

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

- 2006-Present Assistant, Associate and Full Professor, University of Vermont, Dept. of Biology, Burlington, VT.
- 2016-Present 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 and Biology 096 Nobel Prize Winning Science and first-year Biology Seminar; BCOR11-12, Introductory biology for majors; BCOR101, Genetics; Biology 223, Developmental Biology; Biology 205, Advanced Genetics and Proteomics Lab; Neuroscience 111-112,; Biology 190, Internship; Undergraduate Research courses: Biology 097-098, 191-192, Research Apprenticeship; Biology/Neuroscience 197-198/297-298 and HON208-209/281-282 (Honors Research)
Graduate courses taught: Biology 371/372, Graduate Colloquia and Special Topics in proteomics, and cell signaling); Biology 381, Graduate Seminar; Biology 391 Master's Thesis Research; Biology/Neuroscience 491, Doctoral Dissertation Research
- 1/20-8/20 Acting Director, Undergraduate Program in Neuroscience, U. of Vermont, Burlington, VT
- 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	Member, Vermont Academy of Science and Engineering
2108	UVM Student athlete, “Favorite Teacher” recognition
14-15	Dean’s Lecture Outstanding Scholar and Teacher Award, U. of Vermont, College of Arts and Sciences
08-17	Nominated five times for the University of Vermont’s Kroepsch-Maurice Excellence in Teaching Award and twice for the Dean’s Lecture Award.
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, College and Department Committees

UVM Biology Dept. Advisory Committee	2009-2013
UVM CAS Awards Committee	2009-2013
UVM Biology Dept. Faculty and Staff Search Committees (8 total, 5 chaired)	2010-2018
UVM Graduate College Executive Committee	2012-2015
UVM CAS Student Experience Committee	2013-2014
UVM Graduate College Dean Search Committee	2014
UVM Neuroscience Graduate Program Review Committee	2014
UVM Biology Dept. Academic Affairs Committee (Chair and member)	2014-2015; 2017
UVM Faculty Senate	2016-2017
UVM CAS Study Abroad in the Sciences Committee	2016
UVM CAS Distribution Requirement Task Force Committee	2018
UVM CNHS Dept. of Biomed. and Health Sciences Tenure Review Committee	2018
UVM CAS Academic Planning and Budget Committee	2016-2019
UVM CAS Reorganization Exploration Task Force Committee	2018-2019
UVM Biology Dept. Graduate Affairs Committee (Interim Chair Spring 2019)	2018-present
UVM CAS and Graduate College May Commencement Marshal	2014-present
UVM CAS Undergraduate Neuroscience Steering Committee	2016-present
UVM Biology Dept. Faculty Affairs Committee	2019-present
UVM Biology <i>Ad hoc</i> RPT Guideline Review Committee	2020-2021

External Program Reviewer and External Service

Promotion and Tenure External Evaluator (five)	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-present
Vermont NIH-INBRE (VBRN) Steering Committee Member	2020-present

Membership in Professional Societies

American Association for the Advancement of Science (current)
Vermont Chapter of the Society for Neuroscience (current)
Society for Developmental Biology (current)
Society for Neuroscience (past)
American Chemical Society (past)
American Society for Mass Spectrometry (past)
American Society for Biochemistry and Molecular Biology (past)
International Society for Blood Transfusion (past)
Human Proteome Organization (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*, *Review of Proteomics*, *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*, *Neuroscience*, *Nucleic Acids Research*, *Parasite Epidemiology and Control*, *Proteomics*, *Proteomics-Clinical Applications*, *Scientific Reports*.

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 INBRE faculty research awards study section

Mentoring/Training (†co-advised)

<u>Graduate Students</u>	<u>Year and Degree</u>	<u>Position(s) since leaving UVM</u>
Violet Roskens†	'10 Biology M.S.	Res. Assoc. MBL, U. CO-Boulder, ArcherDx, CO
Madhurima Saha	'11 Biology Ph.D.	Postdoc. Dartmouth/U. Florida; Sen. Sci., Lacerta, 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.	Instructor and Faculty Coord., 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.	Senior Scientist, Q2 solutions, Ithaca, NY
Judith Keller†	'18 Biology Ph.D.	Senior Scientist, Sanofi Genzyme, Framingham, MA
Riley St. Clair	'19 Neurosc. Ph.D.	Postdoc. University of British Columbia, B.C., Canada
Anna Schmoker	'20 Biology, Ph.D.	Research Scientist, Dana Farber Cancer Inst./Harvard
<u>Amanda Northrop†</u>	'20 Biology Ph.D.	<u>Lecturer, Norwich University, Northfield, VT</u>
Caroline Dumas†	'24 exp. Biology Ph.D.	(current student)
Steven Fortucci	'25 exp. Biology Ph.D.	(current student)

Shorter Term Graduate Rotation Students: Anish Ali Sarkar, Jesse Sheehe, Emily Joyce

<u>Undergraduates</u>	<u>Year and Degree</u>	<u>Position(s) since leaving UVM:</u>
Gwen Buel	'09 Honors Biochemistry	Ph.D. program, Harvard, MA; Postdoc. NCI/NIH, MD
Steffanie Kelshaw	'09 Biology	Clin. Asst, MA, NCC, CCTP, 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. program, Johns Hopkins, MD
Aidan Smith	'11 Biology Vassar College	Technician MIT, M.S. program, Yale, CT
Anh-Thu Lam	'12 Honors Biochemistry	Tech. Harvard Med; Ph.D. program Johns-Hopkins, 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 Medical Service Corps, TX
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
Jonathan 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	Research Scientist, Seattle Children's Research Inst. WA
Jessica Souza	'19 Honors Biological Sciences	LNA, C.Medical Center, Manchester, NH
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	
Brigitte Durieux	'20 Honors Biochemistry	Research Tech. Dana Farber Cancer Inst., Boston, MA
Fabiola Pagan-Torres	'21 Biology U. Puerto Rico-B	
Leishla Pérez Pearson	'21 English U. Puerto Rico-RP	
<u>Lindsey Gleason</u>	<u>'21 Biology William and Mary</u>	
Grace Skylstad	'21 Honors Biochemistry	(current student)
Noah Lind	'21 Honors Biochemistry	(current student)
Samantha Rovetto	'21 Neuroscience	(current student)
Samantha Cilli	'21 Neuroscience	(current student)

Zach Gottlieb	'21 Biological Sciences	(current student)
Lyucheng Zou	'21 Neuroscience and Biology	(current student)
Maeve Dillon-Martin	'22 Honors Biological Sciences	(current student)
Gillian Berglund	'23 Neuroscience	(current student)
Alyssa Saltz	'23 Neuroscience	(current student)
Phoebe Cousens	'23 Neuroscience	(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>Current Position</u>
Dr. Karen Hinkle	Visiting Scholar	Assoc. Professor/Assoc. V.P. for Res., Norwich University, VT
Jonathan Aiwazian	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,
Oswaldo 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)	Biology '22, 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
9/1/19—2/3/21	Tyra Martinez (M.S.)	Biology	Dept. Advisor
4/5/17—Present	Inessa Manuelyan (Ph.D.)	CMB	Member
5/30/18—Present	Kathryn Svec (Ph.D.)	CMB	Chair
6/22/18—Present	Robert Rabelo (Ph.D.) U. Puerto Rico	Biology	Member
6/1/18—Present	Caroline Dumas (Ph.D.)	Biology	Co-Advisor
5/7/19—Present	Bradley Cech (Ph.D.)	Chemistry	Chair
9/1/19—Present	Helaina Stergas (Ph.D.)	Biology	Member
2/4/20—Present	Katie Queen (Ph.D.)	CMB	Member
8/15/20—Present	Steven Fortucci (Ph.D.)	Biology	Advisor

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, Jonathan 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
- 2022 Honors Thesis Advisor, Biological Sciences Major, Maeve Dillon-Martin

Speaking Invitations, Guest Lectures and Research Workshops

- 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
- 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 (lecture given at UVM)
- 2017 Speaker, Department of Biology, University of Vermont, Burlington, VT
- 2017 Guest Lecturer, Cell Biology, Biology 306, Norwich University, Northfield, Vermont
- 2017 Guest Lecturer, 1st-Year Neuroscience Seminar, NSCI 096, University of Vermont
- 2017 Speaker and Proteomics Workshop Director, Department of Biology, University of Puerto Rico-RP
- 2017 Guest Lecturer, Clinical Chemistry, Medical Laboratory Science 221, University of Vermont
- 2017 Speaker, Department of Biochemistry, University of Vermont, Burlington, VT
- 2016 Vermont Genetics Network Retreat, Featured Professional Development Speaker, Burlington, VT
- 2016 Ana G. Mendez University System, Pre-College Saturday Academy (two talks), San Juan, Puerto Rico
- 2016 Speaker and Proteomics Workshop Director, Department of Biology, University of Puerto Rico-RP
- 2015 Speaker, Congress of the International Society for Blood Transfusion, London, England, UK.
- 2015 Guest Lecturer- Saint Michael's College, Colchester, VT.
- 2015 Speaker, College of Arts and Sciences Dean's Lecture Award, University of Vermont
- 2015 Speaker, Berg Health, Framingham, MA
- 2015 Guest Lecturer, Clinical Chemistry, Medical Laboratory Science 221, University of Vermont.
- 2014 Speaker, Department of Biology, University of Vermont.
- 2014 Speaker, Department of Genetics, Dartmouth Medical School, West Lebanon, NH.
- 2014 Guest Lecturer- Saint Michael's College, Colchester, VT.
- 2014 Guest Lecturer, Clinical Chemistry, Medical Laboratory Science 221, University of Vermont.
- 2014 Guest Lecturer-Proteomics Outreach Instructor, Norwich University Biochemistry Course.
- 2013 Guest Lecturer- Proteomics Outreach Instructor, Green Mountain College Biology Course.
- 2013 Guest Lecturer- Saint Michael's College, Colchester, VT.
- 2013 Guest Lecturer-Proteomics Outreach Instructor, Norwich University Biology Course.
- 2013 Guest Lecturer-Proteomics Outreach Instructor, Marlboro College Biochemistry Course.
- 2013 Guest Lecturer-Proteomics Outreach Instructor, Castleton State College Biochemistry Course.
- 2013 Guest Lecturer-Proteomics Outreach Instructor, Middlebury Chemistry Course.
- 2013 Speaker, Cell Signaling Technology, Danvers, MA.
- 2013 Guest Lecturer, Cells and Physiology, Biology 1212, Lyndon State College, Lyndonville, VT.
- 2013 Guest Lecturer, Ecology, Biology 4040, Lyndon State College, Lyndonville, VT.
- 2103 Speaker, Department of Mol. Pharm., Albert Einstein Medical College, Yeshiva University, Bronx, NY.
- 2013 Guest Lecturer, Clinical Chemistry, Medical Laboratory Science 221, University of Vermont.
- 2013 Guest Lecturer-Proteomics Outreach Instructor, Plant Biology Course, University of Vermont.
- 2013 NEAGAP Outreach Representative, University of Puerto Rico Mayagüez, Mayagüez, Puerto Rico.

2012 Chemical Engineering at the Life Science Interface (ChELSI institute), University of Sheffield, UK.

2012 Guest Lecturer, Cell Biology 301, University of Vermont.

2012 Speaker, Phosphoinositide Biology, Signaling and Cancer, Institute for Research in Immunology and Cancer, University of Montréal, Montréal, Québec, Canada.

2012 Speaker, Department of Microbiology and Molecular Genetics, University of Vermont.

2012 Guest Lecturer-Proteomics Outreach Instructor (1 lecture, 1 laboratory instruction), Advanced Genetics Lab, Biology 206, University of Vermont.

2012 Guest Lecturer-Proteomics Outreach Instructor (1 lecture, 6 laboratory instructions), Proteomics, Biochemistry Lab, Saint Michael's College, Colchester, VT.

2012 Guest Lecturer-Proteomics Outreach Instructor (2 lectures, 3 laboratory instructions), Proteomics, Biochemistry Lab, Norwich University, Northfield, VT.

2012 Guest Lecturer, Clinical Chemistry, Medical Laboratory Science 221, University of Vermont.

2011 Guest Lecturer, Cell Biology 301, University of Vermont

2011 Speaker, Keynote address, Tri Beta Upsilon Tau Chapter Induction Ceremony, University of Vermont.

2011 Speaker, Vermont Genetics Network, Undergraduate Student Career Day, Burlington, VT.

2011 Guest Lecturer-Proteomics Outreach Instructor (1 lecture, 1 laboratory instruction), Advanced Genetics Lab, Biology 205, University of Vermont.

2011 Guest Lecturer-Proteomics Outreach Instructor (1 lecture, 2 laboratory instructions), Proteomics, Biochemistry Lab, Saint Michael's College, Colchester, VT.

2011 Guest Lecturer, Clinical Chemistry, Medical Laboratory Science 221, University of Vermont.

2010 Speaker, Keynote address, NSF Pre-college symposium, San Juan, Puerto Rico.

2010 Speaker, Vermont Genetics Network Retreat, Burlington, VT.

2010 Speaker, Department of Neuroscience and Physiology, Upstate Medical College, Syracuse, NY.

2010 Speaker, Dahlem Colloquia in Molecular Genetics, Max Planck Institute for Molecular Genetics, Berlin, Germany.

2010 Guest Lecturer-Proteomics Outreach Instructor (2 lectures, 4 laboratory instructions), Proteomics, Biology Lab, Green Mountain College, Poultney, VT.

2010 Guest Lecturer-Proteomics Outreach Instructor (2 lectures, 4 laboratory instructions), Proteomics, Biology Lab, Norwich University, Northfield, VT.

2010 Guest Lecturer, Clinical Chemistry, Medical Laboratory Science 221, University of Vermont.

2010 Guest Lecturer-Proteomics Outreach Instructor (2 lectures, 4 laboratory instructions), Proteomics, Biology Lab, Johnson State College, Johnson, VT.

2010 Guest Lecturer-Proteomics Outreach Instructor (2 lectures, 1 laboratory instruction), Advanced Genetics Lab, Biology 205, University of Vermont.

2010 Guest Lecturer, Cell Biology 301, University of Vermont

2009 Guest Lecturer-Proteomics Outreach Instructor (2 lectures, 4 laboratory instructions), Chemistry 325, Saint Michael's College, Colchester, VT.

2009 Speaker, Eastern Analytical Symposium, Somerset, NJ.

2009 Speaker, VGN Proteomics Facility Open House, University of Vermont

2009 Speaker, NE Regional IDEA meeting, Proteomics Workshop, Whitefield, NH.

2009 Speaker, NE Regional IDEA meeting, Whitefield, NH.

2009 Guest Lecturer, Clinical Chemistry, Medical Laboratory Science 221, University of Vermont

2009 Guest Lecturer-Proteomics Outreach Instructor (2 lectures, 6 laboratory instructions), Advanced Genetics Lab, Biology 205, University of Vermont.

2009 Speaker, Department of Biochemistry, University of Vermont.

2009 Speaker, Department of Pharmacology, University of Vermont.

2008 Speaker, Department of Pathology and Molecular Medicine, Queens University, Kingston, Canada.

2008 Guest Lecturer, Biology 371A Scientific Integrity, Department of Biology, University of Vermont.

2008 Speaker, VGN Proteomics Facility Open House, University of Vermont.

2008 Speaker, Department of Biology and VGN Proteomics, University of Vermont.

2007 Speaker, Institute for Research in Immunology and Cancer, Université de Montréal, Montréal, Canada.

2007 Speaker, Developmental and Molecular Pathways Division, Novartis, Cambridge, MA

- 2007 Speaker, Vermont Chapter of the Society for Neuroscience, University of Vermont.
- 2006 Speaker, Department of Molecular Biology, Princeton University, Princeton, NJ.
- 2006 Speaker, Department of Biochemistry, University of Wisconsin-Madison, Madison, WI.
- 2006 Speaker, Department of Biochemistry and Molec. Biology, University of Mass.-Amherst, Amherst, MA.
- 2006 Speaker, Department of Biology, University of Vermont
- 2005 Speaker, Department of Physiology, Tufts University School of Medicine, Boston, MA.
- 2005 Speaker, Department of Pharmacol. and Therapeutics, McGill University Med. School, Montreal, Canada.
- 2005 Speaker, Neurovascular Seminar Series, Massachusetts General Hospital, Boston, MA.
- 2004 Speaker, Norris Cotton Cancer Center, Dartmouth Medical School, Lebanon, NH.
- 2002 Workshop Attendance, "Introduction to Systems Biology," Institute for Systems Biology, Seattle, WA.
- 2002 Speaker, Tyrosine Phosphorylation and Cell Signaling, The Salk Inst. for Biological Studies, La Jolla, CA.
- 2000 Speaker, Apoptosis 2000, European Conference of Cell Death, Gibilmanna, Italy

Poster Presentations (Includes talks by trainees or major collaborator as indicated; underlined is presenter)

- 2021 American Society of Virology Meeting. A global map of the Zika virus phosphoproteome reveals host-driven regulation of viral budding. Inessa Manuelyan, Anna Schmoker, Boyd Yount, Philip Eisenhauer, Clarissa Gold, Dante Terino, Shannon Beaty, Jeff Alexander, Heather Driscoll, Edward Hutchinson, Douglas Widman, Mark T. Heise, Ralph Baric, **Bryan Ballif**, Jason W. Botten. (*National, Selected*).
- 2021 Neuroscience Behavior and Health Forum, NE Society for Neuroscience, University of Vermont. Characterization of Sema6A reverse signaling in zebrafish eye development. Caroline Dumas (Talk by Ebert and **Ballif** trainee). (*Local, Contributed*)
- 2021 Neuroscience Behavior and Health Forum, NE Society for Neuroscience, University of Vermont. Crk adaptor proteins are necessary for the development of the zebrafish retina. Helaina Stergas (Talk by Ebert and **Ballif** trainee). (*Local, Contributed*)
- 2020 UVM Student Research Conference, Burlington, VT. Biochemical Validation of CRK & CRKL Binding Proteins in the Context of Neurodevelopment and Cell Migration Pathways. Brigitte Durieux (Talk by Ebert and **Ballif** trainee). (*Local, Contributed*)
- 2020 Neuroscience Behavior and Health Forum, NE Society for Neuroscience, University of Vermont. Crk adaptor proteins are necessary for the development of the zebrafish retina. Helaina R. Stergas, Zoë Kalbag, Riley M. St. Clair, Jared Talbot, **Bryan A. Ballif**, and Alicia M. Ebert. (*Local, Contributed*)
- 2020 Neuroscience Behavior and Health Forum, NE Society for Neuroscience, University of Vermont. Mechanisms of Glial Infiltration. Grace Ross, Anna Schmoker, **Bryan Ballif**, and Jaeda Coutinho-Budd. (*Local, Contributed*)
- 2020 American Society for Virology Conferece (Fort Collins, CO). Granulin is an essential host factor required for Zika virus and lymphocytic choriomeningitis mammarenavirus growth. Inessa Manuelyan, Phillip Eisenhauer, Anna Schmoker, Dante Terino, Christopher Ziegler, Shannon Beaty, Jeff Alexander, Emily Bruce, Douglas Widman, Mark Heise, Ralph Baric, **Bryan Ballif**, Jason Botten. (*National, Selected*).
- 2020 American Society for Virology Conferece (Fort Collins, CO). Rab proteins play key roles in the mammarenavirus (LCMV) life cycle. Emily A. Bruce, Benjamin R. King, David J. Shirley, Christopher M. Ziegler, Madaline M. Schmidt, Anna M. Schmoker, Philip L. Eisenhauer, **Bryan A. Ballif**, Jason W. Botten. (*National, Selected*).
- 2020 American Society for Virology Conferece (Fort Collins, CO). NEDD4 family ubiquitin ligases associate with LCMV Z's PPXY domain and are required for virus budding, but not via direct ubiquitination of Z. Jason Botten, Christopher M. Ziegler, Loan Dang1, 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, and **Bryan A. Ballif**. (*National, Selected*).
- 2019 9th International Conference on cGMP: Generators, Effectors and Therapeutic Implications (Mainz, Germany). Oxidation of cysteine 117 stimulates constitutive activation of the type I α cGMP-dependent protein kinase. Jessica L. Sheehe, Adrian D. Bonev, Anna M. Schmoker, **Bryan A. Ballif**, Mark T. Nelson, Thomas M. Moon, Wolfgang R. Dostmann. (*International, Selected*).

- 2019 Northeast Regional IDeA Conference (Bretton Woods, NH). Mechanisms of Semaphorin6A/PlexinA2 signaling in zebrafish nervous system development. Emerson SE, St Clair RM, Waldron AL, Dumas CM, Williams KS, Goldstein MT, Stant EA, D'Elia KP, Weir ME, Schmoker AM, **Ballif, BA**, Ebert AM (*Regional, Selected*).
- 2019 Northeast Regional IDeA Conference (Bretton Woods, NH). An *in silico* proteomics screen to predict and prioritize protein-protein interactions dependent on post-translationally modified motifs. Anna M. Schmoker, Heather E. Driscoll, Stefanie R. Geiger, James J. Vincent, Alicia M. Ebert and **Bryan A. Ballif**. (*Regional, Selected*).
- 2019 College of the Holy Cross Undergraduate Research Forum. Characterizing Novel Protein-Protein Interactions Regulating Brain Development. Charlotte A. Kearns, Warren T. Yacawych, Brendan W. Chandler, Amila Šemić, Anna M. Schmoker, Alicia M. Ebert and **Bryan A. Ballif**. (*Local, Contributed*).
- 2019 Summer Neuroscience Undergraduate Research Fellowship (SNURF) Symposium (UVM, Burlington, VT). Abl regulates SH family adaptor Protein Levels and their Interaction with CrkL. Amila Šemić, Charlotte A. Kearns, Anna M. Schmoker, Brendan W. Chandler, Warren T. Yacawych, Alicia M. Ebert and **Bryan A. Ballif**. (*Local, Contributed*).
- 2019 Summer Neuroscience Undergraduate Research Fellowship (SNURF) Symposium (UVM, Burlington, VT). CRMP2 and CRMP3 *In Situ* Expression and Phenotypic Description. Simon O. Bupp-Chickering, Riley M. St. Clair, Morgan E. McNellis, **Bryan A. Ballif**, Alicia M. Ebert. (*Local, Contributed*).
- 2019 Summer Neuroscience Undergraduate Research Fellowship (SNURF) Symposium (UVM, Burlington, VT). Characterizing the role of DCBLD1 in zebrafish retinal development. Sarah B. Hutcheon, Anna M. Schmoker, Helaina Stergas, **Bryan A. Ballif**, Alicia M. Ebert. (*Local, Contributed*).
- 2019 International Conference on Hantavirus (Leuven, Belgium). Host factors that regulate virus infectivity. Klaus, Joseph; Eisenhauer, Philip; Russo, Joanne; Mason, Anne; Do, Danh; King, Benjamin; Taatjes, Douglas; Cornillez-Ty, Cromwell; Boyson, Jonathan; Lao, Lujian; Yates III, John; Zhang, Bin; **Ballif, Bryan**; Botten, Jason. (*International, Selected*).
- 2019 UVM Student Research Conference (University of Vermont, Burlington VT). Characterization of Sema6A forward and reverse signaling in Zebrafish eye development. Caroline Dumas, Riley St. Clair, **Bryan Ballif*** and Alicia Ebert*. *Equal Contribution. (*Local, Contributed*).
- 2019 Northeast Society for Developmental Biology Meeting (Woods Hole, MA). Characterization of Sema6A forward and reverse signaling in Zebrafish eye development. Caroline Dumas, Riley St. Clair, **Bryan Ballif*** and Alicia Ebert*. *Equal Contribution. (*Local, Contributed*).
- 2019 Northeast Society for Developmental Biology Meeting (Woods Hole, MA). Essential retinal, optic tract, and vascular developmental regulator DCBLD2 interacts with Ras-signaling member GRB2 in a phosphorylation-dependent manner. Jacob Markwood, Ryan Joy, Ashley Waldron, Anna Schmoker, Helaina Stergas, Kyle Kellett, Kathryn Albretsen, Karen Hinkle, **Bryan Ballif*** and Alicia Ebert*. *Equal Contribution. (*Regional, Contributed*).
- 2019 Northeast Society for Developmental Biology Meeting (Woods Hole, MA). Abl Induces the binding of SH2 Domain-containing family members to the CrkL-SH2 domain via phosphorylation of YxxP motifs. Warren Yacawych, Brendan Chandler, Anna Schmoker, Jaye Weinhart, Charlotte Kearns, Karen Hinkle, Alicia Ebert and **Bryan Ballif**. (*Regional, Contributed*).
- 2019 UVM NBH Forum. Burlington, VT. Investigating Sema6A-PlxnA Signaling Mechanisms in Development: Identification of Key PlxnA Phosphorylation Sites and the Discovery of a Novel Secreted Sema. Riley M. St. Clair, Sarah E. Emerson, Kristen P. D'Elia, Marion E. Weir, Anna M. Schmoker, Kori S. Williams, Matthew T. Goldstein, Elizabeth Stant, Alicia M. Ebert, and **Bryan A. Ballif** (*Local, Contributed*).
- 2019 UVM NBH Forum. Burlington, VT. Characterization of Sema6A forward and reverse signaling in Zebrafish eye development Caroline Dumas, Riley St. Clair, **Bryan Ballif** and Alicia Ebert. (*Local, Contributed*).
- 2019 UVM NBH Forum. Burlington, VT. Abl-dependent phosphorylation of SH family adaptors promotes their interaction with the CrkL-SH2 domain. Brendan W. Chandler, Anna M. Schmoker, Jaye L. Weinhart, Charlotte A. Kearns, Warren T. Yacawych, Alicia M. Ebert, **Bryan A. Ballif**. (*Local, Contributed*).

- 2018 Summer Neuroscience Undergraduate Research Fellowship (SNURF) Symposium (UVM, Burlington, VT). Abl Induces the binding of SH2 Domain-containing family members to the CrkL-SH2 domain via phosphorylation of YxxP motifs. Warren Yacawych, Brendan Chandler, Anna Schmoker, Jaye Weinhart, Charlotte Kearns, Karen Hinkle, Alicia Ebert and **Bryan Ballif**. (*Local, Contributed*)
- 2018 Summer Neuroscience Undergraduate Research Fellowship (SNURF) Symposium (UVM, Burlington, VT). SH family adaptors bind to the CrkL-SH2 domain after tyrosine phosphorylation by Abl. Charlotte Kearns, Brendan Chandler, Warren Yacawych, Anna Schmoker, Alicia Ebert and **Bryan Ballif**. (*Local, Contributed*).
- 2018 Society for Vector Ecology Meeting. Yosemite, CA. Omics approaches to interrupting Chagas transmission in Central America. Lori Stevens, Patricia Dorn, Carlota Monroy, Silvia Justi, Judith Keller, Raquel Lima-Cordon, and **Bryan Ballif**. (*International, Selected*)
- 2018 Society for Vector Ecology Meeting. Yosemite, CA. Identification and quantification of Chagas disease vector blood meal sources using protein mass spectrometry. Judith Keller, Raquel Lima-Cordon, **Bryan Ballif**, Carlota Monroy and Lori Stevens. (*International, Selected*)
- 2018 Federation of the European Biochemical Society Meeting. Prague, Czech Republic. Riley St. Clair (Talk by Ballif trainee), The PlexinA downstream effector phosphoprotein Crmp2 is essential for zebrafish eye development (*International, Selected*)
- 2018 Northeast Society for Developmental Biology Meeting (Woods Hole, MA). ‘CRK’-ing the Code: The Role of CRK Adaptor Proteins in Zebrafish Eye Development. Helaina R. Stergas, Riley M. St. Clair, **Bryan A. Ballif**, and Alicia M. Ebert. (*Regional, Contributed*)
- 2018 Northeast Society for Developmental Biology Meeting (Woods Hole, MA). Ryan M. Joy*, Ashley L. Waldron*, Anna M. Schmoker*, Helaina R. Stergas, Michelle L. Lunde, Kyle J. Kellett, Karen L. Hinkle, **Bryan A. Ballif**, and Alicia M. Ebert. Dcbl2 and its Tyrosine Phosphorylation are Essential for the Development of the Zebrafish Retina, Optic Tract and Vasculature. *Equal Contribution. (*Regional, Contributed*)
- 2018 Northeast Society for Developmental Biology Meeting (Woods Hole, MA). Riley M. St. Clair, Sarah E. Emerson, Kristen D’Elia, Marion E. Weir, Anna M. Schmoker, Alicia M. Ebert, **Bryan A. Ballif**. Biochemical and Functional Characterization of PlexinA Phosphorylation Events in Zebrafish Eye Development. (*Regional, Contributed*)
- 2018 Northeast Society for Developmental Biology Meeting (Woods Hole, MA). Riley M. St. Clair*, Caroline M. Dumas, Abagael M. Lasseigne, Leah J. Damon, Sarah Emerson, Garrett M. Cammarata, Laura Anne Lowery, **Bryan A. Ballif**, and Alicia M. Ebert. Characterization of Sema6A and its downstream effectors in Zebrafish eye development. (*Regional, Contributed*)
- 2018 Northeast Society for Developmental Biology Meeting (Woods Hole, MA). The microtubule plus-end-tracking protein TACC3 promotes persistent axon outgrowth and mediates axon guidance signals during development. Burcu Erdogan, Garrett Cammarata, Eric Lee, Ben Pratt, Andrew Francel, Erin Rutherford, Riley St. Clair, **Bryan A. Ballif**, and Laura Anne Lowery. (*Regional, Contributed*)
- 2018 Experimental Biology (San Diego, CA). Riley St. Clair, Sarah Emerson, Kristen D’Elia, Marion Weir, Anna Schmoker, Kori Williams, Matthew Goldstein, Elizabeth Stant, Alicia Ebert, and **Bryan Ballif**. Investigating Sema6A-PlxnA Signaling Mechanisms in Development: Identification of Key PlxnA Phosphorylation Sites and the Discovery of a Novel Soluble Sema. (*International, Selected*)
- 2018 Experimental Biology (San Diego, CA). Anna Schmoker, Jaye Weinert, Kyle Kellett, Hannah Johnson, Ryan Joy, Marion Weir, Alicia Ebert, **Bryan Ballif**. Dynamic multi-site phosphorylation by Fyn and Abl drives the interaction between CRKL and the novel scaffolding receptors DCBLD1 and DCBLD2. (*International, Selected*)
- 2018 UVM Student Research Conference. Judith I. Keller, Justin O. Schmidt, Anna M. Schmoker, **Bryan A. Ballif**, and Lori Stevens. (*Local, contributed*). Temporal variation of blood meal detection ability comparing protein mass spectrometry and DNA PCR in Chagas disease insect vectors. (*Local, contributed*)
- 2018 UVM Student Research Conference. Amanda Northrop, **Bryan A. Ballif**, Aaron Ellison, and Nicholas Gotelli. Driver-dependent hysteresis in an enriched aquatic ecosystem. (*Local, contributed*)
- 2018 Negative Strand Virus Meeting, Verona, Italy. Christopher M. Ziegler, Benjamin R. King, Emily A. Bruce, Philip L. Eisenhauer, Marion E. Weir, David J. Shirley, Joseph P. Klaus, Dimitry N. Kremontsov, Aubin

- Samacoits, Christophe Zimmer, Daniel Zenklusen, Florian Mueller, **Bryan A. Ballif**, Jason Botten. Key LCMV-host interactions required for defective interfering particle production and the highly dynamic state of viral replication and transcription during persistence. (*International, selected*)
- 2018 Ecological Society of America. New Orleans, LA. Amanda Northrop, Nicholas Gotelli, **Bryan Ballif**, and Aaron Ellison. Hysteresis in a teapot: organic enrichment and eutrophic collapse of the pitcher-plant foodweb. (*International, selected*)
- 2018 UVM NBH Forum. Burlington, VT. Helaina Stergas, Riley St. Clair, **Bryan Ballif**, and Alicia Ebert. Characterization of Crk and Crkl in zebrafish eye development. (*Local, contributed*)
- 2018 2018 UVM NBH Forum. Burlington, VT. Riley M. St. Clair, Sarah E. Emerson, Marion E. Weir, Anna M. Schmoker, Alicia M. Ebert, **Bryan A. Ballif**. Biochemical and Functional Characterization of PlexinA Phosphorylation Events in Zebrafish Eye Development. (*Local, contributed*)
- 2018 UVM NBH Forum. Burlington, VT. Brendan W. Chandler, Ashley L. Waldron, Jaye L. Weinert, James J. Vincent, Alicia M. Ebert and **Bryan A. Ballif**. The Adaptor Protein SHD Reversibly Binds to the CrkL-SH2 Domain and is Required for Proper Eye Formation in the Zebrafish. (*Local, contributed*)
- 2017 ABRCMS 2017 Research Symposium. Phoenix, AZ. Leishla M. Pérez, Anna M. Schmoker, and **Bryan A. Ballif**. Identification of phosphophorylation sites on TREM-Like-Transcript-1. (*National, Peer-reviewed*)
- 2017 SACNAS 2017 Research Symposium. SLC, UT. Leishla M. Pérez, Anna M. Schmoker, and **Bryan A. Ballif**. Identification of phosphophorylation sites on TREM-Like-Transcript-1. (*National, Peer-reviewed*)
- 2017 AGMUS 2017 Research Symposium. San Juan, Puerto Rico. Claudia Cruz, Camille Collazo, Leishla M. Pérez, Anna M. Schmoker, and **Bryan A. Ballif**. Analysis of phosphorylation and signaling mechanisms of DCBLD2 in adult zebrafish. (*National, Contributed*)
- 2017 Ana G. Mendez University System AGMUS 2017 Research Symposium. Leishla M. Pérez, Anna M. Schmoker, and **Bryan A. Ballif**. Identification of phosphophorylation sites on TREM-Like-Transcript-1. (*National, Contributed*)
- 2017 XIX International Botanical Congress (Shenzhen, China). Amanda C. Northrop. *Sarracenia Purpurea* Microecosystem as a Model System for Understanding and Predicting Aquatic Ecosystem Dynamics and Tipping Points. (*International, selected speaker, peer-reviewed*)
- 2017 Summer Neuroscience Undergraduate Research Fellowship (SNURF) Symposium (UVM, Burlington, VT). Caroline Dumas, Lizzy Stant, Riley M. St. Clair, Alicia M. Ebert, and **Bryan A. Ballif**. Studies toward Deciphering the Role of Sema6a Signaling in Zebrafish Eye Development. (*Local, Contributed*)
- 2017 Summer Neuroscience Undergraduate Research Fellowship (SNURF) Symposium (UVM, Burlington, VT). Lizzy Stant, Caroline Dumas, Riley M. St. Clair, **Bryan A. Ballif**, Alicia M. Ebert. Investigation of Sema6a Reverse Signaling and the Role of Secreted Sema6a. (*Local, Contributed*)
- 2017 Summer Neuroscience Undergraduate Research Fellowship (SNURF) Symposium (UVM, Burlington, VT). Leishla M. Pérez, Anna M. Schmoker, and **Bryan A. Ballif**. Identification of phosphophorylation sites on TREM-Like-Transcript-1. (*Local, Contributed*)
- 2017 Summer Neuroscience Undergraduate Research Fellowship (SNURF) Symposium (UVM, Burlington, VT). Claudia Cruz, Camille Collazo, Leishla M. Pérez, Anna M. Schmoker, and **Bryan A. Ballif**. Analysis of phosphorylation and signaling mechanisms of DCBLD2 in adult zebrafish. (*Local, Contributed*)
- 2017 Northeast Society for Developmental Biology Meeting (Woods Hole, MA). 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**. Dynamic multi-site phosphorylation by Fyn and Abl drives the interaction between CrkL and the novel scaffolding receptors DcblD1 and DcblD2. (*Regional, Contributed*)
- 2017 Northeast Society for Developmental Biology Meeting (Woods Hole, MA). Brendan W. Chandler, Ashley L. Waldron, Helaina Stergas, Riley M. St. Clair, Jaye L. Weinert, James J. Vincent, Alicia M. Ebert and **Bryan A. Ballif**. The adaptor protein Src Homology 2 Domain Containing Protein D (SHD) reversibly binds CrkL and is expressed in the developing zebrafish central nervous system. (*Regional, Contributed*)
- 2017 Northeast Society for Developmental Biology Meeting (Woods Hole, MA). The microtubule plus-end-tracking protein TACC3 promotes persistent axon outgrowth and mediates axon guidance signals during development. Burcu Erdogan, Garrett Cammarata, Eric Lee, Ben Pratt, Andrew Francel, Erin Rutherford, Riley St. Clair, **Bryan A. Ballif**, and Laura Anne Lowery. (*Regional, Contributed*)

- 2017 Northeast Society for Developmental Biology Meeting (Woods Hole, MA). Sarah Emerson, Sarah Light, **Bryan A. Ballif**, Alicia Ebert. Investigating the roles of Plexin A1 and Plexin A2 receptors during early eye development in zebrafish. (*Regional, Contributed*)
- 2017 Northeast Society for Developmental Biology Meeting (Woods Hole, MA). Ryan M. Joy, Ashley L. Waldron, Helaina R. Stergas, Kyle J. Kellett, **Bryan A. Ballif**, and Alicia M. Ebert. Dcbl2 is Essential for the Development of the Zebrafish Retina and Optic Tract. (*Regional, Contributed*)
- 2017 Northeast Society for Developmental Biology Meeting (Woods Hole, MA). Riley St. Clair, Sarah Emerson, Marion Weir, Anna Schmoker, Alicia Ebert, and **Bryan A. Ballif**. The Biochemistry of PlexinA Signaling in Zebrafish Eye Development. (*Regional, Contributed*)
- 2017 UVM Student Research Conference. Kyle Kellett, Heather E. Driscoll, and **Bryan A. Ballif**. An identification and comparison of Crk/CrkL binding partners at the rostral and caudal ends of *Danio rerio* (*Local, Contributed*)
- 2017 UVM Student Research Conference. Marjorie DesLauriers, Riley M. St. Clair, Alicia M. Ebert and **Bryan A. Ballif**. Investigation of Semaphorin6A Induced Phosphorylation of PlexinA2 and Neuropilin 1. (*Local, Contributed*)
- 2017 UVM Student Research Conference. Emi Eakin, Judith Keller, **Bryan A. Ballif** and Lori Stevens. Chagas Disease Transmission: Protein Identification and Analysis of Triatominae Blood Meal Digestion Over Time. (*Local, Contributed*)
- 2017 UVM Student Research Conference. Judith I. Keller, M. Carlotta Monroy, James J. Vincent, Carlotta, Riley M. St. Clair, **Bryan A. Ballif** and Lori Stevens. From Bug to Blood to Protein: Identifying blood sources in a Chagas Disease vector feeding experiment with protein mass spectrometry. (*Local, Contributed*)
- 2017 UVM Student Research Conference. Matt Goldstein, Kori S. Williams, Riley M. St. Clair, Bryan A. Ballif, and Alicia M. Ebert. Investigation of a Novel Secreted Semaphorin (*Local, Contributed*)
- 2017 UVM Student Research Conference. Samuel Barritt, Marion Weir, **Bryan A. Ballif** and Paula Deming Fyn regulates cyclic-AMP dependent protein kinase A binding interactions. (*Local Contributed*)
- 2017 UVM NBH Forum, Burlington, VT. Riley M. St. Clair, Sarah E. Emerson, Marion E. Weir, Anna M. Schmoker, Alicia M. Ebert, and **Bryan A. Ballif**. The Biochemistry of PlxnA Signaling in Zebrafish Eye Development. (*Local Contributed*)
- 2017 UVM NBH Forum, Burlington, VT. Anna M. Schmoker, Jaye L. Weinert †, Ryan M. Joy, Kyle J. Kellett, Marion E. Weir, Alicia M. Ebert and **Bryan A. Ballif**. Biochemical characterization of the phospho-dependent interaction of Dcbl1 and 2 with the adaptor protein CrkL: Implications for a novel signaling pathway governing the development of the neural retina. (*Local Contributed*)
- 2017 UVM NBH Forum, Burlington, VT. Brendan W. Chandler, Ashley L. Waldron, Jaye L. Weinert, James J. Vincent, Alicia M. Ebert and **Bryan A. Ballif**. The adaptor protein Src Homology 2 Domain Containing Protein D (SHD) reversibly binds CrkL and is expressed in the developing zebrafish central nervous system. (*Local Contributed*)
- 2016 Beckman Symposium 2016 (Irvine, CA). Samuel Barritt, Marion Weir, **Bryan A. Ballif** and Paula Deming Fyn regulates cyclic-AMP dependent protein kinase A binding interactions. (*National/Peer Reviewed/Selected*)
- 2016 Society for Developmental Biology Meeting (Boston, MA). Riley St. Clair, Marion Weir, **Bryan A. Ballif**, and Alicia Ebert. Biochemical and Functional Characterization of PlexinA2 Tyrosine Phosphorylation in Semaphorin6A Signaling. (*International, peer-reviewed*)
- 2016 Society for Developmental Biology Meeting (Boston, MA). Sarah Emerson, Sarah Light, Riley St. Clair, **Bryan A. Ballif**, Alicia Ebert. The Role of the Plexin A family in zebrafish eye development. (*International, peer-reviewed*)
- 2016 FASEB Meeting, Protein Kinase Signaling Network Regulation (Snowmass Village, CO). Sam Barritt, Marion E. Weir, **Bryan A. Ballif**, and Paula B. Deming. (Snowmass Village, CO) Fyn regulates cyclic-AMP dependent protein kinase A binding interactions. (*International, Peer Reviewed/Invited/Selected for poster and talk*)
- 2016 National IDeA Symposium of Biomedical Research Excellence (Washington D.C.). Carla Salgado, Yadira Cantres, **Bryan A. Ballif**, and Loyda Meléndez. The Translational Proteomics Center at the Universities of

- Puerto Rico and Vermont collaborate to provide new tools toward discoveries in Puerto Rico. (*National, contributed*)
- 2016 National IDeA Symposium of Biomedical Research Excellence (Washington D.C.). 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 autophosphorylation sites of Src Family Kinases regulate kinase activity and SH2 domain binding capacity. (*National, contributed*)
- 2016 National IDeA Symposium of Biomedical Research Excellence (Washington D.C.). Heather Driscoll, **Bryan A. Ballif**, Nate Herzog, Jim J. Vincent. The Vermont Genetics Network Bioinformatics Core. (*National, contributed*)
- 2016 UVM Student Research Conference. Judith Keller, Lori Stevens and **Bryan A. Ballif**. Chagas Disease Vector Blood Meal Sources Identified by Protein Mass Spectrometry. (*Local, contributed*)
- 2016 UVM Student Research Conference. Samuel Barritt, Marion Weir, **Bryan A. Ballif** and Paula Deming, Fyn-Mediated Regulation of Protein Kinase A. (*Local, contributed*)
- 2016 UVM Student Research Conference. Riley St. Clair, Alicia Ebert and **Bryan A. Ballif**. Characterizing the Interaction between PlexinA2 and the Tyrosine Kinase Fyn (Talk by graduate student trainee of Ballif). (*Local, selected*)
- 2016 Northeast Society for Developmental Biology (Woods Hole, MA). Riley St. Clair, Alicia Ebert and **Bryan A. Ballif**. Characterizing the Interaction between PlexinA2 and the Tyrosine Kinase Fyn (Talk by graduate student trainee of Ballif). (*Regional/National, peer-reviewed*)
- 2016 Experimental Biology 2016 (San Diego, CA). Abby Haswell, **Bryan A. Ballif** and Karen L. Hinkle. The SH2 domain of the Src Family Kinase FYN binds to Partitioning Defective Protein 3 (PAR3). (*International, peer-reviewed*)
- 2016 UVM NBH Forum. Riley St. Clair, Alicia M. Ebert and **Bryan A. Ballif**. Putting the [P] in [P]lexin: characterizing the phosphorylation of PlexinA2 by the tyrosine kinase Fyn. (Talk by graduate student trainee of Ballif). (*Local, selected*)
- 2016 UVM NBH Forum. Emerson, S.E., Light, S.E., St. Clair, R.M., **Ballif, B.A.**, and Ebert, A.M. The Role of the Plexin A Family in Eye Development. (*Local, contributed*)
- 2015 Beckman Scholar Symposium (Irvine, CA). Liam P. Kelley, Lionel Arnaud, Virginie Helias, Jean-Pierre Cartron, and **Bryan A. Ballif**. Molecular Characterization of Biochemical and Immunogenic Roles of SMIM1. (*National, contributed*)
- 2015 Ecological Society of America (Baltimore, MD). Amanda C. Northrop, Rachel K. Brooks, Aaron M. Ellison, **Bryan A. Ballif**, Nicholas J. Gotelli, Metaproteomic survey reveals differences in composition and function between microbial communities in detritus-enriched and unmanipulated ecosystems.
- 2015 Society for Developmental Biology (Snowbird, UT), Biochemical and Functional Characterization of the Semaphorin6A-PlexinA2 Signaling Pathway in Zebrafish Eye Development. Riley St. Clair, Marion Weir, Alicia Ebert, **Bryan Ballif**. (*International, peer-reviewed*)
- 2015 Society for Developmental Biology (Snowbird, UT), ESDN/DCBLD2 serves as a scaffold for the signaling adaptor CrkL and is essential for proper development of the zebrafish eye. **Bryan A. Ballif**, Ryan M. Joy, Tyler M. Aten, Miranda M. Redmond, Erin E. Wyszolmerski, Alicia M. Ebert. (*International, peer-reviewed*)
- 2015 International Society for Blood Transfusion (London, UK), Molecular and Biochemical Characterization of the SMIM1 Protein Defining the New VEL Blood Group System. Liam P. Kelley (talk by undergraduate student of B.A. Ballif). (*International, peer-reviewed*)
- 2015 Dartmouth Neuroscience Day (Hanover, NH), Biochemical and Developmental Approaches toward Elucidating PlexinA2 Signaling. Riley St. Clair (talk by graduate student of **B.A. Ballif**). (*Regional, peer-reviewed*)
- 2015 Dartmouth Neuroscience Day (Hanover, NH), Novel Tyrosine Phosphorylation Sites Fine Tune the Activity and Substrate Binding of the Src Family Kinase Fyn. Marion E. Weir (talk by graduate student of **B.A. Ballif**). (*Regional, peer-reviewed*)

- 2015 Ecological Society of America (Baltimore, MD). Metaproteomic survey reveals differences in composition and function between microbial communities in detritus-enriched and unmanipulated ecosystems. Amanda Northrop (talk by graduate student of **B.A. Ballif**). (*International, peer-reviewed*)
- 2015 UVM Student Research Conference. A Novel Role for Collapsin Response Mediator Protein 2 (CRMP2) in the Development of the Vertebrate Visual System. Riley St. Clair (talk by graduate student of **B.A. Ballif**). (*Local, Contributed*)
- 2015 UVM Student Research Conference. Novel Tyrosine Phosphorylation Sites Fine Tune the Activity and Substrate Binding of the Src Family Kinase Fyn. Marion E. Weir (talk by graduate student of **B.A. Ballif**). (*Local, Contributed*)
- 2015 UVM Student Research Conference. Delineation of ESDN-Dependent Signaling Mechanisms Required for Zebrafish Eye Development. R.M. Joy, E.E. Wysolmerski, B.A. Ballif and A.M. Ebert. (*Local, Contributed*)
- 2015 UVM Student Research Conference. Characterization of the Effects of the Anti-Tumorigenic Drug TPCK on the Substrates of the Pro-Proliferative Kinase PDK1. Rana Anjum, Jaye L. Grundy, John Blenis and **Bryan A. Ballif**. (*Local, Contributed*)
- 2015 UVM Student Research Conference. Molecular Characterization of Biochemical and Immunogenic Roles of SMIM1. Liam P. Kelley, Lionel Arnaud, Virginie Helias, Jean-Pierre Cartron, and **Bryan A. Ballif**. (*Local, Contributed*)
- 2015 UVM Student Research Conference. *In Silico* Identification and Biochemical Characterization of Novel CrkL-SH2 Binding Partners. Hannah E. Johnson, Ryan M. Joy, Marion E. Weir, James J. Vincent and **Bryan A. Ballif**.
- 2015 UVM Student Research Conference. The Northern Pitcher Plant as a model system for identifying proteomic predictors of aquatic ecosystem tipping points. Amanda Northrop, Rachel K. Brooks, Aaron M. Ellison, **Bryan A. Ballif**, and Nicholas J. Gotelli.
- 2015 UVM Student Research Conference. Identification of Hexamerin Storage Proteins in the *Aphaenogaster rudis* Species Complex. Amanda S. Meyer, Katie A. Miller, Sara Helms Cahan and **Bryan A. Ballif**.
- 2015 Experimental Biology (Boston, MA). Novel Tyrosine Phosphorylation Sites Fine Tune the Activity and Substrate Binding of Src Family Kinases. K. Hinkle, M. Weir, Z. Fulton, J. Hao, J. Mann, A. McGehee, T. Corwin, U. Stelzl, P. Deming, P. Juo and **B. Ballif**. (*International, peer-reviewed*)
- 2015 Experimental Biology (Boston, MA). Identification of Fyn-Induced PKA Binding Partners Using Quantitative Proteomics M.E. Weir, J.E. Mann, **B.A. Ballif** and P.B. Deming. (*International, peer-reviewed*)
- 2015 Experimental Biology (Boston, MA). Delineation of ESDN-Dependent Signaling Mechanisms Required for Zebrafish Eye Development R.M. Joy, E.E. Wysolmerski, B.A. Ballif and A.M. Ebert. (*International, peer-reviewed*)
- 2015 Experimental Biology (Boston, MA). Regulation of cAMP-Dependent Protein Kinase A by Src Family Tyrosine Kinases, J. Mann and M. Weir, **B. Ballif**, and P. Deming. (*International, peer-reviewed*)
- 2015 Berg Health (Framingham, MA). A Tale of Two Signals. Marion E. Weir, Karen L. Hinkle, Paula B. Deming and Bryan A. Ballif. (Talk by graduate student trainee of Ballif)(*Regional, Invited*).
- 2015 16th International Conference on Negative Strand Viruses (Siena, Italy). Junin Virus Blocks PKR-Mediated Phosphorylation of Eif2alpha. Benjamin King, Philip Eisenhauer, Dylan Hershkowitz, Christopher Ziegler, Marion Weir, **Bryan Ballif**, Jason Botten. (*International, peer-reviewed*)
- 2015 UVM NBH Forum. A Novel Role for Collapsin Response Mediator Protein 2 in the Development of the Vertebrate Visual System. Riley M. St. Clair, **Bryan A. Ballif** and Alicia M. Ebert. (Talk by graduate student trainee of Ballif). (*Local, Selected*)
- 2015 UVM NBH Forum. Novel Tyrosine Phosphorylation Sites Fine Tune the Activity and Substrate Binding of the Src Family Kinase Fyn. Marion E. Weir, Jacqueline E. Mann, Zachary W. Fulton, Thomas Corwin, Jennifer M. Hao, Jeanine F. Maniscalco, Elizabeth F. Chapdelaine, Marie C. Kenney, Kristal M. Roman Roque, Ulrich Stelzl, Paula B. Deming, **Bryan A. Ballif** and Karen L. Hinkle. (*Local, Contributed*)
- 2015 UVM NBH Forum. Dynamic modulation by Trim32 as a novel mechanism for regulating a voltage-gated potassium channel in the brain. Eugene Cilento, **Bryan Ballif**, and Anthony Morielli. (*Local, Contributed*)

- 2014 UVM Summer Undergraduate Research program (SNURF). Kori S. Williams, Marion E. Weir, Alicia M. Ebert, and **Bryan A. Ballif**. Studies to Delineate Mechanisms of Semaphorin 6a Signaling. (*Local, Contributed*)
- 2014 UVM Student Research Conference. St. Clair, Riley; Waldron, Ashley; **Ballif, Bryan**; Ebert, Alicia. Sema6a-PlxnA2 Signaling Negatively Regulates ras11b to Maintain Proliferation of Retinal Precursor Cells during Zebrafish Eye Development. (*Local, Contributed*)
- 2014 UVM Student Research Conference. Weir, Marion; Bassett, Rachael; D'Elia, Kristen; **Ballif, Bryan**; Ebert, Alicia. Elucidation of PlexinA2 Signaling Mechanisms Critical for Zebrafish Eye Development. (*Local, Contributed*)
- 2014 UVM Student Research Conference. Weir, Marion; Bassett, Rachael; D'Elia, Kristen; **Ballif, Bryan**; Ebert, Alicia. Elucidation of PlexinA2 Signaling Mechanisms Critical for Zebrafish Eye Development. (*Local, Contributed*)
- 2014 UVM Student Research Conference. Phospho-dependent 14-3-3:histone Protein Interactions and Implications for Ras-MAPK Signaling. M. Saha, J. Karp and **B.A. Ballif**. (*Local, Contributed*)
- 2014 UVM Student Research Conference. Molecular Characterization of Plexins: Signaling Mechanisms and Developmental Expression. . K.P. D'Elia, M.E. Weir, R.L. Bassett, A.M. Ebert, and **B.A. Ballif (Best Undergrad. Poster)** (*Local, Contributed*)
- 2014 Federation of European Neuroscience Societies (Milan, Italy). Laura E. Perlini, Joanna Szczurkowska, **Bryan A. Ballif**, Alessandra Piccini, Silvia Giovedì, Fabio Benfenati and Laura Cancedda. Synapsin III Acts Downstream of Semaphorin 3A/CDK5 Signaling to Regulate Radial Migration and Orientation of Pyramidal Neurons *In Vivo*. (*International, Contributed*)
- 2014 Joint Aquatic Sciences Meeting (Portland, Oregon). Northrop, A. C.; Brooks, R. K.; Ellison, A. M.; **Ballif, B. A.**; Gotelli, N. J.; The northern pitcher plant, *Sarracenia purpurea*, as a model ecosystem for identifying novel proteomic predictors of aquatic ecosystem tipping points. (Talk by graduate student trainee of Ballif). (*National, peer-reviewed*)
- 2014 Evolution (Raleigh, North Carolina). Federico Lopez Osorio, Kurt Pickett, J. M. Carpenter, **Bryan A. Ballif** and Ingi Agnarsson. Phylogenomic analysis of yellowjackets and hornets (Hymenoptera, Vespidae) (*International, peer-reviewed*). (Talk by graduate student trainee of Ballif)
- 2014 UVM NBH Forum. ESDN is required for proper development of retinal ganglion cells in developing zebrafish. R.M. Joy, E. Wysolmerski, **B.A. Ballif**, A.M. Ebert. (*Local, Contributed*)
- 2014 UVM NBH Forum. Molecular Characterization of Plexins: Signaling Mechanisms and Developmental Expression. K.P. D'Elia, M.E. Weir, R.L. Bassett, A.M. Ebert, and **B.A. Ballif (Best Undergrad. Poster)** (*Local, Contributed*)
- 2014 Northeast Society for Developmental Biology (Woods Hole, MA). Joy, Ryan; Wysolmerski, Erin; **Ballif, Bryan**; Ebert, Alicia. Delineation of ESDN-Dependent Signaling Mechanisms Required for Zebrafish Eye Development. (*Regional/National, Peer-Reviewed*)
- 2014 Northeast Society for Developmental Biology (Woods Hole, MA). Weir, Marion; Bassett, Rachael; D'Elia, Kristen; **Ballif, Bryan**; Ebert, Alicia. Elucidation of PlexinA2 Signaling Mechanisms Critical for Zebrafish Eye Development. (*Regional/National, Peer-Reviewed*)
- 2014 Northeast Society for Developmental Biology (Woods Hole, MA). St. Clair, Riley; Waldron, Ashley; **Ballif, Bryan**; Ebert, Alicia. Sema6a-PlxnA2 Signaling Negatively Regulates ras11b to Maintain Proliferation of Retinal Precursor Cells during Zebrafish Eye Development. (*Regional/National, Peer-Reviewed*)
- 2013 UVM Summer Undergraduate Research program (SNURF). Molecular Characterization of Plexins: Signaling Mechanisms and Developmental Expression. K.P. D'Elia, M.E. Weir, R.L. Bassett, A.M. Ebert, and **B.A. Ballif** (*Local, Contributed*)
- 2013 Society for Neuroscience. Synapsin III regulates radial migration and orientation of pyramidal neurons *in vivo*. L. Perlini, J. Szczurkoskai, **B.A. Ballif**, A. Piccini, S. Giovedì, F. Benfenati, L. Cancedda. (*International, peer-reviewed*)
- 2013 Woods Hole Molecular Parasitology Meeting. Analysis of cell membrane associated proteins in EhMSP-1 silenced *Entamoeba histolytica* trophozoites. J. Teixeira, A. Sateriale, **B.A. Ballif**, C. Huston. (*International, peer-reviewed*)

- 2013 American Society for Mass Spectrometry. Global quantitative phosphoproteomic analysis of RSK-dependent signal transduction. J.A. Galan, K.M. Geraghty, E. Kanshin, J. Tcherkezian, G. Lavoie, B.E. Turk, **B.A. Ballif**, J. Blenis, P. Thibault, P.P. Roux (*International, peer-reviewed*)
- 2013 UVM Student Research Conference. Retinal Expression of key players in the growth cone collapse pathway. M. Weir (talk by graduate student of **B.A. Ballif**) (*Local, Contributed*)
- 2013 UVM Student Research Conference. A Large-Scale Phosphoproteomic Comparison of the Developing Mouse Brain. P. Doubleday (talk by undergraduate student of **B.A. Ballif**) (*Local, Contributed*)
- 2013 UVM Student Research Conference. Identification of Novel RSK-Dependent 14-3-3 Binding Proteins and Their Potential Role in Ras-MAPK Signaling. M. Saha, J. Karp and **B.A. Ballif**) (*Local, Contributed*)
- 2012 Human Proteome Organization Conference. The Quantification of Tissue-Specific CrkL-SH3 Binding Proteins Highlights Caveats to the Quantification of Protein Variants in Bottom-Up Proteomics. M. Cheerathodi and **B.A. Ballif**. (*International, peer-reviewed*)
- 2012 Human Proteome Organization Conference. Identification and Characterization of CIN85 Binding Proteins in Cultured Cells and Murine Brain. B.K. Bior and **B.A. Ballif**. (*International, peer-reviewed*)
- 2012 Human Proteome Organization Conference. Comparative Phosphoproteomic Analysis of Neonatal and Adult Murine Brain. P. F. Doubleday, T. Goswami, X. Li, A.M. Smith, E.M. Luderowski, R.M. Joy, J. Rush and **B.A. Ballif**. (*International, peer-reviewed*)
- 2012 Phosphoinositide Biology, Signaling and Cancer, Institute for Research in Immunology and Cancer, University of Montréal, TPCK inhibits AGC kinases by direct activation loop adduction at phenylalanine-directed cysteine residues. Anjum R, Pae E, Blenis J, **Ballif BA**. (*International, Peer-Reviewed*)
- 2012 UVM Student Research Conference. Identification and Characterization of a Novel, Isoform-Specific Phosphorylation Site of Collapsin Response Mediator Protein 1. M.E. Weir, G.R. Buel, J. Rush, and **B.A. Ballif**. (*Local, contributed*)
- 2012 UVM Student Research Conference. Comparative Phosphoproteomic Analysis of Neonatal and Adult Murine Brain. Tapasree Goswami, X. Li, A.M. Smith, E.M. Luderowski, P.F. Doubleday, R.M. Joy, J. Rush and **B.A. Ballif** (*Local, contributed*)
- 2012 UVM Student Research Conference. Identification and Characterization of a Novel Cooperative Activity between the Protooncogenic SFKs and Crk/CrkL Signaling Protein Families. M.M. Redmond, T.M. Aten, S. Weaver and **B.A. Ballif**. (*Local, contributed*)
- 2012 Vermont Chapter of the Society for Neuroscience and NBH meeting. Comparative Phosphoproteomic Analysis of Neonatal and Adult Murine Brain. Tapasree Goswami, X.Li, A.M. Smith, E.M. Luderowski, P.F. Doubleday, R.M. Joy, J. Rush and **B.A. Ballif** (*Local, contributed*)
- 2011 VGN Proteomics Open House. Proteomic Approaches Identify Novel RSK-Dependent 14-3-3 Interactions. M. Saha (talk by graduate student of **B.A. Ballif**) (*Local, invited*)
- 2011 11th International Congress on Toxoplasmosis. Strategies for target identification of tachypleglinA, a small-molecule inhibitor of T. gondii motility and invasion. J.M. Leung, R. Pathak, A.T. Heaslip, D.M. Warsaw, **B.A. Ballif**, N.J. Westwood and G.E. Ward. (*International, peer reviewed*)
- 2011 Gordon Research Conference, Mechanisms of Cell Signaling. The identification and characterization of novel MEK- and RSK-dependent 14-3-3 interactions using quantitative proteomics. M. Saha and **B.A. Ballif**. (*International, peer reviewed*)
- 2011 Gordon Research Conference, Mechanisms of Cell Signaling. RSK phosphorylates SOS1 inducing 14-3-3 binding and negatively regulating Ras-MAPK signaling. M. Saha and **B.A. Ballif**. (*International, peer reviewed*)
- 2011 American Society for Mass Spectrometry. Identification of CrkL-SH3 binding proteins from embryonic murine brain: Implications for Reelin signaling during brain development. M. Cheerathodi and **B.A. Ballif**. (*International, peer reviewed*)
- 2011 UVM Student Research Conference. Disabled-1 Functions as a Dynamic Switch Regulating Reelin Receptor Endocytic Machinery. B. Bior and **B.A. Ballif**. (*Local, contributed*)
- 2011 Vermont Chapter of the Society for Neuroscience. Disabled-1 Functions as a Dynamic Switch Regulating Reelin Receptor Endocytic Machinery. B. Bior and **B.A. Ballif**. (*Local, contributed*)
- 2010 Gordon Conference on Protein Phosphorylation and G Protein Coupled Receptors. G.B. Caldwell, A.K. Howe, **B.A. Ballif**, P.B. Deming. Functional interaction between platelet-derived growth factor beta

- receptor and the catalytic subunit of cAMP-dependent protein kinase A. Burlington, VT. (*International, peer reviewed*)
- 2010 NIH, NCRR Third Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE). The ER-Golgi intermediate compartment 53-kDa protein associates with hantavirus and arenavirus glycoproteins and is important for viral replication. Klaus, J., Eisenhauer, P., Russo, J., Do, D., Cornillez-Ty, C., **Ballif, BA.**, Lao, L., and Botten, J. (*National, peer reviewed*)
- 2010 UVM Student Research Conference. The ER-Golgi intermediate compartment 53-kDa protein associates with hantavirus and arenavirus glycoproteins and is important for viral replication. Klaus, J., Eisenhauer, P., Russo, J., Do, D., Cornillez-Ty, C., **Ballif, BA.**, Lao, L., and Botten, J. (*Local, contributed*)
- 2010 American Society for Mass Spectrometry. Fyn Promotes Phosphorylation of Collapsin Response Mediator Protein 1 at Tyrosine 504, a Novel, Isoform-Specific Regulatory Site. G.R. Buel, John Rush and **B.A. Ballif**. (*International, peer reviewed*)
- 2010 UVM Student Research Conference. Identification of a Novel Cooperative Activity between the Proto-oncogenic Src Family Kinases and Crk/CrkL Signaling Protein Families. Tyler M. Aten (talk by undergraduate student of **B.A. Ballif**). (*Local, organizer selected*)
- 2010 UVM Student Research Conference. M. Cheerathodi and **B.A. Ballif**. Proteomic Identification of CrkL-SH3 Binding Proteins from Embryonic Murine Brain: Implications for Multiprotein Complexes in Reelin Signaling. (*Local, contributed*)
- 2010 Vermont Chapter of the Society for Neuroscience. Fyn Promotes Phosphorylation of Collapsin Response Mediator Protein 1 at Tyrosine 504, a Novel, Isoform-Specific Regulatory Site. G.R. Buel and **B.A. Ballif**. (*Local, contributed*)
- 2009 Vermont Cancer Center Symposium. G.B. Caldwell, A.K. Howe, **B.A. Ballif**, P.B. Deming. Functional interaction between platelet-derived growth factor beta receptor and the catalytic subunit of cAMP-dependent protein kinase A. (*Local, contributed*)
- 2009 UVM Proteomics Open House. Tyler M. Aten (talk by undergraduate student of **B.A. Ballif**). Identification of novel CrkL-SH2 binding partners using quantitative proteomics. (*Local, invited*)
- 2009 Vermont Genetics Network 2009 Retreat. Madhurima Saha and **B. A. Ballif**. Identification and characterization of a regulated SOS : 14-3-3 complex. (*Local, contributed*)
- 2009 Vermont Genetics Network 2009 Retreat. Fyn Promotes Phosphorylation of Collapsin Response Mediator Protein 1 at Tyrosine 504, a Novel, Isoform-Specific Regulatory Site. G.R. Buel and **B.A. Ballif**. (*Local, contributed*)
- 2009 Vermont Genetics Network 2009 Retreat. S. H. Cahan, K.R. Helms, C. Casals, **B.A. Ballif**. Shotgun proteomics in a non-model organism: Identifying proteins associated with aggression in a desert ant. (*Local, contributed*)
- 2009 Vermont Genetics Network 2009 Retreat. U. Wesley and **B.A. Ballif**. Proteomic Analysis of Proliferating and Differentiating Neuroblastoma Cells. (*Local, contributed*)
- 2009 Vermont Genetics Network 2009 Retreat. Bin Deng, Dwight E. Matthews, **B.A. Ballif**. The Establishment and Growth of the Vermont Genetics Network Proteomics Facility. (*Local, contributed*)
- 2009 The American Society for Cell Biology. K.F. Lechtreck, E.C. Johnson, T. Sakai, **B.A. Ballif**, D. Cochran, G. Pazour, J. Evans, M. Ikebe, G.B. Witman. The *Chlamydomonas* BBSome is transported by a subset of IFT particles and necessary for normal flagellar membrane composition. (*International, peer reviewed*)
- 2009 NE Regional IDEA Meeting. Bin Deng, Dwight E. Matthews, **B.A. Ballif**. The Establishment and Growth of the Vermont Genetics Network Proteomics Facility. (*Regional, organizer selected*)
- 2009 UVM, ANNB, Summer Neuroscience Undergraduate Fellowship Research Day, Eva Luderowski and **B.A. Ballif**. The Effects of Phosphorylation of Fyn, a Src-Family Tyrosine Kinase, at Tyr185 and Tyr440. (*Local, contributed*)
- 2009 The American Association for Cancer Research. G.B. Caldwell, A.K. Howe, **B.A. Ballif**, P.B. Deming. Functional interaction between platelet-derived growth factor beta receptor and the catalytic subunit of cAMP-dependent protein kinase A. (*International, peer reviewed*)
- 2009 UVM Student Research Conference. Identification and Characterization of a Novel Tyrosine Phosphorylation Site in the Src Family of Tyrosine Kinases. J.F. Maniscalco (talk by undergraduate student of **B.A. Ballif**). (*Local, organizer selected*)

- 2009 UVM Student Research Conference. Fyn Promotes Phosphorylation of Collapsin Response Mediator Protein 1 at Tyrosine 504, a Novel, Isoform-Specific Regulatory Site. G.R. Buel and **B.A. Ballif**. (*Local, contributed*)
- 2009 UVM Student Research Conference. T. Aten and **B.A. Ballif**. An Investigation of Tyrosine Kinase Tnk1 Substrates and Function. (*Local, contributed*)
- 2008 Society for the Advancement of Chicanos and Native Americans in Science. Immunocytochemical localization of a tracheal-like protein in Drosophila: Evidence for diversity of extracellular matrix. Pedro Alvarez-Ortiz, **B.A. Ballif**, Shawna Guillemette, Rachel Humphrey, Jim Vigoreaux. (*National, peer reviewed*)
- 2008 Gordon Conference--Protein phosphorylation and G-protein-mediated signaling networks. Phosphorylation of mTOR on serine 1261 promotes mTORC1-mediated biochemical signaling and cell growth/size. H. Acosta-Jaquez, J.A. Keller, K.G. Foster, G.A. Soliman, E. Feener, S.P. Gygi, **B.A. Ballif**, and D.C. Fingar. (*International, peer reviewed*)
- 2008 NSF Research Day, University of Vermont. M. Saha and **B.A. Ballif**. Regulation of Synapsins by Phosphorylation and by their Interaction with 14-3-3. (*Regional, contributed*)
- 2008 NSF Research Day, University of Vermont. M. Cheerathodi and **B.A. Ballif**. Identification of CrkL-SH3-Binding Proteins from Embryonic Murine Brain: Implications for Reelin Signaling During Brain Development. (*Regional, contributed*)
- 2008 The American Society for Cell Biology. Comparative Phosphogenomics of Flightin in Drosophila Flight Muscles Reveal Conserved Basal and Lineage Specific Phosphorylation Sites. J.O. Vigoreaux, P. Lekkas, F. Soto-Adames, **B.A. Ballif**. (*International, peer reviewed*)
- 2008 Northeast Regional Life Sciences Core Directors Meeting. B. Deng, **B.A. Ballif** and D.E. Matthews. The Vermont Genetics Network Proteomics Facility at the University of Vermont. (*Regional, contributed*)
- 2008 Woods Hole Molecular Parasitology Meeting. A.T. Heaslip, K.L. Carey, D.M. Warshaw, **B.A. Ballif**, N.J. Westwood, G.E. Ward. Treatment of Toxoplasma gondii with compound 115556 modifies TgMLC1 resulting in altered TgMyoA activity and parasite motility. (*International, peer reviewed*)
- 2008 Penn State McNair Scholars Summer Research Conference. T. Aten (talk by undergraduate student of **B.A. Ballif**). An Investigation of Tyrosine Kinase Tnk1 Substrates and Function. (*National, peer reviewed*)
- 2008 Society for Mathematical Biology Conference. T. Aten and **B.A. Ballif**. An Investigation of Tyrosine Kinase Tnk1 Substrates and Function. (*International, peer reviewed*)
- 2008 Vermont Genetics Network 2008 Annual Retreat. M. Cheerathodi and **B.A. Ballif**. Identification of CrkL-SH3-Binding Proteins from Embryonic Murine Brain: Implications for Reelin Signaling During Brain Development. (*Local, contributed*)
- 2008 NIH National IDeA Symposium of Biomedical Research Excellence (NISBRE). The Vermont Genetics Network Proteomics Facility at the University of Vermont. B. Deng, **B.A. Ballif**, Dwight E Matthews. (*Regional, contributed*)
- 2008 NIH National IDeA Symposium of Biomedical Research Excellence (NISBRE). M. Saha and **B.A. Ballif**. Regulation of Synapsins by Phosphorylation and by their Interaction with 14-3-3. (*Regional, contributed*)
- 2008 NIH National IDeA Symposium of Biomedical Research Excellence (NISBRE). M. Cheerathodi and **B.A. Ballif**. Identification of CrkL-SH3-Binding Proteins from Embryonic Murine Brain: Implications for Reelin Signaling During Brain Development. (*Regional, contributed*)
- 2008 UVM Student Research Conference. M. Saha and **B.A. Ballif**. Regulation of Synapsins by Phosphorylation and by their Interaction with 14-3-3. (*Local, contributed*)
- 2008 UVM Student Research Conference. M. Cheerathodi and **B.A. Ballif**. Identification of CrkL-SH3-Binding Proteins from Embryonic Murine Brain: Implications for Reelin Signaling During Brain Development. (*Local, contributed*)
- 2008 UVM Student Research Conference. GR Buel (talk by undergraduate student of **B.A. Ballif**). Regulation of Tyrosine Phosphorylation on Collapsin Response Mediator Protein 1. (*Local, organizer selected*)
- 2008 UVM Proteomics Open House. GR Buel (talk by undergraduate student of **B.A. Ballif**). Regulation of Tyrosine Phosphorylation on Collapsin Response Mediator Protein 1. (*Local, invited*)
- 2007 Gordon Research Conference: Cell Contact and Adhesion. Knowlton, M.L., Wrobel, C.N., Gu, T., **Ballif, B.A.**, Gygi, S.P., Polakiewicz, R., and Brugge, J.S. PhosphoScan® analysis reveals insights into the

- mechanisms responsible for disruption of cell-cell adhesion mediated by activation of the CSF-1R in mammary epithelial cells. (*International, peer reviewed*)
- 2007 Vermont Chapter of the Society for Neuroscience. M. Cheerathodi and **B.A. Ballif**. Identification of CrkL-SH3-Binding Proteins from Embryonic Murine Brain: Implications for Reelin Signaling During Brain Development. (*Local, contributed*)
- 2007 Vermont Chapter of the Society for Neuroscience. E.C. Connors, **B.A. Ballif**, A.D. Morielli. Homeostatic Regulation of Kv1.2 Potassium Channel Trafficking by Cyclic AMP. (*Local, contributed*)
- 2007 The American Society for Cell Biology. A. G. Montalvo, D. Lemas, P. Lekkas, **B. A. Ballif**, J. O. Vigoreaux Functional and Phylogenetic Analysis of Flightin Phosphorylation Reveal Lineage-specific Differences in Phosphorylation Site Selection. (*International, peer reviewed*)
- 2007 Northeast Regional IDeA Meeting. M. Cheerathodi and **B.A. Ballif**. Identification of CrkL-SH3-Binding Proteins from Embryonic Murine Brain: Implications for Reelin Signaling During Brain Development. (*Regional, contributed*)
- 2007 The Federation of American Societies for Experimental Biology. J. Yano, **B.A. Ballif**, R. Saha and J.L. Van Houten. Proteomics of the ciliary membrane of Paramecium tetraurelia. (*International, peer reviewed*)
- 2007 Keystone Symposium. P.P. Roux, **B.A. Ballif**, S.A. Gerber, J. Blenis, S.P. Gygi. Global profiling of phosphorylation events in the TSC1 and TSC2 tumor suppressors using stable isotope labeling of amino acids in cell culture (SILAC). (*International, peer reviewed*)
- 2007 The American Society for Mass Spectrometry. S.P. Gygi, **B.A. Ballif**, C. Zhou, S.J. Elledge, C.E. Bakalarski, S.A. Beausoleil, X. Li, W. Haas. The Use of Ion Traps Alone and in Hybrid Configurations for Protein Identification, Characterization, and Quantification. (*International, peer reviewed*)
- 2007 The American Association for Cancer Research. M.L. Knowlton, C.N. Wrobel, T-L Gu, **B.A. Ballif**, S.P. Gygi, R. Polakiewicz, and J.S. Brugge. Phosphoscan analysis reveals insights into the mechanisms responsible for disruption of cell-cell adhesion mediated by activation of the CSF-1R in mammary epithelial cells. (*International, peer reviewed*)
- 2005 Second East Coast Regional Fission Yeast Meeting. R.H. Roberts, C.A. Thorne, R.H. Carnahan, I. McLeod, J.R. Yates III, **B.A. Ballif**, S.P. Gygi, J.-S. Chen and K.L. Gould. Cdc15p undergoes complex changes in its phosphorylation pattern during mitotic progression. (*National, peer reviewed*)
- 2004 The American Society for Mass Spectrometry. **B.A. Ballif**, C.E. Bakalarski, S.A. Gerber, P.P. Roux, J. Blenis, S.P. Gygi. Quantitative and temporal profiling of acutely-induced phosphorylation events using selective isotope labeling and a hybrid LTQ FT mass spectrometer. (*International, peer reviewed*)
- 2004 The American Society for Mass Spectrometry. **B.A. Ballif**, J. Villén, S.A. Beausoleil and S.P. Gygi. Phosphoproteomic Analysis of the Developing Murine Brain. (*International, peer reviewed*)
- 1999 FASEB Summer Conference, Protein Kinases and Phosphorylation. **B.A. Ballif**, A. Shimamura, S.A. Richards and J. Blenis. RSK1 mediates a MEK-MAPK cell survival signal. (*International, peer reviewed*)
- 1995 FASEB/Experimental Biology Conference, April 1995. **B.A. Ballif**, N.V. Mincek, J.T. Barret, M.L. Wilson and D.L. Simmons. Identification of Proteins Interacting with Cyclooxygenases-1 and -2. (*International, peer reviewed*)

Grants and Research Support Received

• Major Extramural Awards and Support

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

06/01/17-5/31/21 National Science Foundation Grant IOS 1656510

Grant Title: A Biochemical, Proteomic and Functional Delineation of DcblD1 and 2 Signaling during Zebrafish Neural Retina Development. **PI: Bryan A. Ballif**; Total: \$540,000

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 Direct \$50,000; Commitment of Ballif—0.6 calendar month (6/1/16-1/31/20)

08/01/15-7/31/19 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**; Direct: \$275,000.00 (over 2 years)

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**; Direct: \$1,906,431 (over 5 years)

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**; Direct: \$7,499,998 (over 5 years)

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)**
Direct: \$ 14,490,165 (over 5 years)

• **Intramural Awards/Support**

12/15/19-6/30/20 UVM College of Arts and Sciences and Department of Biology Undergraduate APLE Research Award (Noah Lind). Proposal Title: Biochemical characterization of novel and putative CrkL-SH2 binding partners. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$500

3/15/19-6/30/19 UVM College of Arts and Sciences and Department of Biology Undergraduate APLE Research Award (Jess Souza). Proposal Title: Biochemical characterization and subcellular localization of SMIM1, the protein carrying the Vel Blood Group System Antigen. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$500

6/1/17-8/31/17 UVM Department of Molecular Biology and Molecular Genetics Distinguished Undergraduate Research Award (Mari Tomanelli). Proposal Title: A Proposal to Investigate the Function of the Adaptor Protein Src Homology 2 Domain Containing Protein D (SHD) in Regulating CrkL Signaling. **Faculty Mentor: Bryan A. Ballif.** Award Amount \$5,000

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

3/15/15-6/30/15 UVM College of Arts and Sciences and Department of Biology Undergraduate APLE research Award (Jaye Grundy). Proposal Title: Elucidation of the Mechanisms of TPCK Inhibition of PDK1 Signaling Pathways. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$500

3/15/15-6/30/15 UVM Graduate College Student Mini-Travel Grant (**Marion Weir**) to present work at the 2015 Experimental Biology meeting. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$300

11/15/14-6/30/15 UVM College of Arts and Sciences and Department of Biology Undergraduate APLE research Award (**Kyle Kellett**). Proposal Title: Molecular Characterization of DCBLD1 in Zebrafish. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$500

4/30/14 UVM VT Society for Neuroscience Travel Award (**Riley St. Clair**). Presentation Title: Sema6A-PlxnA2 Signaling Negatively Regulates ras11b to Maintain Proliferation of Retinal Precursor Cells during Zebrafish Eye Development. Northeast Society for Developmental Biology, Woods Hole, MA. **Faculty Mentor: Bryan A. Ballif.**

6/1/13-5/31/14 UVM REACH grant. Proposal Title: Identifying Antigens Responsible for Antibody-Based Graft Rejection in Human Transplant Recipients. **PI: Bryan A. Ballif, Co-PI Antonio Di Carlo.** Award Amount: \$8,770

3/1/14-6/30/14 UVM College of Arts and Sciences and Department of Biology Undergraduate APLE research Award (**Rachael Bassett**). Proposal Title: PlexinA2 Binding Sites in Neuronal Signaling. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$500

1/1/14-6/30/14 UVM College of Arts and Sciences and Department of Biology Undergraduate APLE research Award (**Zach Silberman**). Proposal Title: PACAP Signaling Mechanisms. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$500

10/1/13-5/15/14 UVM Honors College Undergraduate mini-grant research Award (**Jon Karp**). Proposal Title: Phospho-dependent 14-3-3:histone Protein Interactions and Implications for Ras MAPK Cell Signaling **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$500

6/1/12-5/31/13 UVM URECA! Undergraduate Student Summer Research Award (**Peter Doubleday**). Proposal Title: Comparative Phosphoproteomic Analysis of Neonatal and Adult Murine Brain. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$4,000

3/1/12-5/31/12 UVM College of Arts and Sciences and Department of Biology Undergraduate APLE research Award (**Collin Love**). Proposal Title: Characterization of TPCK effects on RSK using quantitative mass spectrometry. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$500

11/18/11-5/31/12 UVM College of Arts and Sciences Research Award for the Natural and Social Sciences. Proposal Title: Characterization of the Molecular Consequences of Novel Chemotherapeutics by Quantitative Mass Spectrometry. **PI: Bryan A. Ballif.** Award Amount: \$2,500

10/31/11-5/31/12 UVM College of Arts and Sciences and Department of Biology Undergraduate APLE research Award (**Nick Thompson**). Proposal Title: Delineating the effects of RSK inhibitors using quantitative mass spectrometry. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$500

2/1/11-4/30/11 UVM College of Arts and Sciences and Department of Biology Undergraduate APLE research Award (**Miranda Redmond**). Proposal Title: Characterization of the Interaction between CrkL and ESDN **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$500

2/1/11-8/31/11 UVM College of Arts and Sciences Graduate Student Suiter Travel Award (**Madhurima Saha**) to present work at the 2011 Mechanisms of Cell Signaling Gordon Conference. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$200

2/1/11-8/31/11 UVM Grad. College Student Mini-Travel Grant (**Madhurima Saha**) to present work at the 2011 Mechanisms of Cell Signaling Gordon Conference. **Faculty Mentor: Bryan Ballif.** Award: \$200

2/1/11-4/30/11 UVM College of Arts and Sciences and Department of Biology Undergraduate APLE research Award (**Peter Doubleday**). Proposal Title: A quantitative profile of tyrosine phosphorylation sites across mouse brain development. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$500

2/1/10-4/30/10 UVM College of Arts and Sciences and Department of Biology Undergraduate APLE research Award (**Anh-Thu Lam**). Proposal Title: The Role of Tyrosine 504 Phosphorylation on the Regulation of Collapsin Response Mediator Protein 1. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$500

7/1/09-6/30/10 Vermont Genetics Network (VGN), NIH IDeA Networks of Biomedical Research

Excellence (INBRE) Graduate Student Assistantship (**Mujeeburahiman Cheerathodi**). Proposal Title: Delineation of a Reelin-Regulated Signaling Pathway to the Actin Cytoskeleton. **PI: Judith Van Houten. Faculty Mentor: Bryan A. Ballif.** Award Amount: \$30,000

6/1/09-8/31/09 UVM URECA! Undergraduate Student Summer Research Award (**Tyler Aten**). Proposal Title: Src-Family Kinase Global Phosphorylation Analysis. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$4,000

6/1/09-8/31/09 UVM Neuroscience Undergraduate Student Summer Research Fellowship (**Eva Luderowski**—visiting from Carleton College, MN). **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$3,500

6/1/09-8/31/09 Math-Biology NSF Student Summer Research Award (**Tyler Aten**). **PI: Lori Stevens. Faculty Mentor: Bryan A. Ballif.** Award Amount: \$3,000

2/1/09-4/30/09 UVM College of Arts and Sciences and Department of Biology Undergraduate APLE research Award (**Gwen Buel**). Proposal Title: Regulation of Tyrosine Phosphorylation on Collapsin Response Mediator Proteins. **Faculty Mentor Bryan A. Ballif.** Award Amount: \$500

12/1/08-11/30/09 UVM Research Opportunities Grant. Grant Title: Ecosystem services in aquatic food webs: a proteomics survey of molecular production by the Sarracenia food web. **PIs: Nick Gotelli and Bryan Ballif.** Award Amount: \$19,250

7/1/08-6/30/09 Vermont Genetics Network (VGN), NIH IDeA Networks of Biomedical Research Excellence (INBRE) Graduate Student Assistantship (**Madhurima Saha**). Proposal Title: Regulation of Synapsins by Phosphorylation and their Interaction with 14-3-3. **PI: Judith Van Houten. Faculty Mentor: Bryan A. Ballif.** Award Amount: \$30,000

6/1/08-8/31/08 URECA! Undergraduate Student Summer Research Award (**Gwen Buel**). Proposal Title: Regulation of Tyrosine Phosphorylation on Collapsin Response Mediator Proteins. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$4,000

6/1/08-8/31/08 McNair Scholars Program. Undergraduate Summer Research Award (**Tyler Aten**). **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$2,900

6/1/08-8/31/08 Daniel C. Oppenheimer Biology Department Undergraduate Student Summer Research Award (**Jeanine Maniscalco**). Proposal Title: Characterization of a Novel Tyrosine Phosphorylation Site in the Src Family of Tyrosine Kinases. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$2,000

7/1/07-6/30/08 Vermont Genetics Network (VGN), NIH IDeA Networks of Biomedical Research Excellence (INBRE) Graduate Student Assistantship (**Mujeeburahiman Cheerathodi**). Proposal Title: Phosphoproteomic Analysis of Reelin Signaling. **PI: Judith Van Houten. Faculty Mentor: Bryan A. Ballif.** Award Amount: \$30,000

6/1/07-8/31/07 Daniel C. Oppenheimer Biology Department Undergraduate Student Summer Research Award (**Gwen Buel**). Proposal Title: Identification and quantification of tyrosine phosphorylation on CRMP family members in mock- and reelin-stimulated primary embryonic neurons. **Faculty Mentor: Bryan A. Ballif.** Award Amount: \$2,000

• **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 (99 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. #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.
2. #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.
3. 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.
4. #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.
5. @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.
6. 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.
7. 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.
8. #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.
9. #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.

10. #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**.
11. 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.
12. #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.
13. 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.
14. 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.
15. #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.
16. #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.
17. #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**.
18. 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.
19. #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**.
20. 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**.
21. #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**

22. 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.
23. 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 Junin virus selectively impairs the antiviral activity of PKR. *Journal of Virology*. 2017, May 24. pii: JVI.00763-17.
24. 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.
25. #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.
26. #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.
27. 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.
28. 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.
29. #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.
30. 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.
31. 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.
32. 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
33. #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

34. 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.
35. 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.
36. 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.
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Book Chapter

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2. Burcu Erdogan, #Riley M. St. Clair, Garrett M. Cammarata, Timothy Zaccaro, **Bryan A. Ballif**, Laura Anne Lowery. Abelson-induced phosphorylation of TACC3 modulates its interaction with microtubules and affects its impact on axon outgrowth and guidance. bioRxiv, Cold Spring Harbor Laboratory. doi: <https://doi.org/10.1101/2020.02.14.948448>.
3. Clockwise and counterclockwise hysteresis characterize state changes in the same aquatic ecosystem
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