis Reveals 14-3-3 as a Key Mediator of RSK-dependent Signal Transduction. *Proceedings of the National Academy of Sciences, USA*. 2014 Jul 22;111(29):E2918-27.
48. Leung JM, Tran F, Pathak R, Poupart S, Heaslip AT, **Ballif BA**, Westwood NJ and Ward GE. Identification of *T. gondii* Myosin Light Chain-1 as a Direct Target of TachypleglinA-2, a Small-Molecule Inhibitor of Parasite Motility and Invasion. *PLoS One*. 2014, Jun 3;9(6):e98056.
49. #Lopez-Osorio F, Pickett KM, Carpenter JM, **Ballif BA** and Ingi Agnarsson I. Phylogenetic relationships of yellowjackets inferred from nine loci (Hymenoptera: Vespidae, Vespinae, Vespula and Dolichovespula). *Molecular Phylogenetics and Evolution*. 2014 Apr;73:190-201.
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Book Chapter

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