

Curriculum Vitae

Marcelo Benjamin Sztejn, M.D.

**Professor, Departments of Pediatrics, Medicine and Microbiology and Immunology
Associate Director for Immunologic Research
Leader, Immunology Group
Chief, Cellular Immunology Section and Flow Cytometry Core Lab
Center for Vaccine Development.
University of Maryland School of Medicine**

Date: October 17, 2016

Personal Information:

- **Business Address:**

Center for Vaccine Development
Division of Infectious Diseases and Tropical Pediatrics
Department of Pediatrics
University of Maryland at Baltimore
685 West Baltimore Street, HSF-1 - Rm 480
Baltimore, Maryland 21201

- **Business Phone Number:** (410) 706-2345 or 706-5328

- **Fax Number:** (410) 706-6205

- **Email:** msztejn@medicine.umaryland.edu

- **Foreign Languages:** Spanish [native]

Education:

- **B.S.** 1970. High School #4, Nicolas Avellaneda, Argentina, Biology Major
- **M.D.** 1976. School of Medicine, University of Buenos Aires, Argentina

Post Graduate Education and Training

- 1976-1979. **Fellow** - Immunology. National Research Council, Argentina
- 1979-1982. **Visiting Fellow - Immunology.** National Institutes of Health, Bethesda, MD (Dr. J. Oppenheim, mentor)
- 1982-1983. **Research Fellow.** The Cancer Research Laboratories, Division of Hematology/Oncology, Dept. of Medicine, The George Washington University Medical Center, Washington D.C.
2004. GMP and Process Development Course. Aventis-Pasteur. Sponsored by the Mid-Atlantic Regional Center of Excellence in Biodefense (MARCE). Merck and Co. West Point, PA. August 30-31, 2004.
2004. Media Training Course. George Washington University Media Training Center. Sponsored by the Mid-Atlantic Regional Center of Excellence in Biodefense (MARCE). Washington DC.
2007. BSL-3 Training Course. Sponsored by the Mid-Atlantic Regional Center of Excellence in Biodefense (MARCE). University of Maryland. Baltimore, MD.
2010. PhosphoFlow Training Course. Stanford University School of Medicine. Stanford, CA.
2010. Integrative Genomics Workshop. Baylor Institute for Immunology Research, Dallas, TX.

Employment History

Faculty Appointments.

- 1983-1984. **Assistant Research Professor of Medicine.** The Cancer Research Laboratories, Division of Hematology/Oncology, Dept. of Medicine, The George Washington University Medical Center, Washington D.C.
- 1984-1988. **Assistant Professor of Medicine.** The Cancer Research Laboratories, Division of Hematology/Oncology, Dept. of Medicine, The George Washington University Medical Center, Washington D.C.
- 1988-1989. **Associate Professor of Medicine.** The Cancer Research Laboratories, Division of Hematology/Oncology, Dept. of Medicine, The George Washington University Medical Center, Washington D.C.
1989. **Associate Professor of Medicine and of Biochemistry and Molecular Biology.** Division of Hematology/Oncology, Departments of Medicine and of Biochemistry and Molecular Biology, The George Washington University Medical Center, Washington D.C.
- 1989-1996. **Associate Professor of Pediatrics (primary appointment, tenured) and of Microbiology and Immunology and Medicine.** Departments of Pediatrics, Microbiology and Immunology and Medicine, University of Maryland at Baltimore, Baltimore, Maryland.
- 1996-Present. **Professor of Pediatrics (primary appointment, tenured) and of Microbiology and Immunology and Medicine.** Departments of Pediatrics, Microbiology and Immunology and Medicine, University of Maryland at Baltimore, Baltimore, Maryland.

Other Administrative Appointments

- 1971-1972. **Research Assistant in Endocrinology.** Reproduction Research Center, School of Medicine, University of Buenos Aires.
- 1973-1976. **Research Assistant in Immunology.** Reproduction Research Center, School of Medicine, University of Buenos Aires.
- 1976-1979. **Research Associate in Immunology.** Reproduction Research Center, School of Medicine, University of Buenos Aires.
- 1986-1989. **Director, Flow Cytometry Core Facility.** The Cancer Research Laboratories, Division of Hematology/Oncology, Dept. of Medicine, The George Washington University Medical Center, Washington D.C.
- 1989-Present **Chief, Cellular Immunology and Flow Cytometry Section, Center for Vaccine Development.** University of Maryland at Baltimore, Baltimore, Maryland.
- 1989-Present. **Director, Flow Cytometry Core Facility.** University of Maryland at Baltimore, Baltimore, Maryland.
- 1997-Present. **Graduate School Faculty Member.** University of Maryland Graduate School, Baltimore. Maryland.
- 2002-Present. **Leader, Immunology Group, Center for Vaccine Development.** University of Maryland at Baltimore, Baltimore, Maryland.
- 2010-Present. **Associate Director for Immunologic Research, Center for Vaccine Development.** University of Maryland at Baltimore, Baltimore, Maryland.

Fellowships

- 1973-1975. **Undergraduate Research Assistant.** Latinoamerican Center for the Study of the Biology of Reproduction, World Health Organization, Reproduction Research Center, School of Medicine, University of Buenos Aires. Subject: Transfer of Experimental Allergic Orchitis With Immune-RNA. Studies In Vivo.
- 1977-1979. **Junior Fellow.** National Council of Scientific Investigation. Reproduction Research Center and Immunobiology Service, School of Medicine, University of Buenos Aires. Subject: Mechanisms of Action of Immune-RNA in the Transfer of Cellular Immunity in the Experimental Allergic Orchitis Model.
1979. **Senior Fellow.** National Council of Scientific Investigation. Reproduction Research Center and Immunobiology Service, School of Medicine, University of Buenos Aires. Subject: Mechanisms of Action of Immune-RNA in the Transfer of Immunity in an Allogeneic Murine Model.
- 1979-1982. **Fogarty International Research Fellowship.** Dr. Joost J. Oppenheim, Sponsor. Cellular Immunology Section. Laboratory of Microbiology and Immunology, National Institute of Dental Research, National Institutes of Health, Bethesda, Maryland. Subject: Role of Interleukins in the Acute Phase Response and Modulation of Human Monocyte DR Antigen Expression by Interferons.
- 1982-1986. **Louis Goldstein Leukemia Research Fellowship.** The Cancer Research Laboratories. Division of Hematology/Oncology, Department of Medicine, The George Washington University Medical Center, Washington, D.C. Subject: Study of the Mechanisms of Action of Biological Response Modifiers on the Immune Response and Development of the Human Tumor Clonogenic Cell Assay With Particular Emphasis in the Use of Soluble Mediators.

Professional Society Memberships

- 1984-1994. The New York Academy of Sciences (NYAS)
1991-1995. Tropical Medicine Dinner Club. Johns Hopkins School of Public Health.
1990-1998. Chesapeake Flow Cytometry Consortium (CCC).
1984-2007. Federation of American Societies for Experimental Biology (FASEB).
1985-2008. American Association for the Advancement of Science (AAAS).
1984-Present. The American Association of Immunologists (AAI).
1988-Present. International Society for Analytical Cytology (ISAC).
1994-Present. Society for Mucosal Immunology (SMI).
1999-Present. American Society of Tropical Medicine and Hygiene (ASTMH).
1999-Present. American Society for Microbiology (ASM).
2012-Present. Federation of Clinical Immunology Societies (FOCIS).

Honors and Awards

1986. Elaine H. Snyder Award for outstanding contributions to Cancer Research (\$38,884.84 in research funds).
1987. Elaine H. Snyder Award for outstanding contributions to Cancer Research (\$22,378.87 in research funds).

License

1980. Authorized User of Radioactive Materials at the National Institutes of Health (Clearance # 5527).

Administrative Service / Institutional Service (partial listing)

- 1988-1989. **Member of the Medical Center Laser Committee.** George Washington University.
1988-1989. **Member of the Medical Center Faculty Senate Committee on Research.** George Washington University.
1989. **Member of the Faculty Senate Committee on Research.** George Washington University.
1990-1991. **Chairperson of the Molecular Biologist/Pediatrician Search Committee.** Department of Pediatrics, UMAB.
1992-1994. **Member of the Scientific Advisory Committee.** Hutzler/Maryland Biotechnology Center Facility.
1994. **Member of the Physician/Scientist Faculty Search Committee.** Division of Geographic Medicine, Department of Medicine, UMAB.
1999. **21st Annual Graduate Student Research Day Judge** (Immunology). University of Maryland Graduate School.
2004-2005. **Member of the Molecular/Cellular Microbiology Faculty Search Committee.** Department of Biomedical Sciences, Dental School, University of Maryland, Baltimore.
2005-2011 **External Reviewer and Consultant for the West Virginia University Flow Cytometry Core Facility.** Dr. Christopher Cuff, Core Director.
2009-2013 **Member of the Department of Pediatrics Action Implementation Steering Committee.** University of Maryland.
1992-Present. **Evaluation of Pediatric Infectious Diseases Fellowship Applicants.** Department of Pediatrics, University of Maryland.

- 1992-Present. **Evaluation of Adult Infectious Diseases Fellowship Applicants.** Department of Medicine, University of Maryland.
- 1998-Present. **Member of the Trainee Selection Committee for the NIH T32 Vaccinology Training Grant.** Department of Medicine, University of Maryland.
- 1998-Present. **Member of the Selection Committee for Associate Membership in the Center for Vaccine Development.** Departments of Pediatrics and Medicine, University of Maryland.
- 2001-Present. **Mentor for Junior faculty.** School of Medicine, University of Maryland (see listing below).
- 2009-Present Evaluation of faculty candidates for appointment, promotion and tenure at the University of Maryland.

Local, National and International Service

- **Editorial Boards – Peer-Reviewed Scientific Journals**

- 2011-present. Review Editor, Frontiers in Immunological Memory, Frontiers in Immunology
- 2011-Present. Review Editor, Frontiers in Immunotherapies and Vaccines, Frontiers in Immunology

- **Ad Hoc Reviewer – Peer-Reviewed Scientific Journals**

- Journal of Immunology
- Journal of Infectious Diseases
- Journal of Immunological Methods
- Journal of Clinical Investigation
- Infection and Immunity
- Vaccine
- Gut Microbes
- Clinical & Diagnostic Laboratory Immunology
- The New England Journal of Medicine
- Scandinavian Journal of Infectious Diseases
- Journal of Developmental and Comparative Immunology
- American Journal of Clinical Nutrition
- Immunopharmacology
- PLOS Neglected Tropical Diseases

Grant Review Service (Partial Listing)

1988. Member of the British Columbia Health Care Research Foundation Scientific Review Panel, 1988.
- 1988-1989. Member of the Biomedical Research Support Grant (BRSG) Review Panel. George Washington University Medical Center
1992. Member of Special Scientific Review Panel for RFA AI-92-02 entitled: "Enhancing Vaccine Immunogenicity". National Institute of Allergy and Infectious Diseases, NIH.
- 1990-1993. Member of the Biotechnology/Immunology, Protozoal and Parasitic Diseases Scientific Review Panel, Agency for International Development, Program in Science and Technology Cooperation (PSTC) and U.S.-Israel Cooperative Development Research (CDR) Program.

1994. Member of Special Scientific Review Panel for RFA AI-94-01 entitled: "Immunological Enhancement of Vaccine Immunogenicity". National Institute of Allergy and Infectious Diseases, NIH. June 29-30, 1994.
2003. Member of Scientific Special Review Panel for RFA NIH-AI-02-042 entitled: 2003 "Cooperative Centers for Translational Research on Human Immunology and Biodefense". National Institute of Allergy and Infectious Diseases, NIH. April 22-23, 2003.
2003. Member of Scientific Special Emphasis Review Panel ZRG1 AARR-C 11. National Institute of Allergy and Infectious Diseases, NIH. December 16, 2003.
2003. Member of Scientific Special Emphasis Review Panel ZAI GPJ-I (J1) entitled "Research Program Project: Biodefense and Emerging Infectious Diseases" (NOT-AI-02-023/PA-AI-03-080). National Institute of Allergy and Infectious Diseases, NIH. September 4, 2003.
- 2000-2005. Reviewer of grant applications submitted to the Argentinian National Agency for the Promotion of Science and Technology, Science and Technology Administration (FONCYT, SECYT), Buenos Aires, Argentina.
- 2004-2005. Expert outside reviewer for the Swiss National Science Foundation individual project grant review panel (Divisions I-III).
2005. Member of Scientific Special Review Panel for RFP-NIAID-DAIT-BAA-05-11 entitled: "Immune Function and Biodefense in Children, Elderly and Immunocompromised Populations". National Institute of Allergy and Infectious Diseases, NIH. May 2-3, 2005.
2006. Ad hoc member of the Microbiology and Infectious Diseases Research Committee (MIDRC; responsible for reviewing K08, K22, K23, K24, K25, T32 and T35 applications), Microbiology, Infectious Diseases and AIDS Initial Review Group, National Institute of Allergy and Infectious Diseases, NIH. February 21-23, 2006.
2006. Member of Scientific Special Review Panel for RFP-NIH-NIAID-DMID-07-16 entitled "Malaria Vaccine Production and Support Services". Special Emphasis Panel ZAI1-MH-M-C2; National Institute of Allergy and Infectious Diseases, NIH. October 20, 2006
2007. External Reviewer. Career Investigator Awards. Michael Smith Foundation for Health Research (MSFHR), British Columbia, Canada. March 22, 2007.
2007. Ad hoc member of the Microbiology and Infectious Diseases Research Committee (MIDRC; responsible for 1 Fondazione Cariplo reviewing K08, K22, K23, K24, K25, K99/R00, T32 and T35 applications), Microbiology, Infectious Diseases and AIDS Initial Review Group, National Institute of Allergy and Infectious Diseases, NIH. June 7, 2007.
2007. Chair of Special Emphasis Review Panel ZAI1 SR-M (S1) entitled "Respiratory Infections and Host Immunity". National Institute of Allergy and Infectious Diseases, NIH. June 26, 2007.
2009. Chair of Special Emphasis Panel ZAI1-KE-I-C1 entitled "Population Genetics Analysis Program" (BAA-NIAID-DAIT-NIHAI2009061). National Institute of Allergy and Infectious Diseases, NIH. November 12, 2009.
2010. External Reviewer. Program on promoting innovative approaches to vaccines development against infectious diseases. Fondazione Cariplo. Milan. Italy. April 9, 2010.
2010. Chair of Special Emphasis Panel ZAI1-JTS-I-C1 entitled "Protective Immunity in Special Populations" (BAA-NIAID-DAIT--NIHAI2010085). National Institute of Allergy and Infectious Diseases, NIH. October 5-6, 2010.
- 2007-2011. Standing member of the Microbiology and Infectious Diseases Research Committee (MIDRC), Microbiology, Infectious Diseases and AIDS Initial Review Group, National Institute of Allergy and Infectious Diseases, NIH. MIDRC is

- responsible for reviewing “K” series (e.g., K08, K22, K23, K99/R00) and “T” series (e.g., T32, T35) Training Grants. Period of service: August 16, 2007 to June 30, 2011. Three review sessions per year. Total of 12 review panels.
2012. Ad Hoc reviewer. NIAID Human Immunology Project Consortium (HIPC) Infrastructure & Opportunity Fund (IOF) Projects RFA. National Institute of Allergy and Infectious Diseases, NIH. April 2012.
- 2004-2012. Reviewer of Development Grant applications submitted to the Mid-Atlantic Regional Center for Excellence in Bioterrorism (MARCE).
2014. External Reviewer. Biotechnology and Biological Sciences Research Council (BBSRC) Program. Research Councils UK (RCUK). Funded by the Government's Department for Business, Innovation and Skills (BIS). United Kingdom. March 2014.
- 1993-Present. Ad Hoc Member of the School of Medicine Intramural Grant Competition Review Panel, University of Maryland at Baltimore.

Participation in National / Regional Committees, Organizations and Panels

- 1988-1989. AIDS Clinical Trials Group (ACTG) Immunology Committee.
- 1993-1994. President-elect, Chesapeake Cytometry Consortium.
- 1994-1995. President, Chesapeake Cytometry Consortium.
- 1995-1999. Member, Executive Committee. Chesapeake Cytometry Consortium.
2004. Member. Ricin Toxin Expert Panel Workshop. Sponsored by the NIH. Bethesda, Maryland. April 1-2, 2004.
2005. Vaccine Development Expert. Medical Countermeasures and Innate Immunity Advisory Panel: Critical Path to Product Discovery, Development and Medical Use. Co-sponsored by the Food and Drug Administration and the National Defense University. Washington DC. December 8, 2005
2006. Chair of the Mucosal Immunology Group at the US-European (EC) Workshop: Advances in Immunology and Vaccine Discovery. Responsible for generating a report on recommendations for filling gaps in mucosal immunology and presenting it verbally to the full workshop, as well as writing a set of recommendations submitted to the executive branch of the federal government, through the White House Subcommittee on Biotechnology and the European counterparts for consideration for funding. This workshop was sponsored by The European Commission Directorate of Research, U.S. Department of Agriculture, Office of Naval Research, NSF, NIH, the Iowa State University and the Molecular Vaccines Interagency Working Group. Ames, Iowa. December 12-14, 2006.
2007. Member of the Enteric Vaccine Initiative (EVI) roundtable discussion involving experts in the field of novel vaccines for Shigella and enterotoxigenic Escherichia coli (ETEC). Co-organized by the Bill and Melinda Gates Foundation and PATH. May 18, 2007. Baltimore, Maryland.
2008. Member, NIAID DMID Influenza Cell-Mediated Immunity Assays Working Group
- 2009-2012. Member of the Systems Biology Working Group (SBWG) Advisory Committee. This committee serves as the advisory board for NIAID's network “Systems Biology Programs for Infectious Diseases Research” (period 2009-2013). The purpose of this network is to use systems biology approaches to comprehensively study molecular pathways (e.g., signaling, regulatory, metabolic) or other types of molecular interaction networks of microbial pathogens and their host cells through a combination of computational and experimental high-throughput technologies. Chair sessions in 2011 and 2012.

- 2015 Member of the Faculty Panel. Building a successful scientific career. International Vaccine Institute (IVI). Seoul, South Korea. October 17, 2015.
- 2015 Panelist. Career Development Workshop: "Identifying and Achieving your Dream Job." 9th Vaccine and ISV (International Society for Vaccines) Congress. Seoul, South Korea. October 20, 2015.
- 2015-2016 Steering Committee Chair of the Cooperative Centers for Human Immunology (CCHI) network supported by DAIT, NIAID, NIH.
- 2004-Present Expert Judge – Biological Sciences. Exploravision. Grades K-12 Innovation in Science and Technology International Competition. United States and Canada. Sponsored by the National Teacher's Association and Toshiba Co. Washington DC

Organization of National / International Meetings (selected)

- 1994. Member, Symposium Steering Committee. 1st Annual Clinical Cytometry Symposium. Holiday Inn Crowne Plaza Hotel. Rockville, Maryland. May 21-22, 1994.
- 1995. Member, Symposium Steering Committee. 2nd Annual Clinical Cytometry Symposium. Holiday Inn Crowne Plaza Hotel. Rockville, Maryland. May 11-13, 1995.
- 2005. Chair. Session 3. Animal Model Workshop. Food & Waterborne Diseases Integrated Research Network. Michigan State University, East Lansing, Michigan. April 26-28, 2005.
- 2008. Chair. Session III. CMI Evaluation in Vaccine Development. CMI Techniques Standardization for Vaccine Responses Evaluation. Mérieux Foundation. Les Pensières, Annecy, France. September 15-17, 2008
- 2011 Moderator. Plenary Session 2. Opportunities and The Path Ahead. Annual Meeting of the Systems Biology Programs for Infectious Diseases Research Network. Seattle. Washington. November 7-8, 2011.
- 2013 Co-Chair of the session entitled "Gut Microbiome, Immune Modulation and Heterologous Immunity. 7th Annual Vaccine Renaissance Conference, Providence, Rhode Island, October 16-18, 2013.
- 2014 Chair of the session entitled "Human Microbiome Immunopathogenesis and Vaccines". 8th Annual Vaccine Renaissance Conference, Providence, Rhode Island. October 15, 2014.
- 2014 Co-chair of Scientific Session 162 entitled: "Bacteriology: Typhoid, Febrile Illness, Bacteremia". Nov 5, 2014. 63rd Annual Meeting of the American Society of Tropical Medicine and Hygiene. New Orleans, LA. November 2-6, 2014.
- 2014 Organizer and Host. CyTOF Interest Group Meeting Workshop. University of Maryland School of Medicine. November 21, 2014.
- 2016. Chair. Immunology and Host Responses. Vaccines Against *Shigella* and ETEC (VASE) Conference. Washington DC. June 28-30, 2016.

Teaching Service

- 1973-1976. **Junior Teaching Assistant** (equivalent to Instructor) in Histology and Cytology for first year medical students. Department of Histology, Cytology and Embryology, School of Medicine, University of Buenos Aires. Lectures and Labs: average 80 contact hours per year.
- 1976-1979. **Senior Teaching Assistant** (equivalent to Assistant Research Professor) in Histology and Cytology for first year medical students. Department of

- Histology, Cytology and Embryology, School of Medicine, University of Buenos Aires. Lectures and Labs: average 100 contact hours per year.
- 1987-1988. **Faculty sponsor** for Medical Students Summer Research Fellowships (Full-time, June-August). Responsibilities included the assignment and direct supervision of well defined research projects, as well as to provide laboratory space, equipment and supplies. George Washington University Medical Center.
- 1984-1993. **Teaching team member/Lecturer.** Biochemistry and Cell Biology of the Immune Response. Graduate Course. Department of Biochemistry and Molecular Biology. George Washington University Medical Center.
- 1984-1989. **Teaching team member/Lecturer.** Advances in Hematology. Graduate course. Department of Physiology and Biophysics. Georgetown University School of Medicine N° 182-510-01.
1986. **Teaching team member/Lecturer.** Practical Methods in Cell-Mediated Immunity. Graduate course. Department of Pathology. Uniformed Services University of the Health Sciences N° 408.
- 1985-1988. **Member, Examining Committees and Reader** of the dissertations of Drs. K. Oates (1985) and O.J. Semmes IV (1988) for the degree of Doctor of Philosophy in Biochemistry. The George Washington University.
1989. **Faculty sponsor** for Summer Research Fellowships awarded by the Institute for Advanced Studies in Immunology and Aging, Washington DC. Responsibilities included the assignment and direct supervision of well-defined research projects, as well as to provide laboratory space, equipment and supplies.
1991. **Teaching team member/Lecturer.** Microbiology and Immunology Core Course for Graduate Students. Department of Microbiology and Immunology. University of Maryland School of Medicine, Baltimore.
- 1991-1992. **Teaching team member/Lecturer.** Advanced Parasitology Course for Graduate Students, N° MMIC 719. Department of Microbiology and Immunology, University of Maryland School of Medicine, Baltimore.
1992. **Member, Examining Committee** of the dissertation of Dr. J. E. Kirkley for the degree of Doctor of Philosophy in Biochemistry. The George Washington University Medical Center.
- 1990-Present. **Teaching team member/Lecturer.** Medical Microbiology Course for Medical Students. Department of Microbiology and Immunology, University of Maryland School of Medicine, Baltimore, Maryland.
- 1990-Present. **Faculty sponsor** for fellows participating in the University of Maryland School of Medicine, Infectious Diseases Fellowship Program, Baltimore, Maryland.
- This 3-year combined program of the Divisions of Infectious Diseases and Geographic Medicine entail the training in clinical or laboratory research of physicians who plan to pursue an academic career. Sponsor responsibilities include the training of the fellow, the close supervision of the research program and to provide laboratory space, equipment and supplies.
- 1997-Present. **Faculty Sponsor for Federal Work Study Students, UMD.**
- 1997-Present **Graduate Faculty of the University of Maryland Graduate School and Graduate Program in Life Sciences (GPILS).** Molecular Microbiology and Immunology. University of Maryland Baltimore
- 1998-Present. **Faculty sponsor** for graduate students in the Department of Microbiology and Immunology, University of Maryland School of Medicine, Baltimore, Maryland. Sponsor responsibilities include providing a well-defined project, close supervision of the research, and making available laboratory space, equipment and supplies. Rotations are approximately 3 months.

Training of Graduate and other Students and Visiting Fellows

- 1987-1989. **Andrea Ferreira-Centeno, Ph.D.** Graduate Student. Co-advisor. Research project: Effects of thymic hormones on human lymphocyte function. Last known position: Assistant Research Professor of Pathology, University of Virginia, Charlottesville, VA.
1999. **Patricia Lehane.** Visiting Graduate Student from Imperial College, London (Professor Gordon Dougan, advisor). Research project: Cytotoxic T cell responses in patients with reactive arthritis.
- Spring 1999. **Angela Jansen.** Graduate Student (3 months rotation). Department of Microbiology and Immunology, UMD. Research project: Immunological responses in mice immunized with *S. typhi* carrying heterologous antigens.
- Spring 2000. **Jayasree Iyer.** Graduate Student (3 months rotation). Department of Microbiology and Immunology, UMD. Research project: Optimization of RNA extraction procedures from human cells for the use of microarray technology in specimens from malaria endemic areas. Last known position: Division of Genomics and Genetics, School of Biological Sciences, Nanyang Technological University, Singapore 637551, Singapore.
- Summer 2000. **Susan Harrington.** Graduate Student (2 months summer rotation). Department of Microbiology and Immunology, UMD. Research project: Immune effects of a family of secreted proteases produced by various enteric pathogens.
- 2000-2001. **Mahamadou Diakite,** Pharmacologist. Visiting fellow from Mali, West Africa. Research project: Immune Correlates of Protection in Volunteers from Malaria Endemic Areas in Mali, West Africa.
2000. **Ogobara Doumbo, MD. Ph.D.** Visiting Professor from Mali, West Africa. Research project: Immune Correlates of Protection in Volunteers from Malaria Endemic Areas in Mali, West Africa.
2001. **Amed Ouattara, Pharm.D.** Visiting fellow. Research project: Immune Correlates of Protection in Volunteers from Malaria Endemic Areas in Mali, West Africa.
- 2000-2003. **Yacouba Cissoko, M.D.** (University of Mali, 2002). International visiting fellow from Mali, West Africa. Research project: Immune Correlates of Protection in Volunteers from Malaria Endemic Areas in Mali, West Africa. Last known position: Department of Epidemiology of Parasitic Diseases, University of Bamako, Bamako, Mali
- 2000-2003. **Lansana Sangare, Ph.D.** (University of Mali, 2003). International visiting fellow from Mali, West Africa. Research project: Immune Correlates of Protection in Volunteers from Malaria Endemic Areas in Mali, West Africa.
- 2001-2002. **Claudia Rosenkranz.** Visiting Research Graduate Student from the Institute of Hygiene, School of Medicine, University of the Republic, Montevideo, Uruguay (Dr. Alejandro Chabalgoity, Main advisor). Received her Ph.D. in Chemistry in 2004. Research project: Modulation of the immune response to the vector and foreign antigens by plasmids encoding cytokines delivered by attenuated Salmonella strains. Last known position: Biotechnology, Private Sector. Provides technical and legal support to the Pharmaceutical Industry for drug licensing in Chile.
2002. **Abdoulaye Djimde, Ph.D.** (University of Maryland, Baltimore, MD, 2002). International visiting fellow from Mali, West Africa. Research project: Cytokine levels in Chloroquine Sensitive and Resistant Volunteers infected with *P. falciparum* carrying the PfT76 mutation in Malaria Endemic Areas in Mali,

- West Africa. Last known position: Assistant Professor and Howard Hughes Scholar, Head, Molecular Epidemiology & Drug Research Unit, University of Bamako, Bamako, Mali.
- 2003-2004. **Souleymane Diakite, Pharm.D.** (University of Bamako, Bamako, Mali). **International** visiting fellow from Mali, West Africa. Project: Training in laboratory techniques to isolate and cryopreserve peripheral blood mononuclear cells from volunteers (supported by Fogarty Foundation, NIH). Since returning to Mali in 2005, Mr. Diakite supervises the CVD Immunology Lab in Bamako.
- Summer 2005. **Smita S. Chandran.** Graduate Student (2-month summer rotation). Department of Microbiology and Immunology, UMD. Research project: Identification IFN- γ -secreting lymphoid populations in subjects vaccinated with *Shigella*.
- Summer 2006. **Omar Elnabawi.** Summer Research Student. University of Maryland. Research project: *Ex vivo* detection of human perforin by ELISPOT.
- 2004-2009. **Priyanka Karicherla.** Graduate Student, Department of Microbiology & Immunology, University of Maryland School of Medicine, Baltimore, MD. Advisory Committee Member.
2006. **Bourema Kouriba, Ph.D.** (University of Marseille, France, 2005). Visiting fellow from Mali, West Africa. Project: Training in laboratory techniques to measure antibody levels, subclasses and avidity of anti-AMA-1 antibodies in the serum of naturally infected and immunized Malian volunteers. Associate Professor and Supervisor of the Malaria Immunology Lab, School of Medicine, Pharmacy and Dentistry, University of Bamako, Bamako, Mali.
- Spring 2007. **Steven Bowen.** Graduate student (3 months rotation). Department of Microbiology and Immunology, UMD. Research project: Identification IFN- γ -secreting lymphoid populations by ELISPOT in Elderly and Young adults subjects immunized with standard or a high dose of the Fluzone influenza vaccine.
- Summer 2009. **David Lou.** Student (2 months summer rotation). University of Maryland. Research project: immunological studies using specimens collected in typhoid vaccine trials.
- Spring 2010. **Brian Astry.** Graduate Student (3 months rotation). Department of Microbiology and Immunology, UMD. Research project: Establishment of an assay to determine whether disruption of the endosomes by *E. coli* carrying foreign antigens is required for antigen processing and presentation to the host immune system.
- Summer 2010. **Nalin Dayal.** Graduate student (2 months summer rotation). Department of Microbiology and Immunology, University of Maryland. Research project: immunological studies in a cynomolgus macaque *S. dysenteriae* 1 challenge model.
- 2003-2010. **Vicky Gunther.** Graduate Student, Biological Sciences Program, University of Maryland, Baltimore County Campus, Baltimore, MD. Ph.D. Thesis Committee Member. Research Project: Protective Dengue Immunity Requires a Th1 Response with IFN- γ playing a Key Role in Protection.
- Summer 2011 **Scott Mu, B.S.** Summer Research Student. University of Maryland. Research project: measurement of protein phosphorylation by flow cytometry.
- 2011-2012 **Member, Thesis Advisory Committee** for Mr. Eric Gottlieb for the degree of Master in Science (Molecular Medicine). University of Maryland.
- 2011-2012 **Frough (Tina) Safavie, B.S.** Pre-medical student. Research Project: Development of an organotypic model of the human intestinal mucosa.

- 2011-2012 **Tasmia Wahid, B.S.** Pre-medical student. Research Project: Development of a novel ORFeome approach to identify CD8+ T cell responses to *S. Typhi* proteins in humans
- 2011-2012 **Shah (Jawad) Zafar, B.S.** Pre-medical student. Research Project: Characterization of immunological responses to *Salmonella* proteins in humans
- 2012-2013 **David Lou.** Pre-medical student. Research Project: Development of a novel ORFeome approach to identify CD8+ T cell responses to *S. Typhi* proteins in humans.
- 2009-2013 **Member, Thesis Advisory Committee** for Ms. Anna Seekatz for the degree of Doctor of Philosophy. Institute for Genome Sciences, University of Maryland.
- Spring 2014 **Mark Rudolph.** Graduate student (3 months rotation). Department of Microbiology and Immunology, University of Maryland. Research project: Optimization of a mass cytometry panel for the the measurement of immunological responses in subjects challenged with wild-type *S. Typhi*.
- Summer 2016 **Michael Lee.** Graduate student, M.D., Ph.D. program (3 months rotation). Department of Microbiology and Immunology, University of Maryland. Research project: Neonatal B and T cell immune responses in human cord blood.
- 2014-2016 **Member, Thesis Advisory Committee** for Ms. Sarah Boudova for the degree of Doctor of Philosophy. Department of Microbiology and Immunology. University of Maryland. Research project: The effects of malaria in pregnancy on infant susceptibility to malaria.
- 2014-Present **Member, Thesis Advisory Committee** for Mr. Antoine Dara for the degree of Doctor of Philosophy. Department of Microbiology and Immunology. University of Maryland. Research project: *var2csa* genetic diversity and sero-reactivity in 3 different malaria endemic settings.
- 2014-Present **PhD advisor for Mark Rudolph.** Graduate student. Department of Microbiology and Immunology, University of Maryland. Research project: Immunological responses in children immunized with the attenuated oral Ty21a typhoid vaccine.

Training of Post-Doctoral Fellows, Research Fellows and Junior Faculty

- 1986-1989. **Kimberly Leichtling, Ph.D.** (State University of NY, Buffalo, NY, 1985). Postdoctoral fellow. Research project: Thymosin alpha 1 modulation of high-affinity IL-2 receptors on human lymphocytes. Last known position: Research Fellow, NIH, Bethesda, MD.
- 1990-1992. **Rafael Harpaz, M.D.** (University of New Mexico, Albuquerque, NM, 1986). Infectious Diseases fellow. Research project: Serum cytokine profiles and other cell-mediated immune responses in experimental human malaria. Last known position: Medical Officer, National Immunization Program, CDC, Atlanta, GA.
- 1995-1998. **Timothy Wyant, Ph.D.** (University of Arizona, Tucson, AZ, 1995). Postdoctoral fellow. Research project: Cell-mediated immunological studies in *Salmonella typhi* vaccines. Current position: Associate Director, Molecular Medicine. Millennium: The Takeda Oncology Company, Cambridge, MA.
- 1996-2001. **Marcela F. Pasetti, Ph.D.** (University of Buenos Aires, Argentina, 1994). Postdoctoral fellow. Research project: Immune responses to *Salmonella* vectors carrying foreign genes. Current position: Professor (tenured), Department of Pediatrics, University of Maryland, Baltimore, MD.

- 1998-2001. **Taraz Samandari, M.D., Ph.D.** (Ph.D. in 1991 and M.D. in 1993, both from the University of Colorado, Denver, CO). Vaccinology fellow (T32 AI07524). Research project: Protective immune mechanisms in human *Shigella* vaccines. Last known position: Chief, Epidemiology Branch, Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD and TB Elimination, Center for Disease Control and Prevention, Atlanta, GA.
- 1999-2002. **Kirsten Lyke, M.D.** (Georgetown University, Washington DC, 1992). Infectious Diseases Research fellow. Research project: Immune correlates of protection in volunteers from malaria endemic areas. Current position: Associate Professor (tenured), Department of Medicine, University of Maryland, Baltimore, MD.
- 2002-2003. **Ralph LeBlanc, M.D.** (Michigan State University, East Lansing, MI, 1979). Vaccinology fellow. Research project: Mechanisms of protective immunity in malaria: Studies in Bandiagara, Mali. Private Practice. Baltimore, MD.
- 2000-2003. **Rosângela Salerno-Gonçalves Mezghanni, Ph.D.** (Paris V University, Paris, France, 1999). Postdoctoral fellow. Research project: Immune mechanisms of protection in *S. Typhi* vaccines. Current position: Assistant Professor, Department of Pediatrics, University of Maryland, Baltimore, MD.
2004. **Hong Ro Kim, Ph.D.** (Pusan National University, Korea, 2000). Postdoctoral fellow. Research project: Development of a wild-type *S. dysenteriae* 1 challenge model and study of the mechanisms of protective immunity in monkeys. Last known position: Senior Research Scientist, Biotechnology Lab, CKD Research Institute, Chonan, Korea.
- 2003-2007. **Stacey Wooden, Ph.D.** (Johns Hopkins University, Baltimore, MD, 2003). Postdoctoral fellow. Research Project: Protective Immunity by *Shigella* vaccines in humans. Last known position: Scientific Review Officer, Health and Civil Services, SRA International. Chapel Hill, North Carolina.
- 2002-2007 **M. Rezwatul Wahid, M.D. Ph.D.** (M.D. from Dhaka Medical College, Bangladesh, 1987; Ph.D. from Kagoshima University, Japan, 1996). Postdoctoral fellow. Research project: Characterization of cytotoxic T cells and other immune responses elicited by *S. Typhi* vaccines. Current position: Assistant Research Professor, Department of Pediatrics, University of Maryland, Baltimore, MD.
- 2005-2007 **Jakub K. Simon, M.D.** (University of Southern California, Los Angeles, CA, 1998). T32 Vaccinology/Infectious Diseases fellow. Research project: Immunological Correlates of Protection in Shigellosis. Current position: Senior Director of Clinical Operations, PaxVax. Menlo Park, CA 94025.
- 2007-2010. **Milton Maciel, Ph.D.** (University of São Paulo, Brasil, 2001). Postdoctoral fellow. Research Project: Identification of protective immune responses to *Shigella* in humans and monkeys. Current position: Senior Scientist, Head of Immunology, ETEC Vaccine Program, Enteric Diseases Department, Naval Medical Research Center, Silver Spring, MD.
- 2006-2010 **Abdul Khan, Ph.D.** (University of Gifu, School of Medicine, Japan, 1998). Postdoctoral fellow. Research project: Development of a wild-type *S. dysenteriae* 1 challenge model and study of the mechanisms of protective immunity in monkeys. Current Position. Senior Scientist, Department of Microbiology & Immunology. Uniformed Services University of the Health Sciences (USUHS), Bethesda, MD.
- 2009-2011 **Franklin R. Toapanta, M.D., Ph.D.** (MD, Central University of Ecuador, 1998; Ph.D. University of Pittsburgh, 2006). Postdoctoral Fellow. Research Project: Mucosal Immunity to enteric pathogens, including *H. pylori*, *Shigella* and *S. Typhi*. Current position: Assistant Professor, Dept. Medicine, University of Maryland.

- 2007-2011 **Wilbur H. Chen, M.D.** (Howard University, Washington DC, 1999). Co-mentor of Dr. Chen's K12 award. Research Project: Elderly dendritic cell function and influenza vaccine responses. Current position: Assistant Professor. Dept. Medicine. University of Maryland.
- 2009-2012 **Monica A. McArthur, M.D., Ph.D.** (MD/PhD, The University of Texas Medical Branch, 2006). Postdoctoral/T32 Vaccinology Fellow. Research Project: Immunological mechanisms of protection in subjects immunized with attenuated strains of *S. Typhi* or challenged with wild-type *S. Typhi* in children and adults with emphasis on regulatory T cells and T follicular/helper cells. Current position: Assistant Professor, Dept. Pediatrics. University of Maryland.
- 2011-2013 **Shawna Graves, Ph.D.** (NIAID, NIH – Rocky Mountain Labs, 2011). Postdoctoral Fellow co-mentor. Research Project: Multifunctional cell-mediated immune responses in subjects who participated in an AMA-1 Phase II vaccine study in Mali. Current position: Postdoctoral Fellow, California Institute for Biomedical Research (Calibr), CA.
- 2011-Present **Jayaum Booth, Ph.D.** (Vaccine and Infectious Disease Organization (VIDO)/International Vaccine Center, Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, Canada, 2009). Postdoctoral Fellow. Research Project: Interactions between gut mucosal immunity and microbiota in *H. pylori*, *S. Typhi* and *Shigella* infections in humans.
- 2011-Present **Stephanie Fresnay-Murray, Ph.D.** (Blood Transfusion Center and University of Franche-Comte, Besancon, France, Program in Transplant Immunology, 2004). Postdoctoral Fellow and T32 Vaccinology Fellow. Research Project: Immune mechanisms of protection in *S. Typhi* vaccinees and subjects challenged with wild-type *S. Typhi* with emphasis on T effector/memory responses.

Mentoring of Junior Faculty

- 2002-2008 **Marcela F. Pasetti, Ph.D.** Department of Pediatrics. University of Maryland.
- 2008-2010 **Jakub K. Simon, M.D.** Department of Pediatrics. University of Maryland.
- 2002-2010 **Kirsten Lyke, M.D.** Department of Medicine. University of Maryland.
- 2003-Present **Rosângela Salerno-Gonçalves Mezghanni, Ph.D.** Assistant Professor. Department of Pediatrics. University of Maryland.
- 2007-Present **M. Rezwanul Wahid, M.D. Ph.D.** Assistant Research Professor. Department of Pediatrics. University of Maryland.
- 2011-Present. **Franklin R. Toapanta, M.D., Ph.D.** Assistant Professor. Department of Medicine. University of Maryland.
- 2011-Present **Wilbur H. Chen, M.D.** Associate Professor. Department of Medicine. University of Maryland.
- 2011-Present **Aruna Panda, Ph.D.** Assistant Professor. Department of Pathology. University of Maryland.
- 2011-Present **Jennifer A. Snyder, Ph.D.** Instructor. Department of Medicine. University of Maryland.
- 2012-Present **Monica A. McArthur, M.D., Ph.D.** Assistant Professor. Department of Pediatrics. University of Maryland.

GRANT SUPPORT

CURRENTLY ACTIVE

Grants and Contracts (as PI, Project Leader or Mentor)

- 2014-2019. **National Institutes of Health Grant. U19-AI082655.** Cooperative Centers for Human Immunology (CCHI) entitled “Mucosal and Systemic Immunity, Vaccines and Microbiota Interplay in Humans”. **Marcelo B. Sztein, P.I.** 06/01/2014 - 05/31/2019. \$13,494,225 total costs (all years). Peer-reviewed.
- 2013-2018. **National Institutes of Health Grant. R01-AI036525.** Immune mechanisms of protection in *S. Typhi* vaccines. **Marcelo B. Sztein, P.I.** 03/19/2013 - 02/28/2018. \$2,121,250 total costs (all years). Peer-reviewed.
- 2014-2019. **National Institutes of Health Grant. U19-AI109776.** Center of Excellence for Translational Research (CETR) Network titled “Immunoprophylactic Strategies to Control Emerging Enteric Infections”. Myron M. Levine, CETR P.I. **Marcelo B. Sztein, PI** of Research Project 1 titled “Immunologic Basis for Broad Protection against Enteric Fever Salmonella”. 03/01/2014 – 02/28/2019. Research Project 1 total costs \$4,315,125 (all years). CETR total costs \$24,990,278 (all years). Peer-reviewed.
- 2014-2019. **National Institutes of Health Grant. U19-AI110820.** Genomic Centers for Infectious Diseases (GCID) Network titled “Host, Pathogen, and the Microbiome: Determinants of Infectious Disease Outcome”. Claire Fraser, GCID P.I. **Marcelo B. Sztein, PL** of the Immunology Core. 04/15/2014 – 04/14/2019. Immunology Core total costs (all years) \$730,034. Peer-reviewed.
- 2013-2023. **National Institutes of Health Research Contract. HHSN2722013000221.** Vaccine and Treatment Evaluation Units (VTEU). Karen L. Kotloff, P.I.; **Marcelo B. Sztein, Senior Immunologist.** 09/16/2013 - 09/15/2023. This contract is based on competitive funding of Task Orders. Funding up to \$953 million total costs over 10 Years. Peer-reviewed.

Active studies (as Task Order PI or Laboratory PI)

- Establishment of central facilities to analyze clinical samples for levels of circulating cytokines (including chemokines and growth factors) and activation and/or increase in subpopulations of natural immune cells, and T and B cells from multiple DMID-funded VTEU clinical studies and trials. Order No. HHSN27200012. Requisition reference number: FY.2015.A4D14.0033. **Role: PI.** 09/01/2015 – 02.28.2018. \$2,767,600 current total approved costs (Order No HHSN27200012-1). This Task order has a maximum total approved costs if all options are implemented of \$9,143,349.
 - A Phase 1 double-blind, placebo-control, dose escalating study to evaluate the safety and immunogenicity of double mutant heat labile toxin LTR192G/L211A(dmLT) from *enterotoxigenic Escherichia coli* (ETEC) by oral, sublingual, and intradermal vaccination in adults residing in an endemic area. Order No. HHSN27200010. Requisition reference number: 14-0031.B1C1D1.0022-22. **Role: Laboratory PI.** 07/15/2015 - 2/11/2019. \$2,537,544 total costs.
- 2013-2018. **National Institutes of Health. T32AI07524.** Fellowship Training Program in Vaccinology. Myron M. Levine, P.I.; **Marcelo B. Sztein, Co-director of**

Immunology, Training Faculty and Member of the Executive Committee.
07/01/2013 - 06/30/2018. \$1,536,261 total costs (all years). Peer-reviewed

Grants and Contracts (as Co-investigator)

2012-2016. **Wellcome Trust.** Live oral and parenteral conjugate vaccines to prevent invasive non-typhoidal *Salmonella* infections in infants and young children in Sub-Saharan Africa. Myron M. Levine, P.I.; **Marcelo B. Sztein**, Co-investigator/Key personnel. 04/01/2012 - 10/31/2016. \$1,192,485 total costs. Peer-reviewed.

2013-2023. **National Institutes of Health Research Contract. HHSN2722013000221.** Vaccine and Treatment Evaluation Units (VTEU). Karen L. Kotloff, P.I.; **Marcelo B. Sztein, Senior Immunologist.** 09/16/2013 - 09/15/2023. This contract is based on competitive funding of Task Orders. Funding up to \$953 million total costs over 10 Years. Peer-reviewed.

Active studies (as Task Order Co-investigator)

- A randomized, double-blinded, outpatient Phase 1 study in healthy adults to determine the safety and immunogenicity of an ETEC candidate vaccine, attenuated recombinant dmLT from ETEC, administered by the ID route. Order No. HHSN27200009. Requisition reference number: 13-0013.D1.0025. Role: Co-investigator. 08/01/2015 - 12/31/2017. \$1,146,421 total costs.

2014-2017. **Program for Appropriate Technology in Health (PATH).** Immunological evaluation of ETEC vaccine candidate dmLT in Healthy Adult Volunteers. **Marcelo B. Sztein**, Co-investigator. 04/15/2014 – 4/14/2017. \$526,690 total costs (all years).

COMPLETED

Grants (as PI, Project Leader or Mentor)

1980. **LALCEC** (Argentine Association Against Cancer). Regulation of the Immune Response Against Tumors in Human and Animal Models. **Marcelo B. Sztein, P.I.** 1/1/1980 - 12/31/1980. Peer-reviewed.

1984-1985. **Biomedical Research Support Grant. BRSG SO7 RR05359-22 Project #14-84.** Division of Health Research Resources, National Institutes of Health. Improvement of the Human Tumor Stem Cell Assay. **Marcelo Sztein, P.I.** 1/1/84 - 3/31/85. \$11,040 total direct costs. Peer-reviewed.

1987-1989. **Alpha 1 Biomedicals, Inc.** Influenza Vaccine-Adjuvant Thymosin Alpha 1 Clinical Trial. **Marcelo B. Sztein, P.I. for Immunological Studies.** 10/1/1987 - 9/30/1989. \$142,157 total direct costs.

1986-1989. **National Institutes of Health Grant. R01-CA42219.** National Cancer Institute. Modulation of interleukin 2 and interleukin 2 receptors by Thymic Hormones.

- Marcelo B. Sztein, P.I.** 12/1/1986 - 11/30/1989. \$247,132 total direct costs. Peer-reviewed.
- 1989-1993. **National Institutes of Health Grant. R01-AI26542.** Lymphocyte Modulation by *Trypanosoma cruzi*. **Marcelo B. Sztein, P.I., Subcontract.** Felipe Kierszenbaum, P.I. 4/1/1989 - 3/31/1993. \$103,488 total direct costs of this subcontract with Michigan State University. Peer-reviewed.
- 1994-1995. **Medeva Research Group. Vaccine Research Unit.** Cell-mediated Immune Studies in Volunteers Immunized with Live Oral *Salmonella typhi* Vaccines (Clinical Trial Protocol Typhoid CVD 24000). **Marcelo B. Sztein, P.I.** 8/1994 - 12/1995. \$35,000 total direct costs.
1997. **Auragen, Inc.** Cell-mediated Immune Studies in Volunteers Immunized with a DNA Vaccine Encoding Hepatitis B Surface Antigen Delivered by a Gene Delivery Device (Clinical Trial Protocol Hepatitis CVD 4000). **Marcelo B. Sztein, P.I.** 2/1997 - 8/1997. \$15,800 total direct costs.
- 1996-1998. **National Institutes of Health. Fogarty International Center Research Fellowship. FO5-TW05295.** Mucosal Cell Mediated Immune Responses to Oral Vaccines. **Marcelo B. Sztein, Mentor.** Dr. Marcela Pasetti, Fellow. Area of training: Immunology. 8/19/1996 - 8/18/1998. \$60,190 total direct costs. Peer-reviewed.
- 1997-1998. **Peptide, Inc.** Cell-mediated Immune Studies in Volunteers Immunized with Attenuated *Salmonella typhi* Oral Live Vector Vaccine CVD 908-*htrA* (Clinical Trial Protocol Typhoid CVD 27000). **Marcelo B. Sztein, P.I.** 8/1997 - 8/1998. \$25,000 total direct costs.
- 1996-1998. **Antex Biologics.** Cell-mediated Immune Studies in Volunteers with and without Subclinical Gastric Infection Immunized with Killed Whole-Cell *Helicobacter pylori* Vaccine with Adjuvant (Clinical Trial Protocol Helicobacter CVD 3000). **Marcelo B. Sztein, P.I.** 12/1996 - 12/1998. \$38,500 total direct costs.
- 1994-2000. **National Institutes of Health Grant. R01-AI36525.** Antigenic Competition in *S. typhi* Live Vector Vaccines. **Marcelo B. Sztein, P.I.** 9/1/1994 - 5/31/2000. \$706,497 total direct costs. \$1,023,869 total costs. Peer-reviewed.
- 1999-2001. **National Institutes of Health Grant. R21-AI42802.** Mucosal and Systemic Immunity in Human Shigella Vaccines. **Marcelo B. Sztein, P.I.** 3/1/1999 - 2/28/2001. \$127,657 direct costs. Peer-reviewed.
- 2000-2006. **National Institutes of Health Grant. R01-AI36525.** Antigenic Competition in *S. typhi* Live Vector Vaccines. **Marcelo B. Sztein, P.I.** 9/1/2000 - 8/31/2006. \$1,852,274 total costs. Peer-reviewed.
- 1998-2001. **National Institutes of Health. KO8-AI-01507.** Protective Immune mechanisms in Human *Shigella* Vaccines. Taraz Samandari, P.I.; **Marcelo B. Sztein, Mentor.** 7/1/1998 - 6/1/2001. \$212,736 total direct costs. Peer-reviewed.
- 2002-2004. **National Institutes of Health Grant. Research Supplement for Underrepresented Minorities to R01-AI36525.** Immune mechanisms of protection in *S. Typhi* vaccines. **Marcelo B. Sztein, P.I.;** Marcela F. Pasetti,

- Ph.D., Minority trainee. 9/1/2002 - 8/31/2004. \$173,432 direct costs. Peer-reviewed.
- 2002-2006. **National Institutes of Health. K23-AI49203.** Immunologic interaction of chronic schistosomiasis and acute falciparum malaria. Kirsten Lyke, P.I.; **Marcelo B. Sztein, Mentor for Immunological Studies.** 2/1/2002 - 1/31/2006. \$469,000 total direct costs. \$506,520 total costs. Peer-reviewed.
- 2003-2008. **National Institutes of Health Grant. U19-AI056578.** Live Bacterial Vector Vaccines Against Agents of Bioterror. James P. Nataro, P.I.; **Marcelo B. Sztein, P.I., Animal/Immunology Core.** 9/30/2003 - 01/31/2008. \$1,760,823 current year direct costs. \$8,301,519 total costs. Peer-reviewed.
- 2004-2009. **National Institutes of Health. U54-AI057168.** Regional Center for Excellence for Biodefense and Emerging Infectious Diseases Research (MARCE). Mid-Atlantic Region. Myron M. Levine, P.I. **Marcelo B. Sztein, PI** of the study entitled "Establishment of a *S. dysenteriae* 1 challenge model and identification of immunological correlates of protection in monkeys", a component of the Low-dose enteric infections" cluster. Peer-reviewed. \$47,277,038 total costs. Peer-reviewed.
- 2004-2010. **National Institutes of Health Grant. R01-AI057927.** Protective Immunity by *Shigella* vaccines in humans. **Marcelo B. Sztein, P.I.** 05/01/2004 - 04/30/2010. \$2,646,951 total costs. Peer-reviewed.
- 2005-2010. **National Institutes of Health. U19-AI-065683.** International Collaborations in Infectious Disease Research (ICIDR). Malaria Vaccine Trials in Mali. Christopher Plowe, PI. **Marcelo B. Sztein, Leader of Project 2 (Allelic Diversity and Immune Correlates of Vaccine-induced Protection) and Member of the ICIDR Steering Committee.** 9/01/05 - 4/30/10. \$1,060,037 total costs/year. Peer-reviewed.
- 2005-2010. **National Institutes of Health. K23-AI065759.** Immunological Correlates of Protection in Shigellosis. Jakub K. Simon, P.I.; **Marcelo B. Sztein, Primary Mentor/Sponsor.** 9/1/2005 - 7/31/2010. \$152,183 current year direct costs. \$808,670 total costs. Peer-reviewed.
- 2007-2010 **LigoCyte** Pharmaceuticals, Inc. Phase 1 Dose Escalation, Safety and Immunogenicity Study of Intranasal Norwalk VLP0 Vaccine with Adjuvant (MPL) and Excipients (Chitosan, Mannitol and Sucrose). **Marcelo B. Sztein, PI** for cell-mediated T and B memory immunological studies. \$211,808 total costs.
- 2011 **Atox Bio Ltd.** Phase 1, Double Blind, Placebo-Controlled, Dose Escalation, Safety, Pharmacokinetic, and Pharmacodynamic Clinical Trial of AB103, a Peptide Antagonist In Healthy Volunteers. **Marcelo B. Sztein, PI** for flow cytometric studies. \$96,867 direct costs.
- 2007-2011. **Doris Duke Foundation. Clinical Scientist Development Award.** Schistosoma-mediated Resistance to Malaria. Kirsten Lyke, P.I.; **Marcelo B. Sztein, Mentor.** 8/1/2007 - 7/31/2011. \$124,998 current year direct costs. \$404,924 total costs. Peer-reviewed.
- 2011-2012 **National Institutes of Health Grant. U19 AI082655.** Cooperative Centers for Translational Research in Human Immunology and Biodefense (CCHI)

Discretionary Funds (Subcontract with Baylor University). “Immunological studies in typhoid vaccines using advanced proteomics.” **Marcelo B. Sztein, P.I.** 2/1/2011 - 4/30/2012. \$110,000 total costs for Dr. Sztein’s component. Peer-reviewed.

2006-2013. **National Institutes of Health Grant. R01-AI036525.** Immune mechanisms of protection in *S. Typhi* vaccines. **Marcelo B. Sztein, P.I.** 12/15/2006 - 3/18/2013. \$2,173,177 total costs. Peer-reviewed.

2012-2013 **National Institutes of Health Grant. U19 AI082655.** Cooperative Centers for Translational Research in Human Immunology and Biodefense (CCHI) Discretionary Funds (Subcontract with Baylor University). “IL-17A and multifunctional CD8+ T cells in immunity to dengue infection in humans” **Marcelo B. Sztein, P.I.** Monica McArthur, Project leader. 5/15/2012 - 7/31/2013. \$98,000 total costs for Dr. Sztein’s component. Peer-reviewed.

2012-2013 **National Institutes of Health Grant. U19 AI082655.** Cooperative Centers for Translational Research in Human Immunology and Biodefense (CCHI) Discretionary Funds (Subcontract with Baylor University). “Deep proteomics to identify correlates of protection in Ty21a typhoid vaccines” **Marcelo B. Sztein, P.I.** 5/15/2012 - 9/30/2013. \$53,500 total costs for Dr. Sztein’s component. Peer-reviewed.

2011-2013 **NanoBio Corporation.** Measurement of immunological responses in A Phase 1b Randomized, Single-Blind, Controlled Safety, Tolerability and Immunogenicity Study of Intranasal NB 1008 (Fluzone® + 60%W805EC) in Healthy Adult Volunteers Administered by Nasal Spray and Dropper (Protocol # NB-1008-002). **Marcelo B. Sztein, P.I.** \$119,640 direct costs.

2009-2014 **National Institutes of Health. U54-AI057168.** Regional Center for Excellence for Biodefense and Emerging Infectious Diseases Research (RCE). Mid-Atlantic Region. Myron M. Levine, P.I. **Marcelo B. Sztein, PI** of project III-1 entitled “Broad-spectrum vaccines to enteric fevers in humans: cross-protective immunity” 3/1/2009 – 2/28/2014. \$278,404 ~total costs/year project III.1. \$39,726,978 MARCE total costs. Peer-reviewed.

2009-2014. **National Institutes of Health Grant. U19-AI082655.** Cooperative Centers for Translational Research in Human Immunology and Biodefense (CCHI) entitled “Mucosal Immunity, Vaccines and Microbiota Interplay in Humans and Animal Models”. **Marcelo B. Sztein, P.I.** 06/18/2009 - 05/31/2014. \$14,786,549 total costs (all years). Peer-reviewed.

2013-2014 **National Institutes of Health Grant. U19-AI082655.** Cooperative Centers for Translational Research in Human Immunology and Biodefense (CCHI) Discretionary Funds (Subcontract with Baylor University). “Human Immunity and gut microbiota interactions after wild-type *S. Typhi* challenge” **Marcelo B. Sztein, P.I.** 5/1/2013 - 4/30/2014. \$307,000 total costs. Peer-reviewed.

Grants (as Co-investigator)

1987-1990. **National Institutes of Health Research Project Cooperative Agreement. U01-AI25867.** National Institute of Allergy and Infectious Diseases. Combination Therapy of HIV Infection. Richard S. Schulof, P.I.; **Marcelo B. Sztein, Co-**

- investigator.** 9/30/1987 - 10/31/1990. \$3,175,388 total direct costs. Peer-reviewed.
- 1990-1993. **National Institutes of Health Grant. R01-AI29471.** Recombinant and Live Oral *Salmonella typhi* Hybrid Vaccines. Myron M. Levine, P.I.; **Marcelo B. Sztein, Co-Investigator.** 4/1/1990 - 3/31/1993. \$731,617 total direct costs. Peer-reviewed.
- 1991-1993. **National Institutes of Health Program Project Grant. P01-AG10207.** Mechanisms of Immunosenescence. Project #7: Alterations in T helper cell subpopulations with aging. Jan Cerny, P.I.; **Marcelo B. Sztein, Co-investigator.** 12/1/1991 - 11/30/1993. \$197,805 total direct costs for Project #7. Peer-reviewed.
- 1990-1995. **National Institutes of Health - Institutional National Research Service Award.** Molecular Pathogenesis of Bacterial Infections. John W. Warren, P.I.; **Marcelo B. Sztein, Contributing Faculty.** 7/1/1990 - 6/30/1995. Peer-reviewed.
- 1993-1997. **National Institutes of Health Grant. R01-AI29471.** Recombinant and Live Oral *Salmonella typhi* Hybrid Vaccines. Myron M. Levine, P.I.; **Marcelo B. Sztein, Co-Investigator.** 4/1/1993 - 3/31/1997. \$827,899 total direct costs. Peer-reviewed.
- 1993-1996. **National Institutes of Health. U01-AI37546.** Malaria Vaccine Research and Development Project. Myron M. Levine, P.I.; **Marcelo B. Sztein, Co-investigator.** 7/1/1993 - 6/30/1996. \$501,313 total direct costs. Peer-reviewed.
- 1997-2000. **National Institutes of Health. R01-I40297.** Multivalent *Salmonella typhi*-based Malaria Vaccines. Myron M. Levine, P.I.; **Marcelo B. Sztein, Co-investigator.** 4/1/1997 - 3/30/2000. \$536,031 total direct costs. Peer-reviewed.
- 1998-2002. **National Institutes of Health Grant. R01-AI40568.** Interferon- γ Mediated anti-*E. coli* Defenses and Sepsis. Alan S. Cross, P.I.; **Marcelo B. Sztein, Co-Investigator.** 7/1/1998 - 6/30/2002. \$898,584 total direct costs. Peer-reviewed.
- 1997-2002. **National Institutes of Health. T32AI07524.** Fellowship Training Program in Vaccinology. Myron M. Levine, P.I.; **Marcelo B. Sztein, Training Faculty and Member of the Steering Committee.** 7/01/1997 - 6/30/2002. \$758,488 total costs. Peer-reviewed.
- 1998-2004. **National Institutes of Health Grant. R01-AI29471.** Recombinant and Live Oral *Salmonella Typhi* Hybrid Vaccines. Myron M. Levine, P.I.; **Marcelo B. Sztein, Co-Investigator.** 4/1/1998 - 03/31/2004. \$257,743 last year direct costs. Peer-reviewed.
- 2000-2005. **National Institutes of Health Grant. R01AI40297.** Bacterial Live Vector-Based Vaccine Against Malaria. Myron M. Levine, P.I.; **Marcelo B. Sztein, Co-investigator.** 7/1/2000 - 6/30/2005. \$1,250,000 total direct costs. Peer-reviewed.
- 2002-2007. **National Institutes of Health. 2 T32AI07524.** Fellowship Training Program in Vaccinology. Myron M. Levine, P.I.; **Marcelo B. Sztein, Training Faculty and Member of the Steering Committee.** 7/01/2002 - 6/30/2007. \$1,141,155 total costs. Peer-reviewed.

- 2004-2009. **National Institutes of Health. R01-AI29471.** Recombinant and live oral *Salmonella* Typhi hybrid vaccines. Myron M. Levine, P.I.; **Marcelo B. Sztein, Co-investigator.** 3/1/04-2/28/09. \$343,175 current year direct costs. \$2,585,239 total costs. Peer-reviewed.
- 2010-2011 **PaxVax Corporation.** Development of a flow cytometric based live/dead bacterial assay to evaluate the CVD 103-HgR live oral cholera vaccine. **Marcelo B. Sztein, P.I.** \$18,167 direct costs.
- 2007-2012. **National Institutes of Health. 2T32AI07524.** Fellowship Training Program in Vaccinology. Myron M. Levine, P.I.; **Marcelo B. Sztein, Co-director, Training Faculty and Member of the Executive Committee.** 7/01/2007 - 6/30/2012. \$1,423,090 total costs. Peer-reviewed.
- 2013-2014. **DARPA. Subcontract WA00135893/RFS2014050 with the University of Massachusetts.** Vectored Delivery of Oligoclonal Antibodies for Protection Against Enterotoxin Mediated Diarrheal Diseases. Myron M. Levine, P.I.; **Marcelo B. Sztein, Co-investigator.** 7/1/2013 – 4/30/2014. \$1,120,451 total costs (all years).
- 2010-2015. **National Institutes of Health. U01-AI-065683.** International Collaborations in Infectious Disease Research (ICIDR). Malaria Vaccine Trials in Mali. Christopher Plowe, PI. **Marcelo B. Sztein, Senior Immunologist.** 07/01/10 - 06/30/15. \$614,646 Year 1 total costs. Peer-reviewed.
- 2014-2015. **Substudies on Humans with Vibrio cholerae infection. PaxVax, Inc.** San Diego, CA. Substudy of “ A Phase 3 Randomized, Double-Blind, Placebo-Controlled, Efficacy Trial of a Single Dose of Live Oral Cholera Vaccine Candidate, PXVX0200 CVD 103-HgR Strain, in Preventing Cholera following Challenge with *Vibrio cholerae* O1 El Tor Inaba 10 Days or 3 Months after Vaccination”. Wilbur H. Chen, PI. **Marcelo B. Sztein, Co-investigator** (immunological studies). 11/2013 – 10/2015.
- 2014-2015. **University of Oxford. Wellcome Trust. 106325/Z/14/Z.** Accelerated Clinical Evaluation of a Monovalent Vectored Ebola Vaccine. Myron M. Levine, P.I.; **Marcelo B. Sztein, Co-investigator (Immunology).** 10/01/2014 - 9/30/2015. \$654,211 direct costs.

Contracts (as Principal Investigator)

- 2003-2010. **National Institutes of Health Contract. N01-AI30028.** Food and Waterborne Diseases Integrated Research Network (FWD-IRN) Immunology Research Unit (IRU). **Marcelo B. Sztein, P.I.** 7/14/2003 - 7/13/2010. \$8,044,772 total costs. Peer-reviewed.

Contracts (as Co-investigator)

- 1983-1986. **BRMP, NCI Master Agreement RFP N01-CM-37613-64 DCT:** Phase I/II Clinical Evaluation of Biological Response Modifiers (BRMs) for the Treatment of Cancer. Dr. Richard S. Schulof, P.I.; **Marcelo B. Sztein, Co-investigator.** 9/30/1983 - 8/29/1986.

- 1987-1992. **U.S. Army Medical Material Development Activity Contract. DAMD-17-88-C-8039.** Vaccine Testing Facility. Myron M. Levine, P.I. 10/13/1987 - 10/12/1992. \$4,685,246 total costs. **Marcelo B. Sztein, Co-investigator** in Task Execution Plans #14 and 19, "Evaluation of the Safety and Immunogenicity of Dengue 1 Vaccine".
- 1990-1993. **U.S.A.I.D. #DPE-5979-A-DO-0040-0.** Malaria Vaccine Research and Development Project. Myron M. Levine, P.I.; **Marcelo B. Sztein, Co-investigator.** 4/1/1990 - 3/31/1993. \$592,306 total direct costs.
- 1990-1994. **National Institutes of Health Contract. RFP-NIAID-DMID-91.** To Provide and Operate an Enteric Diseases Vaccine Evaluation and Treatment Unit. Myron M. Levine, P.I.; **Marcelo B. Sztein, Co-Investigator.** 11/30/1990 - 9/30/1994. \$5,644,111 total direct costs.
- 1992-1997. **U.S. Army Medical Material Development Activity Contract. DAMD-17-91-R-1166.** Vaccine Testing Facility. Myron M. Levine, P.I.; **Marcelo B. Sztein, Co-investigator.** 9/25/1992 - 9/24/1997. \$5,036,129 total direct costs.
- 1996-2001. **National Institutes of Health Research Contract. N01-AI65299.** Enteric Diseases Mucosal Pathogens Research Unit (EPRU). Carol O. Tacket, P.I.; **Marcelo B. Sztein, P.I.** of the project 96-04 entitled "Phenotypic Characterization of Cell Populations Isolated From Human Mucosal Biopsies by Multicolor Flow Cytometry". 1/22/1996 - 1/2/2001. Approximately \$475,000 direct costs.
- 1994-2002. **National Institutes of Health Research Contract. N01-AI45251.** Evaluation of Control Measures Against Infectious Diseases other than AIDS (VTEU). Myron M. Levine, P.I.; **Marcelo B. Sztein, Senior immunologist and P.I.** of the project entitled "Immunobiology of Responses to Salmonella Live Vectors". 9/30/1994 - 5/31/2002. \$9,216,428 total direct costs for this contract.
- 1996-2003. **National Institutes of Health Research Contract. N01-AI65299.** Enteric Diseases Mucosal Pathogens Research Unit (EPRU). Carol O. Tacket, P.I.; **Marcelo B. Sztein, Senior Immunologist/Co-Investigator.** 1/22/1996 - 12/31/2003. \$10,536,087 total direct costs.
- 1998-2004. **National Institutes of Health Contract. N01-AI85346.** Malaria: Clinical Research and Trial Preparation Sites in Endemic Areas. Christopher Plowe, P.I.; **Marcelo B. Sztein, Senior Immunologist.** 9/25/1998 - 5/31/2004. \$1,271,450 last year direct costs.
- 1998-2005. **National Institutes of Health Research Contract. N01-AI85342.** Evaluation of Vaccines and Therapeutics Against Infectious Diseases other than AIDS in the Elderly and Adults. Robert Edelman, P.I.; **Marcelo B. Sztein, Co-Investigator.** 7/1/1998 - 12/31/2005. \$8,199,128 total direct costs. Peer-reviewed.
- 2000-2006. **Bill and Melinda Gates Foundation Grant.** A "Stealth" Mucosal Measles Vaccine that can Immunize Young Infants (2-6 Months of Age) in Developing Countries, Despite the Presence of Maternal Antibodies. Myron M. Levine, P.I. **Marcelo B. Sztein, Co-Investigator.** 8/1/2000 - 7/31/2006. \$20,360,592 total costs. Peer-reviewed.

- 2002-2008. **National Institutes of Health Research Contract. N01-AI25461.** Evaluation of Control Measures Against Infectious Diseases other than AIDS (VTEU). Myron M. Levine, P.I.; **Marcelo B. Sztein, Senior Immunologist.** 6/01/2002 - 12/31/2008. \$27,626,528 total costs. Peer-reviewed.
- 2007-2014. **National Institutes of Health Research Contract. N01-AI80001.** Evaluation of Control Measures Against Infectious Diseases other than AIDS (VTEU). Karen L. Kotloff, P.I.; **Marcelo B. Sztein, Senior Immunologist.** 11/01/2007 - 10/31/2014. Peer-reviewed.
- “A Phase 2, Multi-Center, Double-Blind, Randomized Trial Comparing the Safety and Immunogenicity of a Francisella tularensis Live Vaccine Strain (LVS) Vaccine Produced by DynPort Vaccine Company (DVC-LVS) to a LVS Vaccine in use by the United States Army Medical Research Institute of Infectious Diseases (USAMRIID-LVS). DMID Protocol Number: 08-0006”. Role: PI, Immunological Studies. 12/28/2010 - 12/27/2012. \$928,300 total direct costs for the immunological studies.
 - “Phase 1 Study of the Safety and Immunogenicity of Recombinant Staphylococcal Enterotoxin B Vaccine (STEBVax) in Healthy Adults DMID Protocol Number: 07-0009.” Role: Immunologist. 01/01/2011 – 12/31/2014. \$143,545 total direct costs for the immunological studies.
- 2013-2016 Enterics Vaccine Initiative (EVI)-PATH. Bill & Melinda Gates Foundation. K.L. Kotloff, PI. **Marcelo B. Sztein, Senior Immunologist.** Safety, immunogenicity, and efficacy following experimental challenge of CVD 1208S, a Δ guaBA, Δ sen, Δ set Shigella flexneri 2a live oral vaccine. \$2,488,445 total costs.
- 2013-2023. **National Institutes of Health Research Contract. HHSN2722013000221.** Vaccine and Treatment Evaluation Units (VTEU). Karen L. Kotloff, P.I.; **Marcelo B. Sztein, Senior Immunologist.** 09/16/2013 - 09/15/2023. This contract is based on competitive funding of Task Orders. Funding up to \$953 million total costs over 10 Years. Peer-reviewed.
- Overall administration, clinical operations support and concept and protocol development, implementation and assays of approved concepts in normal healthy volunteers. Order No. HHSN27200011. Requisition reference number: FY.2016.A1B1C1D1.0026. Role: Co-investigator. 07/13/2015 - 7/31/2016. \$363,918 total costs.

Patents and Inventions

- Noriega, Fernando R., **Sztein, Marcelo B.** and Levine, Myron M. "Attenuated Mutants of Salmonella which Constitutively Express the Vi Antigen". UM Tech ID N° 1464FN. US patent # 6,190,669 B1 (issued February 20, 2001); South Africa patent# 2000/6,381 (issued March 27, 2002); New Zealand patent# 508110 (issued February 13, 2003); Australian Patent# 75495 (issued March 13, 2003); European Regional Patent Number 1,076,566 (issued July 19, 2006) [countries include Austria, Belgium, Switzerland, Germany, Denmark, Spain, Finland, France, United Kingdom, Greece, Ireland, Italy, Luxembourg, Monaco, The Netherlands]; Mexican patent# 237651 (issued June 7, 2006); Japanese Certificate of Patent# 436,782 (issued August 28, 2009); Canadian patent# 2,328,056 (issued July 6, 2010).

- Fasano, Alessio, **Sztein, Marcelo B.**, Lu, R. and Tanner, M.K. "Method of Using ZOT to Inhibit Lymphocyte Proliferation in an Antigen Specific Manner". UM Tech ID N° 1535AF. US patent # 6,733,762 B1 (issued May 11, 2004); South African patent Number 2001/2,071 (issued April 24, 2002); New Zealand Patent Numbers 510,150 (issued February 3, 2003) and 521,410 (issued October 6, 2005); Australian Letters Patent Number 754,142 (issued February 20, 2003); Russian Patent Number 2,214,271 (issued October 20, 2003); European Regional Patent Number 1,113,813 (issued May 25, 2005); Chinese Certificate of Patent Number ZL99,810,865.0 (issued November 23, 2005); Israel Certificate of Patent #141,563 (issued September 12, 2006); South Korean Patent Number 0615,442 (issued October 3, 2006); Mexican Patent Number 250,253 (issued October 11, 2007).
- Mezghanni, Rosangela, Fasano, Alessio and **Sztein, Marcelo B.** "Multicellular Organotypic Model of the Human Intestinal Mucosa." U.S. Patent and Trademark Office Number 9,200,258. Issued 12.01.2015.

Publications

Peer-Reviewed Articles

Google Scholar Citation Report (last updated October 17, 2016)

Sum of Times Cited: 9,010 - i10 index: 152 - h-index: 56

1. Fainboim, L., **Sztein, M.B.**, Serrate, S. and Mancini, R.: Transfer of Experimental Allergic Orchitis with Immune RNA. *Studies In Vivo. Clin. Exp. Immunol.* **34**: 92-99, 1978.
2. Fainboim, L., **Sztein, M.B.**, Serrate, S. and Satz, L.: **In Vitro** Transfer of Cellular Immunity in the Experimental Allergic Orchitis Model by Means of Immune - RNA. *Immunology.* **38**: 311-316, 1979.
3. Braun, M., **Sztein, M.B.**, Satz, M.L., Jasnis, M.A. and Saal, F.: Idiotypic Determinants in Alloantigen Receptor. I. Role in a Leucocyte Migration Inhibition Reaction. *Scand. J. Immunol.* **10**: 25-30, 1979.
4. **Sztein, M.B.**, Satz, M.L. and Serrate, S. Transfer of Cell Migration Inhibition **In Vitro** With Xenogeneic RNA in Experimental Allergic Orchitis. *J. Clin. Lab. Immunol.* **3**: 39-43, 1980.
5. Satz, M.L., **Sztein, M.B.**, Serrate, S. and Braun, M.: Mechanism of Immune Transfer by RNA Extracts. Immune RNA Induces the Synthesis of Idiotype-bearing Antigen Receptors in Noncommitted Cells. *Mol. Cell. Biochem.* **33**: 105-113, 1980.
6. **Sztein, M.B.**, Vogel, S.N., Sipe, J.D., Murphy, P.A., Mizel, S.B., Oppenheim, J.J. and Rosenstreich, D.L.: The Role of Macrophages in the Acute-phase Response: SAA Inducer Is Closely Related to Lymphocyte Activating Factor and Endogenous Pyrogen. *Cell. Immunol.* **63**: 164-176, 1981.
7. Serrate, S., Satz, M.L., **Sztein, M.B.** and Braun, M.: Transfer of Cellular Immunity **In Vivo** with Immune RNA in an Allogeneic Murine Model. *Clin. Immunol. and Immunopathol.* **22**: 75-82, 1982.

8. **Sztein, M.B.**, Luger, T.A. and Oppenheim, J.J.: An Epidermal Cell-derived Cytokine Triggers the **In Vivo** Synthesis of Serum Amyloid A By Hepatocytes. **J. Immunol.** **129**: 87-90, 1982.
9. Lustig, L., Satz, M.L., **Sztein, M.B.** and Denduchis, B.: Antigens of the Basement Membranes of the Seminiferous Tubules Induce Autoimmunity in Wistar Rats. **J. Reproductive Immunol.** **4**: 79-90, 1982.
10. Sipe, J.D., Vogel, S.N., **Sztein, M.B.**, Skinner, M. and Cohen, A.S.: The Role of Interleukin 1 in the Acute Phase Serum Amyloid A (SAA) and Serum Amyloid P (SAP) Biosynthesis. **Ann. New York Acad. Sci.** **389**: 137-150, 1982.
11. Luger, T.A., Grabner, G., **Sztein, M.B.** and Smolin, G.: A Corneal Cytokine Triggers the **In Vivo** Synthesis of Serum Amyloid A by Hepatocytes. **Ophthalmic Research** **15**: 121-125, 1983.
12. Luger, T.A., **Sztein, M.B.**, Schmidt, J.A., Murphy, P., Grabner, G. and Oppenheim, J.J.: Properties of Murine and Human Epidermal Cell-derived Thymocyte-activating Factor. **Federation Proc.** **42**: 2772-2776, 1983.
13. Luger, T.A., Stadler, B.M., Luger, B.M., **Sztein, M.B.**, Schmidt, J.A., Hawley-Nelson, P., Grabner, G. and Oppenheim, J.J.: Characteristics of an Epidermal Cell Thymocyte-Activating Factor (ETAF) Produced by Human Epidermal Cells and a Human Squamous Cell Carcinoma Cell Line. **J. Invest. Dermatol.** **81**: 187-193, 1983.
14. **Sztein, M.B.**, Steeg, P.S., Johnson, H.M. and Oppenheim, J.J.: Regulation of Human Peripheral Blood Monocyte DR Antigen Expression **In Vitro** by Lymphokines and Recombinant Interferons. **J. Clin. Invest.** **73**: 556-565, 1984.
15. Stiehm, E.R., **Sztein, M.B.**, Steeg, P.S., Mann, D., Newland, C., Blaese, M. and Oppenheim, J.J.: Deficient DR Antigen Expression on Human Cord Blood Monocytes: Reversal With Lymphokines. **Clin. Immunol. and Immunopath.** **30**: 430-436, 1984.
16. Zatz, M.M., Oliver, J., Samuels, C., Skotnicki, A.B., **Sztein, M.B.** and Goldstein, A.L.: Thymosin Increases T-Cell Growth Factor Production By Normal Peripheral Blood Lymphocytes. **Proc. Natl. Acad. Sci. USA** **81**: 2882-2885, 1984.
17. Naylor, P.H., Schulof, R.S., **Sztein, M.B.**, Spira, T.J., McCurdy, P.R., Darr, F., Kessler, C.M., Simon, G. and Goldstein, A.L.: Thymosin in the Early Diagnosis and Treatment of High Risk Homosexuals and Hemophiliacs with AIDS-like Immune Dysfunction. In Acquired Immunodeficiency Syndrome. Selikoff IJ, Teirstein AS and Hirshman SZ, eds. **Ann. New York Acad. Sci.** **437**: 88-99, 1984.
18. Nagai, H., **Sztein, M.B.**, Steeg, P.S., Hooks, J.J., Oppenheim, J.J. and Steimberg, A.D.: Diminished Peripheral Blood Monocyte DR Antigen Expression in Systemic Lupus Erythematosus. **Clin. Exp. Rheumatol.** **2**: 131-137, 1984.
19. Goldstein, A.L., Naylor, P.H., Schulof, R.S., Simon, G.L., **Sztein, M.B.**, Kessler, C.M., Robert-Guroff, M., and Gallo, R.C.: Thymosin in the Staging and Treatment of HTLV-III positive Homosexuals and Hemophiliacs with AIDS-Related Immune Dysfunction. **Adv. Exp. Med. Biol.** **187**: 129-140, 1985.

20. Denduchis, B., Satz, M.L., **Sztein, M.B.**, Puig, R.P., Doncel, G. and Lustig, L.: Multifocal Damage of the Testis Induced in Rats by Passive Transfer of Antibodies Prepared Against Non-Collagenous Fraction of Basement Membrane. **J. Reproductive Immunol.**, **7**: 59-75, 1985.
21. Zatz, M.M., Oliver, J., **Sztein, M.B.**, Skotnicki, A.B. and Goldstein, A.L. : Comparison of the Effects of Thymosin and other Thymic Factors on Modulation of Interleukin 2 Production. **J. Biol. Resp. Mod.** **4**: 365-376, 1985.
22. Steeg, P.S., **Sztein, M.B.**, Mann, D.L., Strong, D.M. and Oppenheim, J.J.: Interferon Regulation of DR Antigen Expression and Alloantigen-Presenting Capabilities of the Promyelocytic Line HL60. **Scand. J. Immunol.** **21**: 425-430, 1985.
23. **Sztein, M.B.**, and Goldstein, A.L.: Thymic Hormones - A Clinical Update. F. Spreafico and J.W. Hadden, editors. **Springer Seminars *in Immunopathology** **9**: 1-18, 1986.
24. **Sztein, M.B.**, Serrate, S.A. and Goldstein, A.L.: Modulation of Interleukin 2 Receptor Expression in Normal Human Lymphocytes by Thymic Hormones. **Proc. Nat. Acad. Sci. USA**, **83**: 6107-6111, 1986.
25. Schulof, R.S., Simon, G.L., **Sztein, M.B.**, Parenti, D.M., DiGioia, R.A., Courtless, J.W., Orenstein, J.M., Kessler, C.M., Kind, P.D., Schlesselman, S., Paxton, H.M., Robert-Guroff, M., Naylor, P.H. and Goldstein, A.L. Phase I/II Trial of Thymosin Fraction 5 and Thymosin Alpha 1 in HTLV-III seropositive subjects. **J. Biol. Resp. Mod.** **5**: 429-443, 1986.
26. Schulof, R.S., **Sztein, M.B.** and Goldstein, A.L. Thymosins - Pre-clinical and Clinical Studies. **Drugs of the Future** **11**: 783-793, 1986.
27. Schulof, R.S., Scheib, R.G., Parenti, D.M., Simon, G.L., DiGioia, R.A., Paxton, H.M., **Sztein, M.B.**, Chandra, P., Courtless, J.W., Taguchi, Y.T., Sun, D.K., Goldstein, A.L. and Sarin, P.S.: Treatment of HTLV-III/LAV-infected Patients with D-Penicillamine. **Drug Research** **36 (II)**: 1531-1534, 1986.
28. **Sztein, M.B.**, Simon, G.L., Parenti, D.M., Scheib, R., Goldstein, A.L., Goodman, R., DiGioia, R.A., Paxton, H., Skotnicki A.B. and Schulof, R.S.: In Vitro Effects of Thymosin and Lithium on Lymphoproliferative Responses of Normal Donors and HIV Seropositive Male Homosexuals with AIDS-Related Complex. **Clin. Immunol. Immunopathol.** **44**: 51-62, 1987.
29. Schulof, R.S., Naylor, P.H., **Sztein, M.B.** and Goldstein, A.L. Thymic Physiology and Biochemistry. In: **Advances in Clinical Chemistry**. Spiegel, HE, editor. **26**: 203-292, 1987.
30. Neta, R., **Sztein, M.B.**, Oppenheim, J.J., Gillis, S. and Douches, S.D. The **In Vivo** Effects of Interleukin 1. I. Bone Marrow Cells are Induced to Cycle Following Administration of IL-1. **J. Immunol.** **139**: 1861-1866, 1987.
31. Serrate, S.A., Schulof, R.S., Leondaridis, L., Goldstein, A.L. and **Sztein, M.B.** Modulation of Human Natural Killer Cell Cytotoxic Activity, Lymphokine Production and Interleukin 2 Receptor Expression by Thymic Hormones. **J. Immunol.** **139**: 2338-2343, 1987.

32. Merritt, W.D., **Sztein, M.B.** and Reaman, G.H. Detection of GD₃ Ganglioside in Childhood Acute Lymphoblastic Leukemia with Monoclonal Antibody to GD₃: Restriction to Immunophenotypically Defined T-cell Disease. **J. Cell. Biochem.** **37**: 11-19, 1988.
33. Beltz, L.A., **Sztein, M.B.** and Kierszenbaum, F. Novel Mechanism for *Trypanosoma cruzi*-induced suppression of Human Lymphocytes: Inhibition of IL-2 Receptor Expression. **J. Immunol.** **141**: 289-294, 1988.
34. Skotnicki, A.B., Zatz, M., **Sztein, M.B.**, Goldstein, A.L., and Schulof, R.S. Effects of Thymic Hormones on Interleukin 2 Synthesis by Lymphocytes from HIV-positive pre-AIDS subjects. **Immunol. Invest.** **17**: 159-164, 1988.
35. Parenti, D.M., Simon, G.L., Scheib, R.G., Meyer III, W.A., **Sztein, M.B.**, Paxton, H., DiGioia, R.A. and Schulof, R.S. The Effect of Lithium Carbonate in HIV-Infected Patients with AIDS-related Immune Dysfunction. **J. Acquired Immune Deficiency Syndromes.** **1**: 119-124, 1988.
36. Kierszenbaum, F., **Sztein, M.B.** and Beltz, L.A. Decreased Human Interleukin-2 Receptor Expression due to a Protozoan Pathogen. **Immunology Today** **10**: 129-131, 1989.
37. Kierszenbaum, F., Cuna, W.R., Beltz, L.A. and **Sztein, M.B.** *Trypanosoma cruzi* Reduces the Number of High Affinity IL-2 Receptors on Activated Human Lymphocytes by Suppressing the Expression of the p55 and p70 Receptor Components. **J. Immunol.** **143**: 275-279, 1989.
38. Beltz, L.A., Kierszenbaum, F. and **Sztein, M.B.** Selective Suppressive Effects of *Trypanosoma cruzi* on Activated Human Lymphocytes. **Infect. Immun.** **57**: 2301-2305, 1989.
39. Sztein, M.B. and Serrate, S.A. Characterization of the Immunoregulatory Properties of Thymosin alpha 1 on Interleukin-2 Production and Interleukin-2 Receptor Expression in Normal Human Lymphocytes. **Int. J. Immunopharmacol.** **11**: 789-800, 1989.
40. Tzehoval, E., **Sztein, M.B.** and Goldstein, A.L. Thymosins α_1 and β_4 Potentiate the Antigen-Presenting Capacity of Macrophages. **Immunopharmacology** **18**: 107-113, 1989.
41. Hsia, J., **Sztein, M.B.**, Naylor, P.H., Simon, G.L., Goldstein, A.L. and Hayden, F.G. Modulation of Thymosin α_1 and thymosin β_4 levels and Peripheral Blood Mononuclear Cell Subsets During Experimental Rhinovirus Colds. **Lymphokine Res.** **8**: 383-391, 1989.
42. Leichtling, K., Serrate, S.A. and **Sztein, M.B.** Thymosin alpha 1 Modulates the Expression of High Affinity Interleukin-2 Receptors on Normal Human Lymphocytes. **Int. J. Immunopharmacol.** **12**: 19-29, 1990.
43. Beltz, L.A., Kierszenbaum, F. and **Sztein, M.B.** *Trypanosoma cruzi*-induced Suppression of Human Peripheral Blood Lymphocytes Activated via the Alternative (CD2) Pathway. **Infect. Immun.** **58**: 1114-1116, 1990.
44. Bessler, H., **Sztein, M.B.** and Serrate, S.A. β -endorphin Modulation of IL-1-Induced IL-2 Production. **Immunopharmacology** **19**: 5-14, 1990.

45. **Sztein, M.B.**, Cuna, W., Beltz, L.A. and Kierszenbaum, F. *Trypanosoma cruzi* inhibits the Expression of CD3, CD4, CD8 and IL-2R by Mitogen-Activated Helper and Cytotoxic Human Lymphocytes. **J. Immunol.** **144**: 3558-3562, 1990.
46. Kierszenbaum, F., Cuna, W.R., Beltz, L.A. and **Sztein, M.B.** Trypanosomal Immunosuppressive Factor (TIF): A Secretion Product(s) of *Trypanosoma cruzi* that Inhibits Proliferation and IL-2 Receptor Expression by Activated Human Peripheral Blood Mononuclear Cells. **J. Immunol.** **144**: 4000-4004, 1990.
47. Schulof, R.S., Parenti, D.M., Simon, G.L., Paxton, H., Meyer III, W.A., Schlesselman, S.B., Courtless, J., LeLacheur, S. and **Sztein, M.B.** Clinical, Virologic and Immunologic Effects of Combination Therapy with Ribavirin and Isopinosine in HIV-Infected Homosexual Men. **J. AIDS.** **3**: 485-492, 1990.
48. Kierszenbaum, F. and **Sztein, M.B.** Mechanisms Underlying Immunosuppression Induced by *Trypanosoma cruzi*. **Parasitol. Today** **6**: 261-264, 1990.
49. Hsia, J., Goldstein, A.L., Simon, G.L., **Sztein, M.B.** and Hayden, F.G. Peripheral Blood Mononuclear Cell Interleukin-2 and Interferon- γ Production, Cytotoxicity and Antigen-Stimulated Blastogenesis During Experimental Rhinovirus Infections. **J. Infect. Dis.** **162**: 591-597, 1990.
50. Badamchian, M., Goldstein, A.L. and **Sztein, M.B.** Immune and neuroendocrine modulation with thymosins: current status of recent clinical trials in the United States. **Int. J. Neurosci.** **51**: 365-367, 1990.
51. **Sztein, M.B.** and Kierszenbaum, F. *Trypanosoma cruzi* Suppresses the Ability of Activated Human Lymphocytes to Enter the Cell Cycle. **J. Parasitol.** **77**: 502-505, 1991.
52. **Sztein, M.B.** and Kierszenbaum, F. A Soluble Factor from *Trypanosoma brucei rhodesiense* that Prevents Progression of Activated Human T Lymphocytes through the Cell Cycle. **Immunology** **73**: 180-185, 1991.
53. Moreno, A., Clavijo, P., Edelman, R., Davis, J., **Sztein, M.**, Herrington, D. and Nardin, E. Cytotoxic CD4⁺ T cells from a Sporozoite-Immunized Volunteer Recognize the *Plasmodium falciparum* CS Protein. **Int. Immunol.** **3**: 997-1003, 1991.
54. Kierszenbaum, F., Muthukkumar, S., Beltz, L.A. and **Sztein, M.B.** Suppression by *Trypanosoma brucei rhodesiense* of the Capacities of Human T Lymphocytes to Express Interleukin-2 Receptors and Proliferate after Mitogenic Stimulation. **Infect. Immun.** **59**: 3518-3522, 1991.
55. Herrington, D., Davis, J., Nardin, E., Beier, M., Cortese, J., Eddy, H., Losonsky, G., Hollingdale, M., **Sztein, M.**, Levine, M., Nussenzweig, R.S., Clyde, D. and Edelman, R. 1991. Successful Immunization of Humans with Irradiated Malaria Sporozoites: Humoral and Cellular Responses of the Protected Vaccinees. **Am. J. Trop. Med. Hyg.** **45**: 539-547, 1991.
56. Kierszenbaum, F., Moretti, E., and **Sztein, M.B.** *Trypanosoma cruzi* Induces Suppression of DNA Synthesis and Inhibits Expression of Interleukin-2 Receptors by Stimulated Human B Lymphocytes. **Immunology** **74**: 317-392, 1991.

57. Merritt, W.D., **Sztein, M.B.**, Taylor, B. and Reaman, G.H. Immunoreactivity of Leukemic Lymphoblasts of T-cell and B-cell Precursor Origin with Monoclonal anti-GD₃ and anti-GM₃ Antibodies. **Leukemia** **5**: 1087-1091, 1991.
58. Naylor, P.H., **Sztein, M.B.**, Wada, S., Maurer, S., Holterman, D., Kirkley, J.E., Naylor, C.W., Zook, B.C., Hitzelberg, R.A., Gibbs, C.J. Jr., Zagury, D., Achour, A., O'Toole, C., Gazzard, B., Youle, M., Rios, A., Sarin, P.S. and Goldstein, A.L. Preclinical and Clinical Studies on Immunogenicity and Safety of HIV-1 p17 Based Synthetic Peptide AIDS Vaccine - HGP-30-KLH. **Int. J. Immunopharmacol.** **13**: 117-127, 1991.
59. Kierszenbaum, F. and **Sztein, M.B.** *Trypanosoma cruzi* Suppresses the Expression of the p75 Chain of Interleukin-2 receptors on the Surface of Activated Helper and Cytotoxic Human Lymphocytes. **Immunology** **75**: 546-549, 1992.
60. Semmes, O.J., **Sztein, M.B.**, Bailey, J.M. and Merritt, W.D. Tunicamycin Inhibits Function and Expression of the High Affinity IL-2 Receptor in a Murine IL-2 Dependent Cell Line. **Int. J. Immunopharmacol.** **14**: 583-593, 1992.
61. Brown, A.E., Herrington, D.A., Webster, H.K., Clyde, D.F., **Sztein, M.B.**, Davis, J.R., Beier, M.S. and Edelman, R. Urinary Neopterin in Volunteers Experimentally Infected with *Plasmodium falciparum*. **Trans. R. Soc. Trop. Med. Hyg.** **86**: 134-136, 1992.
62. Harpaz, R., Edelman, R., Wasserman, S.S., Levine, M.M., Davis, J.R. and **Sztein, M.B.** Serum Cytokine Profiles in Experimental Human Malaria. Relationship to Protection and Disease Course After Challenge. **J. Clin. Invest.** **90**: 515-523, 1992.
63. **Sztein, M.B.** and Kierszenbaum, F. Suppression by *Trypanosoma cruzi* of T Cell Receptor Expression by Activated Human Lymphocytes. **Immunology** **77**: 277-283, 1992.
64. Mejia Lopez, H., Tanner, M.K., Kierszenbaum, F. and **Sztein, M.B.** Alterations Induced by *Trypanosoma cruzi* in Activated Mouse Lymphocytes. **Parasite Immunol.** **77**: 273-280, 1993.
65. Moreno, A., Clavijo, P., Edelman, R., Davis, J., **Sztein, M.**, Sinigaglia, F. and Nardin, E. CD4⁺ T Cell Clones Obtained from *Plasmodium falciparum* Sporozoite-Immunized Volunteers Recognize Polymorphic Sequences of the Circumsporozoite Protein. **J. Immunol.** **151**: 489-499, 1993.
66. Kierszenbaum, F., Moretti, E. and **Sztein, M.B.** Molecular Basis of *Trypanosoma cruzi*-induced Immunosuppression. Altered Expression by Activated Lymphocytes of Molecules which Regulate Antigen Recognition and Progression through the Cell Cycle. **Biological Res.** **26**: 197-207, 1993.
67. **Sztein, M.B.** and Kierszenbaum, F. Mechanisms of Development of Immunosuppression During *Trypanosoma* Infections. **Parasitol. Today** **9**: 424-428, 1993.
68. Edelman, R., Hoffman, S.L., Davis, J.R., Beier, M., **Sztein, M.B.**, Losonsky, G., Herrington, D.A., Eddy, H.A., Hollingdale, M.R., Gordon, D.M. and Clyde, D.F. Long-Term Persistence of Sterile Immunity in a Volunteer Immunized with X-irradiated *Plasmodium falciparum* Sporozoites. **J. Infect. Dis.** **168**: 1066-1070, 1993.

69. Kierszenbaum, F., Mejia Lopez, H. and **Sztein, M.B.** Does Interleukin-2 Restore Lymphocyte Responses Suppressed by *Trypanosoma cruzi* ?. **Immunology 80**: 445-450, 1993.
70. Gonzalez, C., Hone, D., Noriega, F., Tacket, C.O., Davis, J.R., Losonsky, G., Nataro, J.P., Hoffman, S., Malik, A., Nardin, E., **Sztein, M.B.**, Heppner, D.G., Fouts, T.R., Isibasi, A., Levine, M.M. *Salmonella typhi* Vaccine Strain CVD 908 Expressing the Circumsporozoite Protein of *Plasmodium falciparum*: Strain Construction, Safety and Immunogenicity in Humans. **J. Infect. Dis. 169**: 927-931, 1994.
71. Kierszenbaum, F., Mejia Lopez, H. and **Sztein, M.B.** Inhibition of *Trypanosoma cruzi*-specific Immune Responses by a Protein Produced by *T. cruzi* in the Course of Chagas' Disease. **Immunology 81**: 462-467, 1994.
72. Hoffman, S.L., Edelman, R., Bryan, J.P., Schneider, I., Davis, J., Sedegah, M., Gordon, D., Church, P., Gross, M., Silverman, C., Hollingdale, M., Clyde, D., **Sztein, M.**, Losonsky, G., Paparello, S. and Jones, T.R. Safety, Immunogenicity and Efficacy of a Malaria Sporozoite Vaccine Administered with Monophosphoryl Lipid A, Cell Wall Skeleton of Mycobacteria, and Squalene as Adjuvant. **Am. J. Trp. Med. Hyg. 51**: 603-612, 1994.
73. **Sztein, M.B.**, Wasserman, S.S., Tacket, C.O., Edelman, R., Hone, D., Lindberg, A.A. and Levine, M.M. Cytokine Production Patterns and Lymphoproliferative Responses in Volunteers Orally Immunized with Attenuated Vaccine Strains of *Salmonella typhi*. **J. Infect. Dis. 170**: 1508-1517, 1994.
74. Kierszenbaum, F., Majumder, S., Mejia Lopez, H. and **Sztein, M.B.** Differential Effects of *Trypanosoma cruzi* on the Transcription of the p55L-2R, *c-fos*, *c-myc* and CD69 Genes in Activated Human Lymphocytes. **Parasite Immunol. 17**: 197-205, 1995.
75. Kierszenbaum, Mejia Lopez, H., Tanner, M.K. and **Sztein, M.B.** *Trypanosoma cruzi*-induced Decrease in the Level of Interferon- γ Receptor Expression by Resting and Activated Human Blood Lymphocytes. **Parasite Immunol. 17**: 207-214, 1995.
76. **Sztein, M.B.**, Tanner, M.K., Polotsky, Y., Orenstein, J.M. and Levine, M.M. Cytotoxic T Lymphocytes After Oral Immunization with Attenuated Vaccine Strains of *Salmonella typhi* in Humans. **J. Immunol. 155**: 3987-3993, 1995.
77. Levine, M.M., Galen, J., Barry, E., Noriega, F., Chatfield, S., **Sztein, M.B.**, Dougan, G. and Tacket, C.O. Attenuated *Salmonella* as Live Oral Vaccines Against Typhoid Fever and as Live Vectors. **J. Biotechnology 44**: 193-196, 1995.
78. Levine, M.M., Tacket, C., Galen, J., Barry, E., Noriega, F., Chatfield, S., **Sztein, M.B.** and Dougan, G. Progress in Vaccines Against Typhoid Fever. **Southeast Asian Journal of Tropical Medicine and Public Health 26**: 264-271, 1995.
79. Darwin, P.E., **Sztein, M.B.**, Qiao-Xi, Z.; James, S.P. and Fantry, G.T. Immune Evasion by *Helicobacter pylori*: Gastric Spiral Bacteria Lack Surface Immunoglobulin Deposition and Reactivity with Homologous Antibodies. **Helicobacter 1**: 20-27, 1996.
80. Kierszenbaum, F., Mejia Lopez, H. and **Sztein, M.B.** *Trypanosoma cruzi* Downregulates the Production of Interleukin-2, Interferon- γ , Interleukin-4 and Interleukin-5 by Activated Human Lymphocytes. **J. Parasitology 82**: 652-656, 1996.

81. Morris, J.G., **Sztein, M.B.**, Rice, E.W., Nataro, J.P., Losonsky, G.A., Panigrahi, P., Tacket, C.O. and Johnson, J.A. *Vibrio cholerae* 01 can Assume a Chlorin-resistant Rugose Survival Form that is Virulent for Humans. **J. Infect. Dis.** **174**: 1364-1368, 1996.
82. Kotloff, K.L., Noriega, F., Losonsky, G.A., **Sztein, M.B.**, Wasserman, S.S., Nataro, J.P. and Levine, M.M. Safety, Immunogenicity and Transmissibility in Humans of CVD 1203, a Live Oral *Shigella flexnei* 2a Vaccine Candidate Attenuated by Deletions in *aroA* and *virG*. **Infect. Immun.** **64**: 4542-4548, 1996.
83. Tacket, C.O., **Sztein, M.B.**, Losonsky, G.A., Wasserman, S.S., Nataro, J.P., Edelman, R., Pickard, D., Dougan, G., Chatfield, S.N. and Levine, M.M. Safety of Live Oral *Salmonella typhi* Vaccine Strains with Deletions in *htrA* and *aroC aroD* and immune Response in Humans. **Infect. Immun.** **65**: 452-456, 1997.
84. Levine, M.M., Galen, J., Barry, E., Noriega, F., Tacket, C., **Sztein, M.**, Chatfield, S.N., Dougan, G., Losonsky, G. and Kotloff, K. Attenuated *Salmonella typhi* and *Shigella* as live Oral Vaccines and as Live Vectors. **Behring Inst. Mitt.** **98**:120-123, 1997.
85. Kierszenbaum, F., Majumder, S., Paredes, P., Tanner, M.K. and **Sztein, M.B.** The *trypanosoma cruzi* Immunosuppressive Factor (TIF) Targets a Lymphocyte Activation Event Subsequent to Increased Intracellular Calcium Ion Concentration and Translocation of Protein Kinase C but previous to Cyclin D2 and *cdk4* mRNA accumulation. **Molec. Biochem. Parasitol.** **92**: 133-145, 1998.
86. Wyant, T.L., Tanner, M.K. and **Sztein, M.B.** Potent Immunoregulatory Effects of *S. typhi* Flagella on Antigenic Stimulation of Human Peripheral Blood Mononuclear Cells. **Infect. Immun.** **67**: 1338-1346, 1999.
87. Luzina, I.G., Knitzer, R.H., Atamas, S.P., Gause, W.C., Papadimitriou, J.C., **Sztein, M.B.**, Storrer, C.E. and Handwerker, B.S. Vasculitis in the Palmerston North Mouse Model of Lupus: Phenotype and Cytokine Production Profile of Infiltrating Cells. **Arthritis Rheum.** **42**: 561-568, 1999.
88. Wright, A.C., Powell, J.L., Tanner, M.K., Ensor, L.A., Karpas, A.B., Glenn Morris, Jr., J. and **Sztein, M.B.** Differential Expression of *Vibrio vulnificus* Capsular Polysaccharide. **Infect. Immun.** **67**: 2250- 2257, 1999.
89. Kierszenbaum, F., deDiego, J.L., Fresno, M. and **Sztein, M.B.** Inhibitory Effects of the *Trypanosoma cruzi* Membrane Glycoprotein AGC10 on the Expression of Interleukin-2 Receptor Chains and Secretion of Cytokines by Subpopulations of Activated Human T Lymphocytes. **Eur. J. Immunol.** **29**: 1684-1691, 1999.
90. Pasetti, M.F., Anderson, R.J., Noriega, F.R., Levine, M.M. and **Sztein, M.B.** Attenuated Δ *guaBA* *Salmonella typhi* Vaccine Strain CVD 915 as a Live Vector Utilizing Prokaryotic or Eukaryotic Expression Systems to Deliver Foreign Antigens and Elicit Immune Responses. **Clin. Immunol.** **92**: 76-89, 1999.
91. Wyant, T.L., Tanner, M.K. and **Sztein, M.B.** *Salmonella typhi* Flagella are Potent Inducers of Proinflammatory Cytokine Secretion by Human Monocytes. **Infect. Immun.** **67**: 3619-3624, 1999.

92. Galen, J.E., Nair, J., Wang, J.Y., Wasserman, S.S., Tanner, M.K., **Sztein, M.B.**, Levine, M.M. Optimization of Plasmid Maintenance in the Attenuated Live Vector Vaccine *Salmonella typhi* Strain CVD 908-*htrA*. **Infect. Immun.** **67**: 6424-6433, 1999.
93. Pickett, T.E., Pasetti, M.F., Galen, J.E., **Sztein, M.B.** and Levine, M.M. In vivo characterization of the Murine Intranasal Model for Assessing the Immunogenicity of Attenuated *Salmonella typhi* as Live Mucosal Vaccines and as Live Vectors. **Infect. Immun.** **68**: 205-213, 2000.
94. Samandari, T., Kotloff, K.L., Losonsky, G.A., Picking, W.D., Sansonetti, P.J., Levine, M.M. and **Sztein, M.B.** Production of interferon- γ and IL-10 to *Shigella* invasins by mononuclear cells from volunteers orally inoculated with a Shiga toxin-deleted *Shigella dysenteriae* type 1 strain. **J. Immunol.** **164**: 2221-2232, 2000. A correction to this article appeared in *J. Immunol.* 165: 4756, 2000.
95. Kotloff, K.L., Noriega, F.R., Samandari, T., **Sztein, M.B.**, Losonsky, G.A., Nataro, J.P., Picking, W.D., Barry, E.M. and Levine, M.M. *Shigella flexneri* 2a Strain CVD 1207, with Specific Deletions in *virG*, *sen*, *set* and *guaBA* is Highly Attenuated in Humans. **Infect. Immun.** **68**: 1034-1039, 2000.
96. Tacket, C.O., **Sztein, M.B.**, Wasserman, S.S., Losonsky, G., Kotloff, K.L., Wyant, T.L., Nataro, J.P., Edelman, R., Perry, J., Bedford, P., Brown, D., Chatfield, S., Dougan, G., Levine, M.M. Phase 2 Clinical Trial of Attenuated *Salmonella enterica* Serovar Typhi Oral Live Vector Vaccine CVD 908-*htrA* in U.S. Volunteers. **Infect. Immun.** **68**: 1196-1201, 2000.
97. Anderson, R.J., Pasetti, M.F., **Sztein, M.B.**, Levine, M.M. and Noriega, F.R.. Δ *guaBA* Attenuated *Shigella flexneri* 2a Strain CVD1204 as a *Shigella* Vaccine and as a Live Mucosal Delivery System for Fragment C of Tetanus Toxin. **Vaccine** **18**: 2193-2202, 2000.
98. Tacket, C.O., **Sztein, M.B.**, Losonsky, G., Abe, A., Finlay, B.B., McNamara, B.P., Fantry, G.T., James, S.P., Nataro, J.P., Levine, M.M. and Donnenberg, M.S. The Role of EspB in Experimental Human Enteropathogenic *Escherichia coli* Infection. **Infect. Immun.** **68**: 3689-3695, 2000.
99. Pasetti, M.F., Pickett, T.E., Levine, M.M. and **Sztein, M.B.** A Comparison of Immunogenicity and in vivo Distribution of *Salmonella enterica* serovar Typhi and Typhimurium Live Vector Vaccines Delivered by Mucosal Routes in the Murine Model. **Vaccine** **18**: 3208-3213, 2000.
100. Tacket, C.O., Galen, J., **Sztein, M.B.**, Losonsky, G., Wyant, T.L., Nataro, J., Wasserman, S.S., Edelman, R., Chatfield, S., Dougan, G., Levine, M.M. Safety and Immune Responses to Attenuated *Salmonella enterica* serovar Typhi Oral Live Vector Vaccines Expressing Tetanus Toxin Fragment C. **Clin. Immunol.** **96**: 146-153, 2000.
101. Wu, S., Beier, M., **Sztein, M.B.**, Galen, J., Pickett, T., Holder, A.A., Gomez-Duarte, O.G. and Levine, M.M. Construction and Immunogenicity in Mice of Attenuated *Salmonella typhi* Expressing *Plasmodium falciparum* Merozoite Surface Protein (MSP-1) Fused to Tetanus Toxin Fragment C. **J. Biotechnology** **83**: 125-135, 2000.
102. Gomez-Duarte, O.G., Pasetti, M.F., Santiago, A., **Sztein, M.B.**, Hoffman, S.L. and Levine, M.M. Expression, Extracellular Secretion and Immunogenicity of the *Plasmodium*

- falciiparum* Sporozoite Surface Protein 2 in *Salmonella* Vaccine Strains. **Infect. Immun.** **69**: 1192-1198, 2001.
103. Kierszenbaum, F. and **Sztein, M.B.** Down-regulation of Human B Lymphocyte Activities by a *Trypanosoma cruzi* Membrane Glycoprotein. **Int. J. Parasitology.** **31**: 265-271, 2001.
 104. Kotloff, K.L.; **Sztein, M.B.**, Wasserman, S.S.; Losonsky, G.A.; DiLorenzo, S.C. and Walker, R.I. Safety and Immunogenicity of Oral Inactivated Whole Cell *Helicobacter pylori* Vaccine with Adjuvant Among Volunteers with and without Subclinical Infection. **Infect. Immun.** **69**: 3581-3590, 2001.
 105. Wang, J.Y., Pasetti, M.F., Noriega, F.R., Anderson, R.J., Wasserman, S.S., Galen, J.E., **Sztein, M.B.** and Levine, M.M. Construction, Genotypic and Phenotypic Characterization, and Immunogenicity of Attenuated Δ *guaBA* *Salmonella enterica* serovar Typhi Strain CVD 915. **Infect. Immun.** **69**: 4734-4741, 2001.
 106. Levine, M.M., Tacket, C. and **Sztein, M.B.** Host-*Salmonella* Interaction: human trials. **Microbes and Infection** **3**: 1271-1279, 2001.
 107. Kotloff, K.L., Taylor, D.N., **Sztein, M.B.**, Wasserman, S.S., Losonsky, G.A., Nataro, J.P., Venkatesan, M., Hartman, A., Picking, W.D., Katz, D.E., Campbell, J.D., Levine, M.M. and Hale, T.L. Phase I Evaluation of a *virG* Deleted *Shigella sonnei* Live, Attenuated, Oral Vaccine Strain WRSS1 in Healthy Adults. **Infect. Immun.** **70**: 2016-2021, 2002.
 108. Pasetti, M.F., Salerno-Gonçalves, R. and **Sztein, M.B.** *Salmonella enterica* serovar Typhi Live Vector Vaccines Delivered Intranasally Elicit Regional and Systemic Specific CD8⁺ MHC Class I-restricted Cytotoxic T Lymphocytes. **Infect. Immun.** **70**: 4009-4018, 2002.
 109. Salerno-Gonçalves, R., Pasetti, M.F. and **Sztein, M.B.** Characterization of CD8⁺ Effector T Cell Responses in Volunteers Immunized with *Salmonella enterica* serovar Typhi Strain Ty21a Typhoid Vaccine. **J. Immunol.** **169**: 2196-2203, 2002.
 110. Kierszenbaum, F., Fresno, M. and **Sztein, M.B.** The Trypanosomal Membrane Glycoprotein AGC 10 Inhibits Division of Activated Human Lymphocytes by a Mechanism Involving Decreased Biosynthesis of IL-2 and High-affinity IL-2 Receptor Components. **Molec. Biochem. Parasitol.** **125**: 91-101, 2002.
 111. Pasetti, M.F., Levine, M.M. and **Sztein, M.B.** Animal Models Paving the Way for Clinical Trials of Attenuated *Salmonella* Typhi Live Oral Vaccines and Live Vectors. **Vaccine.** **21**: 401-418, 2003.
 112. Rosenkranz, C.D., Chiara, D., Agorio, C., Baz, A., Pasetti, M.F., Schreiber, F., Dematteis, S., Martinez, M., **Sztein, M.B.** and Chabalgoity, J.A. Towards New Immunotherapies: Targeting Recombinant Cytokines to the Immune System using Live Attenuated *Salmonella*. **Vaccine.** **21**: 798-801, 2003.
 113. Salerno-Gonçalves, R., Wyant, T.L., Pasetti, M.F., Fernandez-Viña, M., Tacket, C.O., Levine, M.M. and **Sztein, M.B.** Concomitant Induction of CD4⁺ and CD8⁺ T Cell Responses in Volunteers Immunized with *Salmonella enterica* serovar Typhi Strain CVD 908*htrA*. **J. Immunol.** **170**: 2734-2741, 2003.

114. Pasetti, M.F., Barry, E.M., Losonsky, G., Singh, M., Medina-Moreno, S.M., Polo, J.M., Ulmer, J., Robinson, H., **Sztein, M.B.** and Levine, M.M. Attenuated *Salmonella enterica* serovar Typhi and *Shigella Flexneri* 2a Strains Mucosally Deliver DNA Vaccines Encoding Measles Virus Hemagglutinin, Inducing Specific Immune Responses and Protection in Cotton Rats. **J. Virology. 77:** 5209-5217, 2003.
115. Tacket, C.O., **Sztein, M.B.**, Losonsky, G.A., Wasserman, S.S. and Estes, M.K. Humoral, Mucosal and Cellular Immune Responses to Oral Norwalk virus-like Particles (VLP) in Volunteers. **Clin. Immunol. 108:** 241-247, 2003.
116. Cao, K., Moormann, A.M., Lyke, K.E., Masaberg, C., Sumba, O.P., Doumbo, O.K., Koech, D., Lancaster, A., Nelson, M., Meyer, D., Single, R., Hartzman, R.J., Plowe, C.V., Kazura, J., Mann, D.L., **Sztein, M.B.**, Thomson, G. and Fernandez-Viña, M.A. Differentiation Between African Populations is Evidenced by the Diversity of Alleles and Haplotypes of HLA class I Loci. **Tissue Antigens. 63:** 293-325, 2004.
117. Tacket, C.O., Pasetti, M.F., **Sztein, M.B.**, Livio, S. and Levine, M.M. Immune Responses to an Oral Typhoid Vaccine Strain Modified to Constitutively Express Vi Capsular Polysaccharide. **J. Infect. Dis. 190:** 565-570, 2004.
118. Kotloff, K.L. Pasetti, M.F., Barry, E.M., Nataro, J.P., Wasserman, S.S., **Sztein, M.B.**, Picking, W.D. and Levine, M.M. Deletion in the Shigella Enterotoxin Genes Further Attenuates *Shigella flexneri* 2a Bearing Guanine Auxotrophy in a Phase 1 Trial of CVD 1204 and CVD 1208. **J. Infect. Dis. 190:** 1745-1754, 2004.
119. Levine, M.M. and **Sztein, M.B.** Vaccine Development Strategies for Improving Immunization: The Role of Modern Immunology. **Nat. Immunol. 5:** 460-464, 2004. Commentary.
120. Lyke, K.E., Burges, R., Cissoko, Y., Sangare, L., Dao, M., Diarra, I., Kone, A., Harley, R., Plowe, C.V., Doumbo, O.K. and **Sztein, M.B.** Serum Levels of Pro-inflammatory Cytokines Interleukin-1 beta, IL-6, IL-8, IL-10, Tumor Necrosis Factor-alpha and IL-12p70 in Malian Children with Severe *Plasmodium falciparum* Malaria and Matched Uncomplicated Malaria or Healthy Controls. **Infect. Immun. 72:** 5630-5637, 2004.
121. Salerno-Gonçalves, R., Fernandez-Viña, M., Lewinsohn, D.M. and **Sztein, M.B.** Identification of a Human HLA-E-Restricted CD8⁺ T cell Subset in Volunteers Immunized with *Salmonella enterica* serovar Typhi Strain Ty21a Typhoid Vaccine. **J. Immunol. 173:** 5852-5862, 2004.
122. Salerno-Gonçalves, R., Wahid, R. and **Sztein, M.B.** Immunization of Volunteers with *Salmonella enterica* serovar Typhi Strain Ty21a Elicits the Oligoclonal Expansion of CD8⁺ T Cells with Predominant Vβ Repertoires. **Infect. Immun. 73:** 3521-3530, 2005.
123. Lyke, K.E., Burges, R.B., Cissoko, Y., Sangare, L., Kone, A. Dao, M., Diarra, I., Fernandez-Viña, M.A., Plowe, C.V., Doumbo, O.K. and **Sztein, M.B.** HLA-A2 Supertype-restricted Cell-mediated Immunity by Peripheral Blood Mononuclear Cells Derived from Malian Children with Severe or Uncomplicated *P. falciparum* Malaria and Healthy Controls. **Infect. Immun. 73:** 5799-5808, 2005.
124. Lyke, K.E., Dicko, A., Dabo, A., Sangare, L. Kone, A., Coulibaly, D., Guindo, A., Traore, K., Dra, M., Diarra, I., **Sztein, M.B.**, Plowe, C.V. and Doumbo, O.K. Association of

Schistosoma haematobium Infection with Protection Against Acute *Plasmodium falciparum* Malaria in Malian Children. **Am. J. Trop. Med. Hyg.** **73**: 1124-1130, 2005.

125. Cissoko, Y., Daou, M., Lyke, K.E., Dicko, A., Diarra, I., Kone, A., Guindo, A., Traore, K., Krishnegowda, G., Diallo, D.A., Doumbo, O.K., Plowe, C.V., Gowda, D.C. and **Sztein, M.B.** Serum Antibody Levels to Glycosylphosphatidylinositols (GPIs) in Specimens Derived from Matched Malian Children with Severe or Uncomplicated *Plasmodium Falciparum* Malaria and Healthy Controls. **Am. J. Trop. Med. Hyg.** **75**: 199-204, 2006.
126. Lyke, K.E., Dabo, A., Sangare, L., Arama, C., Dao, M., Diarra, I., Plowe, C.V., Doumbo, O.K. and **Sztein, M.B.** Effects of concomitant *Schistosoma haematobium* infection on the serum cytokine levels elicited by acute *Plasmodium falciparum* malaria infection in Malian children. **Infect. Immun.** **74**: 5718-5724, 2006.
127. Salerno-Gonçalves, R. and **Sztein, M.B.** Cell-mediated immunity and the challenges for vaccine development. **Trends in Microbiology.** **14**: 536-542, 2006.
128. Wahid, R., Salerno-Gonçalves, R., Tacket, C.O., Levine, M.M. and **Sztein, M.B.** Cell-mediated immune responses in humans after immunization with one and two doses of oral live attenuated typhoid vaccine CVD 909. **Vaccine.** **25**: 1416-1425, 2007.
129. Levine, M.M., Kotloff, K.L., Barry, E.M., Pasetti, M.F. and **Sztein, M.B.** Clinical trials of *Shigella* Vaccines: Two Steps Forward and One Step Back on a Long, Hard Road. **Nature Reviews Microbiol.** **5**: 540-553, 2007. PMID: 17558427
130. **Sztein, M.B.** Cell-mediated immunity and antibody responses elicited by attenuated *S. Typhi* strains used as live oral vaccines. **Clin. Inf. Dis.** **45(S1)**:S15-S19, 2007. PMID: 17582562.
131. Awomoyi, A.A., Rallabhandi, P., Pollin, T.I., Lorenz, E., **Sztein, M.B.**, Boukhvalova, M.S., Hemming, V.G., Blanco, J.C. and Vogel, S.N. Association of TLR4 Polymorphisms with Symptomatic Respiratory Syncytial Virus Infection in High-Risk Infants and Young Children. **J. Immunol.** **179**: 3171-3177, 2007.
132. Kotloff, K.L., Simon, J.K., Pasetti, M.F., **Sztein, M.B.**, Wooden, S.L., Livio, S., Nataro, J.P., Blackwelder, W.C., Barry, E.M., Picking, W. and Levine, M.M. Safety and Immunogenicity of CVD 1208S, a live, oral Δ *guaBA*, Δ *sen*, Δ *set* *Shigella flexneri* 2a vaccine grown on animal-free media. **Human Vaccines** **3**: 268-275, 2007. PMID: 17938573.
133. Rallabhandi, P., Awomoyi, A., Thomas, K.E., Phalipon, A., Fujimoto, Y., Fukase, K., Kusumoto, S., Qureshi, N., **Sztein, M.B.** and Vogel, S.N. Differential Activation of Human TLR4 by *E. coli* and *S. flexneri* 2a Lipopolysaccharide: Effect of Lipid A Acylation State and TLR4 Polymorphisms on Signaling. **J. Immunol.** **180**: 1139–1147, 2008. PMID: 18178854. PMC2739731.
134. Pasetti, M.F., Cuberos, L., Horn, T.L., Shearer, J.D., Matthews, S.J., House, R.V. and **Sztein, M.B.** An improved *Francisella tularensis* Live Vaccine Strain (LVS) is well tolerated and highly immunogenic when administered to rabbits in escalating doses using various immunization routes. **Vaccine** **26**: 1773-1785, 2008. PMID:18308432, PMC2678717

135. Wahid, R., Salerno-Gonçalves, R., Tacket, C.O., Levine, M.M. and **Sztein, M.B.** Generation of specific effector and memory T cells with gut and secondary lymphoid tissues homing potential by oral attenuated CVD 909 typhoid vaccine in humans. **Mucosal Immunology** **1**: 389-398, 2008. PMID: 19079203. PMC3215293.
136. Simon, J.K., Wahid, R., Maciel Jr., M., Picking, W.L., Kotloff, K.L., Levine, M.M. and **Sztein, M.B.** Antigen-specific B memory cell responses to lipopolysaccharide (LPS) and invasion plasmid antigen (Ipa) B elicited in volunteers vaccinated with live-attenuated *Shigella flexneri 2a* vaccine candidates. **Vaccine** **27**: 565-572, 2009. PMID: 19022324. PMC3753173.
137. Ramirez, K., Capozzo, A.V.E., Lloyd, S.A., **Sztein, M.B.**, Nataro, J.P. and Pasetti, M.F. Mucosally delivered *Salmonella* Typhi expressing the *Yersinia pestis* F1 antigen elicits mucosal and systemic immunity early in life and primes the neonatal immune system for a vigorous anamnestic response to parenteral F1 boost. **J. Immunol.** **182**: 1211-1222, 2009. PMID: 19124765. PMC2863138.
138. Lyke, K.E., Daou, M., Diarra, I., Kone, A. Kouriba, B., Thera, M.A., Heppner, D.G., Doumbo, O.K., Plowe, C.V. and **Sztein, M.B.** Cell Mediated Immunity Elicited by the Blood Stage Malaria Vaccine Apical Membrane Antigen 1 in Malian Adults: Results of a Phase I Randomized Trial. **Vaccine.** **27**: 2171-2176, 2009. PMID: 19356621. PMC2707027.
139. Galen, J.E., Pasetti, M.F., Tennant, S., Ruiz-Olvera, P., **Sztein, M.B.**, Levine, M.M. *Salmonella enterica* serovar Typhi Live Vector Vaccines Finally Come of Age. **Immunology and Cell Biology.** **87**: 400-412, 2009. PMID: 19417771. PMC3747779.
140. Chen, W.H., Kozlovsky, B.F., Effros, R.B., Grubeck-Loebenstein, B., Edelman, R. and **Sztein, M.B.** Vaccination in the elderly: an immunological perspective. **Trends in Immunology** **30**: 351-359, 2009. PMID: 19540808. PMC3739436.
141. Salerno-Gonçalves, R. and **Sztein, M.B.** Priming of *Salmonella enterica* serovar Typhi-specific CD8⁺ T cells by suicide dendritic cell cross-presentation in humans. **PLoS ONE** **4**: e5879, 2009. PMID: 19517022. PMC2691582.
142. El Sahly, H.M., Atmar, R.L., Patel, S.M., Wells, J.M., Cate, T., Ho, M., Guo, K., Pasetti, M.F., Lewis, D.E., **Sztein, M.B.** and Keitel, W.A. Safety, Reactogenicity and Immunogenicity of Francisella tularensis Live Vaccine Strain in Humans. **Vaccine** **27**: 4905-4911, 2009. PMID: 19567246. PMC2726995.
143. Salerno-Gonçalves, R., Hepburn, M.J., Bavari, S. and **Sztein, M.B.** Generation of heterogeneous effector and memory T cells by live attenuated tularemia vaccine in humans. **Vaccine.** **28**: 195-206, 2009. PMID: 19799845. PMC2788084.
144. Shipley, S.T., Panda, A., Khan, A.Q., Kriel, E.H., Maciel, M., Livio, S., Nataro, J.P., Levine, M.M., **Sztein, M.B.** and DeTolla, L.J. A challenge model for *Shigella dysenteriae* 1 in cynomolgus macaques. **Comparative Medicine.** **60**: 54-61, 2010. PMID: 20158950. PMC2826086.
145. Salerno-Gonçalves, R., Wahid, R. and **Sztein, M.B.** Ex vivo Kinetics of Early and Long-Term Multifunctional HLA-E specific CD8⁺ Cells in Volunteers Immunized with the Ty21a Typhoid Vaccine. **Clinical Vaccine Immunology.** **17**: 1305-1314, 2010. PMID: 20660136. PMC2944457.

146. El-Kamary, S.S., Pasetti, M.F., Mendelman, P.M., Frey, S.E., Bernstein, D.I., Treanor, J.J., Ferreira, J., Chen, W.H., Sublett, R., Richardson, C, Robert F. Bargatze, R.F., **Sztein, M.B.** and Tacket, C.O. Adjuvanted Intranasal Norwalk VLP Vaccine Elicits Antibodies and Antibody Secreting Cells Expressing Homing Receptors in Mucosal and Peripheral Lymphoid Tissues. **J. Infectious Diseases.** **202:** 1649-1658, 2010. PMID: 20979455. [not NIH funded, PA policy not applicable].
147. Pasetti, M.F., Simon, J.K., **Sztein, M.B.** and Levine, M.M. Immunology of Gut Mucosal Vaccines. **Immunological Reviews.** **239:** 125-148, 2011. PMID: 21198669. PMC3298192.
148. Wahid, R., Pasetti, M.F., Maciel, Jr. M., Simon, J.K., Tacket, C.O., Levine, M.M. and **Sztein, M.B.** Oral priming with Salmonella Typhi vaccine strain CVD 909 followed by parenteral boost with the S. Typhi Vi capsular polysaccharide vaccine induces CD27+ IgD-S. Typhi specific IgA and IgG B memory cells in humans. **Clin. Immunol.** **138:**187-200, 2011. PMID: 21146460. PMC3035995.
149. Simon, J.K., Maciel Jr., M., Weld, E.D., Wahid, R., Pasetti, M.F., Picking, W.L., Kotloff, K.L., Levine, M.M. and **Sztein, M.B.** Antigen-specific IgA B memory cell responses to *Shigella* antigens elicited in volunteers immunized with live attenuated *Shigella flexneri* 2a oral vaccine candidates. **Clin. Immunol.** **139:**185-192, 2011. PMID: 21388888. PMC3078965.
150. Chen, W.H., Cross, A.S., Edelman, R. **Sztein, M.B.**, Blackwelder, W.C. and Pasetti, M.F. Antibody and Th1-type cell-mediated immune responses in elderly and young adults immunized with the standard or a high dose- influenza vaccine. **Vaccine.** **29:** 2865-2873, 2011. PMID: 21352939. PMC3070775.
151. Gunther, V.J., Putnak, R., Eckels, K.H., Mammen, M.P., Scherer, J.M., Lyons, A., **Sztein, M.B.** and Sun, W. A Human Challenge Model for Dengue Infection Reveals a Possible Protective Role for Sustained Interferon Gamma Levels During the Acute Phase of Illness. **Vaccine.** **29:** 3895-3904, 2011. PMID: 21443963. [not NIH funded, PA policy not applicable].
152. Lyke, K.L., Fernandez-Viña, M.A., Cao, K., Hollenbach, J., Coulibaly, D., Kone, A.K., Guindo, A., Burdett, L.A., Hartzman, R.J., Wahl, A.R., Hildebrand, W.H., Doumbo, O.K., Plowe, C.V. and **Sztein, M.B.** Association of HLA alleles with *Plasmodium falciparum* severity in Malian children. **Tissue Antigens.** **77:** 562-571, 2011. PMID: 21447146. PMC3152196.
153. Ulmer, J.B. and **Sztein, M.B.** Promising Cutting-edge Technologies and Tools to Accelerate the Discovery and Development of New Vaccines. Editorial overview. **Current Opinion in Immunology.** **23:** 1-3, 2011. PMID: 21524899. PMC4076839.
154. Salerno-Goncalves, R., Fasano, A. and **Sztein, M.B.** Engineering of a multicellular organotypic model of human intestinal mucosa. **Gastroenterology.** **141:**e18-21, 2011. PMID: 21723866. PMC3328095.
155. Ruiz-Perez, F. Wahid, R., Faherty, C.S., Kolappaswamy, K., Rodriguez, L., Santiago, A., Murphy, E., Cross, A., **Sztein, M.B.**, Nataro, J.P. Serine protease autotransporters from *Shigella flexneri* and pathogenic *Escherichia coli* target a broad range of leukocyte glycoproteins. **PNAS.** **108:** 12881-12886, 2011. PMID: 21768350. PMC3150873

156. Simon, J.K., Carter, M., Pasetti, M.F., **Sztein, M.B.**, Kotloff, K.L., Weniger, B.G., Campbell, J.D., Levine, M.M. Safety, Tolerability, and Immunogenicity of Inactivated trivalent seasonal influenza Vaccine administered with a needle-free disposable-syringe jet injector. **Vaccine**. **29**: 9544-9550, 2011. PMID: 21986218. PA policy not applicable. [not NIH funded, PA policy not applicable].
157. Lyke, K.L., Dabo, A., Arama, C., Daou, M., Diarra, I., Wang, A., Plowe, C.V., Doumbo, O.K. and **Sztein, M.B.** Reduced T Regulatory Cell Response during Acute *Plasmodium falciparum* Infection in Malian Children Co-infected with *Schistosoma haematobium*. **PLoS One**. **7**: e31647, 2012. PMID: 22348117. PMC3279404.
158. Fernandez-Viña, M., Hollenbach, J.A., Lyke, K.E., **Sztein, M.B.**, Maiers, M., Klitz, W., Cano, P., Mack, S., Single, R., Brautbar, C., Israel, S., Raimondi, E., Khoriaty, E., Inati, A., Andreani, M., Testi, M., Moraes, M.E., Thomson, G., Stastny, P., Cao, K. Tracking human migrations by the analysis of the distribution of HLA alleles, lineages and haplotypes in closed and open populations. **Phil Trans R Soc B**. **367**: 820-829, 2012. PMID:22312049. PMC3267126.
159. Wahid, R., Simon, R., Zafar, S.J., Levine, M.M., **Sztein, M.B.** Live oral typhoid vaccine Ty21a induces cross reactive humoral immune responses against *S. Paratyphi A* and *S. Paratyphi B* in humans. **Clinical and Vaccine Immunology**. **19**: 825-834, 2012. PMID: 22492745. PMC3370435.
160. Lyke, K.L., Wang, A., Dabo, A., Arama, C., Daou, M., Diarra, I., Plowe, C.V., Doumbo, O.K., **Sztein, M.B.** Antigen-Specific B Memory Cell Responses to *Plasmodium falciparum* Malaria Antigens and *Schistosoma haematobium* Antigens in Co-infected Malian Children. **PLoS One**. **7**: e37868, 2012. PMID: 22693628. PMC3367916.
161. McArthur, M.A. and **Sztein, M.B.** Heterogeneity of multifunctional IL-17A producing *S. Typhi*-specific CD8+ T cells in volunteers following Ty21a typhoid immunization. **PLoS One**. **7**: e38408, 2012. PMID: 22679502. PMC3367967.
162. Ramirez, K., Wahid, R., Richardson, C., Bargatze, R.F., El-Kamary, S.S., **Sztein, M.B.**, Pasetti, M.F. Intranasal vaccination with an adjuvanted Norwalk virus-like particle vaccine elicits antigen-specific B memory responses in human adult volunteers. **Clin. Immunol**. **144**: 98-108, 2012. PMID: 22710446. [not NIH funded, PA policy not applicable].
163. Toapanta, F.R., Bernal, P.J., **Sztein, M.B.** Diverse phosphorylation patterns of B cell receptor-associated signaling in naïve and memory human B cells revealed by phosphoflow, a powerful technique to study signaling at the single cell level. *Frontiers in Cellular and Infection Microbiology*. **Frontiers in Microbiology**. **2**: 128, 2012. PMID:23087912. PMC3473368.
164. McArthur, M.A. and **Sztein, M.B.** Unexpected heterogeneity of multifunctional T cells in response to superantigen stimulation in humans. **Clin. Immunol**. **146**: 140-152, 2013. PMID 23333555. PMC3565224.
165. Fiorentino, M., Ding, H., Blanchard, T.G., Czinn, S.J., **Sztein, M.B.** and Fasano, A. *Helicobacter pylori* induced disruption of monolayer permeability and proinflammatory cytokine secretion in polarized human gastric epithelial cells. **Infection & Immunity**. **81**: 876-883, 2013. PMID: 23297384. PMC3584868.

166. Fiorentino, M., Lammers, K.M., Levine, M.M., **Sztein, M.B.*** and Fasano, A*. In Vitro Intestinal Mucosal Epithelial Responses to wild-type *Salmonella* Typhi and attenuated Typhoid Vaccines. *Frontiers in Mucosal Immunity. Frontiers in Immunology. 4:* 17, 2013. PMID: 23408152. PMC3569575. ***Joint senior authorship**
167. Barry, E.M., Pasetti, M.F., **Sztein, M.B.**, Fasano, A., Kotloff, K.L., Levine, M.M. Progress and pitfalls in *Shigella* vaccine research. **Nature Reviews Gastroenterology and Hepatology. 10:** 245-255, 2013. PMID: 23419287. PMC3747556.
168. Davis, C.L., Wahid, R., Toapanta, F.R., Simon, J.K., **Sztein, M.B.,*** Levy, D.* Applying Mathematical Tools to Accelerate Vaccine Development: Modeling *Shigella* Immune Dynamics. **PLoS One. 8:**e59465, 2013. PMID: 23589755. PMC3614931. ***Joint senior authorship.**
169. Wahid, R., Simon, J.K., Picking, W.L., Kotloff, K.L., Levine, M.M., **Sztein, M.B.** *Shigella* antigen-specific B memory cells are associated with decreased disease severity in subjects challenged with wild-type *Shigella flexneri* 2a. **Clin. Immunol. 148:** 35-43, 2013. PMID: 23649043. PMC3679276.
170. Eloë-Fadrosch, E.A., McArthur, M.A., Seekatz, A.M., Drabek, E.F., Rasko, D.A., **Sztein, M.B.***, Fraser, C.M.* Impact of oral typhoid vaccination on the human gut microbiota and correlations with *S. Typhi*-specific immunological responses. **PLoS One. 8:**e62026, 2013. PMID: 23637957. PMC3634757. ***Joint senior authorship.**
171. Moise, L., Gutierrez, A.H., Bailey-Kellogg, C., Terry, F., Leng, Q., Abdel Hady, K.M., VerBerkmoes, N., **Sztein, M.B.**, Losikoff, P., Martin, W.D., Rothman, A., De Groot, A.S. The Two-Faced T cell Epitope: Examining the Host-Microbe Interface with JanusMatrix. **Hum. Vaccine Immunother. 9:** 2013. PMID: 23584251. PMC3974887.
172. Seekatz, A.M., Panda, A., Rasko, D.A., Toapanta, F.R., Eloë-Fadrosch, E.A., Khan, A.Q., Liu, Z., Shipley, S.T., DeTolla, L.J., **Sztein, M.B.**, Fraser, C.M. Differential response of the cynomolgus macaque gut microbiota to *Shigella* Infection. **PLoS One. 8:**e64212, 2013. PMID: 23755118. PMC3673915.
173. McArthur, M.A., **Sztein, M.B.**, Edelman, R. Dengue vaccines: recent developments, ongoing challenges and current candidates. **Expert Review Vaccines. 12:** 933-953, 2013. PMID: 23984962. PMC3773977.
174. McArthur, M.A., **Sztein, M.B.**, Edelman, R. Prospects for controlling dengue spread: vaccines and vector control. *In: Ask the Experts: Dengue fever: transmission, diagnosis & surveillance. Future Science Group, London. e-book.* In press. 2014.
175. Fiorentino, M., Levine, M.M., **Sztein, M.B.*** and Fasano, A.* Effect of wild-type *Shigella* species and attenuated *Shigella* vaccine candidates on small intestinal barrier function, antigen trafficking, and cytokine release. **PLoS One. 9:**e85211, 2014. PMID: 24416363, PMC3887025. ***Joint senior authorship.**
176. Salerno-Goncalves, R., Rezwan, T. and **Sztein, M.B.** B cells modulate mucosal associated invariant T cell (MAIT) immune responses. Mucosal Immunity section, **Frontiers in Immunology. 4:** 511, 2014. Top viewed immunology research article in *Frontiers in Immunology* Jan 2014. PMID: 24432025. PMC3882667.

177. Wahid, R., Zafar, S.J., McArthur, M.A., Pasetti, M.F., Levine, M.M. and **Sztein, M.B.** Live oral *Salmonella* Typhi vaccines Ty21a and CVD 909 induce opsonophagocytic functional antibodies in humans that cross-react with *S. Paratyphi A* and *S. Paratyphi B*. **Clin. Vacc. Immunol.** **21**: 427-434, 2014. PMID: 24416363. PMC39557674.
178. Waddington, C.S., Darton, T.C., Jones, C., Haworth, K., Peters, A., John, T., Thompson, B.A., Kerridge, S.A., Kingsley R.A., Zhou, L., Holt, K.E., Yu, L.M., Lockhart, S., Farrar, J.J., **Sztein, M.B.**, Dougan, G., Angus, B., Levine, M.M., Pollard, A.J. An Outpatient, Ambulant Design, Controlled Human Infection Model Using Escalating Doses of *Salmonella* Typhi Challenge Delivered in Sodium Bicarbonate Solution. **Clin. Infect. Dis.** **58**: 1230-1240, 2014. PMID: 24519873. PMC3982839.
179. Booth, J.S., Toapanta, F.R., Salerno-Goncalves, R., Patil, S., Kader, H.A., Safta, A.M., Czinn, S.J., Greenwald, B.D., **Sztein, M.B.** Characterization and functional properties of gastric tissue-resident memory T cells from children, adults and the elderly. **Frontiers in Immunology.** **5**: 294, 2014. PMID: 24995010. PMC4062881.
180. Toapanta, F.R., Simon, J.K., Barry, E.M., Pasetti, M.F., Levine, M.M., Kotloff, K.L. and **Sztein, M.B.** Gut-homing conventional plasmablasts and CD27- plasmablasts induced by oral immunization with an oral live attenuated *Shigella* vaccine in humans. **Frontiers in Immunology.** **5**: 374, 2014. PMID: 25191323. PMC4138503.
181. **Sztein, M.B.**, Salerno-Goncalves, R., McArthur, M.A. Complex adaptive immunity to enteric fevers in humans: Lessons learned and the path forward. **Frontiers in Immunology.** **5**: 516, 2014. PMID: 25386175. PMC4209864.
182. Wahid, R., Fresnay, S., Levine, M.M., **Sztein, M.B.** Immunization with Ty21a live oral typhoid vaccine elicits cross-reactive multifunctional CD8+ T cell responses against *Salmonella enterica* serovar Typhi, *S. Paratyphi A* and *S. Paratyphi B* in humans. **Mucosal Immunology.** **8**: 1349-1359, 2015. PMID: 25872480. PMC4607552.
183. McArthur, M.A., Fresnay, S., Magder, L.S., Darton, T.C., Jones, C., Waddington, C.S., Blohmke, C.J., Dougan, G., Angus, B., Levine, M.M., Pollard, A.J., **Sztein, M.B.** Activation of *Salmonella* Typhi-specific regulatory T cells in typhoid disease in a wild-type *S. Typhi* challenge model. **PLoS Pathogens.** **11**:e1004914, 2015. PMID: 26001081. PMC4441490.
184. Toapanta, F.R., Bernal, P.J., Fresnay, S., Darton, T.C., Jones, C., Waddington, C.S., Blohmke, C.J., Dougan, G., Angus, B., Levine, M.M., Pollard, A.J., **Sztein, M.B.** Oral wild-type *Salmonella* Typhi challenge induces activation of circulating monocytes and dendritic cells in individuals who develop typhoid disease. **PLoS Tropical Neglected Diseases.** **9**:e0003837, 2015. PMID: 26065687. PMC4465829.
185. Booth, J.S., Salerno-Goncalves, R., Blanchard, T.G., Patil, S.A., Kader, H.A., Safta, A.M., Moningstar, L.M., Czinn, S.J., Greenwald, B.D., **Sztein, M.B.** Mucosal Associated Invariant T cells (MAIT) in the human gastric mucosa and blood: Role in *Helicobacter pylori* infection. **Frontiers in Immunology.** **6**:466, 2015. PMID: 26441971. PMC4585133.
186. Tapia, M.D., Sow, S.O., Lyke, K.E., Haidara, F.C., Diallo, F., Doumbia, M., Traore, A., Coulibaly, F., Kodio, M., Onwuchekwa, U., **Sztein, M.B.**, Wahid, R., Campbell, J.D., Kienny, M-P, Moorthy, V., Imoukhuede, E.B., Rampling, T., Roman, F., De Ryck, I, Bellamy, A.R., Dally, L., Mbaya, O.T., Ploquin, A., Zhou, Y., Stanley, D.A., Bailer, R., Koup, R.A.,

- Roederer, M., Ledgerwood, J., Hill, A.V.S., Ballou, R., Sullivan, N., Graham, B., Levine, M.M. Phase 1 safety and immunogenicity trial in Malian and U.S. adults of non-replicating chimpanzee adenovirus vector expressing Ebolavirus Zaire glycoprotein and effect of boosting with heterologous live vector MVA-BN[®]-Filo or placebo. **Lancet ID.** **16:** 31-42, 2016. PMID: 26546548. PMC4700389.
187. Fresnay, S., McArthur, M.A., Magder, L.S., Darton, T.C., Jones, C., Waddington, C.S., Blohmke, C.J., Dougan, G., Angus, B., Levine, M.M., Pollard, A.J., **Sztein, M.B.** *Salmonella* Typhi-specific multifunctional CD8+ T cells play a dominant role in protection from typhoid fever in humans. **J. Translational Medicine.** **14:** 62, 2016. PMID: 26928826. PMC4772330.
188. Blohmke, C.J., Darton, T.C., Jones, C., Suarez, N.M., Waddington, C.S., Angus, B., Zhou, L., Hill, J., Clare, S., Kane, L., Mukhopadhyay, S., Schreiber, F., Duque-Correa, M.A., Wright, J.C., Roumeliotis, T.I., Yu, L., Choudhary, J.S., Mejias, A., Ramilo, O., Shanyinde, M., **Sztein, M.B.**, Kingsley, R.A., Lockhart, S., Levine, M.M., Lynn, D.J., Dougan, G., Pollard, A.J. Interferon-driven alterations of the host's amino acid metabolism in the pathogenesis of typhoid fever. **J. Experimental Medicine.** **213:** 1061-1077, 2016. PMID: 27217537. PMC4886356.
189. Toapanta, F.R., Bernal, P.J., Fresnay, S., Magder, L.S., Darton, T.C., Jones, C., Waddington, C.S., Blohmke, C.J., Angus, B., Levine, M.M., Pollard, A.J., **Sztein, M.B.** Oral Challenge with Wild-type *Salmonella* Typhi Induces Distinct Changes in B cell Subsets in Individuals Who Develop Typhoid Disease. **PLoS Tropical Neglected Diseases.** **10(6):**e0004766, 2016. PMID: 27300136. PMC4907489.
190. Graves, S.F., Kouriba, B., Diarra, I., Niangaly, A., Daoub, M., Coulibaly, D., Keitab, Y., Laurens, M.B., Berry, A.A., Vekemans, J., Ballou, W.R., Lanar, D., Dutta, J., Heppner, D.G., Soisson, L., Diggs, C.L., Thera, M.A., Doumbo, O.K., Plowe, C.V., **Sztein, M.B.**, Lyke, K.E. Strain-specific *Plasmodium falciparum* multifunctional CD4+ T cell cytokine expression in Malian children immunized with the FMP2.1/AS02A vaccine candidate. **Vaccine.** **34:** 2546-2555, 2016. PMID: 27087149. PMC pending.
191. Salerno-Gonçalves, R., Safavie, F., Fasano, A. and **Sztein, M.B.** Free and complexed-secretory immunoglobulin A triggers distinct intestinal epithelial responses. **Clin. Exp Immunol.** April 2016. E-pub ahead of print. PMID: 27084834. PMC pending.
192. Salerno-Gonçalves, R., Fasano, A. and **Sztein, M.B.** Development of a Multicellular Three-dimensional Organotypic Model of the Human Intestinal Mucosa Grown Under Microgravity. **Journal of Visualized Experiments - J. Vis. Exp. – JoVE.** **113:** e54148, 2016. PMID: 27500889. PMC pending.
193. Darton, T.C., Jones, C., Blohmke, C.J., Waddington, C.S., Zhou, L., Peters, A., Haworth, K., Sie, R. Green, C.A., Jeppesen, C., Moore, M., Thompson, B.A.V., John, T., Kingsley, R.A., Yu, L-M, Voysey, M., Hindle, Z., Lockhart, S., **Sztein, M.B.**, Dougan, G., Angus, B., Levine, M.M., Pollard, A.J. A randomised, double blind, placebo-controlled challenge study to assess the protective efficacy of the single-dose oral typhoid vaccine, M01ZH09. **PLoS Tropical Neglected Diseases.** **10(8):**e0004926, 2016. PMID: 27533046. PMC pending.
194. Wahid, R., Fresnay, S., Levine, M.M. and **Sztein, M.B.** Cross-reactive multifunctional CD4+ T cell responses against *Salmonella enterica* serovars Typhi, Paratyphi A and

Paratyphi B in humans following immunization with live oral typhoid vaccine Ty21a. **Clin. Immunol.** In press.

Manuscripts Submitted for Publication

- Arevalillo, J.M., **Sztein, M.B.**, Kotloff, K.L., Levine, M.M., Simon, J.K. Classification and Regression Trees, Random Forests and Logistic Regression Hybrid Modeling Approach to Identifying Immune Correlates of Protection in *Shigella* Infection. *Computers in Biology and Medicine*. October 2015.
- Davis, C.L., Wahid, R., Toapanta, F.R., Simon, J.K., **Sztein, M.B.** A Clinically Parameterized Mathematical Model of *Shigella* Immunity to Inform Vaccine Design. *PLoS One*. Submitted 6.16.2016.

Meeting Reports and Monographs

1. Gay, C.G.; Richie, T.L.; Pastoret, P.P.; Minguez-Tudela, I.; de Baetselier, P.; Gobel, T.; Goddeeris, B.; Kaiser, P.; Morrison, I.; Sanchez-Vizcaino, J.M.; Anderson, K.; Baillie, L.W.; Brown, W.C.; Estes, D.M.; Herrera, E.; Nara, P.L.; Ockenhouse, C.F.; Roth, J.A. and **Sztein, M.B.** Advances in Immunology and Vaccine Discovery. Report of the United States–European Commission Workshop that took Place in Ames, Iowa, December 12–14, 2006. **Vaccine 25**: 7007-7011, 2007.
2. Levine, M.M., Pasetti, M.F. and **Sztein, M.B.** Salmonella enterica serovar Typhi (typhoid) vaccines. The Immunological Basis for Immunization Series. Module 20. Immunization, Vaccines and Biologicals, WHO. October 2011.

Editorial Work

1. Ulmer, J.B. and **Sztein, M.B.**, co-editors of the “Vaccines” section of the June 2011 issue of **Current Opinion in Immunology**. 2011.

Book Chapters

1. Oppenheim, J.J., Luger, T., **Sztein, M.B.** and Steeg, P.S.: Circuit of Cytokine-Cell Interactions that Regulate Immunological and Inflammatory Reactions. In **"Self-Defense Mechanisms. Role of Macrophages"**. Mizuno, D., Cohn, Z.A., Takeya, K. and Ishida, N., Editors. University of Tokyo Press, Japan. 1982. pp. 127-136.
2. **Sztein, M.B.**, Steeg, P.S., Stiehm, R., Mann, D.L., Blaese, M. and Oppenheim, J.J.: Modulation of Human Cord Blood Monocyte DR Antigen Expression **In Vitro** by Lymphokines and Interferon. In **"Interleukins, Lymphokines and Cytokines"**. Oppenheim, J.J. and Cohen, S., Editors. Academic Press, New York. 1983. pp. 299-305.
3. Luger, T.A., **Sztein, M.B.**, Charon, J.A. and Oppenheim, J.J.: Distinct Species of Epidermal Cell Thymocyte Activating Factor (ETAF) Affect Different Inflammatory Cells. In **"Interleukins, Lymphokines and Cytokines"**. Oppenheim, J.J. and Cohen, S., Editors. Academic Press, New York. 1983. pp. 447-454.

4. Stiehm, E.R., Mann, D., Newland, C., **Sztein, M.B.**, Steeg, P.S., Oppenheim, J.J. and Blaese, R.M.: Deficient DR Antigen Expression on Human Neonatal Monocytes - Reversal With Lymphokines. In "**Primary Immunodeficiency Diseases. Birth Defects: Original Articles Series**". Volume 19, No. 3. Wedgewood, R.J., Rosen, F.S. and Paul, N.W., Editors. Alan R. Liss, Inc., New York. 1983. pp. 295-298.
5. Oppenheim, J.J., Scala, G., Kuang, Y., Matsushima, K., **Sztein, M.B.** and Steeg, P.S.: The Role of Cytokines in Promoting Accessory Cell Functions. In "**Progress in Immunology V**". Yamamura, Y. and Tada, T., Editors. Academic Press, New York. 1983. p. 285.
6. Naylor, P.H., Schulof, R.S., **Sztein, M.B.**, Kessler, C.M., Simon, G.L. and Goldstein, A.L.: Acquired Immune Deficiency Syndrome : The Thymus Connection. Proceedings of UCLA Symposium on AIDS. In "**Acquired Immune Deficiency Syndrome**". Alan R. Liss, Inc, New York. 1984. pp. 265-279.
7. **Sztein, M.B.**, and Goldstein, A.L.: Recent Advances in Thymic Hormone Research. In "**New Experimental Modalities in the Control of Neoplasia**". Chandra P, editor. Plenum Press, New York. 1986. pp. 137-164.
8. Schulof, R.S., Goldstein, A.L., and **Sztein, M.B.** Immune Suppression: Therapeutic Alterations. In: "**Principles of Cancer Biotherapy**"; 1st Edition. Oldham, R.K., editor. Raven Press, Ltd., New York, 1987. pp. 93-162.
9. Schulof, R.S., **Sztein, M.B.** and Goldstein, A.L. Thymic Factors. In: "**Biological Response Modifiers and Cancer Therapy**". J.W. Chiao, editor. Marcel Dekker, Inc., New York, 1988. pp. 267-316.
10. Oates, K.K., **Sztein, M.B.** and Goldstein, A.L. Mechanisms of Action of Thymosins: Modulation of Lymphokines, Receptors and T-Cell Differentiation Antigens. In: "**Cell Surface Antigen Thy-1. Immunology, Neurology, and Therapeutic Applications**". Reif A.E. and Schlessinger M., eds. Immunology Series Vol. 45. Marcel Dekker, Inc. New York. 1989. pp. 273-288.
11. Merritt, W.D., **Sztein, M.B.**, and Reaman, G.H. Analysis of Tumor-associated Gangliosides in Acute Leukemic Lymphoblasts utilizing anti-GD₃ and anti-GM₃ Monoclonal Antibodies. In: "**Gangliosides and Cancer**". Herbert F. Oettgen, ed. VCH Publishers, New York, NY. 1989. pp. 138-147.
12. Serrate, S.A, Schulof, R.S. and **Sztein, M.B.** Current Concepts in Immunology. In: "**Principles of Cancer Biotherapy**"; 2nd Edition. Oldham, R.K., editor. Marcel Dekker, New York, NY. 1991. pp.109-131.
13. Oates, K.K., Schulof, R.S., Goldstein, A.L. and **Sztein, M.B.** Cancer-Associated Immune Suppression: Therapeutic Alterations with Chemical and Biological Agents. In: "**Principles of Cancer Biotherapy**"; 2nd Edition. Oldham, R.K., editor. Marcel Dekker, New York, NY. 1991. pp. 133-215.
14. Kierszenbaum, F. and **Sztein, M.B.** Molecular Alterations Induced by *Trypanosoma cruzi* in Human Lymphocytes which Affect Cytokine Binding and Proliferative Responses. In: Cytokines and Resistance to Non-Viral Pathogenic Infections. Sonnenfeld, G., Czarniecki,

- C., Nacy, C., Byrne, G.I. and Degre, M., eds. Biomedical Press. Augusta, GA. **1992**. pp. 127-134.
15. Levine, M.M., Hone, D.M., Tacket, C.O., **Sztein, M.B.**, Losonsky, G., Nataro, J.P., Gonzalez, C., Dougan, G., Chatfield, S., Cryz, S., Curtiss, R. and Kelley, S. Attenuated *Salmonella typhi* as Live Oral Vaccines to Prevent Typhoid Fever and as Carrier Vaccines to Express Foreign Antigens. **In:** Biology of Salmonella. Cabello, F., Hormaeche, C., Mastroeni, P. and Bonina, L., eds. Plenum Press, New York, NY. NATO ASI Series. Series A: Life Sciences v. 245. **1993**. pp. 343 - 346.
 16. Kierszenbaum, F. and **Sztein, M.B.** Chagas' Disease (American Trypanosomiasis). **In:** Parasitic Infections and the Immune System. Kierszenbaum, F., ed. Academic Press, Inc. New York, NY. **1994**. pp. 53-85.
 17. Levine, M.M. and **Sztein, M.B.** Human Mucosal Vaccines for *Salmonella typhi* Infections. **In:** "Mucosal Vaccines" Kiyono, H., Ogra, P.L. and McGhee, J.R., editors. Academic Press, San Diego, CA. **1996**. pp. 201-211.
 18. **Sztein, M.B.** and Mitchell, G.F.. Recent Advances in Immunology: Impact on Vaccine Development. **In:** "New Generation Vaccines". Second Edition. Levine, M.M., Woodrow, G.C., Kaper, J.B. and Cobon, G.S., editors. Marcel Dekker, Inc., New York, N.Y. **1997**. pp. 99-125.
 19. Levine, M.M., Galen, J.E., **Sztein, M.B.**, Beier, M. and Noriega, F. *Salmonella* Expressing Protozoal Antigens. **In:** "New Generation Vaccines". Second Edition. Levine, M.M., Woodrow, G.C., Kaper, J.B. and Cobon, G.S., editors. Marcel Dekker, Inc., New York, N.Y. **1997**. pp. 351-361.
 20. Levine, M.M., Tacket, C.O., Galen, J.E., Barry, E.M., Chatfield, S., Dougan, G., Noriega, F. and **Sztein, M.B.**. Progress in the Development of New Attenuated Strains of *Salmonella typhi* as Live Oral Vaccines Against Typhoid Fever. **In:** "New Generation Vaccines". Second Edition. Levine, M.M., Woodrow, G.C., Kaper, J.B. and Cobon, G.S., editors. Marcel Dekker, Inc., New York, N.Y. **1997**. pp. 437-446.
 21. Levine, M.M. and **Sztein, M.B.** *Shigella*, *Salmonella typhi*, and *Escherichia coli*. **In:** "Effects of Microbes on the Immune System". Cunningham, M.W. and Fujinami, R.S., editors. Lippincott Williams & Wilkins, Philadelphia, P.A. **2000**. pp. 171-194.
 22. Samandari, T., Levine, M.M. and **Sztein, M.B.** Mechanisms for Establishing Persistence: Immune Modulation. **In:** "Persistent Bacterial Infections". Nataro, J.P., Blaser, M.J. and Cunningham-Rundles, S., editors. ASM Press, Washington, DC. **2000**. pp. 53-78.
 23. Levine, M.M., Galen, J.E., Barry, E., Tacket, C., Kotloff, K., Gomez-Duarte, O., Pasetti, M., Pickett, T. and **Sztein, M.B.** Live Attenuated Vectors: Have they Delivered? **In:** "Fighting Infection in the 21st Century". Andrew, P.W., Oyston, P., Smith, G.L. and Stewart-Tull, D.E., editors. Blackwell Science, London. **2000**. pp. 72-86.
 24. Levine, M.M., Galen, J.E., Barry, E., Pasetti, M.F., Tacket, C.O. and **Sztein, M.B.** Attenuated *Salmonella* and *Shigella* Live Vectors. **In:** "Vaccine Delivery Strategies". Goebel, W. and Dietrich, G., editors. Horizon Scientific Press, Wymondham, UK. **2002**. Chapter 8, pp. 185-210.

25. Cao, K., Lyke, K.E., Masaberg, C., Doumbo, O.K., Ng, J., Hartzman, R.J., Plowe, C.V., **Sztein, M.B.** and Fernandez-Viña, M.A. Distribution and association of alleles at the HLA class I-A, B and C loci in a Malian population. **In:** "HLA 2002. Immunobiology of the Human MHC". Hansen, J. and Dupont, B., Editors. Seattle, WA. May 12-22, 2002. IHWG Press, Seattle, WA. **2003**.
26. **Sztein, M.B.** Recent Advances in Immunology that Impact Vaccine Development. **In:** "New Generation Vaccines". Third Edition. Levine, M.M., Kaper, J.B., Rappuoli, R., Liu, M.A. and Good, M.F., editors. Marcel Dekker, Inc., New York, N.Y. **2004**. Chapter 14, pp. 159-178.
27. Galen, J.E., Pasetti, M.F., **Sztein, M.B.**, Barry, E.M. and Levine, M.M. Attenuated *Salmonella* and *Shigella* as Live Vectors that can carry Either Prokaryotic or Eukaryotic Expression Systems. **In:** "New Generation Vaccines". Third Edition. Levine, M.M., Kaper, J.B., Rappuoli, R., Liu, M.A. and Good, M.F., editors. Marcel Dekker, Inc., New York, N.Y. **2004**. Chapter 30, pp. 353-365.
28. Levine, M.M., Galen, J., Tacket, C.O., Barry, E.M., Pasetti, M.F. and **Sztein, M.B.** Attenuated strains of *Salmonella enterica* serovar Typhi as Live Oral Vaccines Against Typhoid Fever. **In:** "New Generation Vaccines". Third Edition. Levine, M.M., Kaper, J.B., Rappuoli, R., Liu, M.A. and Good, M.F., editors. Marcel Dekker, Inc., New York, N.Y. **2004**. Chapter 41, pp. 479-486.
29. Cao, K., Lyke, K.E., Masaberg, C., Doumbo, O.K., Ng, J., Hartzman, R.J., Plowe, C.V., **Sztein, M.B.** and Fernandez-Viña, M.A. HLA-A, -B and -Cw allele frequencies in a population from Bandigara, Mali. **2004**. **In:** "Immunobiology of the Human MHC". Hansen, J. and Dupont, B., Editors. IHWG Press, Seattle, WA. Human Immunology 65 (9-10): 1004-1006.
30. Pasetti, M.F., Salerno-Gonçalves, R. and **Sztein, M.B.** Mechanisms of adaptive immunity that prevent colonization at mucosal surfaces. **In:** "Colonization of Mucosal Surfaces". Nataro, J.P., Cohen, P.S., Mobley, H.L.T. and Weiser, J.N., editors. ASM Press, Washington D.C. **2005**. Chapter 3, pp. 35-47.
31. **Sztein, M.B.**, Ahmed, R. and Crotty, S. Recent Advances in Immunology that Impact Vaccine Development. **In:** "New Generation Vaccines". Fourth Edition. Levine, M.M., editor; Dougan, G., Good, M.F., Liu, M.A., Nabel, G.J., Nataro, J.P. and Rappuoli, R., Associate editors. Informa Healthcare, New York, N.Y. **2010**. Chapter 17, pp. 166-182.
32. Galen, J.E., Pasetti, M.F., Tennant, S., **Sztein, M.B.** and Levine, M.M. Engineering of Attenuated *Salmonella enterica* Serovars for Use as Live Vector Vaccines. **In:** "New Generation Vaccines". Fourth Edition. Levine, M.M., editor; Dougan, G., Good, M.F., Liu, M.A., Nabel, G.J., Nataro, J.P. and Rappuoli, R., Associate editors. Informa Healthcare, New York, N.Y. **2010**. Chapter , pp. 375-385.
33. Levine, M.M., Galen, J.E., Pasetti, M.F. and **Sztein, M.B.** Attenuated Strains of *Salmonella enterica* Serovars Typhi and Paratyphi as Live Oral Vaccines Against Typhoid Fever. **In:** "New Generation Vaccines". Fourth Edition. Levine, M.M., editor; Dougan, G., Good, M.F., Liu, M.A., Nabel, G.J., Nataro, J.P. and Rappuoli, R., Associate editors. Informa Healthcare, New York, N.Y. **2010**. Chapter 48, pp. 497-505.

Abstracts and/or Proceedings (National and International Conferences)

1. Monastirsky, R. and **Sztein, M.B.**: Neutralization of Endogenous FSH by Antibodies in Prepuber Rats. Effects on Testis. VI International Meeting of the Latinoamerican Association of Investigation in Human Reproduction (A.L.I.R.H.). Lima, Peru. 1974.
2. Fainboim, L., **Sztein, M.B.**, Serrate, S. and Mancini, R.: Homologous Transfer of Lymph Node RNA From Guinea Pigs Sensitized to Sperm Antigen. III International Symposium of Immunology of Reproduction. Varna, Bulgaria. 1975. *Bulgarian Acad. Sci.*, 469-472, 1978.
3. Fainboim, L., **Sztein, M.**, Serrate, S., Mancini, R. and La Torre, J.: Transference of Experimental Allergic Orchitis by Means of I-RNA in Guinea Pigs. Annual Meeting of the Argentine Society for Immunology. Buenos Aires, Argentina. 1976. **Acta Physiol. Latinoam.** **26**: 232-233, 1976.
4. Fainboim, L., **Sztein, M.**, Serrate, S. and Satz, L.: Transference **In Vitro** of Experimental Allergic Orchitis With RNA Extracts. VII Latinoamerican Congress of Microbiology. Buenos Aires, Argentina. 1977.
5. Fainboim, L., **Sztein, M.**, Serrate, S. and Satz, L.: Transference **In Vitro** of Cellular Immunity in the Experimental Allergic Orchitis Model by Means of Immune-RNA. 1st Annual Meeting of the Argentine Society for Immunology. La Plata, Argentina. **Acta Physiol. Latinoam.** **27**: 194, 1977.
6. **Sztein, M.**, Serrate, S. and Satz, L.: Specific Production of MIF **In Vitro** With RNA Extracts of Xenogeneic Origin. XXII Scientific Meeting of the Argentine Society of Clinical Research. Mar del Plata, Argentina. 1977. **Medicina (Buenos Aires).** **37**: 470, 1977.
7. Serrate, S., Satz, L. and **Sztein, M.**: Possible Mechanism of Action of RNA in the Transfer of Cellular Immunity in the Experimental Allergic Orchitis Model. XXII Scientific Meeting of the Argentine Society of Clinical Research. Mar del Plata, Argentina. 1977. **Medicina (Buenos Aires).** **37**: 471, 1977.
8. **Sztein, M.**, Serrate, S. and Satz, M.L.: MIF Production in the Experimental Allergic Orchitis Model With Xenogeneic RNA. An evidence for Cross Reactivity Between Testicular Antigens of Mammalian Species. IV European Immunology Meeting. Budapest, Hungary. 1978.
9. Satz, M.L., Serrate, S. and **Sztein, M.**: **In Vitro** Transfer of Cellular Immunity in an Autoimmune Model by Means of Immune-RNA. IV European Immunology Meeting. Budapest, Hungary. 1978.
10. **Sztein, M.B.**, Satz, M.L., Serrate, S.A. and Braun, M.: Immune-RNA Induces the Expression of Idiotypic Determinants With Antigen Receptor Activity in Normal Murine Cells. IX Annual Meeting of the Scandinavian Society of Immunology. Stockholm, Sweden. 1978. **Scand. J. Immunol.** **8**: 174-175, 1978.
11. Satz, L., **Sztein, M.**, Serrate, S. and Braun, M.: Induction of Synthesis of Antigen Receptors With Idiotypic Determinants in Normal Lymphocytes by Means of Immune-RNA. 1st Annual Meeting of the Argentine Society of Immunol. Lujan, Argentina. 1978. **Acta Physiol. Latinoam.** **28**: 336, 1978.

12. Satz, M., **Sztein, M.**, Serrate, S. and Braun, M.: Mechanism of Action of Immune-RNA in a Murine Allogeneic Model. I. The Active Fraction Bear Characteristics of Messengers RNA's. 1st Annual Meeting of the Argentine Society of Immunology. Quilmes, Argentina. 1979. **Acta Physiol. Latinoam.** **29**: 349, 1979.
13. Serrate, S., Satz, L., **Sztein, M.** and Braun, M.: Mechanism of Action of Immune-RNA in a Murine Allogeneic Model. II Nonspecific Incorporation of Immune-RNA into Non-committed Cells. 1st Annual Meeting of the Argentine Society of Immunology. Quilmes, Argentina. 1979. **Acta Physiol. Latinoam.** **29**: 350, 1979.
14. **Sztein, M.**, Serrate, S., Satz, L. and Braun, M.: Mechanism of Action of Immune-RNA in a Murine Allogeneic Model. III. Immune-RNA Induces the Synthesis of Receptors With Idiotypic Determinants in Cells Genetically Programmed for a Different Idiotype. 1st Annual Meeting of the Argentine Soc. Immunol. Quilmes, Argentina. 1979. **Acta Physiol. Latinoam.** **29**: 351, 1979.
15. Braun, M., Satz, L., **Sztein, M.** and Serrate, S.: Mechanisms of Action of Immune-RNA. II Argentine Congress of Microbiology. Round Table Discussion on Cancer Immunology. Buenos Aires, Argentina. 1979.
16. Serrate, S., **Sztein, M.**, Satz, L. and Braun, M.: **In Vivo** Transference of Cellular Immunity by Means of Immune-RNA in a Murine Allogeneic Model. XXIV Scientific Meeting of the Argentine Society of Clinical Investigation. Mar del Plata, Argentina. 1979. **Medicina (Buenos Aires).** **39**: 780, 1979.
17. **Sztein, M.**, Satz, L. Denduchis, B. and Lustig, L.: Cellular Immunity in Rats With Experimental Allergic Orchitis. XXIV Scientific Meeting of the Argentine Society of Clinical Investigation. Mar del Plata, Argentina. 1979. **Medicina (Buenos Aires).** **39**: 784, 1979.
18. Serrate, S., **Sztein, M.**, Satz, M.L. and Braun, M.: Transfer of Cellular Immunity **In Vivo** With RNA In a Murine Allogeneic Model. IV International Congress of Immunology. Paris, France. 1980.
19. Satz, M., **Sztein, M.**, Serrate, S. and Braun, M.: Mechanism of Immune Transference by RNA Extracts. IV International Congress of Immunology. Paris, France. 1980.
20. **Sztein, M.B.**, Vogel, S.N., Sipe, J.D., Oppenheim, J.J. and Rosenstreich, D.L.: Evidence That Lymphocyte Activating Factor (LAF), Endogenous Pyrogen (EP), and the "Serum Amyloid A (SAA) Inducer" Are Functionally and Biochemically Related Molecules. 65th Annual Meeting of the Federation of American Societies for Experimental Biology. Atlanta, Georgia. 1981. **Fed. Proc.** **40**: 1161, 1981.
21. Sipe, J.D., Vogel, S.N., **Sztein, M.B.**, Skinner, M. and Cohen, A.S.: The Role of Interleukin 1 in the Acute Phase SAA and SAP Synthesis. Conference on C-Reactive Protein and the Plasma Protein Response to Tissue Injury. New York Acad. Sci. New York. September 21-23, 1981.
22. Oppenheim, J.J., Stadler, B., Luger, T.A., **Sztein, M.B.** and Steeg, P.: Circuit of Cytokine-Macrophage-Lymphocyte Interactions That Amplify Immunologic and Inflammatory Reactions. NAITO Foundation International Symposium on Self-Defense Mechanisms: Role of Macrophages. Keidanren-Kaikan, Tokyo, Japan. November 2-4, 1981.

23. Luger, T.A., **Sztein, M.B.**, Schmidt, J.A., Murphy, P. and Oppenheim, J.J.: Characteristics of Epidermal Cell Derived Thymocyte Activating Factor (ETAF). 12th Workshop on Leukocyte Cultures. Vienna, Austria. February 14-17, 1982.
24. **Sztein, M.B.**, Luger, T.A. and Oppenheim, J.J.: Epidermal-Cell Derived Thymocyte Activating Factor (ETAF) Stimulates the **In Vivo** Hepatic Production of Serum Amyloid A (SAA). 66th Annual Meeting of the Federation of American Societies for Experimental Biology. New Orleans, Louisiana. April 15-23, 1982. **Fed. Proc.** **41**: 557, 1982. (Abstract #1681).
25. Luger, T.A., **Sztein, M.B.**, Schmidt, J.A., Murphy, P. and Oppenheim, J.J.: Characterization of a Murine Interleukin 1-Like (IL-1) Epidermal Cell Line Derived Thymocyte Activating Factor (ETAF). 66th Annual Meeting of the Federation of American Societies for Experimental Biology. New Orleans, Louisiana. April 15-23, 1982. **Fed. Proc.** **41**: 481, 1982. (Abstract #1231).
26. Luger, T.A., **Sztein, M.B.**, Schmidt, J.A., Grabner, G., Siraganian, R. and Oppenheim, J.J.: Characterization of Human ETAF. Society for Investigative Dermatology. May 6-8, 1982. Washington, D.C.
27. Oppenheim, J.J., Luger, T.A., **Sztein, M.B.**, Charon, J., Schmidt, J.A., Grabner, G. and Murphy, P.: Relationship of an Epidermal Cell Derived Thymocyte Activating Factor (ETAF) to Interleukin 1 (IL-1). 2nd International Conference on Immunopharmacology. July 5-10, 1982. Washington, D.C.
28. Luger, T.A., **Sztein, M.B.**, Schmidt, J.A., Grabner, G., Murphy, P. and Oppenheim, J.J.: Epidermal Cell Derived Thymocyte Activating Factor (ETAF) Functions to Amplify Immunologic and Inflammatory Reactions. 3rd International Lymphokine Workshop. August 1-5, 1982. Haverford College, Haverford, Pennsylvania. **Cell. Immunol.** **70**: 394, 1982.
29. **Sztein, M.B.**, Steeg, P.S., Mann, D.L., Stiehm, R., Blaese, R.M. and Oppenheim, J.J.: Lymphokine Induction of DR Antigen Expression on Human Neonatal and Cell-line Monocytes. 3rd International Lymphokine Workshop. August 1-5, 1982. Haverford College, Haverford, Pennsylvania. **Cell. Immunol.** **70**: 389-390, 1982.
30. Stiehm, E.R., Mann, D., **Sztein, M.B.**, Steeg, P.S., Oppenheim, J.J. and Blaese, R.M.: Deficient DR Antigen Expression on Human Neonatal Monocytes; Reversal With Lymphokines. Workshop on Primary Immunodeficiency Diseases. September 12-15, 1982. Rosario Resort, Orcas Island, Washington.
31. Nagai, H., **Sztein, M.B.**, Steeg, P.S., Hooks, J.J., Steinberg, A.D. and Oppenheim, J.J.: Decreased DR Expression by Peripheral Blood Monocytes From Patients With Systemic Lupus Erythematosus. American Federation For Clinical Research. April 30-May 2, 1983. Washington, D.C. **Clin. Res.** **31**: 453A, 1983.
32. Luger, T.A., **Sztein, M.B.**, Charon, J.A. and Oppenheim, J.J.: Characterization of Distinct Species of Human Epidermal Cell Thymocyte Activating Factor. The Society For Investigative Dermatology and The European Society for Dermatological Research. Joint International Meeting. April 27-May 1, 1983. Washington, D.C. **J. Invest. Dermatology.** **80**: 303-304, 1983.

33. **Sztein, M.B.**, Lessin, L.S. and Alabaster, O.: Human Tumor Clonogenic Assay (HTCA) Improved by New Methods of Isolation, Characterization and Culture. 4th Conference on Human Tumor Cloning. January 8-10, 1984. Tucson, Arizona.
34. Alabaster, O., **Sztein, M.B.**, Smith, C. and Leondaridis, L.: The effect of adriamycin on tumor cell metabolic heterogeneity measured by intracellular pH. 75th Annual Meeting of the American Association for Cancer Research. May 9-12, 1984. Toronto, Ontario, Canada. Abstract # 1308.
35. Simon, G.L., Kessler, C.M., Westphal, J.L., **Sztein, M.B.**, Goldstein, A.L. and Schulof, R.S.: In vitro immune modifying effects of thymosin fraction 5 on lymphocytes from homosexuals and hemophiliacs with depressed cellular immunity. American Federation for Clinical Research. May 4-7, 1984. Washington D.C. **Clin. Res.** **32**: 384A, 1984.
36. Weiss, R., Lessin, L., Pierce, L., Sahovic, E., Libre, G. and **Sztein, M.**: Low-dose Ara-C in treatment of refractory anemia with excess blasts (RAEB) and acute non-lymphocytic leukemia (ANLL). 20th Annual Meeting of the American Society of Clinical Oncology. May 6-8, 1984.
37. Goldstein, A.L., Naylor, P.H., Schulof, R., Simon, G., **Sztein, M.**, Kessler, C., Robert-Guroff, M., and Gallo, R.C.: Thymosin in the Staging and Treatment of HTLV-III positive Homosexuals and Hemophiliacs with AIDS-related Immune Dysfunction. International Conference on AIDS-Associated Syndromes. December 8-9, 1984. Irvine, California.
38. Simon, G.L., Kessler, C.M., **Sztein, M.B.**, Courtless, J.L., Goldstein A.L. and Schulof, R.S.: The **In Vitro** effects of Thymosin Fraction 5 on lymphocytes from patients with AIDS-related Immune Dysfunction Proc. 24th Interscience Conference on Anti-Microbial Agents and Chemotherapy (ICAAC), Abstract 67, 1984.
39. Schulof, R.S., Simon, G., **Sztein, M.B.**, Schlesselman, S., Kessler, C., Courtless, J., Naylor, P., Orenstein, J., Kind, P., Alabaster, O., Robert-Guroff, M., Gallo, R. and Goldstein, A.L.: **In Vivo** effects of Thymosin Fraction 5 in male Homosexuals and Hemophiliacs at risk for AIDS. Proceedings of the American Society of Clinical Oncology Meeting. May 19-21, 1985. Houston, Texas. **Proc. Am. Soc. Clin. Oncol.** **4**: 1A, (Abstract C-2), 1985.
40. Schulof, R.S., Simon, G., **Sztein, M.**, Orenstein, J., Gallo, R., Goldstein, A.L., et al.: Pilot Study to evaluate the **In Vivo** Effects of Thymosin Fraction 5 in male Homosexuals and Hemophiliacs with Impaired Cellular Immunity. International Conference on Acquired Immune Deficiency Syndrome (AIDS), p 41 (Abstract M-70). April 14-17, 1985. Atlanta, Georgia.
41. Naylor, P.H., Goldstein, A.L., Schulof, R.S., Simon, G., **Sztein, M.B.**, Kessler, C.M., et al. Thymosin in the diagnosis, staging and treatment of AIDS and AIDS-related immune dysfunction. Proc. of the international Conference on Acquired Immunodeficiency Syndrome. p. 85 (Abstract W-79), April 14-17, 1985. Atlanta, Georgia.
42. **Sztein, M.B.**, Schulof, R.S., Simon, G.L., Skotnicki, A.B., Goodman, R., Kessler, C.M. and Goldstein, A.L. **In Vitro** effects lithium and thymosin on lymphoproliferative responses of normal individuals and subjects at risk of developing AIDS. Am. Fed. of Clin. Res. Eastern Section. September 26-27, 1985. Baltimore, Maryland. **Clin. Res.** **33**: 764A, 1985.

43. **Sztein, M.B.**, Serrate, S.A. and Goldstein, A.L. Modulation of mitogen-induced interleukin 2 receptor (IL2R) expression by thymosin fraction 5 on human normal peripheral blood lymphocytes (PBL). Joint Conference of the 17th International Leukocyte Culture Conference and 22nd National Meeting of the Reticuloendothelial Society. Cornell Univ. Ithaca, New York, August 3-8, 1985. **J. Leukocyte Biol.** **38**: 146, 1985. (Abs # 235).
44. **Sztein, M.B.**, Schulof, R.S., Simon, G.L., Kessler, C.M. and Goldstein, A.L. Immunomodulatory properties of lithium and thymosin fraction 5 (TF5) on peripheral blood mononuclear cells (PBL) of normal donors and subjects with AIDS-related immune dysfunction. 25th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), 1985. September 29-October 2, 1985. Minneapolis, Minnesota.
45. Serrate, S.A., Schulof, R.S., Leondaridis, L., Goldstein, A.L. and **Sztein, M.B.** Modulation of Human Natural Killer Cell Cytotoxic Activity and Lymphokine Production by Thymic Hormones. 71st Annual Meeting of Federation of American Societies for Experimental Biology. Washington DC. March 29-April 2, 1987. **Fed. Proc.** **46**: 924, 1987. (Abstract # 3535).
46. Hsia, J.A., Sarin, N., **Sztein, M.B.** and Goldstein, A.L. Abnormal Cellular Immunity in Hypertensives. 60th Scientific Sessions of the American Heart Association. November 16-19, 1987. Anaheim, California. **Circulation** **76** (supp IV): 346, 1987.
47. Beltz, L.A., Kierszenbaum, F., and **Sztein, M.B.** Effect of *Trypanosoma cruzi* on Interleukin 2 Production by Human Lymphocytes. 72nd Annual Meeting of Federation of American Societies for Experimental Biology. Nevada. May 1-5, 1988. **FASEB J.** **2**: A1231, 1988. (Abstract # 5438).
48. Hsia, J.A., Simon, G.L., Goldstein, A.L., **Sztein, M.B.** and Hayden, F.G. Immune Modulation by Oral Aspirin. 61th Scientific Sessions of the American Heart Association. November 14-17, 1988. Washington D.C.
49. Leichtling, K.D., Serrate, S.A. and **Sztein, M.B.** Thymosin Modulate the Expression of High Affinity Interleukin 2 Receptors (IL-2R) on Mitogen-stimulated Human Peripheral Blood Mononuclear Cells (PBMC). 73rd Annual Meeting of Federation of American Societies for Experimental Biology. New Orleans, LA. March 19-23, 1989. **FASEB J.** **3**: A1369, 1989. (Abstract # 6644).
50. Serrate, S.A. and **Sztein, M.B.** Characterization of the Immunoregulatory properties of Thymosin α_1 on IL-2 Production and IL-2R Expression. 73rd Annual Meeting of Federation of American Societies for Experimental Biology. New Orleans, LA. March 19-23, 1989. **FASEB J.** **3**: A1369, 1989. (Abstract # 6643).
51. **Sztein, M.B.**, Cuna, W., Beltz, L.A. and Kierszenbaum, F. *Trypanosoma cruzi* inhibits the Expression of Interleukin 2 Receptors (IL-2R), CD3, CD4 and CD8 Molecules in Mitogen Activated Helper and Cytotoxic Human Lymphocytes. 73rd Annual Meeting of Federation of American Societies for Experimental Biology. New Orleans, LA. March 19-23, 1989. **FASEB J.** **3**: A1092, 1989. (Abstract # 5030).
52. Bessler, H., **Sztein, M.B.** and Serrate, S.A. β -endorphin (β -end) Modulation of Interleukin-1 (IL-1)-induced interleukin-2 (IL-2) Production. 73rd Annual Meeting of Federation of American Societies for Experimental Biology. New Orleans, LA. March 19-23, 1989. **FASEB J.** **3**: A479, 1989. (Abstract # 1469).

53. Hsia, J.A., Simon, G.L., Goldstein, A.L., Naylor, P.N., **Sztein, M.B.** and Hayden, F.G. Immune Activation During Rhinovirus Colds. American Federation For Clinical Research. **Clin. Research 37**: 431A, 1989.
54. Schulof, R.S., Simon, G., Parenti, D., **Sztein, M.B.**, Meyer, W. and Paxton, H. Phase I/II Trial of Ribavirin + Isoprinosine in Asymptomatic HIV Viremic Gay Men. Proceedings of the V International Conference on AIDS, pg. 212 (Abstract Th.B.O.2). June 4-9, 1989, Montreal, Canada.
55. **Sztein, M.B.**, Schulof, R.S., Mai, D., Simon, G., Parenti, D. and Courtless, J. Immunological and Virologic Parameters in 100 HIV-infected Patients (PTS) Treated with Isoprinosine (ISO) or Placebo (PLB) as part of a Multicenter Phase III Clinical Trial. Proceedings of the V International Conference on AIDS, pg. 403 (Abstract W.B.P. 308). June 4-9, 1989, Montreal, Canada.
56. Kierszenbaum, F., **Sztein, M.B.**, Beltz, L.A. and Cuna, W. Inhibition of the Expression of the p55 and p70 Components of High-Affinity IL-2 Receptor by *Trypanosoma cruzi*. Proceedings of the 7th International Congress of Immunology, pg 727 (Abstract 104-42). July 30-August 5, 1989, Berlin, West Germany.
57. **Sztein, M.B.**, Kierszenbaum, F. and Beltz, L.A. Selective Suppressive Effects of *Trypanosoma cruzi* on Activated Human Lymphocytes. Proceedings of the 7th International Congress of Immunology, pg 736 (Abstract 104-95). July 30-August 5, 1989, Berlin, West Germany.
58. Floyd, C.M., **Sztein, M.B.** and Kessler, C.M. Evidence for a Non-RGDS Receptor for Von Willebrand Factor (VWF): Specific Interactions between VWF and Human U937 Tumor Cells. Proceedings of the 31st Annual Meeting of the American Society of Hematology.
59. Naylor, P.H., Kirkley, J., Naylor, C.W., Sarin, P., **Sztein, M.B.**, Pietrobon, P., Lee, C.H. and Goldstein, A.L. Alternate Carriers and Adjuvants for a Synthetic Peptide Vaccine Based on an HIV P17 Epitope: HGP-30. Proceedings of the 2nd Annual Meeting of the National Cooperative Vaccine Development Groups for AIDS. Abstract 35. October 15-18, 1989, Fort Lauderdale, Florida.
60. Merritt, W.D., Kueter, C., **Sztein, M.B.** and Reaman, G.H. Altered Synthesis and Expression of Gangliosides of Leukemic T-Lymphoblasts by Phorbol Ester, Interleukin 2 and Interferon. Second International Workshop on Cytokines. December 10-14, 1989, Hilton Head Island, South Carolina.
61. **Sztein, M.B.**, Tzeoval, E. and Goldstein, A.L. Thymosins α_1 and β_4 Potentiate the Antigen-Presenting Capacity of Macrophages. Second International Workshop on Cytokines. December 10-14, 1989, Hilton Head Island, South Carolina.
62. Sinnadorai, G., Naylor, P.H., Oates, K.K., **Sztein, M.B.**, Erdos, M.R., Naylor, C.W. and Goldstein, A.L. Extracellular Thymosin α_1 and its Interaction with Specific Receptors. 74th Annual Meeting of Federation of American Societies for Experimental Biology. Washington, D. C. April 1-5, 1990. **FASEB J. 4**: A869, 1990. (Abstract # 3493).
63. Kierszenbaum, F., **Sztein, M.B.**, Beltz, L.A. and Cuna, W.R. A Secretion Product of *Trypanosoma cruzi* Inhibits Proliferation and IL-2R Expression by Activated Human Peripheral Blood Mononuclear Cells. Joint Meeting of the American Society of

Biochemistry and Molecular Biology and The American Association of Immunologists. New Orleans, Louisiana. June 4-7, 1990. **FASEB J. 4:** A2223, 1990. (Abstract # 3054).

64. Kierszenbaum, F., Beltz, L.A. and **Sztein, M.B.** *Trypanosoma cruzi* Suppresses Human Lymphocytes Activated via the Antigen-independent (CD2) Pathway. VII Congress International de Parasitologie. Paris, France. August 20-24, 1990.
65. Kirkley, J.E., Naylor, P.H., **Sztein, M.B.**, Sarin, P.S., Pietrobon, P.J., Goldstein, A.L., Holterman, D., Rosenberg, E. and Lee, C.H. Evaluation of Carriers and Adjuvants in Development of Next-generation p17-based Synthetic Peptide AIDS Vaccine. Sixth International Conference on AIDS. San Francisco, California. 1990. (Abstract # 1058).
66. Kierszenbaum, F., Muthukkumar, S., Beltz, L.A. and **Sztein, M.B.** Mechanisms of *Trypanosoma brucei rhodesiense*-induced Immunosuppression: Inhibition of Human T cell Proliferation and IL-2R Expression. 75th Annual Meeting of Federation of American Societies for Experimental Biology. Atlanta, Georgia April 21-25, 1991. **FASEB J. 5:** A1704, 1991. (Abstract # 7739).
67. **Sztein, M.B.** and Kierszenbaum, F. A Soluble Factor from *Trypanosoma brucei rhodesiense* which Prevents Progression of Activated Human T Lymphocytes Through the Cell Cycle. 75th Annual Meeting of Federation of American Societies for Experimental Biology. Atlanta, Georgia April 21-25, 1991. **FASEB J. 5:** A1704, 1991. (Abstract # 7740).
68. Harpaz, R., Edelman, R. and **Sztein, M.B.** Cytokine Profiles in Experimental Human Malaria. 40th Annual Meeting of American Society of Tropical Medicine and Hygiene. Boston, Massachusetts. December 1-5, 1991. Supplement to the **Am. J. Trop. Med. Hyg. 45:** 137, 1991 (Abstract # 107).
69. Moreno, A., Clavijo, P., Edelman, R., Davis, J., **Sztein, M.**, Herrington, D. and Nardin, E. Cytotoxic CD4⁺ T cells from a Sporozoite-Immunized Volunteer Recognize the *Plasmodium falciparum* CS Protein. 40th Annual Meeting of American Society of Tropical Medicine and Hygiene. Boston, Massachusetts. December 1-5, 1991. Supplement to the **Am. J. Trop. Med. Hyg. 45:** 220, 1991 (Abstract # 313).
70. **Sztein, M.B.** and Kierszenbaum, F. *Trypanosoma cruzi* Suppresses the Expression of the p75 Chain of Interleukin-2 Receptors on the Surface of Activated Helper and Cytotoxic Human Lymphocytes. Annual Meeting of Federation of American Societies for Experimental Biology. Anaheim, California. April 5-9, 1992. **FASEB J. 6:** A1219, 1992. (Abstract # 1637).
71. Kierszenbaum, F. and **Sztein, M.B.** Suppression by *Trypanosoma cruzi* of T cell Receptor (TCR) Expression by Activated Human Lymphocytes. Annual Meeting of Federation of American Societies for Experimental Biology. Anaheim, California. April 5-9, 1992. **FASEB J. 6:** A1220, 1992. (Abstract # 1638).
72. Harpaz, R., Davis, J., Levine, M.M., Edelman, R. and **Sztein, M.B.** Stimulation of Peripheral Blood Mononuclear Cells by Soluble *Plasmodium falciparum* Antigens and its Potential Role in Experimental Human Malaria. 41st Annual Meeting of American Society of Tropical Medicine and Hygiene. Seattle, Washington. November 15-19, 1992. Supplement to the **Am. J. Trop. Med. Hyg. 47:** 115, 1992 (Abstract # 62).

73. Moreno, A., Clavijo, P., Edelman, R., Davis, J., **Sztein, M.**, Sinigaglia, F. and Nardin, E. CD4⁺ T Cell Clones obtained from *Plasmodium falciparum* Sporozoite-Immunized Volunteers recognize Polymorphic Sequences of the CS protein. 41st Annual Meeting of American Society of Tropical Medicine and Hygiene. Seattle, Washington. November 15-19, 1992. Supplement to the **Am. J. Trop. Med. Hyg.** **47**: 97, 1992 (Abstract # 21).
74. Kierszenbaum, F., Mejia Lopez, H. and **Sztein, M.B.** Does interleukin-2 Restore Lymphocyte Responses Suppressed by *Trypanosoma cruzi*. Joint Meeting of the American Association of Immunologists and the Clinical Immunology Society. Denver, Colorado. May 21-25, 1993. **J. Immunol.** **150**: 154A, 1993. (Abstract # 872).
75. Edelman, R., Bryan, J., Schneider, I, Davis, J., Sedegah, M., Gordon, D., Church, P., Gross, M., Silverman, C., Hollingdale, M., Clyde, D., **Sztein, M.**, Losonsky, G., Paparello, S., Jones, T.R. and Hoffman, S.L., Safety, Immunogenicity and Efficacy of a Malaria Sporozoite Vaccine Administered with Monophosphoryl Lipid A, Cell Wall Skeleton of Mycobacteria and Squalene as Adjuvant. International Conference on Immunopotentiators in Modern Vaccines. September 7-9, 1993. Pasteur Institute. Paris, France.
76. Morris, J.G., Johnson, J.A., Tacket, C.O., Losonsky, G.A., Rice, E.W., **Sztein, M.B.** and Nataro, J.P. Rugose Survival forms of *Vibrio cholerae* 01 are Virulent for Humans. Annual Meeting of The Infectious Diseases Society of America (IDSA). October 14-18, 1993.
77. Morris, J.G., Johnson, J.A., Rice, E.W., Tacket, C.O., Losonsky, G.A., **Sztein, M.B.** and Nataro, J.P. *Vibrio cholerae* 01 can assume a Rugose Survival Form which Resists Chlorination, but retains Virulence for Humans. 29th Joint Conference on Cholera and Related Diarrheal Diseases. Sponsored by The United States-Japan Cooperative Medical Science Program and NIAID, NIH. December 1-3, 1993. **pp. 177-182.**
78. Frantz, C.F.; Lawrence, M., Stone, K., Eskenazi, A.E., Berg, P.E. and **Sztein, M.** Preclinical Studies of Iron Chelation Cancer Therapy for Neuroblastoma. Keystone Symposium. 1993.
79. M. Levine, C. Tacket, D. Hone, S. Chatfield, G. Dougan, J. Nataro, G. Losonsky and **M. Steinn**. Progress in Typhoid Vaccination. Second Asia-Pacific Symposium on Typhoid Fever and other Salmonellosis. Royal River Hotel, Bangkok, Thailand. November 7-9, 1994.
80. **Sztein, M.B.**, Tanner, M.K., Polotsky, Y., Orenstein, J.M. and Levine, M.M. Cytotoxic T Lymphocytes Following Oral Immunization with Attenuated Vaccine Strains of *Salmonella typhi* in Humans. Keystone Symposia "Mucosal Immunity: New Strategies for Protection against Viral and Bacterial Pathogens". Keystone, CO. January 16-23, 1995. **J. Cell. Biochem. Supplement 19A**, 1995. Page 264. Abstract J1-239.
81. Wright, A.C., Powell, J.L., Tanner, M.K., Simpson, L.M. and **Sztein, M.B.** Analysis of expression of Capsular Polysaccharide in *Vibrio vulnificus* by flow cytometry. 95th General Meeting of the American Society of Microbiology. Washington D.C. May 21-25, 1995. Abstract book **pg. 215** (Abstract # B-285).
82. Kim, S., Nauman, R.K., Tanner, M., **Sztein, M.** and Young, L. Flow Cytometric Analysis of Bactericidal Activity of Quaternary Ammonium Compounds on *Pseudomonas aeruginosa* stained with BacLight. 95th General Meeting of the American Society of Microbiology. Washington D.C. May 21-25, 1995. Abstract book pg. 145 (Abstract # A-11).

83. Tacket, C.O., Losonsky, G.L., **Sztein, M.B.**, Nataro, J.P., Edeman, R., Chatfield, S. and Levine, M.M. Safety and Immune response in Volunteers of a Live Oral *Salmonella typhi* Vaccine Candidate Deleted in *htrA* and *aroC aroD*. 31th Joint Conference on Cholera and Related Diarrheal Diseases. Sponsored by The United States-Japan Cooperative Medical Science Program and NIAID, NIH. December 1-3, 1995. pp. 142-147.
84. Wyant, T., Tanner, M.K. and **Sztein, M.B.** Generation and Characterization of T Cell Lines and Clones from a Volunteer Immunized Orally with an Attenuated Strain of *Salmonella Typhi* (St). Annual Meeting of the American Association of Immunologists. ASMB/ASIP/AAI Joint Meeting. New Orleans, LA. June 2-6, 1996. Late breaking abstract book **pg. 47** (Abstract # LB-187).
85. Levine, M., Kaper, J., Tacket, C., Galen, J., **Sztein, M.**, Losonsky, G., Chatfield, S. and Dougan, G. New Vaccines against Cholera and Typhoid Fever. 7th International Congress for Infectious Diseases. Hong Kong. June 10-13, 1996.
86. Anderson, R.J., Pasetti, M.F., **Sztein, M.B.**, Levine, M.M. and Noriega, F.R. Immune Responses induced by a Shigella Vaccine Strain Harboring an Eukaryotic Expression Vector. 97th Annual Meeting of the American Society for Microbiology. Miami, Florida. May 4-8, 1997 (Abstract #E-103).
87. Handwerger, B.S., Blair, P.J., **Sztein, M.B.**, Storrer, C.E. and June, C.H. T cells from Aged Mice have a Defect in their Ability to Upregulate BCL-X_L Following CD28 Co-stimulation. Annual Meeting of the American Association of Immunologists. Experimental Biology 1998. San Francisco, CA. April 18-22, 1998. \
88. Wyant, T., Tanner, M.K. and **Sztein, M.B.** *Salmonella typhi* Flagella are Potent Inducers of Pro-inflammatory Cytokine Secretion by Human Monocytes. 3rd Annual Symposium on Basic Aspects of Vaccines. Washington D.C., April 29-May 1, 1998. (Abstract #F-11).
89. Pasetti, M.F., Tanner, M.K., Pickett, T.E., Levine, M.M. and **Sztein, M.B.** Lymphoid Populations Involved in the Early Stages of the Immune Response Following Intranasal Immunization with *S. Typhi* Vaccine Strains in Mice. 47th Annual Meeting of American Soc. Trop. Medicine and Hygiene. San Juan, Puerto Rico. October 18-22, 1998. (Abstract #738). Am. J. Trop. Med. Hyg. **59**: 362, 1999.
90. Pickett, T.E., Pasetti, M.F., Tanner, M.K., **Sztein, M.B.** and Levine, M.M. *In vivo* Localization of *Salmonella typhi* in the Intranasal Mouse Model of Typhoid Vaccine Immunogenicity. 47th Annual Meeting of American Society of Tropical Medicine and Hygiene. San Juan, Puerto Rico. October 18-22, 1998. (Abstract #741).
91. Tanner, M., Pasetti, M., Pickett, T., Levine, M.M. and **Sztein, M.B.** Induction of Immune Response by Nasal Associated Lymphoid Tissue in Mice Intranasally Immunized with Attenuated *Salmonella typhi* Vaccines. 6th Annual Chesapeake Cytometry Consortium Conference. Greenbelt, Maryland. March 10-13, 1999.
92. Pasetti, M.F., Anderson, R.J., Noriega, F.R., Levine, M.M. and **Sztein, M.B.** Attenuated Δ *guaBA* *Salmonella typhi* Vaccine Strain CVD 915 as a Live Vector Utilizing Prokaryotic or Eukaryotic Expression Systems to Deliver Foreign Antigens and Elicit Immune Responses. 99th General Meeting of the American Society for Microbiology. Chicago, Illinois. May 30-June 3, 1999. Abstract book pg. 294 (Abstract E-121).

93. Galen, J.E., Tanner, M., **Sztein, M.B.** and Levine, M.M. Plasmid Maintenance Systems for *Salmonella typhi* Live Vectors. 99th General Meeting of the American Society for Microbiology. Chicago, Illinois. May 30-June 3, 1999. Abstract book pg. 368 (Abstract H-203).
94. Pickett, T.E., Pasetti, M.F., Tanner, M.K., **Sztein, M.B.** and Levine, M.M. In vivo Localization of *Salmonella typhi* in Mice Following Intranasal Immunization. 99th General Meeting of the American Society for Microbiology. Chicago, Illinois. May 30-June 3, 1999. Abstract book pg. 50 (Abstract B/D-109).
95. Levine, M.M., Galen, J., Barry, E., Gomez-Duarte, O., Wang, H., Koprowski, H.I., Altboum, Z., Pickett, T., Anderson, R., Tacket, C., Kotloff, K., Losonsky, G., Pasetti, M. and **Sztein, M.** Oral and Nasal Immunization. 3rd International Meeting on "New Approaches to Bacterial Vaccine Development". Munich, Germany. May 19-22, 1999. pg. 38.
96. Samandari, T., Kotloff, K.L., Losonsky, G.A., Picking, W.D., Sansonetti, P.J., Levine, M.M. and **Sztein, M.B.** Production of interferon- γ and IL-10 to *Shigella* Invasins by Mononuclear Cells from Volunteers Orally Inoculated with a Shiga toxin-deleted *Shigella dysenteriae* type 1 Strain. 48th Annual Meeting of American Society of Tropical Medicine and Hygiene. Washington D.C., 1999.
97. Kotloff, K.L., Noriega, F.R., Samandari, T., **Sztein, M.B.**, Losonsky, G.A., Nataro, J.P., Picking, W.D., and Levine, M.M. *Shigella flexneri* 2a Strain CVD 1207 with Specific Deletions in *virG*, *sen*, *set* and *guaBA* is Highly Attenuated in Humans. United States-Japan Cooperative Medical Science Program and NIAID, NIH. 1999.
98. Pasetti, M.F., Tanner, M.K., Pickett, T.E., Levine, M.M. and **Sztein, M.B.** Priming of Immune Responses in the Murine Model of Intranasal Immunization with Attenuated *S. typhi* Vaccine Candidates. 100th General Meeting of the American Society for Microbiology. Los Angeles, CA. May 21-May 25, 2000.
99. Pasetti, M.F., Pickett, T.E., Levine, M.M. and **Sztein, M.B.** Immunogenicity and in Vivo Distribution of *Salmonella enterica* serovar Typhi and *Salmonella enterica* serovar Typhimurium Live Vector Vaccines Delivered by Mucosal Routes in the Murine Model. Annual Meeting of the American Association of Immunologists. Immunology 2000. Seattle, Washington. May 12-16, 2000.
100. DeBoer, M., Kalvakolanu, D., Hasday, J., **Sztein, M.** and Cross, A. Lypopolysaccharide (LPS)-enhanced anti-bacterial Host Defenses: A Model for the Study of LPS in Innate Immunity. International Endotoxin Society. Paris, France. August 24-27, 2000.
101. Gómez-Duarte, O.G., Pasetti, M., **Sztein, M.**, Hedstrom, R., Hoffman, S.L. and Levine, M.M. Immunogenicity of *Plasmodium falciparum* LSA-1 Expressed and Delivered by a Live Attenuated *Salmonella* Vaccine Strain. Congress of Tropical Medicine. Cartagena, Colombia. August 20-25, 2000.
102. Salerno-Gonçalves, R., Wyant, T., Pasetti, M., Levine, M. and **Sztein, M.B.** Induction of Cytotoxic T Lymphocytes (CTL) in Volunteers Immunized with *Salmonella enterica* serovar Typhi (*S. Typhi*) Strain CVD 908htrA. 11th International Congress of Immunology. Stockholm, Sweden. July 22-27, 2001. **Scan. J. immunol.** **54 (suppl. 1):** 82, 2001. Abstract A6.Fri.4.10/778). Poster and oral presentation.

103. Pasetti, M., Salerno-Gonçalves, R. and **Sztein, M.B.** Intranasal Immunization with *S. Typhi* Live Vector Vaccines Elicits Specific, CD8-dependent, MHC class I-Restricted Cytotoxic Lymphocytes (CTL) in Mice. 11th International Congress of Immunology. Stockholm, Sweden. July 22-27, 2001. **Scan. J. immunol.** **54 (suppl. 1):** 122, 2001. Abstract A4.Mon.5.27/1153).
104. Cao, K., Masaberg, C., Yu, J., Moormann, A., Zimmerman, P., **Sztein, M.**, Mann, D., Fernandez-Viña, M. Gene and Haplotype Frequencies of HLA Class I-A, B and C Loci in Four African Populations. *Hum. Immunol.* **62:** S46, 2001.
105. Lyke, K.E., Burges, R.B., Cissoko, Y., Sangare, L., Kone, A., Fernandez-Viña, M., Plowe, C.V., Doumbo, O and **Sztein, M.B.** Interferon-gamma (IFN- γ) Production and Proliferation of HLA-A*0201 Restricted Peripheral Blood Mononuclear Cells (PBMC) Derived from Malian Children with Severe or Uncomplicated *P. falciparum* Malaria and Healthy Controls after Antigenic Stimulation with HLA-A2-restricted Malaria Peptide Pools. 50th Annual Meeting of American Society of Tropical Medicine and Hygiene. Atlanta, GA. November 11-15, 2001. (Abstract #1983).
106. Lyke, K.E., Burges, R.B., Cissoko, Y., Sangare, L., Kone, A., Fernandez-Viña, M., Plowe, C.V., Doumbo, O and **Sztein, M.B.** Interferon-gamma (IFN- γ) Production and Proliferation of HLA-A*3 Restricted Peripheral Blood Mononuclear Cells (PBMC) Derived from Malian Children with Severe or Uncomplicated *P. falciparum* Malaria and Healthy Controls after Antigenic Stimulation with HLA-A3-restricted Malaria Peptide Pools. Keystone Symposia. Malaria's Challenge: From Infants to Genomics to Vaccines. Keystone, CO. March 3-8, 2002. (Abstract #213).
107. Salerno-Gonçalves, R., Pasetti, M.F. and **Sztein, M.B.** Characterization of CD8⁺ Effector T cell Responses in Volunteers Immunized with *Salmonella enterica* serovar Typhi Strain Ty21a Typhoid Vaccine. ASM conference on Immunity, Bacterial, Viral and Protozoal Pathogens. Savannah, GA. March 20-24, 2002. (Abstract #72).
108. Pasetti, M.F., Losonsky, G., Barry, E.M., Medina Moreno, S.M., Galen, J.E., Singh, M., **Sztein, M.B.** and Levine, M.M. Live Attenuated *Salmonella* Typhi and *Shigella flexneri* Strains Efficiently Deliver Measles DNA Vaccines and Induce Immune Responses in Cotton Rats. ASM conference on Immunity, Bacterial, Viral and Protozoal Pathogens. Savannah, GA. March 20-24, 2002. (Abstract #74).
109. Djimdé A.A., Beavogui H.A., Cissoko Y., Tekete M., Guindo A, Fofana B., Coulibaly D., Diakite M., Maiga H., Ouologuem D., Traore O., Kayentao K., Diourte Y., Doumbo S.N., Plowe C.V., **Sztein M.B.** and Doumbo O.K. Clearance of Chloroquine-resistant *P. falciparum* is Associated with Low Plasma Levels of IL-10 in Malian Patients. 12th annual meeting of the Intern. Centers for Tropical Disease Research Network. Bethesda, Maryland. May 13-15, 2003.
110. Heuser, M.D., Crisley, L., Barnes, R., Cerny, J., Sztein, M.B., Wasserman, S., Edelman, R. Placement of Hepatitis B Vaccine in Muscle Compared to Subcutaneous Fat of Older Adults Improves Antibody Response by Three-fold. American Geriatric Society. Baltimore, MD. May, 2003. *J. Amer. Geriatrics Soc.* **51:** S230-S231, pg. 557 Suppl. S, 2003.
111. Lazaro, A.M., Burdett, L., Cao, K., Machan, C., Husted, L., Lyke, K.E., Doumbo, O.K., Ng, J., Hartzman, R.J., Plowe, C.V., **Sztein, M.B.** and Fernandez-Viña, M.A. HLA-B-Cw-DRB1-DQA1-DQB1 haplotypes diversity in Mali population. American Society for Histocompatibility & Immunogenetics. Abstract # 178. *Human Immunol.* **64:** S135, 2003.

112. Djimdé A.A., Beavogui H.A., Cissoko Y., Tekete M., Guindo A, Fofana B., Coulibaly D., Diakite M., Maiga H., Ouologuem D., Traore O., Kayentao K., Diourte Y., Doumbo S.N., Plowe C.V., **Sztein M.B.** and Doumbo O.K. Clearance of Chloroquine-resistant *P. falciparum* is Associated with Low Plasma Levels of IL-10 in Malian Patients. 52th Annual Meeting of American Society of Tropical Medicine and Hygiene. Philadelphia, PA. December 3-7, 2003. (Abstract #883).
113. Cissoko, Y., Daou, M., Lyke, K.E., Dicko, A., Diarra, I., Kone, A, Guindo, A., Traore, K., Krishnegowda, G., Thera M.A., Diallo, D.A., Doumbo, O., Plowe, C., Gowda, D.C. and **Sztein, M.B.** Serum Antibody levels to Glycosylphosphatidylinositols (GPIs) in Specimens Derived from Matched Malian Children with Severe or Uncomplicated *P. falciparum* Malaria and Healthy Controls. 52th Annual Meeting of American Society of Tropical Medicine and Hygiene. Philadelphia, PA. December 3-7, 2003. (Abstract #831).
114. Lyke, K.E., Burges, R., Cissoko, Y., Sangare, L., Daou M., Diarra I., Kone, A., Harley, R., Plowe, C., Doumbo, O. and **Sztein, M.B.** Serum Levels of Pro-inflammatory Cytokines Interleukin 1beta, IL-6, IL-8, IL-10, Tumor Necrosis Factor-alpha and IL-12p70 in Specimens Derived from Matched Malian Children with Severe or Uncomplicated *P. falciparum* Malaria and Healthy Controls. 52th Annual Meeting of American Society of Tropical Medicine and Hygiene. Philadelphia, PA. December 3-7, 2003. (Abstract #433).
115. Salerno-Gonçalves, R., Fernandez-Viña, M., Lewinsohn, D.M. and **Sztein, M.B.** Identification of a human HLA-E-restricted CD8⁺ T cell subset in volunteers immunized with *Salmonella enterica* serovar Typhi strain Ty21a typhoid vaccine. 73rd Annual Meeting of Federation of American Societies for Experimental Biology. Washington, DC. April 17-21, 2004. **FASEB J. 18:** A800, 2004. Supplement. (Abstract # 933).
116. Salerno-Gonçalves, R., Wahid, R. and **Sztein, M.B.** Immunization of Volunteers with *Salmonella enterica* Serovar Typhi Strain Ty21a Elicits the Expansion of CD8⁺ T Cells with a Predominant Vβ Repertoire. 12th International Congress of Immunology. Montreal, Canada. July 18-23, 2004. (Abstract # 2729).
117. Djimdé, A.A., Ouologuem, D., Diakite, M., Beavogui, H.A., Cissoko, Y., Tekete, M., Guindo, A., Fofana, B., Coulibaly, D., Maiga, H., Rockett, K., Plowe, C.V., Sztein, M.B., Kwiatkowski, D. and Doumbo, O.K. Host Immuno-genetics and Clearance of Drug-resistant falciparum Malaria in Malian patients. Melbourne, Australia. September, 2004.
118. Lyke, K.E., Dicko, A., Sangare, L., Kone, A., Coulibaly, D., Guindo, A., Traore, K., Dra, M., Diarra, I., Dabo, A., **Sztein M.B.**, Plowe, C.V. and Doumbo, O.K.. Association of protection against acute *Plasmodium falciparum* infection in Malian children with concomitant *Schistosoma haematobium*. 52th Annual Meeting of American Society of Tropical Medicine and Hygiene. Miami, FL. November 7-11, 2004.
119. Levine, M.M., Barry, E.M., Kotloff, K.L., Pasetti, M.F. and **Sztein, M.B.** A Multivalent Live Vector Oral Vaccine to Prevent Shigellosis and Enterotoxigenic *Escherichia coli* Diarrhea. US-Japan cholera Meeting. Kyoto, Japan. December 2004.
120. Simon, J.K., Kotloff, K. L., Nataro, J. P., Wasserman, S. S., Sztein, M. B., Pasetti, M., Barry, E. M., Blackwelder, W. C., Levine, M. M. Randomized, double-blind phase I study to assess the safety, tolerability, immunogenicity, dose response, and transmissibility of CVD 1208S, a *guaBA*, *sen*, and *set* deleted, live, oral *Shigella flexneri* 2a soy based vaccine. Advance Vaccinology Course. Annecy. France. February 17, 2005.

121. Wahid, R., Salerno-Gonçalves, R., Tacket, C.O., Levine, M.M. and **Sztein, M.B.** Immunization of volunteers with *Salmonella enterica* serovar Typhi (S. Typhi) strain CVD 909 elicits strong cell-mediated immunity characterized predominantly by CD4 and CD8 effector/memory T cells with gut homing potential. 74th Annual Meeting of Federation of American Societies for Experimental Biology. San Diego, CA. April 2-6, 2005. **FASEB J.** **19 (4)**: LBA pg. 134, 2005. (Abstract # LB621).
122. Kotloff, K.L., Simon, J.K., Nataro, J.P., Wasserman, S.S., **Sztein, M.B.**, Pasetti, M., Barry, E.M., Blackwelder, W.C. and Levine, M.M. Randomized, double-blind phase I study to assess the safety, tolerability, immunogenicity, dose response, and transmissibility of CVD 1208S, a *guaBA*, *sen*, and *set* deleted, live, oral *Shigella flexneri* 2a soy based vaccine. 8th Annual Conference on Vaccine Research. Baltimore, MD, May 9-11, 2005.
123. Awomoyi, A.A., Rallabhandi, P., Pollin, T.I., Lorenz, E., **Sztein, M.B.**, Boukhvalova, M., Hemming, V., Blanco, J.G.C. and Vogel, S.N. Association of Toll like receptor 4 (TLR4) Extracellular Polymorphisms with Severe Respiratory Syncytial Virus (RSV) Infection in Infants and Young Children. 46th Annual Short Course in Medical and Experimental Mammalian Genetics. Jackson Laboratories. Bar Harbor, Maine, July 17-29, 2005.
124. Lyke, K.E., Fernandez-Viña, M.A., Cissoko, Y., Coulibaly, D., Kone, A.K., Guindo, A., Doumbo, O.K., Plowe, C.V., **Sztein, M.B.** Association of HLA alleles with *P. falciparum* severity in Malian children with severe malaria matched to uncomplicated malaria or healthy controls. 4th Multilateral Initiative in Malaria (MIM) Pan-African Malaria Conference. Yaoundé, Cameroon, November 13-18, 2005.
125. Ouologuem, D., Djimde, A.A., Cissoko, Y., Dicko, A., Beavogui, H.A., Tekete, M., Guindo, A., Fofana, B., Coulibaly, D., Diakite, M., Maiga, H., Traore, O., Kayentao, K., Dioute, Y., Doumbo, S.N., Plowe, C.V., **Sztein, M.B.** and Doumbo, O.K. Host immunological factors involved in clearance of drug-resistant *falciparum* malaria. 4th Multilateral Initiative in Malaria (MIM) Pan-African Malaria Conference. Yaoundé, Cameroon, November 13-18, 2005.
126. Salerno-Gonçalves, R. and **Sztein, M.B.** Priming of *Salmonella enterica* serovar Typhi-specific CD8⁺ T cells by dendritic cell cross-presentation in humans. 40th Joint Meeting of the US-Japan Cholera and other Bacterial Enteric Infections Panel. Boston, MA, November 30-December 2, 2005.
127. Kotloff, K.L., Simon, J.K., Pasetti, M., **Sztein, M.B.**, Wooden, S.L., Nataro, J.P., Barry, E.M., Blackwelder, W.C. and Levine, M.M. Phase 1 study to assess CVD 1208S, a live, oral delta *guaBA*, *sen*, and *set* *Shigella flexneri* 2a vaccine grown on animal-free media. 40th Joint Meeting of the US-Japan Cholera and other Bacterial Enteric Infections Panel. Boston, MA, November 30-December 2, 2005.
128. Capozzo, A.V.E., Ramírez-Medina, K., Looyd, S., **Sztein, M.B.**, Nataro, J.P. and Pasetti, M.F. Strong antibody and cell-mediated immune responses to foreign antigens expressed by S. Typhi-live vector vaccines are elicited in neonates through bacteria-induced DC maturation and T cell activation. Molecular & Immunological Approaches to Vaccine Design, Cold Spring Harbor, December 1-4, 2005.
129. Gunther, V.J., Palmer, D.R., Putnak, R.J., Fernandez, S., Lyons, A.G., Ostrand-Rosenberg, S., **Sztein, M.B.**, Eckels, K.H., Thomas, S.J., Gibbons, R.V., Vaughn, D.W. and Sun, W. Sustained Production of IFN-gamma Protects Tetravalent Vaccine Recipients

Against Subsequent Infection With Dengue 1 or Dengue 3. 54th Annual Meeting of American Society of Tropical Medicine and Hygiene. Washington D.C., December 11-15, 2005.

130. Lyke, K.E., Dabo, A., Sangare, L., Arama, C., Dra, M., Diarra, I., Plowe, C.V., Doumbo, O.K. and **Sztein, M.B.** Effects of Concomitant *Schistosoma Haematobium* Infection on the Serum Cytokine Levels Elicited by Acute *Plasmodium Falciparum* Malaria Infection in Malian Children. 54th Annual Meeting of American Society of Tropical Medicine and Hygiene. Washington D.C., December 11-15, 2005.
131. Wahid, R., Salerno-Gonçalves, R., Tacket, C.O., Levine M.M. and **Sztein, M.B.** Identification of specific CD4⁺ and CD8⁺ memory T cell populations and expression of homing molecules in subjects immunized with *Salmonella enterica* serovar Typhi (S. Typhi) strain CVD 909. Keystone Symposia "Determinants of Host Resistance and Susceptibility (J2)", Keystone, CO, January 6-11, 2006. Abstract# 230.
132. Tatsunu, I., Harley, R., **Sztein, M.B.** and Kaper, J.B. Translocation Signal of Effector Proteins in *Escherichia coli*. 106th General Meeting of the American Society of Microbiology. Orlando, FL. May 21-25, 2006.
133. Ramirez, K., Capozzo, A., Lloyd, S., Galen, J., **Sztein, M.**, Nataro, J., Pasetti, M. Mucosal priming with *Salmonella* Typhi expressing *Y. pestis* and *B. anthracis* protective antigens followed by parenteral subunit vaccine boost can serve as an effective biodefense vaccine strategy for early life immunization. ASM Conference on Salmonella. Salmonella: From Pathogenesis to Therapeutics. Victoria, British Columbia, Canada. September 9-13, 2006.
134. Capozzo, A., Ramírez-Medina, K., Lloyd, S., **Sztein, M.**, Nataro, J. and Pasetti, M.F. Neonates elicit strong antibody and cell-mediated immunity to foreign antigens expressed by *S. Typhi*-live vector vaccines through bacteria-induced DC maturation and T cell activation. Cold Spring Harbor Laboratory, Molecular and Immunological Approaches to Vaccine Design. Cold Spring Harbor, NY. p 13. 2006.
135. Wahid, R., Pasetti, M.P., Levine, M.M., Tacket, C.O. and **Sztein, M.B.** Parenteral Immunization with Vi Polysaccharide Typhoid Vaccine after Oral Priming with Live Attenuated Oral Vi+ *Salmonella* Typhi Strain CVD 909. Third Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Fallen Leaf, CA. September 19-22, 2006.
136. Awomoyi, A., Rallabhandi, P., **Sztein, M.B.** and Vogel, SN. Differential Activation of Human TLR4 by *Escherichia coli* and *Shigella flexneri* 2a Lipopolysaccharide (LPS): Effect of TLR4 Polymorphisms on NF-κB Activation and Cytokine Production. Third Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Fallen Leaf, CA. September 19-22, 2006.
137. Salerno-Gonçalves, R., Hepburn, M.J., Brittingham, K.C., Fuller, C.L., Bavari, S. and **Sztein, M.B.** *Ex vivo* detection of specific memory T cells in volunteers immunized with the LVS live attenuated tularemia vaccine. Third Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Fallen Leaf, CA. September 19-22, 2006.
138. Sheikh, J., **Sztein, M.B.** and Nataro, J.P. Identification of Immunogens in Enteroaggregative *E. coli*. Third Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Fallen Leaf, CA. September 19-22, 2006.

139. Awomoyi, A., Rallabhandi, P., **Sztein, M.B.** and Vogel, S.N. Differential Activation of Human TLR4 by *E. coli* and *S. flexneri* 2a Lipopolysaccharide (LPS): Effect of TLR4 Polymorphisms on NF-kappaB Activation and Cytokine Production. The Joint Society for Leukocyte Biology and the International Endotoxin and Innate Immunity Society meeting. Innate Immunity: Receptors, Response & Regulation. San Antonio, Texas. November 9-11, 2006.
140. Lyke, K.E., Daou, M., Diarra, I., Kone, A., Thera, M.A., Heppner, G., Leach, A., Doumbo, O., Plowe, C., and **Sztein, M.B.** Cell Mediated Immunity Elicited in Semi-Immune Adults in Bandiagara, Mali, after a Randomized Controlled Phase I Trial Of Walter Reed Army Institute of Research's AMA-1 Antigen Adjuvanted in GlaxoSmithKline Biologicals' AS02A. 55th Annual Meeting of American Society of Tropical Medicine and Hygiene. Atlanta, GA, November 12-16, 2006. Abstract #892.
141. Sheikh, J., **Sztein, M.B.** and Nataro, J.P. Identification of Immunogens in Enteroaggregative *E. coli*. Vaccines for Enteric Diseases meeting (VED). Lisbon, Portugal. April 25-27, 2007.
142. Kotloff, K.L., Simon, J.K., Pasetti, M.F., Livio, S., Blackwelder, W., Barry, E.M., Sztein, M.B. and Levine, M.M. Phase 1 Dose-Escalating Study to Evaluate the Safety and Immunogenicity of CVD 1208S(pCFA/I-LThA2B), a Prototype Attenuated Oral Live Vector *Shigella*/ETEC Vaccine. Vaccines for Enteric Diseases meeting (VED). Lisbon, Portugal. April 25-27, 2007.
143. Edelman, R., Heuser, M., Chrisley, L., Barnes, R., Wasserman, S., Cerny, J., Handwerger, B., Pasetti, M., Siddiqui, K., Elbert, Y., Blackwelder, W. and **Sztein, M.B.** Immunosenescence Among Healthy Elderly Adults Vaccinated With Recombivax-HB[®] Hepatitis B Vaccine. 10th Annual Conference on Vaccine Research. Baltimore, MD. April 30 - May 2, 2007.
144. Salerno-Gonçalves, R. and **Sztein, M.B.** *Ex vivo* detection of early and long-term HLA-E specific CD8⁺ responses in volunteers immunized with *Salmonella enterica* serovar Typhi strain Ty21a typhoid vaccine. 13th International Congress of Immunology – ImmunoRio 2007. August 21-25, 2007. Rio de Janeiro. Brazil.
145. Salerno-Gonçalves, R., Hepburn, M J., Brittingham, K.C., Fuller, C L, Bavari, S. and **Sztein, M.B.** *Ex vivo* detection of specific memory T cells in volunteers immunized with the LVS live attenuated tularemia vaccine. 13th International Congress of Immunology – ImmunoRio 2007. August 21-25, 2007. Rio de Janeiro. Brazil.
146. Lyke, K.E., Dabo, A., Arama, C., Daou, M., Diarra, I., Plowe, C.V., Doumbo, O.K. and **Sztein, M.B.** Effects of Concomitant *Schistosoma Haematobium* Infection on the Intracellular Cytokine Levels and T Cell Memory Populations Elicited by Acute *Plasmodium Falciparum* Malaria Infection in Malian Children. 56th Annual Meeting of American Society of Tropical Medicine and Hygiene. Philadelphia, PA. November 4-8, 2007. Abstract #324.
147. Salerno-Gonçalves, R., Hepburn, M J., Brittingham, K.C., Fuller, C L, Bavari, S. and **Sztein, M.B.** Generation of heterogeneous effector and memory T cells by live attenuated tularemia vaccine and natural infection in humans. 4th Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Pine Mountain, Georgia, April 1-4, 2008.

148. Cuberos, L., Reymann, M., Pasetti, M.F. and **Sztein, M.B.** Antibody responses against *F. tularensis* in humans immunized with the Live Vaccine Strain (LVS). 4th Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Pine Mountain, Georgia, April 1-4, 2008.
149. Sheikh, J., **Sztein, M.B.** and Nataro, J.P. Identification of immunogenic proteins in enteroaggregative *Escherichia coli* (EAEC) and construction of recombinant vaccine strains which express aggregative adherence fimbriae (AafA) and dispersin (Aap) antigens. 4th Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Pine Mountain, Georgia, April 1-4, 2008.
150. Simon, J.K., Wahid, R., Maciel, M., Kotloff, K.L., Levine, M.M., **Sztein, M.B.** Antigen-specific B memory cell responses to lipopolysaccharide (LPS) and invasion plasmid antigen (Ipa) B among volunteers vaccinated with live-attenuated *Shigella flexneri 2a*. 11th Annual Conference on Vaccine Research. National Foundation for Infectious Diseases. Baltimore, MD, May 5-7, 2008.
151. Chen, W.H., Bowen, S., Cross, A.S., Edelman, R., Hayes, M., Lim, Y., Reymann, M., Ruslanova, I., Wu, S., **Sztein, M.B.**, Pasetti, M.F. Cellular and Humoral Immune Responses of Elderly Adults that Received a High-dose or Standard-dose Influenza Vaccine. 11th Annual Conference on Vaccine Research. National Foundation for Infectious Diseases. Baltimore, MD, May 5-7, 2008.
152. **Sztein, M.B.**, Heuser, M., Chen, W.H., Pasetti, M.F., Cross, A. and Edelman, R.E. Immunosenescence in healthy elderly adults immunized with hepatitis B and influenza vaccines. U.S.-Japan Cooperative Medical Science Program, Immunology Board: Immunosenescence Workshop, San Francisco, CA, June 18-21, 2008.
153. Maciel Jr. M., Khan, A.Q., Simon, J., Wahid, R. and **Sztein, M.B.** Evaluation of specific memory B cell responses in a *Shigella dysenteriae* 1 challenge model in Cynomolgus macaques. Immunologic Memory and Host Defense. Keystone Symposia B6. Keystone, Colorado, February 8-13, 2009
154. Cuberos, L., Evon, K., Saeed, M., Pasetti, M.F. and **Sztein, M.B.** Egg-Derived Antibody to *E. coli* Heat Stable Enterotoxin. Fifth Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Stevenson, WA, March 29-April 1, 2009.
155. Wahid, R., Pasetti, M.F., Ruslanova, I., Tacket, C.O., Levine, M.M. and **Sztein, M.B.** Immunity in a CVD 909/Vi Typhoid Vaccine Trial. Fifth Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Stevenson, WA, March 29-April 1, 2009.
156. Salerno-Gonçalves, R. and **Sztein, M.B.** Novel 3-D mucosal model to study *S. Typhi* immunity. Fifth Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Stevenson, WA, March 29-April 1, 2009.
157. Maciel Jr, M., Khan, A.Q., Simon, J.K., Wahid, R., Picking, W.D. and **Sztein, M.B.** Evaluation of systemic and mucosal B cell immune response to oral challenge with *Shigella dysenteriae* 1 in Cynomolgus macaques. 12th Annual Conference on Vaccine Research. National Foundation for Infectious Diseases. Baltimore, MD. April 27-29, 2009.

158. Seekatz, A.M., Hsiao, W.W.L., Khan, A.Q., Panda, A., Shipley, S., DeTolla, L., Levine, M.M., Barry, E.M., **Sztein, M.B.** and Fraser-Liggett, C.M. The Effect of Immunization with an Oral Shigella Vaccine on the Gut Microbiota in Cynomolgus Monkeys. American Society for Microbiology 109th general meeting. Philadelphia, PA. May 17-21, 2009.
159. Maciel Jr, M., Khan, A.Q., Simon, J.K., Wahid, R., Panda, A., Shipley, S., DeTolla, L., Barry, E.M., Picking, W.L., Levine, M.M. and **Sztein, M.B.** Evaluation of mucosal B cell responses in Shigella-vaccinated cynomolgus macaques after challenge with wild-type *S. dysenteriae* 1. 14th International Congress of Mucosal Immunology (ICMI 2009), Boston, Massachusetts, July 5-9, 2009.
160. Tacket, C.O., Frey, S., Bernstein, D.I., Treanor, J.J., El-Kamary, S., Pasetti, M.P., **Sztein, M.B.**, Ferreira, J. and Richardson, C. Phase 1 Dose-Comparison, Safety and Immunogenicity of Intranasal Dry Powder Norwalk VLP Vaccine. 5th International Conference on Vaccines for Enteric Diseases (VED). Benalmadina, Malaga, Spain. September 9-11, 2009.
161. Wahid, R., Pasetti, M.F., Ruslanova, I., Tacket, C.O., Levine, M.M. and **Sztein, M.B.** Antibody and B cell memory immunity in a CVD 909 mucosal immunization prime/Vi parenteral boost typhoid vaccine trial. 3rd ASM Conference on Salmonella: Biology, Pathogenesis & Prevention. Aix-en-Provence, France, October 5-9, 2009.
162. Salerno-Gonçalves, R., Wahid, R. and **Sztein, M.B.** *Ex vivo* detection of early and long-term multifunctional HLA-E specific CD8⁺ cells in volunteers immunized with *Salmonella enterica* serovar Typhi strain Ty21a typhoid vaccine. 3rd ASM Conference on Salmonella: Biology, Pathogenesis & Prevention. Aix-en-Provence, France, October 5-9, 2009.
163. Lyke, K.E., Dabo, A., Arama, C., Daou, M., Diarra, I., Plowe, C.V. Doumbo, O.K. and **Sztein, M.B.** Effects of Concomitant *Schistosoma haematobium* Infection on the T Regulatory Cell Response Elicited by Acute Plasmodium falciparum Malaria Infection in Malian Children. 58th Annual Meeting of American Society of Tropical Medicine and Hygiene. Washington D.C. November 18-22, 2009. Abstract #744.
164. Wahid, R., Tacket, C. Levine, M.M. and **Sztein, M.B.** Broad-spectrum vaccines to enteric fevers in humans: cross-protective immunity. Regional Centers for Excellence in Biodefense and Emerging Infectious Diseases (RCE) National Meeting. Las Vegas, Nevada. April 11-13, 2010.
165. Tacket, C.O., Frey, S., Bernstein, D.I., Treanor, J.J., El-Kamary, S., Pasetti, M.F., **Sztein, M.B.**, Chen, W.H., Ferreira, J. and Richardson, C. Intranasal Vaccination Elicits Serum Antibodies and Antibody Secreting Cells Expressing Mucosal Homing Receptors in a Phase 1 Safety and Immunogenicity Study of a Novel Norovirus VLP Vaccine. 13th Annual Conference on Vaccine Research, Bethesda, MD, April 26-28, 2010.
166. Higgins, A., Maciel, Jr., M., **Sztein, M.** and MacVittie, T. Multichromatic phenotypic analysis of peripheral lymphocytes in non-human primates (NHP) following total body irradiation (TBI) with 5% bone marrow shielding (BM5). 97th Annual Meeting of the American Association of Immunologists. Baltimore, MD. May 7-11, 2010. Abstract #132.19.
167. Salerno-Gonçalves, R. and **Sztein, M.B.** Novel 3D mucosal model to study immunity to *S. Typhi*. 6th Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Cambridge, MD. June 1-4, 2010.

168. Lyke, K.E., Wang, A., Dabo, A., Arama, C., Daou, M., Diarra, I., Dutta, S., Angov, E., Lanar, D.E., Plowe, C.V. Doumbo, O.K. and **Sztein, M.B.** Antigen-specific B memory cell responses to Plasmodium falciparum Blood Stage Malaria Antigens and Schistosomal Antigens in Malian Children With and Without *Schistosoma haematobium*. 59th Annual Meeting of American Society of Tropical Medicine and Hygiene. Atlanta. November 3-7, 2010.
169. Seekatz AM, Hsiao WWL, Khan AQ, Panda A, Shipley S, DeTolla L, Levine MM, **Sztein MB**, Fraser-Liggett CM. Longitudinal Analysis of Bacterial Populations in the Cynomolgus Monkey Gut Using 16S rRNA-based Pyrosequencing. 110th General Meeting of the American Society for Microbiology. San Diego, CA. May 23-27, 2010.
170. McArthur, M. and **Sztein, M.B.** Presence of multifunctional CD4 and CD8 T cells in response to oral Ty21a typhoid immunization in humans. 10th Annual St. Jude/PIDS Pediatric Infectious Diseases Research Conference. St. Jude Children's Research Hospital. Memphis, Tennessee. February 11-12, 2011.
171. Wahid, R., Simon, R., Levine, M.M. and **Sztein, M.B.** Cross-protective immunity in broad-spectrum vaccines to enteric fevers in humans. Regional Centers for Excellence in Biodefense and Emerging Infectious Diseases (RCE) National Meeting. Denver, Colorado. April 3-5, 2011.
172. Seekatz, A.M., Liu, Z., Panda, A., Shipley, S.T., DeTolla, L.J., **Sztein, M.B.**, and Fraser-Liggett, C.M. 16S rRNA-based Pyrosequencing Reveals Fluctuation in the Diversity of Bacterial Populations Over Time in the Cynomolgus Macaque Intestinal Microbiota. International Human Microbiome Congress. Vancouver, BC, Canada. March 9-11, 2011.
173. Corrier, K.L., Erickson, A.R., Lamendella, R., Cantarel, B.L., Shah, M. Fraser-Liggett, C., Hettich, R.L., Jansson, J., **Sztein, M.B.** and VerBerkmoes, N.C. Comparison of direct and indirect extraction methods for deep metaproteomics characterization of the gut microbiota. American Society of Mass Spectroscopy (ASMS). Denver, CO. June 5-9, 2011.
174. Toapanta, F.R., Khan, A.Q., Panda, A., Shipley, S., DeTolla, L., Chen, H., Barry, E.M., Levine, M.M. and **Sztein, M.B.** Oral Immunization with CVD 1256 Attenuated Shigella dysenteriae 1 Results in Partial Protection Following Wild-Type Challenge in Cynomolgus Macaques. Federation of Clinical Immunology Societies (FOCIS) 2011. Washington DC. June 23-26, 2011.
175. Salerno-Goncalves, R., Fasano, A. and **Sztein, M.B.** Engineering of a Multi-cellular Organotypic Model of the Human Intestinal Mucosa. International Congress of Mucosal Immunology. Paris, France. July 5-9, 2011.
176. Toapanta, F.R., Khan, A.Q., Panda, A., Shipley, S., DeTolla, L., Chen, H., Barry, E.M., Levine, M.M. and **Sztein, M.B.** Immunization with CVD 1256 Attenuated Shigella dysenteriae 1 Reduces Bacterial Shedding Following Wild-Type Challenge in Cynomolgus Macaques. International Congress of Mucosal Immunology. Paris, France. July 5-9, 2011.
177. Pasetti, M.F., Wahid, R., Ramirez, K., Bargatze, R., Mendelman, P., Richardson, C., Tacket, C.O. and **Sztein, M.B.** Nasal vaccination with an adjuvanted Norwalk Virus-like particle vaccine elicits antigen-specific B memory responses in adult volunteers. 6th

International Conference on Vaccines for Enteric Diseases. Cannes, France. September 14-26, 2011.

178. Lyke, K.E., Fernandez-Viña, M.A., Cao, K., Hollenbach, J., Coulibaly, D., Kone, A.K., Guindo, A., Burdett, L.A., Hartzman, R.J. Wahl, A.R., Hildebrand, W.H., Doumbo, O.K., Plowe, C.V., **Sztein, M.B.** Association of HLA Alleles with Plasmodium falciparum Severity in Malian Children. 60th Annual Meeting of American Society of Tropical Medicine and Hygiene. Philadelphia, PA. December 4-8, 2011.
179. Seekatz, A., Eloë, E., Panda, A., Shipley, S., DeTolla, L., **Sztein, M.B.** and Fraser-Liggett, C. The Effect of an Oral Live-attenuated Shigella Vaccine and Wild type Shigella Infection on the Intestinal Microbiota of Cynomolgus Monkeys. International Human Microbiome Congress. Paris, France. March 19-21, 2012.
180. Eloë-Fadrosch, E.A., Seekatz, A., Liu, Z., Drabek, E.F., McArthur, M., Wahid, R., Rasko, D.A., **Sztein, M.B.**, Fraser-Liggett, C.M. Effects of oral immunization with the Ty21a typhoid vaccine on the gut microbiota and local and systemic immune responses. International Human Microbiome Congress. Paris, France. March 19-21, 2012.
181. Fiorentino, M., Lammers, K., Sztein, M.B. and Fasano, A. *Salmonella enterica* serovar Typhi impairment of epithelial barrier integrity: effects of wild-type and vaccine strains. 112th American Society for Microbiology General meeting. San Francisco, CA. June 16-19, 2012.
182. Darton, T.C., Jones, C., Waddington, C.S., Zhou, L., Dougan, G., Lockhart, S., Levine, M.M., **Sztein, M.B.**, Farrar, J., Crook, D., Angus, B., Pollard, A.J. Demonstration of primary and asymptomatic DNAemia in participants challenged with Salmonella Typhi (Quailes strain) during the development of a human model of Typhoid infection. 15th International Congress on Infectious Diseases (ICID). Bangkok. Thailand. June 13-16, 2012.
183. Jones, C., Waddington, C., Darton, T., Bowman, J., Farrar, J., Dougan, G., Levine, M.M., Lockhart, S., **Sztein, M.B.**, Angus, B., Crook, D., Pollard, A.J. Quantification of antibody secreting cell responses in a human model of *Salmonella* Typhi infection. 15th International Congress on Infectious Diseases (ICID). Bangkok. Thailand. June 13-16, 2012.
184. Edelman, R., Heuser, M.D., Chrisley, L., Barnes, R., Blackwelder, W., Handwerker, B., Cerny, J., Pasetti, M., Siddiqui, K.M., and **Sztein, M.B.** The Effect of Vaccination Route, Age and Gender on the Immune Response of Healthy Elderly Adults to a Recombinant Hepatitis B Surface Antigen Vaccine (Recombivax-HB®). 14th International Symposium on Viral Hepatitis and Liver Disease (ISVHLD). June 22-25, 2012. Shanghai, China.
185. Berry, A.A., Gottlieb, E.R., Kouriba, B., Thera, M.A., Dutta, S., Heppner, G., Coulibaly, D., Ouattara, A., Niangaly, A., Soisson, L., Diggs, C.L., Wu, Y., Laurens, M.B., **Sztein, M.B.**, Doumbo, O.K., Plowe, C.V., and Lyke, K.E.. Antibody subclass and avidity responses to AMA1 vaccine candidate FMP2.1/AS02_A. 61th Annual Meeting of American Society of Tropical Medicine and Hygiene. Atlanta, Georgia. November 11-15, 2012.
186. Davis, C.L., Wahid, R. Toapanta, F.R., Simon, J.K., **Sztein, M.B.**, Levy, D. Applying Mathematical Tools to Accelerate *Shigella* Vaccine Development. Joint Mathematics Meetings 2013. San Diego, CA. January 9-12, 2013

187. **Sztein, M.B.**, Levine, M.M., Pollard, A.J., Fresnay, S., McArthur, M.A., Jones, C., Waddington, C., Darton, T., Blohmke, C., Wahid, R., Salerno-Goncalves, R. Cell mediated immunity to *S. Typhi*. 8th International Conference on Typhoid Fever and Other Invasive Salmonellosis. Dhaka, Bangladesh. March 1-2, 2013
188. Levine, M.M., Galen, J.E., Tennant, S.M., Pasetti, M.F., Shirley, D., Kotloff, K.L., **Sztein, M.B.** Live Oral Vaccines to Prevent Typhoid and Paratyphoid Fever. 8th International Conference on Typhoid Fever and Other Invasive Salmonellosis. Dhaka, Bangladesh. March 1-2, 2013
189. Fiorentino, M., Ding, H., Blanchard, T.G., Sztein, M.B. and Fasano, A. *Helicobacter pylori* affects gastric epithelial barrier integrity independent of its main virulence factors and induces a polarized host inflammatory cytokine secretion in an in vitro human cell model. Digestive Disease Week 2013. Orlando, FL. May 18-21, 2013.
190. Fiorentino, M., Lammers, K.M., Sztein, M.B. and Fasano, A. *Shigella spp.* adversely affect paracellular permeability in in vitro and ex-vivo models of intestinal mucosa. Digestive Disease Week 2013. Orlando, FL. May 18-21, 2013.
191. Toapanta, F.R., Simon, J., Barry, E., Pasetti, M., Levine, M.N., Kotloff, K. and **Sztein, M.B.** Classic plasmablasts and CD27- plasmablasts infiltrate peripheral blood following CVD 1208S (*Shigella*) vaccination. 16th International Congress of Mucosal Immunology (ICMI 2013), Vancouver, Canada. July 17-20, 2013.
192. Darton, T.C., Waddington, C.S., Jones, C., Blohmke, C., Sie, R., Peters, A., Kingsley, R.A., Dougan, G., Lockhart, S., Levine, M.M., **Sztein, M.B.**, Farrar, J., Crook, D., Angus, B., Pollard, A.J. Assessment of the novel oral typhoid vaccine, M01ZH09, using a controlled human infection model of *Salmonella Typhi* challenge. ISDA 2013. San Francisco, CA. October 2-6, 2013.
193. Fresnay, S., McArthur, M.A., Wahid, R., Salerno-Goncalves, R., Toapanta, F.R., Jones, C., Darton, T.C., Waddington, C.S., Blohmke, C.J., Zhou, L., Levine, M.M., Pollard, A.J., **Sztein, M.B.** Cell mediated immunity in a human wild-type *S. Typhi* challenge model. 4th ASM Conference on Salmonella. Boston. October 5-9, 2013
194. Jones, C., Darton, T.C., Waddington, C.S., Blohmke, C.J., Haworth, K., Peters, A., Kerridge, S., Crook, D., Lockhart, S., Farrar, J., Dougan, G., **Sztein, M.B.**, Levine, M.M., Angus, B., Pollard, A.J. Blood and stool quantification of bacteria in a controlled human infection model of *Salmonella Typhi* challenge following vaccination. 4th ASM Conference on Salmonella. Boston. October 5-9, 2013
195. **Sztein, M.B.**, Eloje-Fadrosch, E., Seekatz, A., McArthur, M., Toapanta, F.R., Panda, A., Rasko, D.A., Khan, A.Q., Drabek, E.F., Liu, Z., Shipley, S.T., DeTolla, L.J., Fraser, C.M. Immune responses to vaccines against enteric pathogens in humans and NHP: Role of the gut microbiome. 7th Annual Vaccine Renaissance Conference, Providence, Rhode Island, October 16-18, 2013.
196. Fraser, C.M., Eloje-Fadrosch, E., Seekatz, A., Solarno-Aguilar, G., Huibbert, P., **Sztein, M.B.** Probiotics, the Microbiome, and the Host Immune Response: Insights for Novel Therapeutic Approaches. 7th Annual Vaccine Renaissance Conference, Providence, Rhode Island, October 16-18, 2013.

197. Lee, L., Corrier, K.L., Dill, B.D., Shah, M., Hettich, R.L., Jansson, J., **Sztein, M.B.**, VerBerkmoes, N.C. Advanced deep metaproteomics methods provide unique insights into the diversity of the human proteome and gut microbiota in healthy adults. 7th Annual Vaccine Renaissance Conference, Providence, Rhode Island, October 16-18, 2013.
198. **Sztein, M.B.**, Pollard, A.J., Levine, M.M., Fresnay, S., McArthur, M.A., Wahid, R., Toapanta, F.R., Jones, C., Darton, T.C., Waddington, C.S., Blohmke, C.J., Zhou, L., Salerno-Goncalves, R. Complex Cell Mediated Immunity elicited by *Salmonella* Typhi in Humans. 7th International Conference on Vaccines for Enteric Diseases (VED). November 6-8, 2013, Bangkok, Thailand.
199. Kotloff, K.L., Sztein, M.B., Shirley, D.T., Pasetti, M.F., Livio, S., Vindurampulle, C., Galen, J., Levine, M.M. Phase 1 and 2 Trial of live, oral *Salmonella enterica* Serovar Paratyphi A vaccine harboring mutations in *guaBA* and *clpX*. 7th International Conference on Vaccines for Enteric Diseases (VED). November 6-8, 2013, Bangkok, Thailand
200. Kotloff, K.L., Pasetti, M.F., Shirley, D.T., Sztein, M.B., Livio, S., Barry, E. Levine, M.M. Phase 1 and 2 Trials of CVD 1208S, a live, oral Δ *guaBA*, Δ *sen*, Δ *set* *Shigella flexneri* 2a vaccine. 7th International Conference on Vaccines for Enteric Diseases (VED). November 6-8, 2013, Bangkok, Thailand
201. Wahid, R., Zafar, S.J., McArthur, M.A., Pasetti, M.F., Levine, M.M., **Sztein, M.B.** Live oral typhoid vaccines Ty21a and CVD 909 induce opsonophagocytic functional antibodies in humans which cross react with *S. Paratyphi* A and *S. Paratyphi* B. 7th International Conference on Vaccines for Enteric Diseases (VED). November 6-8, 2013, Bangkok, Thailand.
202. Graves, S., Diarra, I., Niangaly, A., Daou, M., Coulibaly, D., Kouriba, B., Laurens, M.B., Vekemans, J., Ballou, W.R., Lanar, D., Dutta, S., Heppner, D.G., Soisson, L., Diggs, C.L., Doumbo, O.K., Thera, M.A., Plowe, C.V., **Sztein, M.B.**, Lyke, K.E. Demonstration of enhanced strain-specific *Plasmodium falciparum* multifunctional T cell cytokine expression among Malian children immunized with the FMP2.1/AS02_A vaccine. 62nd Annual Meeting of American Society of Tropical Medicine and Hygiene. Washington D.C. November 13-17, 2013.
203. Wahid, R., Dabo, A., Arama, C., Daou, M., Diarra, I., Kouriba, B., Doumbo, O.K., Plowe, C.V., **Sztein, M.B.**, Lyke, K.E. Detection of multifunctional cytokine-secreting B regulatory cells in Malian children with or without *S. haematobium*. 62nd Annual Meeting of American Society of Tropical Medicine and Hygiene. Washington D.C. November 13-17, 2013.
204. De Groot, A.S., Gutierrez, A., He, L., Bailey-Kellogg, C., Moise, L. Terry, F.E., Losikoff, P., Leng, Q., Hady, K.L., Verberkmoes, N., **Sztein, M.B.**, Rothman, A., Martin, W.D. The Two-faced T cell epitope: Relevance to Vaccine Efficacy and Design. Vaccine and Gene Therapy Institute. November 2013.
205. De Groot, A.S., Bailey-Kellogg, C., Moise, L., Terry, F.E., Verberkmoes, N., **Sztein, M.B.**, Martin, W.D. The two-faced T cell epitope: relevance to autoimmunity. 9th International Congress on Autoimmunity. Nice, France. March 26-30, 2014.
206. Salerno-Gonçalves, R., Safavie, F., Fasano, A. and **Sztein, M.B.** Microbiota-secretory immunoglobulin A immune complexes reduces inflammatory-epithelial cell responses to microflora. 114th American Society Microbiology Annual Meeting. Boston, MA. May 17-20, 2014.

207. Blohmke, C.J., Darton, T.C., Jones, C., Suarez, N.M., Mejias, A., Waddington, C.S., Lockhart, S., Farrar, J.J., Angus, B., Kingsley, R., **Sztein, M.B.**, Levine, M.M., Dougan, G., Ramilo, O., Lynn, D.J., Pollard, A.J. Novel Insight into Typhoid Infection and Vaccination from Functional Genomics. 54th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC). Washington DC. September 5-9, 2014.
208. Booth, J.S., Toapanta, F.R., Salerno-Goncalves, R., Patil, S., Kader, H.A., Safta, A.M., Czinn, S.J., Greenwald, B.D., **Sztein, M.B.** Characterization of gastric tissue-resident memory CD8+ T cells from children, adults and the elderly. 9th European Mucosal Immunology Group Meeting, EMIG 2014. Glasgow, Scotland. October 9-12, 2014.
209. Wahid, R., Fresnay, S., McArthur, M.A., Levine, M.M., **Sztein, M.B.** The live oral typhoid vaccine Ty21a induces cross reactive humoral and cell-mediated immune responses against *S. Paratyphi A* and *S. Paratyphi B* in human. 8th Annual Vaccine Renaissance Conference, Providence, Rhode Island. October 13-16, 2014.
210. McArthur, M.A., Fresnay, S., Darton, T.C., Jones, C., Waddington, C.S., Blohmke, C.J., Dougan, G., Angus, B., Levine, M.M., Pollard, A.J., **Sztein, M.B.** Activation of *Salmonella* Typhi-specific regulatory T cells is associated with typhoid disease in a wild-type *S. Typhi* controlled human infection model. 63rd Annual Meeting of the American Society of Tropical Medicine and Hygiene. New Orleans, LA. November 2-6, 2014.
211. Fresnay, S., McArthur, M.A., Darton, T.C., Jones, C., Waddington, C.S., Blohmke, C.J., Dougan, G., Angus, B., Levine, M.M., Pollard, A.J., **Sztein, M.B.** *Salmonella* Typhi-specific effector/memory CD8+ T cell responses elicited in a wild-type *S. Typhi* controlled human infection model. 63rd Annual Meeting of the American Society of Tropical Medicine and Hygiene. New Orleans, LA. November 2-6, 2014.
212. Lyke, K.E., Kouriba, B., Dabo, A., Arama, C., Daou, M., Diarra, I., Coulibaly, D., Plowe, C.V., Doumbo, O., **Sztein, M.B.** Enhanced multifunctional CD4+ T cell memory responses to malaria antigens in Malian children co-infected with *Schistosoma haematobium*. 63rd Annual Meeting of the American Society of Tropical Medicine and Hygiene. New Orleans, LA. November 2-6, 2014.
213. Chen, W.H., McArthur, M.A., Rasko, D.A., Broeringc, T., **Sztein, M.B.**, Molrined, D., Thomas, W., Vigneaultc, F., Klempnerd, M., Levine, M.M. Establishment of a human experimental challenge with enterotoxigenic *Escherichia coli* (ETEC) strain H10407 and preliminary results of intestinal microbiome and immune response measurements. 49th U.S.-Japan Conference on Cholera and Other Enteric Bacterial Infections. Gainesville, FL. Jan. 14-16, 2015
214. Toapanta, F.R., Bernal, P.J., Fresnay, S., Darton, T.C., Jones, C., Waddington, C.S., Blohmke, C.J., Dougan, G., Angus, B., Levine, M.M., Pollard, A.J., **Sztein, M.B.** Oral challenge with wild-type *Salmonella* Typhi induces activation of circulating monocytes and dendritic cells in individuals who develop typhoid disease. Federation of Clinical Immunology Societies (FOCIS) 2015. San Diego, CA. June 24-27, 2015.
215. Toapanta, F.R., Bernal, P.J., Fresnay, S., Darton, T.C., Jones, C., Waddington, C.S., Blohmke, C.J., Dougan, G., Angus, B., Levine, M.M., Pollard, A.J., **Sztein, M.B.** Oral Challenge with Wild-type *Salmonella* Typhi Induces Distinct Changes in B cell Subsets in Individuals Who Develop Typhoid Disease. International Congress on Mucosal Immunology (ICMI). Berlin, Germany. July 14-18, 2015.

216. Booth, J.S., Salerno-Goncalves, R., Blanchard, T.G., Patil, S., Kader, H.A., Safta, A.M., Morningstar, L.M., Czinn, S.J., Greenwald, B.D., **Sztein, M.B.** Mucosal Associated Invariant T cells (MAIT) in the human gastric mucosa and blood: Role in *Helicobacter pylori* infection. International Congress on Mucosal Immunology (ICMI). Berlin, Germany. July 14-18, 2015.
217. Salerno-Gonçalves, R., Safavie, F., Fasano, A. and **Sztein, M.B.** Evaluation of the Mechanisms of Action of Probiotics using a Multicellular Three-Dimensional Organotypic Model of the Human Intestinal Mucosa. 2015 Tissue Engineering and Regenerative Medicine International Society (TERMIS) World Congress. Boston, MA. September 8-11, 2015.
218. McArthur, M.A., Fresnay, S., Darton, T.C., Jones, C., Waddington, C.S., Blohmke, C.J., Dougan, G., Angus, B., Levine, M.M., Pollard, A.J., **Sztein, M.B.** Activation of *Salmonella* Typhi-specific regulatory T cells in typhoid disease in a wild-type *S. Typhi* controlled human infection model. NIH Future Research Leaders Conference. Bethesda, MD. September 17, 2015
219. Wahid, R., Fresnay, S., Levine, M.M., **Sztein, M.B.** Induction of cross-reactive multifunctional CD4+ T cells in healthy volunteers immunized with the live oral typhoid vaccine Ty21a. 9th Vaccine and ISV (International Society for Vaccines) Congress. Seoul, South Korea. October 18-20, 2015.
220. Wahid, R., Fresnay, S., Levine, M.M., **Sztein, M.B.** Cross-reactive multifunctional T cell responses to *Salmonella enterica* serovars in humans. International Conference on Vaccines Research & Development. Baltimore, MD. November 2-4, 2015.
221. Zhang, Y., Brady, A., Jones, C., Song, Y., Pollard, A.J., **Sztein, M.B.**, Fraser, C.M. Metatranscriptome analysis to study the response of the human gut microbiota to live oral-attenuated vaccines and subsequent challenge with wild-type *Salmonella* Typhi. ASM Micro 2016 Meeting (Combined ASM and ICAAC Meeting). Boston, MA. June 16-20, 2016.
222. Nickerson, K.P., Senger, S., **Sztein, M.B.**, Fasano, A., Fiorentino, M.R. Novel insights into *Salmonella* Typhi pathogenesis from ex vivo human tissue models. ASM Micro 2016 Meeting (Combined ASM and ICAAC Meeting). Boston, MA. June 16-20, 2016.
223. McArthur, M.A., Chen, W.H., Levine, M.M., **Sztein, M.B.** Modulation of antibody responses against enterotoxigenic *Escherichia coli* (ETEC) by T cells in humans. 1st International VASE (Vaccines Against *Shigella* and ETEC) Conference. Washington DC. June 28-30, 2016.
224. Toapanta, F.R., Bernal, P.J., Fresnay, S., Magder, L.S., Darton, T.C., Jones, C., Waddington, C.S., Blohmke, C.J., Angus, B., Levine, M.M., Pollard, A.J., **Sztein, M.B.** Wild-type *Salmonella* Typhi Challenge Induces Distinct Changes in Various B Cell Subsets in Individuals Who Develop Typhoid Disease. Mucosal Immunology Course and Symposium (MICS). Toronto, Canada. July 27-30, 2016.

Major Invited Talks (since 1994, Partial listing)

- Applications of Flow Cytometry to Vaccine Development and Cell Activation measurements. 1st Annual Clinical Cytometry Symposium. Holiday Inn Crowne Plaza Hotel. Rockville, Maryland. May 21-22, 1994.
- Cytokine Production Patterns and Lymphoproliferative Responses in Volunteers Orally Immunized with Attenuated Vaccine Strains of *Salmonella typhi*. Presented at the Symposium entitled: "Mucosal Vaccines: Recent Developments in Design and Human Analysis". Co-sponsored by the American Association of Immunologists and the Society for Mucosal Immunology. Experimental Biology '94. Anaheim, California. April 24-28, 1994. Abstract published in the Mucosal Immunology Update (official publication of the Society for Mucosal Immunology) Vol. 2, N^o 1, pp. 23-24, 1994.
- Cytokine Production Patterns and Lymphoproliferative Responses in Volunteers Orally Immunized with Attenuated Vaccine Strains of *Salmonella typhi*. University of Maryland Department of Medicine First Annual Research Retreat. Marriot Inner Harbor. Baltimore, MD. November 7, 1994.
- Cell-mediated Immunity in Volunteers Immunized with Attenuated Strains of *Salmonella typhi*. Presented at the "Vaccines: Preventive Strategies for the 21st Century" Meeting. Philadelphia, PA. December 8-9, 1994.
- Cell Mediated Immunity in Orally Administered Attenuated Typhoid Vaccine in Humans. Presented at the 6th Immunobiology Vaccine Center MIRG Symposium. Birmingham, Alabama. January 30, 1995.
- Cell-mediated Immune Responses, Including Cytotoxic Lymphocytes, in Recipients of Attenuated *S. typhi* Live Oral Vaccines. 45th Annual Meeting of American Society of Tropical Medicine and Hygiene. Baltimore, Maryland. December 1-5, 1996.
- Cell-mediated Immune Responses in Humans Following Ingestion of Attenuated *S. typhi* as Oral typhoid and as Live Vector Vaccines. Presented at the Consultative WHO/NIH Meeting on the Evaluation of Vaccines Administered via Mucosal Surfaces. Bethesda, Maryland. February 9-10, 1998.
- Progress in the Development of New Attenuated Strains of *Salmonella typhi* as Live Oral Vaccines against Typhoid Fever and as Vectors for the Delivery of Foreign Antigens. V^o Latin American Congress of Immunology. Punta del Este, Uruguay. December 12-16, 1999.
- Mucosal Immunology 2000. First Annual Research Retreat. School of Medicine. University of Maryland. Baltimore, MD. April 4, 2000.
- Chair and speaker in the session entitled "Typhoid Fever: Clinical Disease and Epidemiology". Cell-mediated Immunity in Typhoid Fever. The Wellcome Trust *Salmonella typhi* Genome Meeting. The Wellcome Trust Genome Campus. Hinxton, Cambridgeshire, United Kingdom. November 19-21, 2000.
- Multidisciplinary Case Control Study of Severe *P. falciparum* Malaria: Immunological Studies. Faculty of Medicine, Pharmacy and Odontostomatology, University of Mali. Bamako, Mali, West Africa. September 29, 2001.

- Live Attenuated Typhoid Fever Vaccines in Humans: Immune effector mechanisms. Division of Bacterial, Parasitic and Allergenic Products. Center for Biologics Evaluation and Research. U.S. Food and Drug Administration. Bethesda, MD. February 28, 2002.
- Bacterial Plasmid Delivery Systems. Keystone Symposia. Gene-Based Vaccines: Mechanisms, Delivery Systems and Efficacy. Breckenridge, CO. April 10-15, 2002.
- Studies of Malaria and Live Attenuated Typhoid Fever Vaccines in Humans Complexities in the identification of protective immune effector mechanisms. Virginia Polytechnic Institute and State University -Virginia Tech-, Blacksburg, VA. December 9, 2002.
- Cellular Immune Responses to Live Oral *Shigella* Vaccines. World Health Organization. Initiative for Vaccine Research: "Future Needs and Directions for *Shigella* Vaccines Advisory Panel". Geneva. Switzerland. September 13-15, 2004.
- Strong cell-mediated immunity elicited in subjects immunized with *Salmonella enterica* serovar Typhi (*S. Typhi*) strain CVD 909. First Annual Meeting of the Food and Waterborne Diseases Integrated Research Network, NIAID, NIH. Bethesda, MD. October 14, 2004.
- Rabbit Model of Tularemia Vaccination. Animal Model Workshop. Food & Waterborne Diseases Integrated Research Network. Michigan State University, East Lansing, Michigan, April 26-28, 2005.
- Optimization and Validation of Cell-Mediated Immunological Techniques for the Assessment of Memory T Cell Populations and their Functional Activity and Homing Potential in Immunized Subjects. Second Annual Meeting of the Food and Waterborne Diseases Integrated Research Network, NIAID, NIH. Bethesda, MD. October 27, 2005.
- Cell-mediated Immunity after Recombivax-HB Vaccination. Symposium on Mechanisms of Human Immunosenescence: Immune Responses of Healthy Elderly Adults Vaccinated with Recombivax-HB, a Licensed Recombinant Hepatitis B surface Antigen Vaccine. National Institute on Aging, NIH. Harbor Hospital Center, Baltimore. January 26, 2006.
- Recent advances in the identification and characterization of the complex effector immune responses elicited by oral immunization with attenuated *Salmonella enterica* serovar Typhi strains in humans. 2nd ASM Conference on Salmonella. Salmonella: From Pathogenesis to Therapeutics. Victoria, British Columbia, Canada. September 9-13, 2006.
- Antigen discovery, innate immunity and development of novel immunological techniques for the evaluation of B and T memory populations and homing in volunteers immunized with live attenuated vaccines to tularemia, shigellosis and typhoid fever. Third Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Fallen Leaf, CA. September 19-22, 2006.
- Development of a *Shigella dysenteriae* 1 vaccine: Establishment of a challenge model in monkeys to perform protection and immunogenicity studies. Mid-Atlantic Regional Center for Excellence in Bioterrorism (MARCE). Charlottesville, VA. October 17-18, 2006.

- Immune responses to LVS vaccination in rabbits and humans: Recent advances. Fifth International Conference on Tularemia. Pre-meeting for tularemia NIH contractors organized by NIAID. Marine Biological Labs, Woods Hole, MA. November 1-4, 2006.
- Host immunity to *Salmonella* Typhi: emerging insights on the complexity of the human response. US-European (EC) Workshop: Advances in Immunology and Vaccine Discovery. Sponsored by The European Commission Directorate of Research, U.S. Department of Agriculture, Office of Naval Research, NSF, NIH, the Iowa State University and the Molecular Vaccines Interagency Working Group. Ames, Iowa. December 12-14, 2006.
- Complexities of the host immune response to *Salmonella* Typhi in humans. Genocea. Boston. August 8, 2007.
- Recent advances in the development of a *Shigella dysenteriae* 1 challenge model in monkeys - immunogenicity studies. Mid-Atlantic Regional Center for Excellence in Bioterrorism (MARCE). Pittsburgh, PA. September 27-28, 2007.
- Characterization of the complex functional activity and homing potential of effector and memory T Cells elicited by oral immunization with attenuated *Salmonella* Typhi in humans: A window into the immune responses at mucosal and systemic sites. NIAID Workshop on Defense Mechanisms at the Mucosal Surface. Bethesda, Maryland. January 29-30, 2008
- Immunological responses to LVS and Schu-S4 antigens in subjects naturally infected with *F. tularensis* or immunized with the tularemia LVS vaccine and antigen discovery in enteroaggregative *E. coli*. Fourth Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Pine Mountain, Georgia, April 1-4, 2008.
- Immunosenescence in healthy elderly adults immunized with hepatitis B and influenza vaccines. U.S.-Japan Cooperative Medical Science Program, Immunology Board: Immunosenescence Workshop. Organized by NIAID, NIH. San Francisco, CA. June 18-21, 2008.
- Characterization of the complex effector immunity, memory and homing patterns elicited by oral immunization with attenuated *S. Typhi* in humans: A window into the immune responses at mucosal and systemic sites. Seventh International Conference of Typhoid Fever and other Invasive Salmonellosis. Kilifi, Kenya, January 25-28, 2009.
- Neonatal Immunology and mucosal immunological memory. Speaker and Session Discussant. Mucosal immunology and Vaccines meeting. Gates Foundation. Seattle, Washington. February 10-11, 2009.
- Chair of a “mock” NIH-style Review Panel for “K” training grants and Speaker at the K-awards Breakout Session. 2009 St. Jude-PIDS Pediatric Infectious Diseases Research Conference. St. Jude Children’s Research Hospital, Memphis, TN. February 20-21, 2009.
- Broad-spectrum Vaccines to Enteric Fevers in Humans: Cross-Protective Immunity. Middle Atlantic Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research (MARCE). Turf Valley Resort and Conference Center. Baltimore, MD. March 24, 2009.

- Immunological responses in subjects immunized orally with the attenuated CVD 909 S. Typhi vaccine strains followed by a parenteral Vi boost, development of a novel 3-D mucosal model to study S. Typhi immunity and studies of egg-derived antibodies to *E. coli* heat stable enterotoxin that can serve as a therapeutic against diarrheal disease caused by ETEC strains. Fifth Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Stevenson, WA, March 29-April 1, 2009.
- Oral immunization with attenuated S. Typhi in humans: A window into the complex effector and memory immune responses at mucosal and systemic sites – An update. Visiting Professor Lecture. University of Vermont. Burlington, VT. June 5, 2009
- In depth CMI responses of elderly subjects immunized with high dose TIV influenza vaccine and capabilities of the CVD Immunology Group to perform advanced immunological studies. NIH Advisory panel. Cellular Immune Responses in H5N1 Vaccinated Adults. NIAID, NIH. Bethesda, MD. June 17, 2009.
- Phase 1 dose-comparison, safety and immunogenicity of intranasal dry powder Norwalk VLP vaccine. 5th International Conference on Vaccines for Enteric Diseases. Malaga. Spain. September 9, 2009.
- Update on the development of Broad-spectrum Vaccines to Enteric Fevers in Humans: Cross-Protective Immunity. Annual meeting of the Middle Atlantic Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research (MARCE). George Mason University, VA. November 10, 2009.
- Advances in research, technology development and discretionary funding projects at the UMB-CCHI during 2009. NIAID Cooperative Centers on Human Immunology and Biodefense (CCHI) Annual meeting. Rockville, MD. December 15-16, 2009.
- Broad-spectrum vaccines to enteric fevers in humans: cross-protective immunity. National Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research (RCE). Las Vegas, NV. April 11-13, 2010.
- Development of a novel 3-D mucosal model to study S. Typhi immunity and Immunological responses in subjects immunized orally with the attenuated CVD 909 S. Typhi vaccine strains followed by a parenteral Vi boost. 6th Annual Meeting of the Food and Waterborne Diseases Integrated Research Network. Cambridge, MD. June 1-4, 2010.
- Oral immunization with attenuated S. Typhi in humans: A window into the multifaceted effector and memory immune responses at mucosal and systemic sites. Memory T Cell Workshop. DAIT, NIAID, NIH. Rockville, MD. September 16-17, 2010.
- An immunologic basis for live oral typhoid vaccine providing cross protection against *Salmonella* Paratyphi B but not *Salmonella* Paratyphi A disease. Annual Meeting of the Middle Atlantic Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research (MARCE). Philadelphia, PA. November 15-16, 2010.
- Advances in research, technology development and discretionary funding projects at the UMB-CCHI during 2010. NIAID Cooperative Centers on Human Immunology and Biodefense (CCHI) Annual meeting. Baylor University Medical Center. Dallas, TX. December 9-10, 2010.

- Host-immune response to bacteria - Enteric Pathogens. Neglected Tropical Diseases Workshop. Providence, Rhode Island. January 4-21, 2011.
- Recent advances on the complex and multifaceted B and T memory and effector immune responses elicited by oral immunization with attenuated *S. Typhi* in humans. Department of Veterinary Medicine, University of Cambridge, Cambridge, United Kingdom. July 25, 2011.
- Advances in research, technology development and discretionary funding projects at the UMB-CCHI during 2011. NIAID Cooperative Centers on Human Immunology and Biodefense (CCHI) Annual meeting. Emory University. Atlanta, GA. December 13-14, 2011.
- Role of humoral responses in cross-protection against *Salmonella* Paratyphi B but not *Salmonella* Paratyphi A in typhoid vaccinees. Meeting of the Middle Atlantic Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research (MARCE). Warrenton, VA. December 19-20, 2011.
- Intricacies in defining immunologically relevant measurements in humans: systemic immunity as a window into gut mucosal responses. Host Genetics and Immune Response to Enteric Pathogens. Seattle, WA. May 22-23, 2012.
- The Effect of Vaccination Route, Age and Gender on the Immune Response of Healthy Elderly Adults to a Recombinant Hepatitis B Surface Antigen Vaccine (Recombivax-HB®). 14th International Symposium on Viral Hepatitis and Liver Disease (ISVHLD). Shanghai, China. June 22-25, 2012.
- Advances in research, technology development and discretionary funding projects at the UMB-CCHI during 2013. NIAID Cooperative Centers on Human Immunology and Biodefense (CCHI) Annual meeting. Bethesda, MD. November 29-30, 2012.
- Recent advances on the complex and multifaceted T memory and effector immunity elicited to *S. Typhi* in humans. 8th International Conference on Typhoid Fever and Other Invasive Salmonellosis. Dhaka, Bangladesh. March 1-2, 2013
- Cell mediated immunity in a human wild-type *S. Typhi* challenge model. 4th ASM Conference on Salmonella. Boston. October 5-9, 2013
- Immune responses to vaccines against enteric pathogens in humans and NHP: Role of the gut microbiome. 7th Annual Vaccine Renaissance Conference, Providence, Rhode Island, October 16-18, 2013.
- Advances in research, technology development and discretionary funding projects at the UMB-CCHI during 2013. NIAID Cooperative Centers on Human Immunology and Biodefense (CCHI) Annual meeting. Bethesda, MD. October 24-25, 2013.
- Complex Cell Mediated Immunity elicited by *Salmonella* Typhi in Humans. 7th International Conference on Vaccines for Enteric Diseases (VED). November 6-8, 2013, Bangkok, Thailand.
- Broad-spectrum Vaccines to Enteric Fevers in Humans: Cross-Protective Immunity. Annual meeting of the Middle Atlantic Regional Center of Excellence for Biodefense and

Emerging Infectious Diseases Research (MARCE). Turf Valley, Ellicott City, MD.
December 10-11, 2013.

- Cell-mediated immunity to *S. Typhi* following oral vaccination in a controlled human infection model. Wellcome Trust. London, United Kingdom, January 23, 2014.
- Complex multifaceted T_M , T_{eff} , T_{reg} and MAIT immunity to *S. Typhi* in humans following vaccination or challenge with wild-type organisms. Weatherall Institute of Molecular Medicine (WIMM). Oxford, United Kingdom, January 24, 2014.
- Recent advances in the study of CMI to *S. Typhi* in humans following vaccination or challenge with wild-type organisms. Centre of Clinical Vaccinology and Tropical Medicine (CCVTM). Oxford, United Kingdom, January 24, 2014.
- Complex Immunity to *S. Typhi* in humans following vaccination or challenge with wild-type organisms: Lessons learned and the path forward. Emerging Pathogens Institute, University of Florida. Gainesville, Florida. February 5, 2014.
- An immunologic explanation for how Ty21a live oral typhoid vaccine also protects against *S. Paratyphoid B*, but not *S. Paratyphoid A* disease. 8th Annual Vaccine Renaissance Conference, Providence, Rhode Island. October 15, 2014.
- Advances in research and discretionary funding projects at the UMB-CCHI during 2014. NIAID Cooperative Centers on Human Immunology and Biodefense (CCHI) Annual meeting. Bethesda, MD. December 4-5, 2014
- Complex effector, regulatory and innate immune responses to *S. Typhi* in humans following vaccination or challenge with wild-type organisms. Department of Molecular Microbiology and Immunology. Johns Hopkins University. February 26, 2015.
- Understanding Protective Immunity to Enteric Fevers in Humans: Lessons Learned. International Center for Diarrheal Diseases, Bangladesh (icddr,b). October 15, 2015. Dhaka, Bangladesh.
- Multifaceted immunological mechanisms associated with protection in humans following oral vaccination or challenge with wild-type *Salmonella Typhi*. 9th Vaccine and ISV (International Society for Vaccines) Congress. Seoul, South Korea. October 18-20, 2015.
- Advances in research and discretionary funding projects at the UMB-CCHI during 2015. NIAID Cooperative Centers on Human Immunology and Biodefense (CCHI) Annual meeting. Bethesda, MD. December 1-2, 2015
- Mass cytometry: A novel high-dimensional single-cell technology to dissect the underlying mechanisms of immunity. VTEU Meeting on Assay Harmonization & Data Considerations. NIAID. Rockville, MD. January 27, 2016.
- Immune response and correlates of protection against typhoid. In: Correlates of enteric vaccine-induced protection. Les Pensières Annecy, Fondation Mérieux Conference Center, Veyrier du Lac, Annecy, France. March 21-23, 2016.

- Unraveling the complexity of the human host immune responses to *Salmonella* Typhi. Immunology, Inflammation, & Infectious Diseases Seminar Series. Department of Pathology. School of Medicine. The University of Utah. Salt Lake City, UT. April 1, 2016.
- Complex mechanisms of protective immunity to *Salmonella* Typhi in humans: Lessons learned. Waning Immunity and Microbial Vaccines Workshop. Organized and sponsored by NIAID, NIH, Rockville, MD. September 19, 2016.
- Frontiers in Vaccinology. Update of scientific progress in the Cellular Immunology Section and Flow Cytometry Core Laboratory of the Center for Vaccine Development. University of Maryland, Baltimore, Maryland. 1994 to Present (yearly).