

**John Charles BOOTHROYD, Ph.D.**

*CURRICULUM VITAE [last updated August, 2019]  
[Major/current items are in **bold**]*

Burt and Marion Avery Professor  
Department of Microbiology and Immunology  
Stanford University School of Medicine

**Contact Information:**

Department of Microbiology and Immunology  
Fairchild Science Building, Room D305  
299 Campus Drive  
Stanford, CA 94305-5124

Telephone: 650-723-7984  
Fax: 650-725-6757  
Email: [john.boothroyd@stanford.edu](mailto:john.boothroyd@stanford.edu)

**Personal:**

**Citizenship:** Canada & U.S.A. (dual)

**Education:**

1972-1975 McGill University, Montreal, Canada.  
1972-1974 Human Genetics.  
1974-1975 Cell, Molecular and Developmental Biology.  
Received B.Sc. (Honours, Class I), 1975.

1975-1979 Edinburgh University, Edinburgh, Scotland.  
Received Ph.D. in Molecular Biology, 1979.

**Positions:**

1979-1982 Scientist, Immunochemistry/Molecular Biology Department, Wellcome Research Laboratories, Beckenham, Kent, U.K.

1982-1988 Assistant Professor, Department of Microbiology and Immunology (formerly Medical Microbiology), School of Medicine, Stanford University, California.

1988-1994 Associate Professor, Department of Microbiology and Immunology, School of Medicine, Stanford University.

**1994-date Professor, Department of Microbiology and Immunology, School of Medicine, Stanford University.**

1994-1999 Co-Chair, Department of Microbiology and Immunology, School of Medicine, Stanford University.

1999-2002 Chair, Department of Microbiology and Immunology, School of Medicine, Stanford University.

2002-2003 Senior Associate Dean for Research, Stanford University School of Medicine.  
 2003-2005 Senior Associate Dean for Research and Training, Stanford University School of Medicine.  
 2008-2018 Associate Vice-Provost for Graduate Education, Stanford University.  
 2015-date Director, Stanford-San José State University IRACDA Program  
**2018-date Associate Vice-Provost for Graduate Education and Postdoctoral Affairs, Stanford University.**

## Research:

1974-75 McGill University, Canada. Working with Drs. S.P. Gibbs and R.A. Cattolico on the physiology and biochemistry of the unicellular alga, *Olisthodiscus luteus*.  
 1975-79 University of Edinburgh, Scotland. Working with Dr. R.S. Hayward on the structure and function of regulatory signals located near the end of the early region of the coliphage T7 genome.  
 1979-1982 Wellcome Research Laboratories, Beckenham, England. Responsible for the application of recombinant DNA technology to two areas of research: 1. mechanism of antigenic variation in *Trypanosoma brucei*; 2. recombinant vaccines for Foot and Mouth Disease Virus;  
**1982-date Stanford University, California.** Molecular biology of antigenic variation, trans-splicing and gene regulation in *Trypanosoma brucei* (1982-2000); **Molecular basis of *Toxoplasma gondii* pathogenesis (1983-date).**  
 [1990-1991] M.R.C. Laboratory for Molecular Biology, Cambridge, England. Sabbatical with Dr. Hugh Pelham on the genetics and cell biology of a model system (yeast) in order to bring those approaches to our trypanosome and *Toxoplasma* work.  
 [1996] Dept. Pathology, Univ. Oxford, England and INSERM Unite 42, Lille, France. Sabbatical with Drs. David Ferguson (Oxford) and Jean-Francois Dubremetz (Lille) on imaging of *Toxoplasma*.

## Teaching:

1974-1975 Biology Department, McGill University. Teaching Assistant in developmental biology and gene activity in development.  
 1975-1978 Department of Molecular Biology, Edinburgh University. Laboratory demonstrator for Dr. R. Hayward and Dr. N. Willetts.  
 1982-date Stanford University:  
 Primary lecturer and coordinator for the following courses:  
   Molecular Parasitology (MI209; 1983-1997)  
   Microbial Genetics (MI204; 1988-90)  
   Modern Plagues (MI025; 1997-2008)  
   Ancient and Modern Plagues (MI199; 1998-1999)  
 Stanford Graduate Summer Institute:  
   Using Different Approaches to Solve Complex Problems –  
     Responding to Pandemics (2007, 2008)  
     Inside Pandora’s Box: A Non-Specialist Look at Five Medical Advances with Spectacular Potential but Enormous Ethical Complexity (2009, 2010)  
   Management Matters (2012-2015) [a course on managing people for grad students and post-docs]

**Preparing for Faculty Careers (2015-date)** [a ten-week course with ~100 postdocs and ~40 grad students from all disciplines on how to prepare, apply, interview and negotiate for a diverse array of faculty jobs and then how to thrive in such a role]

Contributing lecturer to:

General Microbiology (MI101; 1983-1993)

Medical Microbiology (MI103; 1983-1990),

**Pathogenesis of Viruses, Bacteria and Eukaryotic Parasites (MI210; 1998-date)**

Infectious Basis of Disease (MI201; 2001-2002)

Scientific Management Series for Post-doctoral Fellows (2005-date)

Future Faculty Seminar (2008-2013)

Advanced Immunology II (2011-2013)

Quick Bytes (2012-date) [a course on diverse issues related to academic life as a graduate student (e.g., time management, writing grants, giving talks, etc.)]

Translational Immunology (2014, 2017)

Setting Expectations and Giving Feedback (2012-date) [a series of workshops for Assistant Professors on how to run a research group]

Sponsoring faculty member for a student-run course in:

Professional and Leadership Development (MI 221; 2009-10)

Discussion group leader in:

Cell Biology of Physiological Processes (MCP221; 1996, 1998)

The Responsible Conduct of Research (MED255; 1995, 1997, 2004)

Academic Chats (2009-date)

Faculty Director at Stanford, Schmidt Science Fellows, Schmidt Futures (2018-19)

**Research supervisor for a total of twenty-six Ph.D. students and forty-eight post-doctoral fellows (see below for full list).**

[1990-1993] Marine Biological Laboratory, Woods Hole, Massachusetts. Course Instructor (1990) and Course Director (1991-93) of an intensive nine-week summer course in "Modern Parasitology" involving about 9 residential faculty, 35 lecturers and twenty graduate/post-doctoral students each year.

## Honors and Awards:

1972-1973 Ontario Scholarship, Ontario Government  
1974-1975 University Scholarship, McGill University  
1975-1976 Moyse Traveling Award, McGill University  
1976-1978 Sir Arthur Sims Memorial Scholarship, Royal Society of Canada  
**1976-1979 Overseas Science Research Scholarship, Royal Commission for the Exhibition of 1851**  
1977 Rennie Bequest, Edinburgh University  
1983-1984 Mellon Foundation Fellow, Stanford University  
1984-1986 Special Fellowship in Molecular Parasitology, Burroughs Wellcome  
1984-1986 Hume Faculty Scholar, Stanford University  
**1986-1991 Burroughs Wellcome Scholar in Molecular Parasitology**  
1987-1988 Mellon Foundation Fellow, Stanford University  
1990-1991 Fogarty Senior International Fellowship  
1994 Scaife Lecturer, University of Edinburgh  
1994 Nelson Lecturer, Montana State University  
1994 Australian Society of Parasitology Invited Lectureship

1994-2004 MERIT Award, NIH  
1999 Elected Chair of Gordon Conference on Parasitism  
**2002 Bass/Dunlevie Family University Fellow in Undergraduate Education, Stanford University**  
2002-2007 Senior Scholar in Global Infectious Diseases, Ellison Medical Foundation  
2005 Meyer Lecturer, University of California, San Francisco  
2007 Honors Lecturer, School of Medicine, New York University  
2007 Elected Fellow of the American Academy of Microbiology  
**2008 Leuckart Medal, German Society for Parasitology**  
2009 Distinguished Lecturer, Centers for Disease Control, Atlanta  
2009 Elkan Blout Lecturer, Marine Biological Laboratory, Woods Hole  
2009 Elsevier Lecturer, Australian Society of Parasitology  
2010 Noble Lecturer, University of Oklahoma  
2010 Marian Koshland Lecturer, University of California, Berkeley  
**2012 Inductee, Inventor Hall of Fame, Stanford University**  
2012 Keynote Speaker, Molecular Parasitology Meeting, Woods Hole, MA  
2012 Rose Lecturer, Columbia University, New York  
2013 Willison Lecturer, University of Michigan  
**2013 Award for Outstanding Service to Graduate Students, Stanford School of Medicine**  
2013 Officers' Choice Recognition Award, Stanford University Postdoctoral Association  
2014 Stanford Biosciences Excellence in Mentoring Award  
2014 Ricketts Lecturer, University of Chicago  
**2015 Burt and Marion Avery Endowed Professor of Immunology, Stanford University**  
2015 Larsen Distinguished Lecturer, Washington State Univ.  
2015 Centenary Speaker, Walter and Eliza Hall Institute, Melbourne Australia  
**2016 Member, National Academy of Sciences, USA**  
2016 Outstanding Ally Award, Stanford University Postdoctoral Association

### Editorial, Reviewing and Advisory Work:

Editor: **Microbiological Reviews (ASM) (1992-1997)**  
Section Editor: **PLoS Pathogens (2005-2007, 2008-2009)**  
**Curr. Opinion in Microbiology (2002)**  
Editorial Board Member: **Experimental Parasitology (1987-1994)**  
**Molecular Biochemical Parasitology (1987-date)**  
**J. Euk. Microbiology (prev. J. Protozool.) (1988-1995)**  
**Annual Review of Microbiology (1993-1998; 2006)**  
**Parasitology Today/Trends in Parasitology (2001-2006)**  
**Faculty of 1000 - Co-head Parasitology Section (2001-2014)**  
**mBio (ASM) (2010-date)**  
Guest Editor: **Proc. Natl. Acad. Sci. (USA) (2010)**  
Study section participant for the following NIH review panels (study sections):  
- **PTHE (Pathogenic Eukaryotes; née, Tropical Medicine and Parasitology; ad hoc member: 10/93, 6/94, 6/97, 6/99, 2/02, 2/05, 10/10, 6/12; regular member: 7/14 – 6/17)**  
- Infectious Etiology of Chronic Disease RFA (10/01)  
- AOIC (AIDS Opportunistic Infections and Cancer; 7/06, 7/07, 8/09)  
- Microbiology and Infectious Disease F13 (3/08)  
- Distinguished Editorial Panel for RC4 (ARRA) (6/10)  
NIH Reviewers Reserve (1994-date)  
Ad hoc grant reviewer: NSF, Wellcome Trust, USDA, MRC-Canada, MRC-UK, etc.  
Member, Joint Steering Committee, Scientific Working Group on African Trypanosomiasis, UNDP/World Bank/WHO (1988-1990).

Member, External Review Committee, ILRAD, Nairobi, Kenya (1988)  
Member, WHO Working Group on Toxoplasmosis Vaccine Development and Technology (1990-1996)  
Member, University of California – University-wide AIDS Research Program, Clinical Sciences Panel (1995)  
Member (1996-1999) and Chair (1999-2001) Advisory Committee, Molecular Parasitology, Burroughs Wellcome Fund  
Member, Scientific Review Committee, Seattle Biomedical Research Institute (1999).  
Member, Pathogen Sequencing Advisory Group, Sanger Center, Cambridge, UK (2002-2007)  
Member, Initial Review Group, Global Infectious Diseases, Ellison Medical Foundation (2003-2005).  
Reviewer, Gates Foundation Grand Challenges in Global Health (2004).  
Member, Euk. Pathogens and Disease Target Selection Working Group, NHGRI/NIAID (2007-2008).  
Member, Selection Committee for C.C. and Alice Wang Award in Molecular Parasitology, American Society for Biochemistry and Molecular Biology (2011-2014)  
Member (2012-2013) and Chair (2013-2016), Advisory Committee, Pathogenesis of Infectious Disease, Burroughs Wellcome Fund  
Member, Committee on Next Generation Researchers Initiative, National Academies of Sciences, Engineering and Medicine (2016-2018)  
**Member, Committee on “Addressing the Underrepresentation of Women in Science, Engineering and Medicine”, National Academies of Sciences, Engineering and Medicine (2018-2019)**  
**Member, Academic Council, Schmidt Science Fellows, in partnership with the Rhodes Trust, Oxford, UK (2019-date)**

### **Other Professional Activity:**

Organizer, West Coast Kinetoplastida Meeting, Asilomar (1988)  
Co-organizer, International Toxoplasma Symposium, New Hampshire (1990)  
Instructor, Marine Biological Laboratory Summer Course in "Biology of Parasitism", Woods Hole (1990)  
**Director, Marine Biological Laboratory Summer Course in "Biology of Parasitism: Modern Approaches", Woods Hole (1991-93)**  
Co-organizer, Society of Protozoology - Toxoplasma Workshop, Cleveland (1994)  
Vice-Chair, Gordon Research Conference on Parasitism (1997)  
**Chair, Gordon Research Conference on Parasitism (1999)**  
Co-organizer, Functional Genomics of Host-Pathogen Interaction; Cold Spring Harbor Laboratory/Sanger Centre, Cambridge, UK (2004 and 2006)

## Supervision of PhD Students and Post-doctoral Fellows:

<b>Ph.D. Students</b>	<b>Year Ph.D. Received</b>	<b>Current Position [funding source for current students]</b>
SUTTON, Richard	1987	<i>Now, Prof.</i> , Dept. Medicine (Infectious Dis.) and Microbial Pathogenesis, Yale School of Medicine, New Haven, CT.
BEALS, Thomas	1989	<i>Now, Scientist</i> ; Thorne Diagnostics, Beverly, MA
HOBBS, Maurine	1989	<i>Now, Res. Assist. Prof.</i> , Dept. Internal Medicine, University of Utah., Salt Lake City, UT
OSSORIO, Pilar	1989	<i>Now, Prof.</i> , Schools of Law and Medicine (Bioethics), University of Wisconsin, Madison, WI
NAGEL, Susana	1989	<i>Now, not known.</i>
HSIA, Ru-Ching	1992	<i>Now, Assoc. Prof.</i> , Dept. Neural and Pain Sciences, University of Maryland, Baltimore, MD
BLACK, Michael	1999	<i>Now, Prof.</i> , Dept. Biol. Sci., California Polytechnic State University, San Luis Obispo, CA
McfADDEN, Diane	1999	<i>Now, Program Manager</i> , Center for Research in Diagnostics and Discovery, Columbia University, New York, NY
CAMPS, Manuel	2001	<i>Now, Assoc. Prof.</i> Dept. Environmental Toxicol., University of California, Santa Cruz, CA
CLEARY, Michael	2004	<i>Now, Assoc. Prof.</i> , School of Natural Sciences, University of California, Merced, CA
DUNN, Joe Dan	2006	<i>Now, Maître-Assistant</i> , University of Geneva, Switzerland.
FOUTS, Ashley	2006	<i>Now, Senior Program Manager</i> , Array BioPharma Inc, Boulder, CO
RAVINDRAN, Sandeep	2009	<i>Now, Science Writer</i> , Washington, DC
PHILLIPS-HALL, Carolyn [co-mentor]	2009	<i>Now, Associate Biosafety Officer</i> , University of Florida, Gainesville, FL
ANDERSON, Matt	2009	<i>Now, Assist. Prof.</i> , Ohio State University, Columbus, OH
ONG, Yi-Ching	2010	<i>Now, Director</i> , Service Focus, Pace Center for Civic Engagement, Princeton University, NJ
POUKCHANSKI, Anya	2013	<i>Now, , Localization Program Manager</i> , Google NBU, Mountain View, CA
PERNAS, Lena	2013	<i>Now, Group Leader (~Assist. Prof.)</i> , Max Planck Institute for Biology of Ageing, Cologne, Germany
SHASTRI, Anjali	2013	<i>Now, Project Manager</i> , 23andMe, Mountain View, CA
FRANCO, Magdalena	2014	<i>Now, Biomedical Researcher</i> , Lawrence Livermore National Laboratory, Livermore, CA
NAKAMOTO, Margaret	2017	<i>Now, Senior Scientist</i> , Becton Dickinson, San Jose, CA
MARINO, Nicole	2017	<i>Now, Post-doc</i> , Dept. Microbiology and Immunology, Univ. California, San Francisco, CA
RASTOGI, Suchita	In progress	[NIH MSTP Training Grant; NIH F30 Individual NRSA Fellowship]

CYGAN, Alicja	In progress	[NSF]
THEISEN, Terence	In progress	[NIH Training Grant; Stanford Interdisciplinary Graduate Fellowship]
FERREL, Abel	In progress	[NIH Training Grant; Gilliam Fellowship, HHMI]

<b>Post-Doctoral Fellows</b>	<b>Years</b>	<b>Major Funding Source; Current Position</b>
CAMPBELL, David, Ph.D.	1983-85	Boothroyd Grant; <i>now Prof.</i> , Microbiol./Immunol., UCLA, CA
BURG, Lawrence, Ph.D.	1984-88	Bank of America Giannini Fellowship; <i>now Manager</i> , Assay Development, Instrumentation Laboratory, Bedford, MA
AMAN, Rashid Abdi, Ph.D.	1985-88	Boothroyd Grant; <i>now, Chief Administrative Secretary</i> , Kenya Ministry of Health, Nairobi
MUHICH, Michael, Ph.D.	1986-88	NIH-NRSA (individual); <i>now Senior Vice-President (Corporate Development)</i> , Stratagene, La Jolla, CA
POULETTY, Philippe, M.D.	1986-87	Clonatec Fellowship (France); <i>now President &amp; CEO</i> , DrugAbuse Sciences, Inc., CA; <b>Chairman</b> , France Biotech, Paris, France
BUELOW, Roland, Ph.D.	1987-89	DAAD Fellowship (Germany); <i>now Chief Executive Officer</i> , Teneobio Inc., Menlo Park, CA
SIBLEY, David, Ph.D.	1987-91	Merck Fellowship; <i>now Alan A. and Edith L. Wolff Distinguished Prof.</i> , Mol. Micro., Washington Univ., MO
BANGS, James, Ph.D.	1988-92	Damon-Runyon Fellowship; <i>now Grant T. Fisher Prof. and Chair</i> , Microbiol. and Immunol., State Univ. of New York, Buffalo, NY
WITTE, Christine, Ph.D.	1988-90	DAAD Fellowship (Germany); <i>then Country Director</i> (Malawi), International Eye Foundation; <i>now Teacher</i> (Chemistry), Baltimore, MD
DORN, Patricia, Ph.D.	1989-92	NIH-NRSA (individual); <i>now Hutchinson Distinguished Prof.</i> , Biological Sciences, Loyola Univ., LA
KIM, Kami, M.D.	1990-94	NIH-KO8; <i>now Prof.</i> , Medicine/Infectious Diseases, Univ. South Florida, Tampa, FL
SOLDATI-FAVRE, Dominique, Ph.D.	1991-95	EMBO Fellowship; <i>now Prof. and Vice Dean</i> , Microbiol. and Mol. Medicine, University of Geneva, Switzerland
TOMAVO, Stanislas, Ph.D.	1991-94	Boothroyd Grant; <i>now CNRS Director of Research</i> , 1st Class (~ <b>Prof.</b> ), University of Paris, Saclay, France
FIELD, Mark, D. Phil.	1993-94	Boothroyd Grant; <i>now Prof.</i> , College of Life Sciences, University of Dundee, UK
SEEBER, Frank, Ph.D.	1993-95	German AIDS Foundation Fell'p; <i>now Prof.</i> , Humboldt University, Berlin, Germany
WILSON, Keith, Ph.D.	1992-97	NIH-NRSA; <i>now President and Chief Scientific Officer</i> , Nalo Therapeutics, San Francisco, CA
ORTEGA-BARRIA, Eduardo,	1993-97	NIH-KO8; <i>now Vice Pres. and Head</i> , Clinical

M.D.		R&D and Medical Affairs, Latin America and Caribbean, Glaxo-Smith-Kline Vaccines
BONNEFOY, Serge, Ph.D.	1995-97	Institut Pasteur Fellowship; <i>now</i> Chargé de Recherche (~ <b>Assoc. Prof.</b> ), Institut Pasteur, Paris, France
HEHL, Adrian, Ph.D.	1995-98	Swiss National Science Foundation Fellowship and Roche Research Foundation Fellowship; <i>now Prof.</i> , University of Zurich, Switzerland
MANGER, Ian, D. Phil.	1993-98	Boothroyd Grant; <i>now Director, Science and Technology</i> , SRI International, Arlington, VA
LEKUTIS, Chris, Ph.D.	1997-2001	Bank of America Giannini Fellowship; NIH-NRSA (individual); <i>now, Senior Patent Agent</i> , Morrison and Foerster, LLP, San Francisco, CA
KNOLL, Laura, Ph.D.	1995-2001	Damon-Runyon Fellowship; Burroughs Wellcome Fund Career Development Award; <i>now, Prof.</i> , Mol. Micro/Immunol., Univ. Wisconsin, Madison, WI
SINGH, Upinder, M.D.	1998-2001	Burroughs Wellcome Fund Career Development Award; NIH KO8; <i>now: Prof. and Chief</i> , Infectious Diseases, Stanford Univ., CA
GRIGG, Michael, Ph.D.	1997-2002	Alameda Foodborne Diseases; <i>now Chief (~Prof.)</i> Mol. Parasitology Unit, Lab. Of Parasitic Diseases, NIAID, NIH, Bethesda, MD
BLADER, Ira, Ph.D.	1999-2003	NIH-NRSA (individual); <i>now Prof.</i> , Microbiol. and Immunol., SUNY, Buffalo, NY
BRADLEY, Peter, Ph.D.	1997-2003	American Cancer Society; <i>now, Prof.</i> , Micro/Immuno./Mol. Genetics., UCLA, CA
ARRIZABALAGA, Gustavo, Ph.D.	1999-2004	NIH-NRSA (individual); <i>now, Prof.</i> , Dept. Pharmacology & Toxicology, Indiana University, IN
SCHWARZ, Jodi, Ph.D.	2002-04	NIH-NRSA (individual); <i>now, Assoc. Prof.</i> Vassar College, Poughkeepsie, NY
ALVAREZ, Gema, Ph.D., B.V.M.	2004-05	Fellowship, Ministry of Science and Education, Spain; <i>now, Assoc. Prof.</i> Univ. Complutense Madrid, Spain.
ALEXANDER, Dave, Ph.D.	2001-05	NIH-NRSA (individual); <i>now, Alliance Manager</i> , TwoPore Guys, Santa Cruz, CA
COLLER-MONAREZ, Susan, Ph.D.	2003-06	California UARP Post-doc Fellowship; <i>now, Deputy Assistant Secretary, Strategy</i> , Office of Strategy, Policy and Plans, US Department of Homeland Security, Washington, DC
KIM, Seon-Kyeong, Ph.D.	2002-07	Boothroyd Grant; <i>now, Lead Content Scientist</i> , Color Genomics, Burlingame, CA
SAEIJ, Jeroen, Ph.D.	2002-07	California UARP Postdoc Fellowship; <i>now, Assoc. Prof.</i> , Dept. Pathology, Microbiology and Immunology, Univ. California, Davis, MA
BOYLE, Jon, Ph.D.	2003-08	NIH-NRSA (individual); <i>now, Assoc. Prof.</i> , Dept. Biological Sciences, Univ. Pittsburgh, PA
LODOEN, Melissa, Ph.D.	2006-09	Giannini Foundation Post-Doc Fellowship; <i>now Assoc. Prof.</i> , Dept. Molecular Biology and



		Biochemistry, Univ. California, Irvine, CA
ZEINER, Gus, Ph.D.	2004-10	NIH-NRSA (individual); <i>now</i> <b>Chief Scientific Officer</b> , Chimera Bioengineering, Menlo Park, CA
TYLER, Jessica, Ph.D.	2006-11	AHA Fellowship; <i>now</i> <b>Assoc. Director and Head, Global Publications</b> , Takeda Pharmaceutical, Boston, MA
CAFFARO, Carolina, Ph.D.	2008-12	AHA Post-doctoral Fellowship; <i>now</i> , <b>Associate Director</b> , Synthorx, San Diego, CA
KOSHY, Anita, M.D.	2007-12	HIV/AIDS Research Program; NIH KO8 Grant; <i>now</i> , <b>Assoc. Prof.</b> , BIO5 and Dept. Neurology, Univ. Arizona, Tucson, AZ
REESE, Michael, Ph.D.	2006-13	ACS Post-doctoral Fellowship; <i>now</i> , <b>Assist. Prof.</b> , Dept. Pharmacology, University of Texas Southwestern, TX
TREECK, Moritz, Ph.D.	2009-13	German Research Foundation and AHA Postdoctoral Fellowships; <i>now</i> , Group Leader (~ <b>Assist. Prof.</b> ), Div. Parasitology, National Institute of Medical Research, Mill Hill, UK
BUCHHOLZ, Kerry, Ph.D.	2008-13	NIH-Training grant (departmental); ACS Post-doctoral Fellowship; <i>now</i> , <b>Senior Research Scientist</b> , Inf. Dis., Genentech, South San Francisco, CA
EWALD, Sarah, Ph.D.	2010-16	Damon Runyon Fellowship; <i>now</i> , <b>Assist. Prof.</b> Dept. Microbiol., Immunol. and Cancer Biology, University of Virginia, Charlottesville, VA
KELLY, Felice, Ph.D.	2011-16	NIH-Training Grant (departmental and individual (F32)); <i>now</i> , <b>Senior Research Associate</b> , Oregon Health Sciences University, Portland, OR
PANAS, Michael, Ph.D.	2012-16	NIH-Training Grant (interdepartmental); <i>now</i> , <b>Research Scientist</b> , Dept. Microbiol. and Immunol., Stanford Univ., CA
GUITON, Pascale, Ph.D.	2012-17	NIH Training Grant (interdepartmental); <i>now</i> , <b>Assist. Prof.</b> , Cal. State Univ., East Bay, CA
NAOR, Adit, Ph.D.	2013-	Human Frontier Science Program
SEGEV-ZARKO, Li-av, Ph.D.	2017-	BARD Fellowship

## Stanford University Service

University:

Undergraduate Adviser (1991-2005)

Member, Faculty Housing Committee (1993)

Member, Health and Safety Committee (1996-1997)

Chair, Health and Safety Committee (1997-1998)

Member, Emergency Planning Steering Committee (1997-1998)

Member, Provost's Committee on Equity Holding (2000-2001)

Member, Presidential Commission on Graduate Education (2004-2005)

Member, Faculty Senate (2006-2008)

**Member, University Advisory Board (2007-2008; 2009-2010; 2019-2022)**

**Associate Vice Provost for Graduate Education (2008-2018)**

**Associate Vice Provost for Graduate Education and Postdoctoral Affairs (2018-date)**

Member, Faculty Advisory Board for Introductory (undergraduate) Seminars (2009-2010)  
Member, Board of Overseers, Vice Provost for Undergraduate Education (2010-2011)  
Member, Advisory Panel on Investment Responsibility and Licensing (2011-2012)  
Member, Search Committee for Dean of the School of Medicine (2011-2012)  
Member, Search Committee for Stanford Ombudsperson (2017-2018)  
Member, University Faculty Senate (2018-2019)  
Member, Affordability Task-Force - Postdocs (2018-2019)

School of Medicine:

Member, Faculty Budget Review Committee (1985-1989)  
Member, Medical Scientists Training Program (1986-1990)  
Member, Radiation Safety (1986-1989)  
Member, Medical Scholars Research (1986-1989)  
Member, Search for Chairman of Diagnostic Radiology (1987-1988)  
Member, Dean's Task Force on Graduate Admissions (1987-1988)  
Director, Combined Admissions Mode Program (1988-1990)  
Co-director, Combined Admissions Mode Program (1991 - 1993)  
Member, Adv. Comm., Prog. in Molecular and Genetic Medicine (1988-2002)  
Member, Subcommittee in Graduate Education in Basic Sciences (1990)  
Member, Committee on Recruitment of Minority Basic Scientists (1990)  
Director, MacArthur Program in Parasitology (1990-1995)  
Member, Dean's Committee on Graduate Student Education (1991-1995)  
Member, Dean's Faculty Budget Advisory Committee (1991-1992)  
Member, Faculty Mentoring Program (Mentor) (1994-2000)  
Member, Dean's Steering Committee (1995-1998)  
Member (Alternate), Biosafety Committee (1997-1999)  
Chair, Search Committee for Chair of Pathology (1997-1998)  
Member, Medical Education Development Committee (1999-2000)  
Member, Research Council (1999-2001)  
Member, Faculty Campaign Planning Committee (1999-2001)  
Member, Commencement Committee (1999-2001)  
Member, Compensation Board (1999-2002)  
Co-Director, HHMI Biomedical Research Support Program (1999-2003)  
Member, Finance Committee (1999-2002)  
Member, Reserves Committee (2001-2002)  
Member, Operating Budget Committee (2002-2003)  
Member, Teaching Incentive Committee (2002-2003)  
**Senior Associate Dean for Research (2002)**  
**Senior Associate Dean for Research and Training (2003-2005)**  
Member, Faculty Awards Committee (2005-2006)  
Member, Faculty Transition Task Force (2007-2008)  
Chair, Faculty Advisory Committee for the Veterinary Service Center (2008-2009)  
Member, Advisory Committee for Lane Library (2011-2012)  
Member, Education Reform Oversight Committee (2012-2013)  
Chair, Task Force on Post-doc Mentoring (2013)  
Member, MSTP Advisory Committee (2013-date)  
Director, IRACDA Program for Postdoctoral Training (2015-date)  
Member, Steering Committee of the Teaching and Mentoring Academy (2015-2017)  
Member, Faculty Advisory Committee on Clinical Research Quality (2016-2018)

Department of Microbiology and Immunology:

Member, Undergraduate Studies Comm. (1984-1990); Chair, (1984-1990)

Chair, Graduate Studies Comm. (1984-1988)  
Member, Graduate Admissions Comm. (1984-1988; 2007-2008)  
Co-Chair, Faculty Search Comm., Parasitology (1987)  
Member, Training Grant Steering Comm. (1987-1998); Co-chair (1987-1989)  
**Co-Chair of Department (1994-1999)**  
**Chair of Department (1999-2002)**  
Chair, Seminar Committee (2006-2007)  
Chair, Faculty Search Committee (2008-2009)  
Chair, Annual Retreat Planning Committee (2010-2013)  
Co-Director, Graduate Studies (2013-2018)  
Chair, Faculty Search Committee (2019-2020)

## **Invited Talks (since 2007):**

2007:

Coral/Dinoflagellate Symbiosis Cell Biology Workshop, Heron Island, Australia  
Keystone Symposium on Imaging Immune Responses, Keystone, CO  
Honors Lecture, New York University School of Medicine, NY  
9<sup>th</sup> International Congress on Toxoplasma, Chico Hotsprings, MT  
Marine Biology Lab, Biology of Parasitism Course, Woods Hole, MA

2008:

Francis Marion University, Florence, SC  
University of North Carolina, Dept. Cell and Developmental Biology, Chapel Hill, NC  
Leuckart Medal Lecture, German Society for Parasitology, Hamburg, Germany  
University of Pennsylvania, Microbiology Seminar Series, Philadelphia, PA  
Laboratory of Parasitic Diseases, NIAID, NIH, Bethesda, MD  
Marine Biology Lab, Biology of Parasitism Course, Woods Hole, MA  
FEBS International Summer School on Pathogen-Host Interplay, Berlin, Germany  
Universidade Federal de Rio de Janeiro, Brazil  
Toxoplasma Centennial Congress, Buzios, Brazil  
University of California, School of Natural Sciences, Merced, CA

2009:

University of California, Santa Cruz, Dept. Micro. and Env'tl. Toxicol., Santa Cruz, CA  
Laboratory of Malaria and Vector Research, NIAID, NIH, Twin Brooks, MD  
Centers for Disease Control, Atlanta, GA  
Vassar College, Biology Dept., Poughkeepsie, NY  
Marine Biology Lab, Biology of Parasitism Course, Woods Hole, MA  
Australian Society for Parasitology, Sydney, Australia

2010:

Harvard School of Public Health, Dept. Immunol. and Infect. Diseases, Boston, MA  
University of California, San Francisco, Dept. Micro. and Immunol., San Francisco, CA  
EMBO Workshop – Emerging Themes in Infection Biology, Nice, France  
Marine Biology Lab, Biology of Parasitism Course, Woods Hole, MA  
Noble Lecture, University of Oklahoma, Oklahoma City, OK  
California Institute of Technology, Dept. Biology, Pasadena, CA  
Marion Koshland Lecture, University of California, Berkeley, CA

2011:

International Congress of Protozoology, Berlin, Germany  
11<sup>th</sup> International Congress on Toxoplasmosis, Ottawa, Canada  
Life Sciences Colloquium, Berlin, Germany

2012:

University of Pennsylvania, Dept. Microbiology, Philadelphia, PA  
American Society of Biochemistry and Molecular Biology, San Diego, CA  
Harry M. Rose Memorial Lecture, Microbiol. & Immunol., Columbia Univ., New York, NY  
Rockefeller University, “Molecular Parasitology: The Next Frontier Symposium”, New York, NY  
Keynote Speaker, Molecular Parasitology Meeting, Woods Hole, MA  
Keynote Speaker, ICB/MBL Biology of Parasitism Course, University of Sao Paulo, Brazil  
Keynote Speaker, Southern California Eukaryotic Pathogens Symposium, Riverside, CA

2013:

Willison Lecture, University of Michigan, Dept. Microbiol. & Immunol., Ann Arbor, MI  
Oregon Health Sciences University, Dept. Immunol. & Microbiol., Portland, OR  
University of California, Infectious Diseases and Immunity, Berkeley, CA  
12<sup>th</sup> International Congress on Toxoplasmosis, Oxford, UK  
Yale University, Microbial Pathogenesis, New Haven, CT  
University of Denver, Dept. Biochemistry and Molecular Genetics, Denver, CO

2014:

George Washington University, Institute for Biomedical Sciences, Washington, DC  
Johns Hopkins University, School of Public Health, Baltimore, MD  
University of California, Molecular and Cellular Biology, Berkeley, CA  
International Congress of Parasitology, Mexico City, Mexico  
Awaji International Forum on Infection and Immunity, Nara, Japan  
Dartmouth University, Life Sciences Symposium, Hanover, NH  
Notre Dame University, Clinical Translational Seminars, Notre Dame, IN  
Ricketts Symposium Lecturer, Committee on Microbiology, University of Chicago, IL

2015:

Larsen Lecture, College of Veterinary Medicine, Washington State University, Pullman, WA  
Centenary Symposium Speaker, Walter and Eliza Hall Institute of Med. Research, Melbourne, Australia

2016:

Keynote Speaker, Annual Molecular Parasitology/Vector Biology Symposium, Univ. Georgia, GA  
Miller Symposium, Marin, CA  
Session Chair and Speaker, Gordon Conference on Parasitism, Newport, RI  
Scripps Research Institute, La Jolla, CA  
University of Utah, Salt Lake City, UT

2017:

Plenary Lecture, Molecular Microbiology Symposium, UT Southwestern, Dallas, TX  
Collège de France, International Symposium, Paris, France  
Crick Institute, Department of Infectious Disease, London, UK  
ThermoFisher Distinguished Speaker, SUNY, Buffalo, NY  
University of Wisconsin, Department of Medical Microbiology and Immunology, Madison, WI

2018:

University of Arizona, Bio5 Institute, Tucson, AZ  
California State University, Department of Biology, Northridge, CA  
Keystone Meeting on Host-Pathogen Interaction, Monterey, CA  
Duke University, Genetics Program, Durham, NC  
University of Pennsylvania, Cell and Molecular Biology Program, Philadelphia, PA  
University of California, San Francisco, Program in Microbial Pathogenesis, San Francisco, CA

2019:

15<sup>th</sup> Biennial International Toxoplasma Congress, Flaminia, Colombia  
University of California, San Francisco, Dept. Biochemistry and Biophysics, San Francisco, CA  
Washington University, Dept. of Mol. Microbiol. St. Louis, MO

## Past, Current and Pending Research Support:

### Current:

[dates are entire period funded since inception; amounts are Direct Costs for most recently funded year]

RO1 AI021423 (P.I. John C. Boothroyd) 07/1/14 - 06/30/19 2.4 cal. mo.

NIH/NIAID \$339,300 Annual Direct Dollars

“Toxoplasma Rhostry Function.”

This is focused on how rhostry proteins are introduced into the host cell during invasion and what changes those injected proteins cause within an infected host cell in vivo.

RO1 AI129529-01 (P.I.: John C. Boothroyd) 08/09/18-07/31/22 3.0 cal. mo.

NIH/NIAID ~\$347,941 Annual Directs

“Identifying the machinery that translocates Toxoplasma effectors into the host cell.”

The major goals of this project are to identify the machinery used to translocate dense granule effectors across the parasitophorous vacuole membrane into the host cell.

Intercampus Initiative (P.I. Wah Chiu) 10/15/18-10/14/21 0 cal. mo.

Chan-Zuckerberg Biohub ~\$65,000 Annual Direct Dollars to Project One.

Project One Leader: John C. Boothroyd

“Integrated Imaging to Understand Complex Biological Machines in Context”

This is a collaborative effort between Stanford, UCSF and UC Berkeley to use cryo-electron tomography to image the invasion machinery used by Toxoplasma when entering a cell.

### Pending:

K12 - IRACDA (P.I.: John C. Boothroyd) 09/01/19-08/31/24 1.2 cal. mo.

NIH/NIGMS ~\$657,000 Annual Direct Dollars

“A Stanford - SJSU Postdoctoral Training Program to Enhance URM Teaching.”

The major goals of this project are to train postdoctoral fellows for a research and teaching career, especially at institutions that excel at serving under-represented minorities.

### Previous Major Grants:

[dates are entire period funded; order is based on when expired]

National Institutes of Health 5 RO1 AI-25732-03

P.I. John C. Boothroyd (10% effort)

“Rapid Diagnostic Procedures for Opportunistic Parasites”

Final Year Annual Direct Costs: ~\$85,000

Period: 9/15/87-8/31/90

Burroughs Wellcome Fund

P.I. John C. Boothroyd

“Scholar Award in Molecular Parasitology”

Final Year Annual Direct Costs: \$60,000

Period: 9/1/86-8/31/91

MacArthur Foundation

Program Director: John C. Boothroyd

“Program in Molecular Parasitology”

Project Title: “Genetic Analysis of Toxoplasma”.

P.I. John C. Boothroyd  
Average Annual Direct Costs: ~\$50,000  
Period: 1/1/85-12/31/95

National Institutes of Health 2 RO1 AI-21025  
P.I. John C. Boothroyd (35% effort)  
"Molecular Basis of Pathogenicity of African Trypanosomes"  
Final Year Annual Direct Costs: ~\$155,000  
Period: 3/1/84-2/28/97

National Institutes of Health UO1 AI-30230-04 (NCDDG)  
P.I. Jack S. Remington  
Project Leader: John C. Boothroyd (5% effort)  
Project Title: "Identification of Drug Targets through Genetics"  
Final Year Annual Direct Costs \$63,875  
Period: 6/1/90-11/30/98

University of California R96-ST-105 (Universitywide AIDS Research Program)  
P.I. John C. Boothroyd (10% effort)  
"Identification of genes involved in invasion by Toxoplasma."  
Final Year Annual Direct Costs: \$60,000  
Period: 7/1/96-6/30/98

Alameda County District Attorney's Office.  
P.I. John C. Boothroyd (5% effort)  
"Strain-specific serological typing of Toxoplasma infection."  
Final Year Annual Direct Costs: \$68,309  
Period: 7/1/99-12/31/02.

National Institutes of Health RO1 AI45057 (John C. Boothroyd)  
P.I. John C. Boothroyd (25% effort)  
"Genetics of Invasion and Egress in Toxoplasma."  
Final Year Annual Direct Costs: \$189,120  
Period: 3/1/99-2/28/06.

Senior Scholar Award in Global Infectious Diseases.  
Ellison Medical Foundation  
P.I. John C. Boothroyd  
"Evolution of Virulence in Eukaryotic Pathogens."  
Final Year Annual Direct Costs: \$150,000  
Period: 11/1/02-10/31/06

National Institutes of Health U19 AI057229 (P.I.: Mark M. Davis)  
NIH/NIAID  
Sub-project P.I.: John C. Boothroyd (3% effort)  
"Predicting Disease Outcome in Human Toxoplasmosis Based on Immune Profiling"  
Final Year Annual Direct Costs: \$75,000  
Period: 12/1/09-11/30/11

EuPathDB (P.I. David S. Roos)  
NIH/NIAID

Sub-contract P.I. John C. Boothroyd (5% effort)  
“High Throughput analysis of oocyst development in Toxoplasma”  
Annual Direct Costs: ~\$103,000  
Period: 8/31/10-7/31/11

RO1 AI41014 (P.I. John C. Boothroyd)  
NIH/NIAID  
“Developmental Biology of Toxoplasma”  
Annual Direct Costs: ~\$225,000  
Period: 12/1/97-11/30/12

R21 AI112962-01 (P.I.: John C. Boothroyd)  
NIH/NIAID  
“Role of c-Myc up-regulation in Toxoplasma infection.”  
Final Year Annual Direct Costs: ~\$125,000  
Period: 12/01/14-11/30/16

R21 AI120476-01 (P.I.: John C. Boothroyd)  
NIH/NIAID  
“Role of pseudouridylation in Toxoplasma differentiation.”  
The major goals of this project are to determine how a pseudouridine synthase operates to enable differentiation of Toxoplasma tachyzoites into bradyzoites.  
Period: 07/01/15-06/30/17

RO1 AI73756-10 (P.I.: John C. Boothroyd)  
NIH/NIAID  
“Strain-specific host-pathogen interactions in toxoplasmosis.”  
The major goals of this project are to use genetic crosses between strains that differ in their virulence to identify and then characterize proteins that play a crucial role in mediating the host-pathogen interaction.  
Period: 08/01/07-07/31/18

K12 GM088033 (P.I.: John C. Boothroyd)  
NIH/NIGMS ~\$400,000 Annual Direct Dollars  
“A Stanford - SJSU Postdoctoral Training Program to Enhance URM Teaching.”  
The major goals of this project are to train postdoctoral fellows for a research and teaching career, especially at institutions that excel at serving under-represented minorities.  
Period: 09/01/10-08/31/18 (P.I. was Joseph Puglisi from 09/01/10-04/31/15)

## **Patents Issued:**

1. Boothroyd, J.C., Cross, G.A.M., Highfield, P., Winther, M. Rowlands, Brown, F. and Harris, T.J. Recombinant DNA expression vector encoding for foot and mouth disease virus proteins U.S. No. 4743554.
2. Burg, J.L., Pouletty, P.J. and Boothroyd, J.C. Selective Amplification of Target Polynucleotide Sequences. U.S. No. 5437990, 6090951 and 6410276; EPO 0682120 [note: as of 2012, this patent ranked in the top 10 on the list of “inventions” ever to come out of Stanford University, in terms of cumulative royalties paid on licenses]
3. Sibley, L.D., Buelow, R. and Boothroyd, J.C. Composition and method for distinguishing virulent and non-virulent Toxoplasma infections. U.S. No. 5429922
4. Burg, J.L., Kasper, L.H. and Boothroyd, J.C. Diagnostic Genes for Toxoplasmosis. U.S. No. 5629414; EPO 89903608.1



5. Burg, J.L., Kasper, L.H. and Boothroyd, J.C. P30 peptides of *Toxoplasma gondii*. U.S. No. 5859196
6. Kim, K., Soldati, D. and Boothroyd, J.C. Transfection and genetic manipulations in obligate intracellular parasites. U.S. No. 5643718, 5976553
7. Cleary, M.D. and Boothroyd, J.C. Biosynthetic labeling and separation of RNA. EPO 04760942.5

## **Publications:**

### **I. Books:**

Boothroyd, J.C. and Komuniecki, R. (editors). 1995. Molecular Approaches to Parasitology. Wiley-Liss, New York.

### **II. Book Chapters:**

1. Holder, A.A., Boothroyd, J.C. and Cross, G.A.M. 1980. Trypanosome Variant Surface Glycoprotein: The C-Terminus of the Protein is the Location of Antigenically Cross Reacting Carbohydrate Groups of a Putative Membrane Attachment Sequence and the Site of Proteolytic Processing. In, The Host Invader Interplay, H. Van den Bosche (ed.), Elsevier/North Holland Biomedical Press, Amsterdam, pp. 249-252.
2. Boothroyd, J.C., Campbell, D.A. and Sutton, R.E. 1985. Expression of Surface Antigen Genes in *Trypanosoma brucei* Involves a Novel System of Discontinuous Transcription. In: Vaccines 85, R. Channock, R. Lerner and F. Brown (eds.). Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, pp. 61-66.
3. Boothroyd, J.C., Burg, J.L., Nagel, S.D., Ossorio, P.N., Perelman, D., Kasper, L.H., Ware, P.L., Prince, J., Sharma, S. and Remington, J. 1987. Antigen and Tubulin Genes of *Toxoplasma gondii*. In: Molecular Strategies of Parasitic Invasion, Agabian, N., Goodman, H. and Noguiera, N. (eds.) UCLA Symposium on Molecular and Cellular Biology, New Series, Vol. 42, Alan R. Liss, Inc., New York, pp. 237-250 .
4. Boothroyd, J.C., Nagel, S.D., Burg, J.L. and Perelman, D. 1987. Molecular Approaches to the Study of *Toxoplasma gondii*. In, Contemporary Issues in Infectious Diseases, Sande, M.A., Leech, J.H. and Root, R.K. (eds.), Vol. 7. Churchill-Livingston.
5. Boothroyd, J.C. and Beals, T.P. 1987. Evolution of Antigenic Variation in African Trypanosomes. In, Host-Parasite Cellular and Molecular Interactions in Protozoal Infections. Chang, K.-P. and Snary, D. (eds.), NATO ASI Series, Springer-Verlag, Heidelberg, pp. 9-18.
6. Boothroyd, J.C. 1990. Molecular Biology of Trypanosomes. In: Wyler, D.J., Pereira, M.E.A. and Wirth, D. (eds.) Cell Biology, Molecular Biology and Immunology of Parasites. Freeman Press, New York
7. Sibley, L.D., Pouletty, C. and Boothroyd, J.C. 1993. Formation and modification of the parasitophorous vacuole occupied by *Toxoplasma gondii*. In, Toxoplasmosis, NATO/ASI series, J. Smith (ed.), Springer Verlag pp. 63-72.
8. Kasper, L.H. and Boothroyd, J.C. 1993. *Toxoplasma gondii* and Toxoplasmosis. In, Immunology and Molecular Biology of Parasitic Infections. K. Warren (ed.), Blackwell Scientific Publications, Boston. pp. 269-301.

9. Boothroyd, J.C., LeBlanc, A.J. and Sibley, L.D. 1993. Allelic Polymorphism in *Toxoplasma gondii*. Implications for Interstrain Mating. in Toxoplasmosis, NATO/ASI series, J. Smith (ed.), Springer Verlag pp. 3-8.
10. Boothroyd, J.C., Black, M., Kim, K., Pfefferkorn, E.R., Seeber, F., Sibley, L.D. and Soldati, D. 1995. Forward and Reverse Genetics as a tool for the study of the protozoan parasite, *Toxoplasma gondii*. In, Methods in Molecular Genetics, Vol. 6. Microbial Gene Techniques. K. Adolph (ed.), Academic Press, New York. pp. 3-29
11. Boothroyd, J.C., Kim, K., Ortega, E., Sibley, L.D. and Soldati, D. 1995. *Toxoplasma* as a paradigm for the use of genetics in the study of parasitic protozoa. In. Molecular Approaches to Parasitology. J.C. Boothroyd and R. Komuniecki (eds.), Wiley-Liss, New York. pp. 211-225.
12. Boothroyd, J.C. 2000. Toxoplasmosis. In: Encyclopedia of Microbiology. Section 4. J. Lederberg (ed.). Academic Press, New York. pp. 598-609.
13. Fouts, A. and Boothroyd, J.C. 2007. Cellular response to infection. In: Toxoplasma: Molecular and Cellular Biology. D. Soldati and J. Ajioka (eds.), Horizon Bioscience, Norfolk. pp.171-190.
14. Dunn, J.D., Butcher, B., Boothroyd, J.C. and Denkers, E.Y. 2007. Alterations in host-cell biology due to *Toxoplasma gondii*. In: Toxoplasma gondii. K. Kim and L. Weiss (eds.), Academic Press, London. pp. 317-340.
15. Montoya, J.G., Boothroyd, J.C. and Kovacs, J.A. 2009. *Toxoplasma gondii*. In: Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. 7<sup>th</sup> Edition. Mandell, G.L., Douglas, J.E. and Dolin, R. (eds.), Churchill Livingstone, Philadelphia.
16. Boothroyd, J.C. 2009. Toxoplasmosis. In: Encyclopedia of Microbiology. Lederberg, J. et al. (eds.). Academic Press, New York.
17. Sibley, L.D. and Boothroyd, J.C. 2011. Genetic mapping of acute virulence in *Toxoplasma*. In: Evolution of Virulence in Eukaryotic Pathogens. Sibley, L.D., Howlett, B. and Heitman, J. (eds.). Wiley Blackwell Press, Hoboken.
18. Butcher, B.A., Reese, M.L., Boothroyd, J.C. and Denkers, E.Y. 2013. Interactions Between *Toxoplasma* Effectors and Host Immune Responses. In: Toxoplasma gondii. 2<sup>nd</sup> Edition. K. Kim and L. Weiss (eds.), Academic Press, London. (in press)
19. Montoya, J.G., Boothroyd, J.C. and Kovacs, J.A. 2014. *Toxoplasma gondii*. In: Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. 8<sup>th</sup> Edition. Mandell, G.L., Douglas, J.E. and Dolin, R. (eds.), Churchill Livingstone, Philadelphia.
20. Boothroyd, J.C. and Hakimi, M.-A. 2019 Effectors Produced by Rhoptries and Dense Granules: An Intense Conversation Between Parasite and Host in Many Languages. In: Toxoplasma gondii. 3<sup>rd</sup> Edition. K. Kim and L. Weiss (eds.), Academic Press, London. (submitted)
21. Montoya, J.G., Boothroyd, J.C. and Kovacs, J.A. 2019. *Toxoplasma gondii*. In: Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. 9<sup>th</sup> Edition. Bennett, Dolin, and Blaser (eds.), Elsevier.

### III. Invited Reviews:

1. Cross, G.A.M., Holder, A.A., Allen, G. and Boothroyd, J.C. 1980. An Introduction to Antigenic Variation in Trypanosomes. **Am. J. Trop. Med. Hyg.** 29(5) suppl.:1027-1032.
2. Boothroyd, J.C. 1985. Antigenic Variation in African Trypanosomes. **Ann. Rev. Microbiol.** 39:475-502.
3. Boothroyd, J.C. 1989. Trans-splicing. **Nucl. Acids and Mol. Biol.** 3: 216-230.
4. Boothroyd, J.C. 1993. Population biology of *Toxoplasma*: clonality, virulence and speciation (or not). **Inf. Agents and Dis.** 2:100-102.
5. Sibley, L.D., Pfefferkorn, E.R. and Boothroyd, J.C. 1993. Development of genetic systems for *Toxoplasma gondii*. **Parasitol. Today** 9:392-392.
6. Boothroyd, J.C. and Sibley, L.D. 1993. Population biology of *Toxoplasma gondii*. **Research in Immunology** 144 (1) 93-96.
7. Carrington, M. and Boothroyd, J.C. 1996. Implications of conserved structural motifs in disparate trypanosome surface proteins. **Mol. Biochem. Parasitol.** 81:119-126.
8. Hehl, A., Manger, I. and Boothroyd, J.C. 1997. Genetic analysis in *Toxoplasma*: gene discovery with EST's and rapid mapping of natural polymorphisms. **Methods** 13:89-102.
9. Boothroyd, J.C., Black, M., Bonnefoy, S., Hehl, I., Knoll, L., Manger, I., Ortega-Barria, E. and Tomavo, S. 1997. Genetic and Biochemical Analysis of Development in *Toxoplasma gondii*. **Philosophical Transactions: Biological Sciences.** Royal Society. 352:1347-1354.
10. Boothroyd, J.C., Hehl, A., Knoll, L.J. and Manger, I.D. 1998. The surface of *Toxoplasma gondii*: more and less. **Intl J. Parasitol.** 28:3-9.
11. Knoll, L.J. and Boothroyd, J.C. 1998. Molecular biology lessons about *Toxoplasma* development: stage-specific homologs. **Parasitology Today** 14:490-493.
12. Black, M.W. and Boothroyd, J.C. 2000. The lytic cycle of *Toxoplasma gondii*. **Microbiology and Molecular Biology Reviews** 64:607-623.
13. McFadden, D.W., Camps, M. and Boothroyd, J.C. 2001. Resistance as a tool in the study of old and new drug targets in *Toxoplasma*. **Drug Resistance Updates** 4:79-84.

14. Boothroyd, J.C. and Grigg, M.E. 2002. Population biology of *Toxoplasma gondii* and its relevance to human disease: do different strains cause different disease? **Current Opinion in Microbiology** 5:429-430.
15. Boothroyd, J.C. and Grigg, M.E. 2002. Population biology of *Toxoplasma gondii* and its relevance to human disease: do different strains cause different disease? **Current Opinion in Microbiology** 5:438-442.
16. Boothroyd, J.C., Blader, I., Cleary, M. and Singh, U. 2003. DNA Microarrays in parasitology. **Parasitology Today**. 19:470-476.
17. Arrizabalaga, G. and Boothroyd, J.C. 2004. Role of Calcium in Toxoplasma Invasion and Egress. **International Journal of Parasitology**. 24:361-368.
18. Saeij, J.P.J., Boyle, J.P. and Boothroyd, J.C. 2005. Differences among the three major strains of *Toxoplasma gondii* and their specific interactions with the infected host. *Microbes and Infection*. **Trends in Parasitology** 21:476-481.
19. Boyle, J.P., Saeij, J.P.J., Cleary, M.D. and Boothroyd, J.C. 2006. Analysis of gene expression during development: lessons from the apicomplexa. **Microbes and Infection** 8:1623-1630.
20. Carruthers, V. and Boothroyd, J.C. 2007. Pulling together: An integrated model of *Toxoplasma* cell invasion. **Current Opinion in Microbiology** 1:82-89.
21. Boothroyd, J.C. and Dubremetz, J.-F. 2008. Kiss and spit: the dual roles of *Toxoplasma* rhoptries. **Nature Reviews in Microbiology** 6:79-88.
22. Ravindran, S. and Boothroyd, J.C. 2008. Secretion of proteins into host cells by Apicomplexan parasites, **Traffic** 9:647-656.
23. Zeiner G.M., Cleary M.D., Fouts A.E., Meiring C.D., Mocarski E.S. and Boothroyd J.C. 2008. RNA analysis by biosynthetic tagging using 4-thiouracil and uracil phosphoribosyltransferase. **Methods Mol. Biol.** 419:135-46
24. Boothroyd, J.C. 2009. Hypothesis: Expansion of host range is a driving force in the evolution of *Toxoplasma*. **Memorias do Instituto Oswaldo Cruz**. 104:179-184.
25. Boothroyd, J.C. 2009. *Toxoplasma gondii*: twenty-five years and twenty-five major advances for the field. **International Journal of Parasitology** 39:935-946. PMC2895946
26. Tyler, J.S., Treeck, M. and Boothroyd, J.C. 2011. Focus on the ringleader: the role of AMA1 in apicomplexan invasion and replication. **Trends in Parasitology** 27: 410-420. PMC3159806
27. Boothroyd, J.C. 2013. Have it your way: how polymorphic, injected protein kinases and pseudokinases enable *Toxoplasma* to subvert host defenses. **PLoS Pathogens** 9(4):e1003296. PMC3635977

28. Rastogi, S., Cygan, A. and Boothroyd, J.C. 2019. Translocation of effector proteins into host cells by *Toxoplasma gondii*. **Current Opinion in Microbiology** 52:130-138. PMID31446366

#### IV. Miscellaneous Publications (Book Reviews, Meeting Reports, Commentary, etc.)

1. Sibley, L.D. Pfefferkorn, E.R. and Boothroyd, J.C. 1991. Proposed genetic nomenclature for *Toxoplasma gondii*. **Parasitol. Today** 7: 327-328.
2. Schwartzman, J.D., Boothroyd, J.C. and Kasper, L.H. 1994. Toxoplasma Workshop Overview. **J. Euk. Microbiol.** 41:S19-S21.
3. Smith, J.E., Boothroyd, J.C., Hunter, C. and Petersen, E. 1997. Progress in Toxoplasmosis research. **Parasitol. Today** 13:245-247.

#### V. Refereed Original Publications:

1. Cattolico, R.A., Boothroyd, J.C. and Gibbs, S.P. 1976. Synchronous Growth and Plastid Replication in the Naturally Wall-less Alga *Olithodiscus luteus*. **Plant Physiol.** 57:497-503.
2. Boothroyd, J.C. and Hayward, R.S. 1979. New Genes and Promoters Suggested by the DNA Sequence Near the End of the Coliphage T7 Early Operon. **Nucl. Acids Res.** 7:1931-1943.
3. Boothroyd, J.C., Cross, G.A.M., Hoeijmakers, J.H.J. and Borst, P. 1980. A Variant Surface Glycoprotein of *Trypanosoma brucei* Synthesized with a C-Terminal Hydrophobic "Tail" Absent from Purified Glycoprotein. **Nature** 288:624-626.
4. Boothroyd, J.C., Highfield, P.E., Cross, G.A.M., Rowlands, D.J., Lowe, P.A., Brown, F. and Harris, T.J.R. 1981. Molecular Cloning of the Foot and Mouth Disease Virus Genome and Nucleotide Sequences in the Structural Protein Genes. **Nature** 290:800-802.
5. Boothroyd, J.C., Paynter, C.A., Cross, G.A.M., Bernards, A. and Borst, P. 1981. Variant Surface Glycoproteins of *Trypanosoma brucei* are Synthesized with Cleavable Hydrophobic Sequences at the Carboxy and Amino Termini. **Nucl. Acids Res.** 9:4735-4743.
6. Majumder, H.K., Boothroyd, J.C. and Weber, H. 1981. Homologous 3'-Terminal Regions of mRNAs for Surface Antigens of Different Antigenic Variants of *Trypanosoma brucei*. **Nucl. Acids Res.** 9:4745-4753.
7. Bernards, A., Van der Ploeg, L.H.T., Frasch, A.C., Borst, P., Boothroyd, J.C., Coleman, S.L. and Cross, G.A.M. 1981. Activation of Trypanosome Surface Glycoprotein Genes Involves a Duplication-Transposition Leading to an Altered 3'-end. **Cell** 27:497-505.

8. Boothroyd, J.C., Lowe, P.A., Rowlands, D.J. and Harris, T.J.R. 1982. The Nucleotide Sequence of cDNA Coding for the Structural Proteins of Foot and Mouth Disease Virus. **Gene** 17:153-161.
9. Boothroyd, J.C., Paynter, C.A., Coleman, S.L. and Cross, G.A.M. 1982. Complete Nucleotide Sequence of Complementary DNA Coding for a Variant Surface Glycoprotein from *Trypanosoma brucei*. **J. Mol. Biol.** 157:547-556.
10. Boothroyd, J.C. and Cross, G.A.M. 1982. Transcripts Coding for Different Variant Surface Glycoproteins of *Trypanosoma brucei* Have a Short, Identical Exon at Their 5'-end. **Gene** 20:281-289.
11. Makoff, A.J., Paynter, C.A., Rowlands, D.J. and Boothroyd, J.C. 1982. Antigenic Variation in Foot and Mouth Disease. Comparison of the Nucleotide and Predicted Amino Acid Sequence of the Major Immunogen from Three Serotypes. **Nucl. Acids Res.** 10:8285-8295.
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