
IVAN VUJKOVIC-CVIJIN, PHD

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Cancer Research Institute Irvington Postdoctoral Research Fellow, National Institutes of Health

EDUCATION

National Institutes of Health

Postdoctoral Fellowship

Year: 2015 - present

Mucosal Immunology Section, National Institutes of Allergy & Infectious Diseases

University of California, San Francisco (UCSF)

Doctor of Philosophy (PhD)

Year: 2015

Concentration: Immunology, Microbiology, Microbial Ecology

University of California, Santa Barbara (UCSB)

Degree: Bachelor of Science (BS), High Honors

Year: 2009

Major: Biochemistry-Molecular Biology

PROFESSIONAL EXPERIENCE

National Institutes of Health Postdoctoral Intramural Research Trainee

(8/2015 – present)

Postdoctoral Fellow

Mucosal Immunology Section, Principal Investigator: Yasmine Belkaid, PhD

- Uncovering mechanisms by which host-associated microbes modulate the human immune system

University of California, San Francisco Biomedical Sciences Graduate Program

(8/2010 – 7/2015)

Graduate Student, PhD

Principal Investigators: Joseph "Mike" McCune, MD, PhD, Division of Experimental Medicine & Susan V. Lynch, PhD, Division of Gastroenterology

- Investigating the role of the gut microbiome in HIV disease progression

University of North Carolina, Chapel Hill

(2/2010-6/2010)

Research Associate

Principal Investigator: Peggy Cotter, PhD, Department of Microbiology and Immunology

- Developed molecular tools to interrogate *Burkholderia thailandensis* inter-bacterial competition

University of California, Santa Barbara

(9/2008-6/2009)

Research Assistant

Principal Investigator: Peggy Cotter, PhD, Department of Molecular, Cellular, and Developmental Biology

- Investigated function of *Bordetella pertussis* virulence factors via site-directed mutagenesis and animal models

HONORS/DISTINCTIONS

Office of AIDS Research Intramural NIH Discretionary Grant, PI

2017

Cancer Research Institute Irvington Postdoctoral Fellowship

2016 – 2018

UCSF Discovery Fellowship Award

2014 – 2015

UCSF Pilot Award Program in HIV/AIDS, Co-PI

2014 – 2015

California HIV/AIDS Research Program Pre-Doctoral Award in Biomedical Sciences

2014 – 2015

International Society for Mucosal Immunology Young Investigator Travel Award

2013

Marine Biological Laboratory (MBL) Special Topics Course Scholarship Award

2013

Earle C. Anthony Travel Fellowship

2013

National Science Foundation Graduate Research Fellowship Program

2012 – 2015

NIH UCSF-GIVI, Center for AIDS Research Basic Science Award in HIV/AIDS, Co-PI

2012 – 2013

Ruth L. Kirschstein National Research Service Award Trainee

2010 – 2012

High Honors at Graduation, UCSB

2009

Certificate of Academic Excellence, UCSB

2009

Distinction in the Major, Department of Molecular, Cellular, and Developmental Biology, UCSB

2009

University of California, Santa Barbara Alumni Scholarship

2007 – 2009

National Science and Mathematics Access to Retain Talent (SMART) Grant

2007 – 2009

Dean's Honors (7)

2005 – 2009

PRESENTATIONS AND PUBLICATIONS**Oral Presentations:**

- NIH Office of AIDS Research Advisory Council Meeting** (4/6/2017)
Rockville, Maryland, USA
Panelist
- Society on Neuroimmune Pharmacology 23rd General Conference** (3/29/2017 - 4/1/2017)
Philadelphia, Pennsylvania, USA
Invited talk
- American Society for Microbiology General Meeting 2015** (5/30/2015 - 6/2/2015)
New Orleans, Louisiana, USA
Abstract selected for a Young Investigator Oral Presentation
Session: ASM Lecturer's Choice: Recent Developments in Microbiome Research
- UCSF Discovery Fellows Symposium** (4/8/2015)
San Francisco, California, USA
Abstract selected for short talk
- Three Minute Thesis Competition, UC San Francisco** (10/29/2014)
San Francisco, California, USA
Finalist presenter
- American College of Surgeons 2014 Clinical Congress** (10/27/2014)
San Francisco, California, USA
Invited speaker, Session: The Gut Microbiome: A Surgeon's Hostile Adversary or Secret Savior
- NHLBI Working Group on the Microbiome in Cardiovascular, Pulmonary, Hematologic Health and Diseases**
National Institutes of Health, Bethesda, Maryland (6/25/14 - 6/26/14)
Invited speaker
- UC Berkeley 15th Annual Microbiology Student Symposium** (4/15/2014)
Berkeley, California, USA
Oral presentation awarded 1st Place Student Presentation
- AIDS Clinical Trials Group (ACTG) Scientific Retreat** (3/7/2014 - 3/8/2014)
Boston, Massachusetts, USA
Invited speaker, Session: End-organ Disease and Inflammation Transformative Science Group
- International Congress of Mucosal Immunology** (7/17/2013 – 7/20/2013)
Vancouver, Canada
Abstract selected for short talk, Session: HIV and the Mucosal Surface
- 16th Annual Bay Area Microbial Pathogenesis Symposium** (3/16/2013)
San Francisco, California, USA
Abstract selected for short talk
- Keystone Symposia: The Gut Microbiome: The Effector/Regulatory Network** (2/10/2013 – 2/16/2013)
Taos, New Mexico, USA
Abstract selected for short talk, Session: Gut Bacteria Modulation of Autoimmunity

Poster Presentations:

- Keystone Symposia: Microbiome in Health and Disease** (2/5/2017 - 2/9/2017)
Keystone, Colorado, USA
Poster presentation
- Keystone Symposia: Gut Microbiota Modulation of Host Physiology: The Search for Mechanism** (3/1/6/2015)
Keystone, Colorado, USA
Poster presentation
- Breakthrough Life Sciences Awards Symposium** (12/13/2013)
San Francisco, California, USA
Poster presentation
- UC Berkeley – UC San Francisco Joint Immunology Retreat** (8/20/2013 - 8/22/2013)
Monterey, California, USA
Poster selected for 1st Place Poster Award

Publications:

1. **Vujkovic-Cvijin I**, Rutishauser RL, Pao M, Hunt PW, Lynch SV, McCune JM, Somsouk M. Limited engraftment of donor microbiome via one-time fecal microbial transplantation in treated HIV-infected individuals. *Gut Microbes*. 2017 May 25:0. doi: 10.1080/19490976.2017.1334034. PMID: 28541799
2. **Vujkovic-Cvijin I**, Deeks SG. Mucosal Microbes Mitigate Maladies. *Immunity*. 2017 Jan 17;46(1):1-3. doi: 10.1016/j.immuni.2016.12.019. Preview. PMID: 28099858.
3. Hand TW, **Vujkovic-Cvijin I**, Ridaura VK, Belkaid Y. Linking the Microbiota, Chronic Disease, and the Immune System. *Trends Endocrinol Metab*. 2016 Sep 9. pii: S1043-2760(16)30106-0. doi: 10.1016/j.tem.2016.08.003. Review
4. Paquin-Proulx D, Ching C, **Vujkovic-Cvijin I**, Fadrosch D, Loh L, Huang Y, Somsouk M, Lynch SV, Hunt PW, Nixon DF, SenGupta D. Bacteroides are associated with GALT iNKT cell function and reduction of microbial translocation in HIV-1 infection. *Mucosal Immunol*. 2016 Apr 6. doi: 10.1038/mi.2016.34
5. Singh RK, Lee KM, **Vujkovic-Cvijin I**, Ucmak D, Farahnik B, Abrouk M, Nakamura M, Zhu TH, Bhutani T, Wei M, Liao W, The role of IL-17 in vitiligo: A review. *Autoimmunity Reviews*. 2016 Jan 21. doi:10.1016/j.autrev.2016.01.004
6. **Vujkovic-Cvijin I**, Swainson L, Chu S, Ortiz A, Santee C, Petriello A, Dunham RM, Faruqi A, Huang Y, Apetrei C, Pandrea I, Klatt N, Brenchley J, Lynch SV, McCune JM. Gut-resident Lactobacillus abundance associates with IDO1 inhibition and Th17 dynamics in SIV-infected rhesus macaques. *Cell Reports*. 2015 Nov 24;13(8):1589-97. doi: 10.1016/j.celrep.2015.10.026. Epub 2015 Nov 12. PMID: 26586432.
7. Ortiz AM, Klase ZA, DiNapoli SR, **Vujkovic-Cvijin I**, Carmack K, Perkins MR, Calantone N, Vinton CL, Riddick NE, Gallagher J, Klatt NR, McCune JM, Estes JD, Paiardini M, Brenchley JM. IL-21 and probiotic therapy improve Th17 frequencies, microbial translocation, and microbiome in ARV-treated, SIV-infected macaques. *Mucosal Immunol*. 2015 Aug 19. doi: 10.1038/mi.2015.75. PMID: 26286233
8. Dunham RM, **Vujkovic-Cvijin I**, Yukl SA, Broadhurst MJ, Loke P, Albright RG, Wong JK, Lederman MM, Somsouk M, Hunt PW, Martin JN, Deeks SG, McCune JM. Discordance between peripheral and colonic markers of inflammation during suppressive ART. *J Acquir Immune Defic Syndr*. 2014 Feb 1;65(2):133-41. PMID: 24121758.
9. **Vujkovic-Cvijin I**, Dunham RM, Iwai S, Maher MC, Albright RG, Broadhurst MJ, Hernandez RD, Lederman MM, Huang Y, Somsouk M, Deeks SG, Hunt PW, Lynch SV, McCune JM. Dysbiosis of the Gut Microbiota Is Associated with HIV Disease Progression and Tryptophan Catabolism. *Sci. Transl. Med*. 2013 July; 5, 193ra91.
10. Broadhurst MJ, Ardeshir A, Kanwar B, Mirpuri J, Gundra UM, Leung JM, Wiens KE, **Vujkovic-Cvijin I**, Kim CC, Yarovinsky F, Lerche NW, McCune JM, Loke P. (2012) Therapeutic helminth infection of macaques with idiopathic chronic diarrhea alters the inflammatory signature and mucosal microbiota of the colon. *PLoS Pathog*. 2012 Nov; 8(11):e1003000.
11. Inatsuka CS, Xu Q, **Vujkovic-Cvijin I**, Wong S, Stibitz S, Miller JF, Cotter PA. (2010) Pertactin is required for Bordetella species to resist neutrophil-mediated clearance. *Infect Immun*. 2010 July; 78(7): 2901–2909.

TEACHING EXPERIENCE / COMMUNITY OUTREACH**Mucosal Immunology Section, National Institute of Allergy & Infectious Diseases, PI: Yasmine Belkaid**

Undergraduate Student Mentor

(5/18/2016 - 8/1/16)

- Mentored Cornell undergraduate student Lutfi Huq in fundamental principles of immunology, experimental design, presentation skills, and microbiome processing

Foundation for Advanced Education in the Sciences, National Institutes of Health (3/2/2016 - present)

Instructor, IMMU 521: Molecular and Cellular Mechanisms of Immunity I

- Lecture: "Microbiota and the Immune System" (11/17/2016)

Instructor, IMMU 325: The Human Microbiome: New Concepts in Health and Disease

- Lecture: "The gut microbiota in obesity and type II diabetes" (10/6/2016)
- Lecture: "Microbiota and the Immune System" (10/13/2016)
- Lecture: "Modulation of the microbiota: probiotics, prebiotics, antibiotics, and transplant" (10/27/2016)

Instructor, IMMU 522: Molecular and Cellular Mechanisms of Immunity II

- Lecture: "Microbiota and the Immune System" (3/2/2016)

McCune Laboratory, Division of Experimental Medicine, UCSF

(3/2014 – 5/2015)

MD/MS Student Mentor

- Mentored UC Berkeley–UCSF Joint Medical Program student Simon Chu in experimental design, grant writing, microbiome processing, bacterial culture methods, and primary cell culture techniques
- Student was awarded the UCSF Dean’s Prize in Research & Scholarship for this work

McCune Laboratory, Division of Experimental Medicine, UCSF

(1/2014 – 9/2014)

Biomedical Sciences PhD Student Mentor

- Mentored Biomedical Sciences graduate student Annalise Petriello in experimental design, grant writing, mouse handling and procedures, lymphocyte isolation, and flow cytometry

Bay Area Science Festival (San Francisco, California)

(10/2012 – 11/2012)

Volunteer Instructor

- Presented booth on mammalian anatomy to San Francisco K-12 children

Science and Health Education Partnership (Raoul Wallenberg High School, San Francisco, CA) (3/2011 – 6/2011)

Volunteer Instructor

- Designed and administered lessons in basic and translational microbiology to grade 12 high school students

LEAPS (Let’s Explore Applied Physical Science), UCSB

(4/2008 – 6/2008)

Volunteer Instructor

- Designed and presented hands-on physical and natural science lessons for students in grades 7 & 8

College of Letters & Science Honors Program, UCSB

(6/2007 – 6/2009)

Peer Mentor

- Provided academic mentorship to three incoming freshmen admitted into the UCSB College of Letters & Science Honors Program

REFERENCES

Yasmine Belkaid, PhD

(Postdoctoral Mentor)

Chief, Mucosal Immunology Section
National Institutes of Health/National Institute of Allergy & Infectious Disease
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Joseph M. "Mike" McCune, MD, PhD

(Graduate Thesis Co-Mentor)

Professor of Medicine & Chief, Division of Experimental Medicine
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Susan V. Lynch, PhD

(Graduate Thesis Co-Mentor)

Associate Professor & Director, Colitis and Crohn's Disease Microbiome Research Core
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Anita Sil, MD, PhD

(Chair, Thesis Committee)

Associate Professor, Department of Microbiology & Immunology
Howard Hughes Medical Institute Early Career Investigator
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513 Parnassus Ave, Med Sci S-472, San Francisco, CA 94143-0414
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Jason Cyster, PhD

(Member, Thesis Committee)

Professor & Director, Biomedical Sciences Graduate Program
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Ma Somsouk, MD

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