

# Curriculum Vitae

Updated: April1, 2022

**Name**            **Cornelia M. Weyand**

**Office Addresses**    **Primary**

Mayo Clinic Alix School of Medicine  
Mayo Clinic College of Medicine and Science  
Department of Medicine, Division of Rheumatology  
Department of Immunology  
200 First St SW  
Rochester, MN 55905  
Guggenheim Bldg. 4-01A  
Telephone: (507) 284-9891  
Fax: (507) 284-0564

**Secondary**

Stanford University School of Medicine  
Department of Medicine, Division of Immunology and Rheumatology  
CCSR Building Room 2225, MC-5166  
291 Campus Drive  
Stanford, CA 94305-5166  
Telephone: (650) 485-9589

**E-mail Addresses**    [cweyand@stanford.edu](mailto:cweyand@stanford.edu)  
[weyand.cornelia@mayo.edu](mailto:weyand.cornelia@mayo.edu)

**Citizenship**    Germany, United States of America

**Academic Appointments**

Professor of Medicine, Stanford University School of Medicine, Stanford, California  
2010 – 2021  
Professor of Medicine em., Stanford University School of Medicine, Stanford, California  
2021 – Present  
Professor of Medicine and Immunology, Mayo Clinic College of Medicine and Science,  
Rochester, Minnesota  
2021 - Present  
Director, Program in Immunity and Inflammation, Mayo Clinic Alix School of Medicine,  
Rochester, Minnesota  
2021 – Present  
Research Chair, Div. of Rheumatology, Mayo Clinic College of Medicine, Rochester, MN  
2021-Present

**Previous Academic and Professional Appointments**

1988-1989    Consultant, Internal Medicine and Rheumatology, Department of Medicine,  
University of Heidelberg, Germany  
1988-1989    Chief, Section of Rheumatology, Department of Medicine, University of  
Heidelberg, Germany  
1990-1993    Assistant Professor of Medicine, Department of Medicine, Mayo Clinic, Rochester,  
Minnesota

- 1990-2003 Consultant, Department of Medicine, Division of Rheumatology, Mayo Clinic, Rochester, Minnesota
- 1991-1993 Assistant Professor of Immunology, Mayo Graduate School, Rochester, Minnesota
- 1993-1998 Associate Professor of Medicine, Mayo Medical School, Rochester, Minnesota
- 1993-1999 Associate Professor of Immunology, Mayo Graduate School, Rochester, Minnesota
- 1999-2003 Professor of Medicine and Immunology, Mayo Medical and Graduate School, Rochester, Minnesota
- 2000-2003 Barbara Woodward Lips Professor of Medicine and Immunology, Mayo Medical and Graduate School, Rochester, Minnesota
- 2001-2003 Director, Clinical Immunology and Immunotherapeutics Program, Department of Medicine, Mayo Clinic, Rochester, Minnesota
- 2004-2009 David C. Lowance, M.D. Professor of Medicine, Emory University School of Medicine, Atlanta, Georgia
- 2004-2009 Director, Kathleen B. and Mason I. Lowance Center for Rheumatology and Human Immunology, Emory University School of Medicine, Atlanta, Georgia
- 2005-2009 Graduate Faculty Member, Program in Immunology and Molecular Pathogenesis, Graduate Division of Biological and Biomedical Sciences, Emory University, Atlanta, Georgia
- 2007-2009 Director, Division of Rheumatology, Emory University School of Medicine, Atlanta, Georgia
- 2009-2021 VA Staff Physician, Palo Alto VA Health Care System, Palo Alto, California
- 2013-2018 Director, Department of Medicine Faculty Mentoring Program, Stanford University School of Medicine
- 2013-2019 Chief, Division of Immunology and Rheumatology, Stanford University School of Medicine
- 2014-2015 Interim Division Chief, Infectious Diseases and Geographic Medicine, Stanford University, Stanford, California
- 2016-2019 Honorary Carnegie Centenary Professor, Universities of Scotland, UK
- 2019-2021 Director, Center for Translational Medicine, Stanford University School of Medicine

### Medical Licensure

- 1979-present Germany
- 1991-present Minnesota
- 2003-present Georgia
- 2010-present California

### Board Certification

- 1987 Board Certification in Internal Medicine (Germany)
- 1991 Board Certification in Rheumatology (Germany)

### Education

- 11/1979 University of Aachen, Germany, M.D.
- 7/1980 University of Bonn, Germany, Dr. med. (Summa cum laude)
- 1988 FMGEMS
- 6/1988 Doctor of Medical Sciences (Dr. habil.), University of Heidelberg, Germany
- 11/1988 Venia legendi in Internal Medicine, University of Heidelberg, Germany (Privatdozent)
- 1990 FLEX

### Postgraduate Training

- 1/80-4/81 Postdoctoral Fellowship, Institute of Immunology and Genetics, German Cancer Research Center (Prof. Dr. Hämmerling) Heidelberg, Germany
- 5/81-5/84 Resident, Department of Medicine, Hannover Medical School, Germany
- 6/84-9/86 Fellow in Rheumatology, Department of Medicine, Division of Immunology, Stanford University, Stanford, California
- 1986-1988 Senior Fellow, Department of Medicine, University of Heidelberg, Germany

**Committee Memberships****National and International**

1992 Abstract Selection Committee, American College of Rheumatology, Central Region  
 1992 Ad Hoc Member, Immunological Sciences Study Section, National Institutes of Health  
 1993 External Advisory Committee (RASCOR)  
 1993, 1994 Abstract Selection Committee, American College of Rheumatology, Annual Meeting  
 1997, 1999 Abstract Selection Committee, American College of Rheumatology, Annual Meeting  
 1993-1996 Clinical Immunology Study Section, National Arthritis Foundation  
 1994-1998 Immunological Sciences Study Section, National Institutes of Health  
 2001-Present Advisory Member, Autoimmunity Subcommittee of the Immune Tolerance Network  
 2004-Present Abstract Selection Committee, American Heart Association Annual Meetings  
 2005-2006 Chair, FOCIS Center of Excellence Executive Committee  
 2005-2010 Member, Rare Diseases Clinical Research Network-DSMB Committee #1, National Institutes of Health  
 2006 Grant Reviewer, Science Foundation of Ireland  
 2006 Member, NIAMS Special Emphasis Panel, National Institutes of Health  
 2007 Chair, NIAMS Special Emphasis Panel, Clinical Trial Planning, National Institutes of Health  
 2007 NIAMS Study Section for Clinical Trial Planning Grant Program, National Institutes of Health  
 2008 Member, External Advisory Committee for the Vanderbilt Multidisciplinary Clinical Research Center  
 2008 Medical Advisor, Vasculitis Foundation Research Committee  
 2008 Member, Target Identification in Lupus (TIL) Review Committee, Alliance for Lupus Research (ALR) Study Section  
 2008-Present Abstract Selection Committee, American College of Rheumatology, Annual Meeting  
 2010 Member, NIAMS/BIRT Review Study section, National Institutes of Health  
 2010-2011 Reviewer, Wellcome Trust, United Kingdom  
 2010 Chair, NIA Study Section HIV, HAART and AGING, National Institutes of Health  
 2011 Member, Vasculitis Foundation Medical Consultant  
 2011 Abstract Reviewer, 16<sup>th</sup> World Congress on Heart Disease  
 2011 Ad Hoc Member, Anterior Eye Disease Study Section, NIH  
 2011 NIAMS Director's Roundtable  
 2012 Selection Committee, Center of Excellence, Arthritis Research UK  
 2012 Abstract Reviewer, 17th World Congress on Heart Disease  
 2012 Study Section, ZRG1 BDCN Eye Disease and Brain Injury, NIH  
 2013 Member, External Advisory Board, Vanderbilt Interdisciplinary Training in Rheumatic Diseases T32 grant  
 2013 NIH Study Section, DPVS/BDCN  
 2014 NIH Study Section, AICS  
 2014 Member, Independent Advisory Board for the Euro-TEAM FP7 Grant  
 2016 NIH Study Section, DPVS  
 2016 American College of Rheumatology Basic Research Conference Selection Committee  
 2017-2023 Member, NIH Study Section, Atherosclerosis and Inflammation of the Cardiovascular System (AICS)  
 2018 Member Scientific Review Board, Kennedy Institute, Oxford, England  
 2018 Member, Leibnitz Society Review Board, Berlin, Germany  
 2019 Member, Gilead Medical Affairs Advisory Board  
 2019 Chair, Gilead Research Scholars Program  
 2021-Present Chair, NIH Study Section, Atherosclerosis and Vascular Inflammation

**Institutional**

1990-2002 Member, Division of Rheumatology, Research Committee, Mayo Clinic  
 1990-2002 Member, Division of Rheumatology, Education Committee, Mayo Clinic

1994-1996	Member, Library Advisory Committee, Mayo Clinic
1997-2003	Member, M.D., Ph.D. Committee, Mayo Clinic
1998-2003	Member, Extramural Awards Committee, Mayo Clinic
2002-2003	Director, Clinical Immunology and Immunotherapeutics Program, Mayo Clinic
2003	Director, Mayo FOCIS Center, Mayo Clinic
2004-2009	Member, AFAR Scientific Research Committee, Emory University
2004-2009	Member, Aging Research Working Group, Emory University
2004-2009	Member, Rheumatology Residency Program, Emory University
2004	Member, Steering Committee of the Research Institute for Predictive Health, Emory University
2004-2006	Co-Chair, Steering Committee of the Research Institute for Predictive Health, Emory University
2004-2006	Member, Symposium Committee of the Research Institute for Predictive Health Research, Emory University
2004-2009	Member, Biomarkers Project Group, Emory University
2005-2009	Member, Immunology and Molecular Pathogenesis MD/PhD Program, Emory University
2005-2009	Member, Mentor Facilitators Subcommittee, Department of Medicine, Emory University
2005-2006	Member, Chair Search Committee, Department of Ophthalmology, Emory University
2006	Member, Physiology Chair Search Committee, Emory University
2007	Member, Microbiology and Immunology Chair Search Committee, Emory University
2011-2013	Member, Appointments & Promotions Committee, Department of Medicine, Stanford University
2011	Member, Mentoring Program for Junior Faculty, Department of Medicine, Stanford University
2012-present	Chair, Mentoring Program for Junior Faculty, Department of Medicine, Stanford University
2012	Member, Chief Search Committee, Division of Gastroenterology/Hepatology, Stanford University School of Medicine
2013	Member, Cardiovascular Institute Imaging Search Committee, Stanford University School of Medicine
2013	Member, Cardiovascular Institute Basic Science Search Committee, Stanford University School of Medicine
2013	Member, Pediatrics UTL Search Committee, Stanford University School of Medicine
2015-2016	Member, Pediatrics UTL Search Committee, Stanford University School of Medicine
2015-2016	Member, Chief of Hematology Search Committee, Stanford University School of Medicine
2016-present	Member, Immunology/Rheumatology Faculty Search Committee, Stanford University School of Medicine
2015-2016	Member, Chair of the Department of Pediatrics Search Committee, Stanford University School of Medicine
2018	Member, Chief of Cardiovascular Medicine Search Committee, Stanford University
2019-2021	Member, A&P Committee, School of Medicine, Stanford University

### Editorial Boards

1993-2008	Consulting Editor, <i>Journal of Clinical Investigation</i>
2000	Editor, <i>Rheumatoid Arthritis, Current Directions in Autoimmune Diseases</i>
2000-Present	Editor, <i>Inflammatory Diseases of Blood Vessels</i>
2002-2010	Editorial Board, <i>Mayo Clinic Proceedings</i>
2000-Present	Editorial Board, <i>Arthritis Research and Therapy</i>
2000-Present	Advisory Board Member, <i>Modern Rheumatology</i>
2000-2007	Editor, <i>Current Opinion in Rheumatology</i>
2005-2007	Associate Editor, <i>Arthritis and Rheumatism</i>
2006-Present	Associate Editor, <i>Nature Clinical Practice Rheumatology</i>
2006-2018	Associate Editor, <i>Journal of Molecular Medicine</i>
2010-Present	Editorial Board, <i>International Journal of Rheumatology</i>
2016-Present	Associate Editor, <i>Frontiers in Immunology</i>
2019-Present	Section Editor, <i>Immunity &amp; Ageing</i>

**Manuscript Reviewer**

*Nature, Nature Medicine, Journal of Experimental Medicine, Journal of Clinical Investigation, New England Journal of Medicine, Annals of Internal Medicine, The Lancet, Journal of Immunology, Arthritis Care and Rheumatism, Journal of Rheumatology, Annals of the Rheumatic Diseases, Journal of Laboratory and Clinical Medicine, Scandinavian Journal of Rheumatology, Annals of Allergy, Asthma, and Immunology, JAMA, Circulation, Circulation Research, American Journal of Pathology, Science Translation Medicine, Science Immunology, Cell, Immunity, Nature*

**Honors/Awards**

1973	Studienstiftung des deutschen Volkes
1980	Marius-Tausk-Award of the German Endocrinology Association
1980	Award of the University of Bonn for outstanding doctoral thesis
1981	Deutsche Forschungsgemeinschaft Postdoctoral Fellowship Award
1986	Merck, Sharp and Dohme Senior Rheumatology Fellow Award
1991-1994	Arthritis Foundation Arthritis Investigator Award
1991	Henry Christian Award for Excellence in Research, American Federation for Clinical Research
1991	Ciba-Geigy Award for Excellence in Rheumatology Research, American Federation for Clinical Research
1992	Henry Kunkel Young Investigator Award, American College of Rheumatology
1995	Carol Nachmann Award for Rheumatology
1999	Mayo Foundation Department of Medicine Outstanding Investigator
2001	Named as one of fifty Arthritis Foundation Postdoctoral Fellow Heroes selected on the 50th Anniversary of the Arthritis Foundation's Postdoctoral Fellowship Program
2003	Laurentian Rheumatology Award for 2003
2006	Emory University School of Medicine, Department of Medicine's Outstanding Research Citation Award-Basic Research
2006	Paul Klemperer Award from the New York Academy of Medicine
2008	JFL Woodbury Lecture in Rheumatology, Dalhousie University, Halifax, Nova Scotia
2008	Charles L. Christian Lecture, Weill Cornell Medical College and the Hospital for Special Surgery, New York, NY
2008	38 <sup>th</sup> Richard Freyberg Lecture, Weill Cornell Medical College, New York, NY
2009	Dunlop-Dotteridge Lecture, Canadian Rheumatology Association, Kananaskis, Alberta, Canada
2009	Hasinger Lecture, Charite, Berlin, Germany
2011	45 <sup>th</sup> Annual Knowles Lecture, Arthritis Foundation, San Francisco, CA
2012	Mayo Distinguished Alumni Award
2014	14 <sup>th</sup> James J. Lane Lecture, University of Washington
2015	21st Annual Robert L. Frye Lectureship, Mayo Clinic, Rochester, MN
2015	SSLIM Lecture, University of Utah, Salt Lake City, UT
2016	2016 New York University Research Day Keynote Speaker, New York, NY
2016-2019	Carnegie Centenary Professor, Glasgow, Scotland
2016	Notable Woman in Science and Medicine, Elena-Timoféeff-Ressovsky Lecture, Max-Delbrueck Centrum fuer Molekulare Medizin, Helmholtz Gemeinschaft, Berlin, Germany
2017	Tinsley Randolph Harrison Society Visiting Professor, Vanderbilt University, TN
2019	Annual Malcolm Feist Lectureship, LSU Health Sciences Center, LA
2021	Kroc Professor 2021, Medical University of South Carolina, Charleston, SC
2022	

**Professional Memberships and Societies**

1986	American Society for Clinical Research
1987	Deutsche Gesellschaft für Immunologie
1987-Present	American College of Rheumatology
1988-2000	British Society of Rheumatology

1988-Present Deutsche Gesellschaft für Rheumatologie  
 1994-Present American Society for Clinical Investigation (elected)  
 1996-Present Molecular Medicine Society  
 2001-2010 Henry Kunkel Society  
 2001-Present American Association of Immunologists  
 2002-Present Association of American Physicians (elected)

### **Organization of National or International Conferences:**

2002 Co-Chair, 2<sup>nd</sup> International Conference on Giant Cell Arteritis and Polymyalgia Rheumatica  
 2008 Organizing Committee, 4<sup>th</sup> International Conference on GCA and PMR  
 2015 Organizing Committee, ACR-EULAR Interactive Workshop at Stanford  
 2016 Conference Organizer, 2016 American Physiological Society Conference

### **Patents**

Goronzy JJ and Weyand CM. Methods and Materials for Treating Inflammatory Diseases. Patent No.: US 6,455,497 B1, Date of Patent: September 24, 2002.

Goronzy JJ and Weyand CM. Methods and Materials for Evaluating Rheumatoid Arthritis. Patent No.: US 6,555,320 B1, Date of Patent: April 29, 2003.

Goronzy JJ and Weyand CM. Methods and Materials for Diagnosing Unstable Angina. Patent No.: US 6,635,433, Date of Patent: October 21, 2003.

Goronzy JJ and Weyand CM. Rheumatoid Arthritis Markers. Patent No.: US 6,818,406, Date of Patent: November 16, 2004.

Goronzy JJ and Weyand CM. Methods and Materials for Evaluating Rheumatoid Arthritis. Patent No.: US 6,953,665, Date of Patent: October 11, 2005.

Kopecky SL, Goronzy JJ, Weyand CM. Methods and Materials for Evaluating Cardiovascular Conditions. Patent No.: US 6,962,776 B2, Date of Patent: November 8, 2005.

Weyand CM, Goronzy JJ, Shao L. Method for Improving Immune System Function by Administering Agents that Inhibit DNA-Dependent Protein Kinase-Directed Apoptosis. Patent No.: 9,511,086, Date of Patent: December 6, 2016.

Goronzy JJ, Weyand CM, Li G, Yu M. Methods to Enhance T cell-Mediated Immune Response. U.S. Application Serial No. 13/082,790, filed on April 8, 2011.

Goronzy JJ, Weyand CM. Biomarkers for the Diagnosis of Autoimmune Disease. U.S. Patent Application Serial No. 13/231,282, filed September 13, 2011.

### **Research Grants**

#### Present

1993-2023	Funder: NIAMS (R01) R01 AR042527 Title: Oligoclonal T Cell Expansion and Rheumatoid Arthritis <u>Role: Principal Investigator</u>
2003-2024	Funder: NIAID (U19) Title: Center for Human Immunology and Biodefense: Vaccine Induced Immunity in the Young and Aged - Project 3: Immune Senescence Role: Co-Investigator - Project 3 (Project PI: J. Goronzy, U19 PI: Rafi Ahmed)

2013-2024	Funder: NIA (R01) Title: Influence of Age on CD4 T Memory Cells Role: Co-Investigator
2013-2023	Funder: NIAID (R01) R01 AI108906 Title: DNA Repair and Mitochondrial Dysfunction in T Cell Aging <u>Role: Principal Investigator</u>
2014-2023	Funder: NIAID (R01) Title: microRNA Regulation of T Cell Senescence Role: Co-Investigator
2014-2026	Funder: NHLBI (R01) R01 HL117913 Title: The NOTCH Signaling Pathway in Large Vessel Vasculitis <u>Role: Principal Investigator</u>
2016-2023	Funder: NHLBI (PPG) Title: Metabolic Regulation of Inflammatory Immune Responses in Cardiovascular Disease P01 HL129941-Project 2 <u>Role: Principal Investigator - Project 2</u>
2017-2022	Funder: NIAID (R01) Title: Memory T Cell Development and Survival in T Cell Responses of Older Individuals Role: Co-Investigator
2018-2023	Funder: NHLBI (R01) R01 HL142068 Title: T Cell Immunity in Giant Cell Arteritis <u>Role: Principal Investigator</u>
<u>Past:</u>	
2012-2013	Funder: Vasculitis Foundation Small Molecule Therapeutics in Giant Cell Arteritis Role: Principal Investigator
2013-2016	Funder: Arthritis Foundation Title: UCSF-Stanford Center of Excellence Role: Principal Investigator (Project: Treg Function in Rheumatoid Arthritis)
2010-2016	Funder: NIAID (U19) Title: Project 4: T cell responses to <i>Varicella zoster</i> virus after vaccination and viral escape Role: Co-Investigator - Project 4 (Project PI: Jorg Goronzy, U19 PI: Mark Davis)
2010-2013	Funder: NHLBI (RC4) Title: Immunobiology of Aging Role: Co-Investigator (PI: C. Garrison Fathman)
2009-2014	Funder: NHLBI (P01) Title: Interactions between Inflammation, Oxidant Stress and Cardiovascular Disease, Project 2, Immune Mechanisms in Atherosclerosis Role: Principal Investigator, Project 2 (PPG PI: David Harrison)
2009-2014	Funder: NHLBI (P01) Title: Diverse Roles of Reactive Oxygen Species and Inflammation in Vascular

Disease - Project 1: T Cell Triggering Events in Hypertension  
 Role: Co-Investigator – Project 1 (Project PI: D. Harrison, P01 PI: K. Griendling)  
 2008-2011 Funder: Vasculitis Foundation  
 Title: Vasculitic T Cells in Giant Cell Arteritis  
 Role: Principal Investigator  
 2008-2009 Funder: Alliance for Lupus Research  
 Title: Immune Mechanism of Cardiovascular Disease in SLE  
 Role: Principal Investigator  
 2007-2009 Funder: ACR Within Our Reach  
 Title: Defects in hematopoietic stem cell function in rheumatoid arthritis  
 Role: Principal Investigator  
 2006-2011 Funder: NHLBI (R01)  
 Title: Regulation of Vascular Function by the Endothelium  
 Role: Co-Investigator (PI: David Harrison)  
 2001-2006 Funder: NHLB (R01)  
 Title: Immunopathways in Acute Coronary Syndromes  
 Role: Principal Investigator  
 2003-2007 Funder: Dana Foundation  
 Title: Human Immunology Program  
 Role: Principal Investigator  
 1999-2014 Funder: NIAID (R56)  
 Title: CD8 T Cells in Rheumatoid Arthritis  
 Role: Principal Investigator  
 1998-2010 Funder: NIA (R01)  
 Title: T Cells and Aging  
 Role: Co-Investigator (PI: Jorg Goronzy)  
 1998-1999 Funder: American Heart Association  
 Title: Role of the Immune System in the Pathogenesis of Unstable Angina  
 Role: Principal Investigator  
 1997-2014 Funder: NEI (R01)  
 Title: Ocular Disease in Giant Cell Arteritis  
 Role: Principal Investigator  
 1997-2000 Arthritis Foundation  
 Title: Steroid Requirements in Polymyalgia Rheumatica  
 Role: Principal Investigator  
 1996 Funder: AF/MN Chapter  
 Title: Mechanisms Underlying Osteolysis in Total Hip Arthroplastics  
 Principal Investigator  
 1993-2008 Funder: NIAMS (R01)  
 Title: Diversity of T Lymphocytes in Rheumatoid Arthritis  
 Role: Co-Investigator (PI Jorg Goronzy)  
 1993-1996 Funder: Arthritis Foundation  
 Title: Use of HLA-DRB1 Alleles as Prognostic Markers in Rheumatoid Arthritis-A  
 Prospective Study  
 Role: Principal Investigator  
 1992-1995 American Heart Association  
 Title: The Role of T Cell Derived Lymphokines in Giant Cell Arteritis  
 Role: Principal Investigator  
 1992 Funder: Lupus/MN Chapter  
 Title: Characterization of Helper Cell Signals Required for Autoantibody Producing  
 CD5<sup>+</sup> B Cells  
 Role: Principal Investigator  
 1992-1993 Funder: AF/MN Chapter



- 1991-1994 Title: Analysis of the T Cell Receptor Repertoire in Patients with Rheumatoid Arthritis  
Role: Principal Investigator  
Arthritis Foundation (Arthritis Investigator Award)
- 1991 Title: Interaction of T Cell Clonotypes with Disease-Associated HLA Determinants in Patients with Rheumatoid Arthritis  
Role: Principal Investigator  
Funder: Lupus/MN Chapter
- 1990-1991 Title: Interleukin-4, Interleukin-5 and Interleukin-6 Production Patterns in Human T-cell Clones and Their Influence on the Production of Immunoglobulins by B Cells of Normals and SLE Patients  
Role: Principal Investigator  
Funder: AF/MN Chapter
- Title: Functional Significance of Sequences Shared by EBV Virus and Disease-Associated HLA Determinants in RA Patients  
Role: Principal Investigator

### Formal Teaching

#### Medical Student Teaching

Mayo Medical School  
Immunology Course – 1991-2003

Emory University  
Medical School Second Year – 2004 -2009  
MEDI605 Immunology 2005  
Immunology - Medical School Lecture on Autoimmunity – 2006  
Immunology - Medical School Lecture on Autoimmunity – 2007  
Medical Microbiology Immunology Segment – 2005  
Autoimmunity and Autoimmune Disease – 2006  
Mechanisms of Autoimmunity – 2007

#### Graduate Program Teaching

Mayo Graduate School  
Tutorial in Cellular Immunology, 1992 – 2003

Emory University  
Immunology and Molecular Pathogenesis, 2005  
Medical Microbiology, 2006  
Introduction to Research-Immunology and Molecular Pathogenesis – 2005, 2006, 2007  
Immunology Tutorial on Autoimmunity, 2006-2008  
Pathophysiology - Biomedical Engineering Program, Georgia Tech/EmoryUniversity, 2008  
Introduction to Immunology and Autoimmunity for Residents and Clinical Fellows, 2005-2009

Stanford University  
IDP Immunology – 2010  
IDP Translational Immunology, Imm 209 – 2010, 2013  
Advanced Immunology I – 2018-2021

#### Residency Training Program

2005, 2008 Department of Medicine/Medical Grand Rounds, Emory University  
2004-2009 Department of Medicine Research Seminar Series, Emory University  
2010, 2011 Department of Medicine/Medical Grand Rounds, Stanford University  
2011-Present Department of Medicine/Tuesday Noon Conference for Residents/Fellows/Faculty,

Stanford University  
2018 Internal Medicine Morbidity and Mortality (M&M) Conference

### University Tenure Line Mentoring Program

2011: Aida Habtezion, Hanlee Ji, Jeremy Goldhaber-Fiebert, Ravi Majeti, Vivek Bhalla  
 2012: Shirit Einav, Nayer Khazeni, David Rehkopf, Justin Annes, Sean Wu  
 2013: Catherine Blish, Joy Wu, Olivier Gevaert, Sanjay Basu, Vinicio de Jesus Perez  
 2014: Maria Juarez-Reyes, Marilyn Tan, Christina Curtis, Mintu Turakhia, Jason Andrews  
 2015: Ami Bhatt, Donna Zulman, Sigurdis Haraldsdottir, Marco Perez, Joshua Knowles, David Iberri  
 2019: R2G2 - route to get grants - for junior faculty across both Stanford School of Engineering and School of Medicine

### Supervisory Teaching

M.D./Ph.D. or Ph.D. students directly supervised

Kisha Piggott – 2005-2010  
 Noah Alberts-Grill – 2006-2009  
 Madina Tugizova – 2013

### Postdoctoral Fellows

N. Roche	1991 – 1992
T. McCarthy	1991 – 1992
X. He	1990 – 1994
M. Jendro	1992 – 1994
I. Waase	1993 – 1994
A. Wagner	1994 – 1995
D. Schmidt	1994 – 1996
W. Park	1994 – 1996
H. Rittner	1995 – 1997
M. Schirmer	1996 – 1997
A. Abril	1996 – 1997
P. Klimiuk	1995 – 1998
U. Wagner	1996 – 1998
M. Kaiser	1996 – 1998
G. Liuzzo	1997 – 1998
J. H. Yen	1997 – 1998
K. Koetz	1997 – 1999
A. Borkowski	1998 – 2000
S. Takemura	1999 – 2001
B. Mock	1999 – 2000
Y. Kang	1999 – 2001
S. Shinohara	1999 – 2000
S. Schönland	2000 – 2002
C. M. Lopez-Benitez	2001 – 2003
X. Zhang	2001 – 2003
Y.-W. Park	2002 – 2005
K. Sato	2002 – 2005
W. Ma Krupa	2002 – 2007
S. Pryshchep	2002 – 2009
H. Sawai	2003 – 2005
J. K. Park	2003 – 2005
K. Shimada	2004 – 2005
A. Diaz-Borjon	2004 – 2006
A. Niessner	2004 – 2006
H. Fujii	2004 – 2008

A. Vaglio	2004 – 2006
J. R. Anderson	2004 – 2005
I. Colmegna	2005 – 2009
S.-J. Kee	2006 – 2008
L. Shao	2006 – 2012
J. W. Han	2006 – 2008
M. S. Shin	2006 – 2007
M. Suzuki	2006 – 2008
S. F. Kwa	2006 – 2007
L. Qian	2006 – 2007
W.-S. Uhm	2007 – 2009
J. Deng	2007 – 2010
H. Oishi	2007 – 2010
J. Loster	2007 – 2008
N. Andrews	2008 – 2009
I. Manoharan	2008 – 2009
N. Shivaiah	2009 – 2010
J. Grisar	2009 – 2012
S. Mohan	2010 – 2013
A. Jagger	2010 – 2013
P. Hohensinner	2010 – 2012
Z. Yang	2010 – 2016
P. Khare	2010 – 2011
S. H. Lee	2010 – 2011
B. Hartmann	2011 – 2013
M. Nasrallah	2011 – 2012
M. Yang	2011 – 2012
Y. Shimojima	2011 – 2013
G. Chen	2012 – 2013
D. Orlova	2012 – 2013
S. Ruppert	2012 – 2013
Y. Kang	2013 – 2014
Tsuyoshi Shirai	2013 – 2016
Zhenke Wen	2014 – 2019
J. Xue	2014 – 2015
C. Wang	2014 – 2014
Marc Hilhorst	2014 – 2015
Y. Shin	2014 – 2019
Hikmat Assi	2014 – 2015
Yinyin Li	2014 – 2019
Hui Zhang	2014 – 2019
J. Jia	2015 – 2016
Markus. Zeisbrich	2016 – 2018
Bowen Wu	2016 – Present
I. Koliesnik	2017
Y. Xiao	2017
Ke Jin	2017 – Present
Y. Wang	2018 – 2019
R. Wen	2018 – 2019
K. Pyo	2019 – 2021
Q. Mu	2019
Tuantuan. Zhao	2019 – Present
Shozo Ohtsuki	2019 – Present
Zhaolan. Hu	2019 – Present

Yutong Jiang	2019 – 2021
X. Li	2019 – Present
J. Morales de la Santos	2021 – Present
T. Huang	2021-present
Yanyan Zheng	2021-present
Simon Parreau	2021-present

#### Predoctoral Students

V. Van Keulen	1991 – 1992
U. Oppitz	1990 – 1992
J. Schönberger	1991
T. Ganten	1993
A. Geisler	1995
J. Brandes	1995 – 1997
V. Hafner	1997
K. Spickshen	1998 – 1999
G. Ferrari	1998 – 2000
M. Dewan	2001 – 2002
A. Braun	2001 – 2002
J. Zimmer	2001 – 2002
O. Goek	2001 – 2002
T. Seyler	2003
S. Spörl	2003
S. Gröschel	2004 – 2006
L. Schäfer	2005 – 2006
C. Konya	2008 – 2009
J. Elrod	2011 – 2012
T. Stobernack	2013 – 2014
B. Schaefgen	2015
L. Brosig	2016
J. Dresse	2017
P Harms	2018 – 2019
F. Neuenfeldt	2018 – 2019
Janine Rupp	2021-present

#### Rheumatology Fellows:

Jeff Stark  
 Heather Holden  
 Susan Shih  
 Nandini Chhitwal  
 Kevin Osgood  
 Julie Thomas  
 Ximena Chavez  
 Nimesh Dayal  
 Athan Tiliakos  
 Jorge Uribe

#### Medical Residents

James Lin – 2004-2005  
 Monica Agrawal – 2005  
 Veronica Gonzalez-Diaz – 2008  
 Nils Patrick Nickel – 2018  
 Atif Rana – 2019

**Ph.D. Student Rotation**

Noah Alberts-Grill  
Justine Liepkalns  
Seema Patel  
Thomas Keller

**Membership Ph.D. Thesis Advisory Committee**

Jaime Darce  
Eduardo Davila  
Caroline Cole  
Gabrielle Henel  
Nyssa Hoch  
Sarah Tressel  
Kisha Piggott  
David Lamar  
Wendy Pang  
Murad R. Mamedov

**Supervision of Visiting Scientists and Faculty**

Harue Ito, Nigata University, Japan, 2011  
Rafal Nazarewicz, Vanderbilt University, TN, 2014 – 2016  
Ryu Watanabe, Tohoku University Graduate school of Medicine, Japan, 2015 – 2019  
Toshihisa Maeda, Kobe University Graduate School of Medicine, Japan, 2017 – 2019  
Mitsuhiro Akiyama, Keio University School of Medicine, Japan, 2018 – Present  
Yuki Sato, Kyoto University School of Medicine, Japan, 2021- Present

**Others**

Lowance Center High School Summer Internship Program, 2007 – 2009  
Jared Isenstein (Intel Semifinalist 2010)  
Maxwell Hellmann  
Annelise Bederman  
Eliana Duncan  
Cindy Wang (Siemens Semifinalist 2009)  
Steve Shen, SIMR, Stanford University – 2012

**LECTURESHIPS, SEMINAR INVITATIONS, AND VISITING PROFESSORSHIPS**

**NAMED LECTURES**

1. Nanna Swartz Lecture, Stockholm, Sweden, “Genetics in the Pathogenesis of Rheumatoid Arthritis”, Karolinska University, Stockholm, Sweden, November 27, 1997.
2. Merrill Lynch Lecture 1998, Tufts University, Boston. “Rheumatoid Arthritis – From Phenotypes to Genotypes”, Tufts University, Boston, MA, September 10-11, 1998.
3. Dunlop-Dotteridge Lecture 1999. “Vasculitis in the Immunodeficient Mouse Model”, Canadian Rheumatology Association, Chateau Lake Louise, Canada, February 27, 1999.
4. Dworkin Lecture 2000. “Giant Cell Arteritis: From Bench to Bedside”, McGill University Grand Rounds, Montreal, Canada, December 11, 2000.
5. Kåre Berglund Lecture. “Giant Cell Arteritis: The Immune Insult and the Artery’s Injury Response”, The 2001 Frank Wollheim Symposium, Lund, Sweden, May 18, 2001.
6. Ogryzlo Professor 2001. “Immunosenescence in Rheumatoid Arthritis – Cause or Consequence”, The Toronto Hospital, Toronto, Canada, June 26, 2001.
7. Morris Ziff Distinguished Lecture 2002. “Premature Immunosenescence in Rheumatoid Arthritis”, University of Texas Southwestern Medical Center, Dallas, TX, January 10, 2002.

8. Kroc Professor 2003. “Immunopathways in Acute Coronary Syndromes – A Common Denominator between Rheumatoid Arthritis and Myocardial Infarction”, University of Colorado Health Sciences Center, Denver, CO, January 22, 2003.
9. Charles W. Thomas Lecture. “Pathogenic Principles in Vasculitis: Lessons Learned from Giant Cell Arteritis”, University of Virginia, Richmond, VA, May 6, 2004.
10. The 1<sup>st</sup> Eric Bywaters Memorial Lecture. “Giant Cell Arteritis: Failure of the Guardian”, London, England, February 3, 2005.
11. Swan Ginsburg Memorial Lecture. “Rheumatoid Arthritis – A Syndrome of Premature Aging”. Harvard Medical School, Brigham and Women’s Hospital, Boston, MA, May 12, 2005.
12. Walter Bauer Lecture. “Immune Aging, Autoimmunity and Rheumatoid Arthritis”, Massachusetts General Hospital, Boston, MA, October 6, 2005.
13. Paul Klemperer Award Lecture. “Giant Cell Vasculitis - Arteries Dropping Their Protective Shield”, New York, NY, October 30, 2006.
14. Rich Lecture. “Vascular Dendritic Cells and Toll-like Receptors in Giant Cell Arteritis”. University of Alabama, Birmingham, AL, March 21, 2007.
15. G. Gill Richards, M.D. Lecture. “Remodeling of the Immune System in Rheumatoid Arthritis”. University of Utah, Salt Lake City, UT, April 3, 2008.
16. J.F.L. Woodbury Lecture in Rheumatology. “New Concepts in the Pathogenesis of Large Vessel Vasculitis”. Dalhousie University, Halifax, Nova Scotia, May 20, 2008.
17. Charles L. Christian Lecture. “Rheumatoid Arthritis – The Contribution of Immune Remodeling to Chronicity”. Weill Cornell Medical College, New York, NY, November 13, 2008.
18. 38<sup>th</sup> Richard Freyberg Lecture. “Large Vessel Vasculitis – The Failure of Vaso-protective Immune Tolerance”. Hospital for Special Surgery, New York, NY, November 14, 2008.
19. Dunlop-Dotteridge Lecture. “Germs and Blood Vessels – A Delicate Relationship”. Canadian Rheumatology Association, February 21, 2009.
20. Hasinger Lecture: “The Immune System in Rheumatoid Arthritis – In Need for Rejuvenation”. Deutsches Rheumaforschungszentrum, December 1, 2009.
21. 45<sup>th</sup> Annual Knowles Lecture: “Inflammatory Immune Responses in Rheumatoid Arthritis and in Atherosclerosis”. Arthritis Foundation, Northern California, San Francisco, CA, May 10, 2011.
22. Mayo Clinic Distinguished Alumni Award: “DNA Instability and Rheumatoid Arthritis – An Unexpected Relationship”, Mayo Clinic, Rochester, MN, October 8, 2012.
23. 14<sup>th</sup> Lane Lecture: “Rheumatoid Arthritis – How Telomeres and Glucose Protect from Autoimmunity”. University of Washington, Seattle, WA, March 20, 2014.
24. 21<sup>st</sup> Annual Robert L. Frye Lectureship: “The Phagocyte’s Dilemma – We are what we eat”. Mayo Clinic, Rochester, MN, September 23, 2015.
25. Elena-Timoféeff-Ressovsky Lecture: “The Warburg Effect. From Cancer to Autoimmune Disease”, Max-Delbrueck Centrum fuer Molekulare Medizin, Helmholtz Gemeinschaft, Berlin, Germany, July 6, 2016.
26. Honorary Carnegie Centenary Professor Lecture: “Immune Aging as a Risk Factor for Inflammatory Disease”. University of Glasgow, Glasgow, Scotland, September 7, 2016.
27. Honorary Carnegie Centenary Professor Lecture: “Macrophages in Coronary Artery Disease- Metabolic Control of Inflammatory Effector Functions”. University of Glasgow, Glasgow, Scotland, September 8, 2016.
28. David Trentham Visiting Professorship: “Medium and Large Vessel Vasculitis”. Medical Grand Rounds, Beth Israel Deaconess Medical Center, Boston, MA, March 9, 2017.
29. Honorary Carnegie Centenary Professor Lecture: “Succeeding in Academic Research: A Personal Journey”. University of Glasgow, Glasgow, Scotland, March 30, 2017.
30. Honorary Carnegie Centenary Professor Lecture: “Medium and Large Vessel Vasculitis”. University of Glasgow, Glasgow, Scotland, March 31, 2017.
31. Tinsley Randolph Harrison Society Visiting Professor: “Immunometabolism in Inflammatory Disease”. Vanderbilt University, Nashville, Tennessee, August 24, 2017.
32. The Gerald Weissmann Lecture. “Feeding Inflammation”. NYU Langone Seminar in Advanced Rheumatology, New York, NY, March 15, 2018.

33. 2018 Doyt L. Conn Lecture. “Metabolic Strategies of Pro-inflammatory T Cells in Rheumatoid Arthritis.” Emory University, Atlanta, GA, May 4, 2018.
34. Malcolm Feist Lecture on Translational Research in Cardiovascular Diseases. “Immunopathogenic Mechanisms in Aortitis and Large Vessel Vasculitis”. Louisiana State University Health Sciences, Shreveport, LA, February 4, 2019.
35. Bilka Visiting Professorship. “Immune Checkpoints in Vasculitis”. Mayo Clinic College of Medicine and Science, Rochester MN, July 26, 2019.
36. Honorary Carnegie Centenary Professor Lecture: “Energy Production and Sensing in Pro-inflammatory T cells”. Dundee University, Dundee, Scotland, November 26, 2019.
37. Honorary Carnegie Centenary Professor Lecture: “Mitochondrial DNA Damage in Autoimmune T cells.” University of Edinburgh, November 27, 2019.
38. Honorary Carnegie Centenary Professor Lecture: “Immunometabolism in Autoimmune Tissue Inflammation.” Institute of Cardiovascular & Medical Sciences/Institute of Infection, Immunity & Inflammation, University of Glasgow, Glasgow, Scotland, November 28, 2019.
39. R.G.E. Murray Lectureship: “Energy Generation and Energy Sensing in Autoimmune T cells.” Western University, London, Ontario, Canada, December 5, 2019.
40. Ray and Robert Kroc Lectureship: “Immune Checkpoints in Large Vessel Vasculitis”, Medical College of South Carolina, Charleston, October 7, 2021.
41. Percy Russell Lectureship: “The Immunopathology of Large Vessel Vasculitis”, University of Alberta, Edmonton, March 24, 2022
42. Henry Pabst Lectureship: “Immunosenescence: Mechanisms and Implications”, University of Alberta, Edmonton, Canada, March 25, 2022
43. Jokko van der Woude Lecture: “Immune Checkpoints in Large Vessel Vasculitis”, ANCA Meeting, Dublin, Ireland, April 1, 2022

## INVITED TALKS

1. “Giant Cell Vasculitis”. Northwestern University Medical School Grand Rounds, Chicago, IL, January 21, 2000.
2. “T Cell Turnover in Rheumatoid Arthritis-Implications for Autoimmunity”. Department of Rheumatology at Northwestern University Medical School, Chicago, IL, January 21, 2000.
3. “Immunological Concepts of Autoimmunity”. Physical Medicine & Rehabilitation Basic Science Lecture – Mayo Clinic, Rochester, MN, March 7, 2000.
4. “Genetics of Rheumatoid Arthritis”. MedNet-Symposium of German Rheumatology, Berlin, Germany, March 24, 2000.
5. “Pathogenic Mechanisms in Giant Cell Arteritis”. 2000 Annual Session of the American College of Physicians, Philadelphia, PA, April 15, 2000.
6. “New Pathogenic Aspects in Giant Cell Vasculitis”. 44<sup>th</sup> Annual Meeting of the Japan Rheumatism Association, Yokohama, Japan, May 13-15, 2000.
7. “Rheumatoid Arthritis – From Phenotype to Genotype”. University of Tokyo, Tokyo, Japan, May 16, 2000.
8. “Giant Cell Arteritis: From Bench to Bedside”. Cortisone & Mayo – 50<sup>th</sup> Anniversary, Mayo Clinic, Rochester, MN, August 13, 2000.
9. “Immunogenetics of Rheumatoid Arthritis”. Harvard Advances in Rheumatology, Boston, MA, September 10, 2000.
10. “Giant Cell Arteritis”. Harvard Advances in Rheumatology, Boston, MA, September 10, 2000.
11. “Accelerated Immunosenescence in Rheumatoid Arthritis”. Advances in Arthritis Treatment, Duke University Medical Center, Durham, NC, September 16, 2000.
12. “Giant Cell Arteritis: From Bench to Bedside”. 4<sup>th</sup> Belgian Congress on Rheumatology, Luxembourg-Kirchberg, Luxembourg, September 29, 2000.
13. “Rheumatoid Arthritis and Atherosclerotic Cardiovascular Disease: Shared Disease Mechanisms”. American College of Rheumatology 64<sup>th</sup> Annual Meeting, Philadelphia, PA, October 31, 2000.

14. "The Genetics and Environment Interplay that Starts Rheumatoid Arthritis". "Early Intervention in Rheumatoid Arthritis". American College of Rheumatology 64th Annual Meeting, Philadelphia, PA, October 31, 2000.
15. "Rheumatoid Arthritis and Atherosclerosis". McGill University Hospital Center Grand Rounds, Montreal, Canada, December 12, 2000.
16. "Immunosenescence and Autoimmunity: Lessons Learned from Rheumatoid Arthritis". Grand Rounds New York University Medical School, New York, NY, February 21, 2001.
17. "Pathogenic Mechanisms in Coronary Artery Disease and Rheumatoid Arthritis". New York University Medical School, New York, NY, February 21, 2001.
18. "Immunosenescence in Rheumatoid Arthritis-The Gains and the Losses of Aging T Cells". Spenshult Rheumatology Hospital, Spenshult, Sweden, May 16, 2001.
19. "Giant Cell Arteritis – The State of the Art and the Territory Ahead". Florida Society of Rheumatology Annual Meeting, Boca Raton, FL, June 30, 2001.
20. "The Dysfunctional Immune System – An Overview". 2001 Seattle Summer Symposium in Rheumatology, Blaine, WA, July 20-22, 2001.
21. "Molecular Markers of Disease Heterogeneity in Rheumatoid Arthritis". Amgen, Inc., Thousand Oaks, CA, August 27, 2001.
22. "The Role of Inflammation in Coronary Artery Disease". Medical Grand Rounds, University of Wisconsin-Madison, WI, October 26, 2001.
23. "Advances in Rheumatology: The Art of Therapeutics. Rheumatoid Arthritis and Acute Coronary Syndromes". American College of Rheumatology Annual Meeting, San Francisco, November 13, 2001.
24. "T Cell Senescence and Autoimmunity". Rheumatology Grand Rounds, University of Pittsburgh, Pittsburgh, PA, November 29-30, 2001.
25. "The Atherosclerotic Plaque – An Inflammatory Lesion". Immunology Seminar Series, University of Pittsburgh, Pittsburgh, PA, November 29-30, 2001.
26. "Premature Immunosenescence in Rheumatoid Arthritis". Medical Grand Rounds, Department of Medicine, Columbia University, NY, February 27, 2002.
27. "Autoimmunity and Atherosclerosis". Seminar in Advanced Rheumatology, New York University, New York, NY, March 16, 2002.
28. "Ectopic Germinal Center Formation in Rheumatoid Synovitis". Immune Mechanisms and Disease, New York Academy of Sciences and The Henry Kunkel Society, April 17, 2002.
29. "Pathogenic Mechanisms in Giant Cell Arteritis". Proceedings of the 10<sup>th</sup> International Vasculitis and ANCA Workshop, Cleveland, OH, April 26, 2002.
30. "Inflammatory Pathways in Acute Coronary Syndromes". Medical Grand Rounds, Emory University, Atlanta, GA, May 7, 2002.
31. "Aging of the Immune System – Relevance to Rheumatoid Arthritis and Giant Cell Arteritis". Rheumatology Conference, Emory University, Atlanta, GA, May 7, 2002.
32. "Inflammation and Immunopathways in Acute Coronary Syndromes". Icelandic Society of Internal Medicine, Reykjavik, Iceland, June 7-9, 2002.
33. "Disease Mechanisms in Acute Coronary Syndromes and Rheumatoid Arthritis". The Rheumatology Club of Denmark, Copenhagen, Denmark, June 21, 2002.
34. "Senescence in the Immune System". FOCIS 2<sup>nd</sup> Annual Meeting, San Francisco, CA, July 1, 2002.
35. "Pathogenic Pathways in Giant Cell Arteritis". 2<sup>nd</sup> International Conference on Giant Cell Arteritis and Polymyalgia Rheumatica, Rochester, MN, August 24, 2002.
36. "Accelerated Immunosenescence and Autoimmunity in Rheumatoid Arthritis". Medicine Grand Rounds, Loyola University, Chicago, IL, September 3, 2002.
37. "Cellular Senescence in the Immune System-Lessons Learned from Rheumatoid Arthritis". Central Society for Clinical Research Annual Meeting, Chicago, IL, September 27, 2002.
38. "Immunopathways in Acute Coronary Syndromes". Long Island Jewish Medical Center, Long Island, NY, December 12, 2002.
39. "Premature Immunosenescence in Rheumatoid Arthritis". Grand Rounds at North Shore Hospital, Long Island, NY, December 13, 2002.



40. "T Cell Senescence in Rheumatoid Synovitis". Kroc Lecturer, National Jewish Medical and Research Center, Denver, CO, January 22, 2003.
41. "Dysfunctional Immune Responses in Rheumatoid Arthritis". Emory University, Atlanta, GA, January 27-28, 2003.
42. "Pathogenic Principles in Giant Cell Arteritis". XXXI Mexican Congress of Rheumatology, Monterrey, Mexico, February 7-12, 2003.
43. "T Cell Homeostasis in Rheumatoid Arthritis". Baylor College of Medicine, Houston, TX, March 9-10, 2003.
44. "Immunopathways in Atherosclerosis – Implications for the Cardiovascular Risk in Rheumatoid Arthritis". 34<sup>th</sup> Laurentian Conference of Rheumatology Mont Tremblant, Montreal, Canada, May 15-17, 2003.
45. "Pathways of Inflammation in Rheumatoid Synovitis". 34<sup>th</sup> Laurentian Conference of Rheumatology Mont Tremblant, Montreal, Canada, May 15-17, 2003.
46. "Immunopathways in Acute Coronary Syndromes". Stanford University, San Francisco, CA, May 26-28, 2003.
47. "Key Determinants of Immune and Inflammatory Infiltrates in Rheumatoid Synovitis". 2003 Arthritis Research Conference, Keystone, CO, June 26-29, 2003.
48. "Immunopathways in Acute Coronary Syndromes". Keynote Address, New Zealand Rheumatology Society, Rotorua, New Zealand, September 3-6, 2003.
49. "Giant Cell Arteritis". Advances in Rheumatology, Boston, MA, September 20, 2003.
50. "Pathogenesis of Atherosclerosis". Advances in Rheumatology, Boston, MA, September 20, 2003.
51. "T-Cells in Rheumatoid Arthritis". Basic Research Conference at American College of Rheumatology Annual Meeting, Orlando, FL, October 24, 2003.
52. "The Heterogeneity of Rheumatoid Synovitis – Diagnostics and Therapeutic Implications". MARS/CORC, Atlanta, GA, December 4, 2003.
53. "Immune Aging and Autoimmunity: Mechanisms and Consequences of T Cell Senescence". Kroc Visiting Professorship, University of Iowa, Iowa City, IA, December 10, 2003.
54. "The Power of the Third Dimension – Synovial Architecture and Autoimmunity in Rheumatoid Arthritis". Immunology Program Research Seminar Series, Hospital for Special Surgery, New York, NY, January 26, 2004.
55. "Giant Cell Arteritis". The 18<sup>th</sup> Annual Southeastern Vitreoretinal Seminar, Emory University School of Medicine, Atlanta, GA, January 30, 2004.
56. "Pathogenesis of Vasculitis". Seminar in Advanced Rheumatology, New York University School of Medicine, New York, March 13, 2004.
57. "Dendritic Cells and Toll-like Receptors in Large Vessel Vasculitis". Georgia Institute of Technology, Atlanta, GA, March 30, 2004.
58. "Immune Mechanisms in Acute Coronary Syndromes". Medical Grand Rounds, University of Alabama at Birmingham, Birmingham, AL, April 8, 2004.
59. "Premature Aging and Autoimmunity in Rheumatoid Arthritis". Georgia Society of Rheumatology, St. Simon Island, GA, April 16-17, 2004.
60. "Pathogenesis of Large Vessel Vasculitis and New Therapeutic Targets". Georgia Society of Rheumatology, St. Simon Island, GA, April 16-17, 2004.
61. "Inflammation of the Atherosclerotic Plaque – A New Immune Mediated Syndrome". Emory Dermatology Symposium, Atlanta, GA, July 10, 2004.
62. "B Cells as a Therapeutic Target in Autoimmune Disease". Second International Conference on 'B Cells and Autoimmunity: New Concepts and Therapeutic Perspectives', Montreal, Canada, July 17, 2004.
63. "Atherosclerosis in Autoimmune Syndromes". American Diabetes Association, Chicago, IL, October 1, 2004.
64. "Giant Cell Arteritis and Polymyalgia Rheumatica". Clinical Symposium, American College of Rheumatology Annual Meeting, San Antonio, TX, October 19, 2004.
65. "The Role of B-Cells in the Pathogenesis of RA". National Symposium: The B-Cell Solution: Addressing the Unmet Needs in Rheumatoid Arthritis, American College of Rheumatology Annual Meeting, San Antonio, TX, October 19, 2004.

66. "Rheumatoid Synovitis: The Power of the Third Dimension". Synovitis in the Next Decade, London, England, November 10-11, 2004.
67. "Current Concepts of Human Vasculitis Pathogenesis: Future Directions". Chemically-Induced Vascular Injury in Animals and Humans, American Registry of Pathology Meeting, Silver Spring, MD, December 1-3, 2004.
68. "T Cell Regulation in Rheumatoid Arthritis". Translational Medicine in Autoimmunity, Keystone Symposia, Big Sky, MT, January 12, 2005.
69. "Ectopic Lymphoid Neogenesis in Rheumatoid Arthritis". Immunology and Molecular Pathogenesis Seminar, Emory University, Atlanta, GA, February 22, 2005.
70. "B cells and T cells in Rheumatoid Synovitis – A Case of Organized Crime". Wyeth Research, Cambridge, MA, April 12, 2005.
71. "Lymphoid Architectures and Autoimmunity in Rheumatoid Synovitis". Rheumatology Division, University of Massachusetts Memorial Health Care, Worcester, MA, April 13, 2005.
72. "Immunosenescence and Rheumatoid Arthritis". Department of Medicine Grand Rounds, University of Massachusetts, Worcester, MA, April 14, 2005.
73. "T Cells and Rheumatoid Arthritis". ACR Research and Education Foundation Rheumatoid Arthritis Scientific Forum, Boston, MA, May 12, 2005.
74. "The Expanding Scope of Clinical Immunology - Cardiovascular Disease". Keynote Speaker at 2<sup>nd</sup> Annual FOCIS Centers of Excellence Trainee Satellite Symposium, Boston, MA, May 12, 2005.
75. "Giant Cell Arteritis – A Glimpse at the Early Events". Brigham and Women's Hospital, Boston, MA, May 13, 2005.
76. "Arterial Dendritic Cells in the Pathogenesis of Vasculitis". Human Immunology Conference, The Dana Foundation and the New York Academy of Sciences, New York, NY, May 18, 2005.
77. "Aging, Stem Cells and Rheumatoid Arthritis". EULAR 2005 Annual Meeting, Vienna, Austria, June 11, 2005.
78. "Tissue Tolerance, Dendritic Cells and T Cells in Vasculitis". 12<sup>th</sup> International Vasculitis and ANCA Workshop, Heidelberg, Germany, June 16, 2005.
79. "Premature Immunosenescence in Rheumatoid Arthritis". St. Vincent's University Hospital, Dublin, Ireland, July 22, 2005.
80. "Pathogenesis of GCA and PMR". Third International Conference on Giant Cell Arteritis and Polymyalgia Rheumatica, Cambridge, England, July 25, 2005.
81. "Immune Aging, Autoimmunity and Rheumatoid Arthritis". Medical Grand Rounds, Walter Bauer Visiting Professor, Massachusetts General Hospital, Boston, MA, October 6, 2005.
82. "Ectopic Lymphoid Organogenesis in Rheumatoid Arthritis", Immunology Research Seminar, Massachusetts General Hospital, Boston, MA, October 6, 2005.
83. "Rheumatoid Arthritis as a Syndrome of Premature Aging". 50<sup>th</sup> Annual Lowe Conference on Rheumatic Diseases, University of Alabama at Birmingham, AL, October 8, 2005.
84. "T Cells and B Cells in Rheumatoid Synovitis". 50<sup>th</sup> Annual Lowe Conference on Rheumatic Diseases, University of Alabama at Birmingham, AL, October 8, 2005.
85. "Mechanisms of T Cell Senescence in Rheumatoid Arthritis". Medical Grand Rounds, Columbia University, New York, NY, January 18, 2006.
86. "Giant Cell Arteritis: Novel Pathogenic Principles in Vascular Inflammation". Oregon Rheumatology Alliance 5<sup>th</sup> Annual Winter Meeting, Eugene, OR, February 25, 2006.
87. "Immune Mechanisms in Plaque Instability". Cedars-Sinai, Los Angeles, CA, March 2, 2006.
88. "Giant Cell Arteritis", Rheumatology Grand Rounds, UCLA, Los Angeles, CA, March 3, 2006.
89. "Understanding the Basic Science Behind the Relationship Between Cardiovascular Disease and RA", RADIUS™ Investigator Meeting, Las Vegas, NV, March 18, 2006.
90. "Giant Cell Arteritis", NYU/HJD Seminar in Advanced Rheumatology, New York, NY, March 25, 2006.
91. "An Unorthodox View of Rheumatoid Arthritis: A Disease of Immunodeficiency", XII International Symposium of Rheumatology, Sevilla, Spain, March 31, 2006.
92. "Disease Mechanisms in Vascular Inflammation", XII International Symposium of Rheumatology, Seville, Spain, April 1, 2006.
93. "Mechanisms of Vasculitis", Atherothrombosis, Keystone Symposia, Keystone, CO, April 5, 2006.

94. "Autoimmunity in the Atherosclerotic Plaque", 22<sup>nd</sup> Annual Rheumatology on the Beach, Destin, FL, April 23, 2006.
95. "Innate and Adaptive Immune Responses in Giant Cell Arteritis". Renal Grand Rounds, Emory University, May 16, 2006.
96. "Large Vessel Vasculitis – A Failure of Immunoprivilege". 100<sup>th</sup> Anniversary of Immunology in Heidelberg, Heidelberg, Germany, May 21-23, 2006.
97. "New Therapeutic Targets in Rheumatoid Arthritis". Spanish Society for Rheumatology XXXII Annual Congress of Rheumatology, Valencia, Spain, May 24-26, 2006.
98. "T Cell Aging and Autoimmunity". Dartmouth Symposia on Immunotherapy in Autoimmunity, Hanover, NH, June 19, 2006.
99. "T-Cells and B-Cells in Rheumatoid Arthritis". 2006 Annual Meeting of the Florida Society of Rheumatology, Kissimmee, FL, June 23-25, 2006.
100. "Giant Cell Arteritis – Re-examining the Role of Infections". 2006 Annual Meeting of the Florida Society of Rheumatology, Kissimmee, FL, June 23-25, 2006.
101. "Ectopic Germinal Centers in Rheumatoid Arthritis". Symposium on Development and Function of Secondary and Tertiary Lymphoid Tissues, Institut Pasteur, Paris, France, September 4-5, 2006.
102. "T cell Immunosenescence in Rheumatoid Arthritis". Rheumatology Grand Rounds, Vanderbilt University, Memphis, TN, September 21, 2006.
103. "Toll-like Receptors in Giant Cell Arteritis". Medicine Grand Rounds, Vanderbilt University, Memphis, TN, September 21, 2006.
104. "Immunological Senescence". First European Workshop on Immune-Mediated Inflammatory Diseases, Amsterdam, The Netherlands, September 27-28, 2006.
105. "Cardiovascular Disease in Rheumatoid Arthritis". Women in Rheumatology Meeting, Chicago, IL, October 7, 2006.
106. "Immune-Mediated Tissue Damage in Atherosclerosis". Emory Cardiovascular Outcomes Research and Epidemiology (EPICORE) Conference, October 13, 2006.
107. "The Rheumatoid Arthritis Orchestra: Who is the Conductor and Who Plays the Immunologic Instruments?" ACR/IRT Symposium-Rheumatoid Arthritis: New Targeted Treatments Lead to Excellent Clinical Outcomes, Washington, DC, November 12, 2006.
108. "Giant Cell Arteritis – An Update". Clinical Immunology Conference Update, Atlanta, GA, November 30, 2006.
109. "T cells in Rheumatoid Arthritis – Too Old to be Tolerant". Rheumatology Grand Rounds, Hospital for Special Surgery, New York, NY, December 13, 2006.
110. "Manipulation of Immune Effectors in Autoimmunity". Keystone Symposia on Immunological Intervention in Human Disease, Big Sky, MT, January 8, 2007.
111. "Mechanisms of B cell-targeted Therapeutic Approaches in Rheumatoid Arthritis". Keystone Symposia on Antibodies as Drugs: From Basic Biology to the Clinic, Lake Louise, Alberta, Canada, February 5, 2007.
112. "Accelerated T cell Senescence as a Risk Factor for Autoimmunity". Pulmonary Research Seminar, Emory University, Atlanta, GA, February 15, 2007.
113. "Giant Cell Arteritis 2007". Ophthalmology Grand Rounds, Emory University, March 2, 2007.
114. "Defective T Cell Generation and Survival in Rheumatoid Arthritis". Rheumatology Grand Rounds, University of Alabama, Birmingham, AL, March 22, 2007.
115. "T Cells in Rheumatoid Arthritis". Immunology Research Seminar, Genentech, San Francisco, CA, April 2, 2007.
116. "Telomerase and T Cell Survival in Rheumatoid Arthritis". Rheumatology Division Conference, Stanford University, April 3, 2007.
117. "T Cell Senescence in Rheumatoid Arthritis". LSU-Tulane Immunology Seminars, New Orleans, LA, May 24, 2007.
118. "Dendritic Cell Function in Vasculitis". 37<sup>th</sup> Annual Meeting of the Scandinavian Society of Immunology, Turku, Finland, June 6-9, 2007.
119. "Immune Intervention in Atherosclerosis". Deutsche Gesellschaft fuer Rheumatologie, Vasculitis Workshop, Freiburg, Germany, June 22, 2007.

120. "Pathophysiologie der Riesenzellerteritis". RZA: Ophthalmologische, internistische neurologische und radiologische Aspekte, Freiburg, Germany, June 23, 2007.
121. "Immune Effector Functions causing Chronic Inflammation in Rheumatoid Arthritis". Daiichi Sankyo, Tokyo, Japan, September 27, 2007.
122. "Immunosenescence in Rheumatoid Arthritis". St. Marianna University School of Medicine, Kawasaki, Japan, September 28, 2007.
123. "Pathomechanisms in Giant Cell Arteritis", International Symposium on Primary Systemic Vasculitides, Tokyo, Japan, September 29, 2007.
124. "Immune Activation in the Atherosclerotic Plaque". Southeast Lipid Research Conference, Callaway Gardens, GA, October 14, 2007.
125. "Premature Senescence of T Cells in Rheumatoid Arthritis". ACR Annual Meeting, November 7-11, 2007.
126. "Giant Cell Arteritis and Polymyalgia Rheumatica". ACR Annual Meeting, November 7-11, 2007.
127. "Defects in Hematopoietic Stem Cells in Rheumatoid Arthritis". Within Our Reach, ACR Annual Meeting, November 7-11, 2007.
128. "Rheumatoid Arthritis as a Syndrome of Accelerated Immune Senescence". The Royal Society of Edinburgh & The Caledonian Research Foundation, Edinburgh, Scotland, November 29-30, 2007.
129. "Atherosclerosis and Inflammation". Sao Paulo Society of Rheumatology Congress, Sao Paulo, Brazil, December 7, 2007.
130. "Inflammation Orchestra". Sao Paulo Society of Rheumatology Congress, Sao Paulo, Brazil, December 8, 2007.
131. "Immunodeficiency in Rheumatoid Arthritis". Texas Medical Center Rheumatology Grand Rounds, University of Texas-Houston Medical School, Houston, TX, December 19, 2007.
132. "Toll-like Receptors in Large Vessel Vasculitis". Renal Grand Rounds, Emory University, January 15, 2008.
133. "Large Vessel Vasculitis". Vascular Surgery Basic Science Conference, Emory University, January 22, 2008.
134. "Cardiovascular Disease in Rheumatoid Arthritis". Joint RA Expert Panel/Roche, Denver, CO, January 25, 2008.
135. "Disease Mechanisms in Rheumatoid Synovitis". Keynote Presentation, Atlanta, GA, February 9, 2008.
136. "Immunosenescence – A Risk Factor for Chronic Inflammatory Disease". Southern Regional AFMR Meeting, New Orleans, LA, February 22, 2008.
137. "Pathogenesis of Large Vessel Vasculitis: Implications for New Treatment Approaches". AAAAI 08 Annual Meeting, Philadelphia, PA, March 17, 2008.
138. "Large Vessel Vasculitis – Are Bacterial Pathogens Involved in Breaking the Artery's Protective Shield?" Rheumatology Grand Rounds, University of Utah, Salt Lake City, UT, April 3, 2008.
139. "Biology of Large Vessel Vasculitis". British Society for Rheumatology Annual Meeting, Liverpool, UK, April 22, 2008.
140. "Disease Pathways in Large Vessel Vasculitis". Keynote Speaker, AFMR Annual Meeting, Chicago, IL, April 25, 2008.
141. "Immune Mechanisms of Cardiovascular Disease in SLE". Alliance for Lupus Research Spring Collaborative Meeting, New York, NY, May 15, 2008.
142. "Pathogenesis of Large Vessel Vasculitis: Implications for New Treatment Approaches". EULAR 2008 Meeting, Paris, France, June 11-14, 2008.
143. "Disease Pathways in Large Vessel Vasculitis". 4<sup>th</sup> International Conference on Giant Cell Arteritis and Polymyalgia Rheumatica, New York, NY, July 31-August 3, 2008.
144. "Mechanisms of Vascular Injury in Vasculitis". PANLAR Annual Meeting, Guatemala City, Guatemala, August 13-17, 2008.
145. "The Quest to Solve Rheumatoid Arthritis: What do we need to do to understand the role of lymphocytes (and stem cells) in RA?" Within Our Reach, Itasca, IL, August 22-23, 2008.
146. "Defects of Hematopoietic Stem Cell Function in Rheumatoid Arthritis". ACR Rheumatology Research Workshop, Itasca, IL, August 22-24, 2008.

147. "Accelerated Aging and Remodelling of the T Cell Pool in Rheumatoid Arthritis". From the Laboratory to the Clinic: Mechanisms of Disease Chronicity, Trinity College, Oxford, England, September 24, 2008.
148. "Chronic Inflammation – One Principle-Different Diseases?" 36<sup>th</sup> Congress of the German Society of Rheumatology (DGRh), Berlin, Germany, September 25, 2008.
149. "Pathogenesis of Non-ANCA-Associated Vasculitides". 36<sup>th</sup> Congress of the German Society of Rheumatology (DGRh), Berlin, Germany, September 27, 2008.
150. "What We Have Learned from Treating GCA with Steroids and Immunosuppressants?" ACR Annual Meeting, San Francisco, CA, October 24-29, 2008.
151. "Disease Pathways in Large Vessel Vasculitis". Vascular Surgery Basic Science Conference, Emory University, January 27, 2009.
152. "T Cell Regeneration in Rheumatoid Arthritis". Rheumatology Grand Rounds, New York University, New York, NY, February 12, 2009.
153. "Rheumatoid Arthritis as a Segmental Aging Syndrome". Rheumatology Grand Rounds, University of Massachusetts, Worcester, MA, March 20, 2009.
154. "Tissue Tropism in Autoimmune Inflammation". Rheumatology Grand Rounds, University of Chicago, Chicago, IL, March 31, 2009.
155. "Rheumatoid Arthritis as a Segmental Aging Syndrome". Medicine Grand Rounds, University of Chicago, Chicago, IL, March 31, 2009.
156. "Toll-Like Receptors and Dendritic Cells in Vascular Inflammation". ASIP/Experimental Biology '09, New Orleans, LA, April 19, 2009.
157. "The Making and Breaking of the Immune System in Rheumatoid Arthritis – Going Beyond Anti-Inflammatory Therapy". ASPET/Experimental Biology '09, New Orleans, LA, April 20, 2009.
158. "Large Vessel Vasculitis, Including Takayasu's Arteritis". Puerto Rico Rheumatology Association International Meeting (PRAIM 2009), San Juan, Puerto Rico, May 29, 2009.
159. "Resetting the Immune System in Rheumatoid Arthritis". Puerto Rico Rheumatology Association International Meeting (PRAIM 2009), San Juan, Puerto Rico, May 30, 2009.
160. "The Aging Immune System: Lessons from Rheumatoid Arthritis". EULAR 2009, Copenhagen, Denmark, June 13, 2009.
161. "Life and Death of T Cells in Rheumatoid Arthritis". Seminar Presentation, University of Heidelberg, June 15, 2009.
162. "Large Vessel Vasculitis". Argentine Society of Rheumatology, Buenos Aires, Argentina, September 3-5, 2009.
163. "Rheumatoid Arthritis – A Syndrome of Premature Aging". Argentine Society of Rheumatology, Buenos Aires, Argentina, September 3-5, 2009.
164. "Rheumatoid Arthritis – A Progeroid Syndrome". Department of Medicine Grand Rounds, Emory University, Atlanta, GA, October 13, 2009.
165. "Large Vessel Vasculitis – It Takes Two to Tango". Medical Grand Rounds, Stanford University Medical School, October 27, 2009.
166. "Disease Mechanisms in Large Vessel Vasculitis". Humboldt University, Berlin, Germany, November, 2009.
167. "Immuno-inflammatory Pathways in Large Vessel Vasculitis". Department of Vascular Surgery, Stanford University, January 8, 2010.
168. "Telomeres and Rheumatoid Arthritis – Why Chromosomal Ends Matter". University Hospital, Zurich, Switzerland, April 13, 2010.
169. "DNA Damage and Telomere Dysfunction in Rheumatoid Arthritis". Annual Congress of SGAI-SSAI, St. Gallen, Switzerland, April 15-16, 2010.
170. "Clinical Challenges in Giant Cell Arteritis – Fighting Two Enemies". New Jersey Rheumatological Association, Iselin, NJ, May 13, 2010.
171. "Genomic Instability in Rheumatoid Arthritis". ITI Retreat, Santa Cruz, CA, June 5, 2010.
172. "Giant Cell Arteritis/Polymyalgia Rheumatica". Vasculitis: Current Concepts and Best Practices, Cedars-Sinai Medical Center and the Vasculitis Foundation, Long Beach, CA, July 31, 2010.
173. "Adaptive Immune Responses and Resident Vascular Cells". 2010 American Physiological Society Conference, Westminster, CO, August 25-28, 2010.

174. "Steroid-Responsive and Steroid-Resistant Immune Responses in Giant Cell Arteritis". Rheumatology Grand Rounds, Vanderbilt University, Nashville, TN, September 23, 2010.
175. "Aging of the Immune System: Lessons Learned from Rheumatoid Arthritis". Medicine Rand Rounds, Vanderbilt University, Nashville, TN, September 23, 2010.
176. "Profiling for Cell-Internal Stressors in the Immune System". ITI Symposium on New Technologies in Immune Phenotyping, Stanford University, October 11, 2010.
177. "Giant Cell Arteritis – An update on pathogenesis and treatment". Ophthalmology Grand Rounds, Stanford University, CA, November 2, 2010.
178. "Immune-mediated Tissue Injury in Vascular Inflammation". Translational Immunology, Stanford University, Stanford, CA, November 29, 2010.
179. "Vasculitis". Rheumatology Tuesday Noon Conference, Stanford University, December 7, 2010.
180. "Genomic Instability in Rheumatoid Arthritis". Molecular Medicine UMCG Seminars Series, Groningen, The Netherlands, December 15, 2010.
181. "The Pathophysiology of Large Vessel Vasculitis". Clinical Immunology, Leiden, The Netherlands, December 16, 2010.
182. "Mechanisms of Immune Aging - How T cells recognize and repair DNA damage". Annual Meeting of the Dutch Society of Immunology, Utrecht, The Netherlands, December 17, 2010.
183. "DNA Damage and Immune Aging in Rheumatoid Arthritis". Immunology Seminar, University of Michigan, Ann Arbor, MI, January 19, 2011.
184. "Large Vessel Vasculitis - Biology and Treatment". Rheumatology Grand Rounds, University of Michigan, Ann Arbor, MI, January 20, 2011.
185. "Immune Aging in Rheumatoid Arthritis - A role for chronic cytokine stimulation?". Genentech Master's Series in Immunology, South San Francisco, CA, February 25, 2011.
186. "ANCA-associated Vasculitis". Medicine Grand Rounds, Stanford University School of Medicine, Stanford, CA, May 2, 2011.
187. "Pathogenesis of Giant Cell Arteritis". 15<sup>th</sup> International Vasculitis and ANCA Workshop, Chapel Hill, NC, May 17, 2011.
188. "Giant Cell Arteritis – Biology and Treatment". New England Rheumatism Society, Boston, MA, May 19, 2011.
189. "Rheumatoid Arthritis – A Tale of Telomeres and DNA Breaks". Beth Israel Medical Center Rheumatology Grand Rounds, Boston, MA, May 20, 2011.
190. "Th17 and Th1 T-cell Responses in Giant Cell Arteritis". 10<sup>th</sup> World Congress on Inflammation, Paris, France, June 26, 2011.
191. "Immune Aging and Chronic Inflammatory Disease". Hôpital Cochin Université Paris Descartes, Paris, France, June 27, 2011.
192. "Immune Aging – Rheumatoid Arthritis as a Model System". Molecular Medicine Seminar, University of Pittsburgh, Pittsburgh, PA, July 26, 2011.
193. "Telomeres in Rheumatoid Arthritis". Rheumatology Grand Rounds, Cedars-Sinai Medical Center, Los Angeles, CA, August 24, 2011.
194. "Giant Cell Arteritis – Adaptive immunity gone wrong". University of Colorado, Denver, CO, September 16, 2011.
195. "DNA Breakage in Rheumatoid Arthritis". Immunology Program Seminar Series, Stanford University, Stanford, CA, September 27, 2011.
196. "T Cells in Vascular Inflammation". North American Vascular Biology Meeting, Hyannis, MA, October 19, 2011.
197. "Giant Cell Arteritis: Immune Mechanisms of Granulomatous Disease". 2011 AAO/ARVO Symposium, Orlando, FL, October 23, 2011.
198. "Giant Cell Arteritis - Barriers in Inducing Disease Remission". Oregon Health & Science University, Portland, OR, January 10, 2012.
199. "Accelerated Immune Aging and Autoimmunity - Lessons Learned from Rheumatoid Arthritis". Division of Rheumatology Grand Rounds, Oregon Health & Science University, Portland, OR, January 11, 2012.
200. "Vasculitis". Rheumatology Tuesday Noon Conference, Stanford University, Stanford, CA, February 28, 2012.

201. "Giant Cell Arteritis – From Bench to Bedside". Australian Rheumatology Association 53<sup>rd</sup> Annual Scientific Meetings, Canberra, May 13, 2012.
202. "The Aetiology of Rheumatoid Arthritis – Time for a Paradigm Shift". Australian Rheumatology Association 53<sup>rd</sup> Annual Scientific Meetings, Canberra, May 14, 2012.
203. "Atherosclerosis and Rheumatoid Arthritis - An Inflammatory Relationship". Australian Rheumatology Association 53<sup>rd</sup> Annual Scientific Meetings, Canberra, May 15, 2012.
204. "Telomeres and other DNA Breaks in Rheumatoid Arthritis". The Walter & Eliza Hall Institute of Medical Research, Victoria, Australia, May 18, 2012.
205. "Immuno-stromal Interactions in Large Vessel Vasculitis". JHRC Seminar Series, University of British Columbia, Vancouver, BC, June 8, 2012.
206. "ANCA-associated Vasculitis", Division of Immunology and Rheumatology, Stanford University, Stanford, CA, July 10, 2012.
207. "Vasculitis – Part II". Rheumatology Tuesday Noon Conference, Stanford University, July 10, 2012.
208. "Immune Responses in the Vascular Wall – Lessons Learned from Large Vessel Vasculitis". Vasculata 2012, Nashville, TN, July 25-28, 2012.
209. "Immune Aging and Atherosclerosis". Cardiovascular Medicine Seminar Series, Mayo Clinic Rochester, Rochester, MN, August 30, 2012.
210. "DNA Damage, Immunosenescence and Rheumatoid Arthritis". Deutsches Rheumaforschungszentrum, Berlin, Germany, September 19-22, 2012.
211. "Premature Aging of Lymphocytes in Rheumatoid Arthritis". DGRh-Kongress, RuhrCongress, Bochum, Germany, September, 2012.
212. "T Cell Effector Functions in Atherosclerosis". Max Delbrück Center for Molecular Medicine, Berlin, Germany, September 24, 2012.
213. "Rheumatoid Arthritis and Ataxia Telangiectasia: An Unexpected Relationship". Medical Grand Rounds, Stanford University, November 7, 2012.
214. "When good guys turn bad – T cells in the atherosclerotic plaque". Vascular Biology Lecture Series, Vanderbilt University, Nashville, TN, December 5, 2012.
215. "Large Vessel Vasculitis – Breaking the Immune Privilege of the Blood Vessel Wall". Medicine Grand Rounds, Vanderbilt University, Nashville, TN, December 6, 2012.
216. "Pathogenesis of giant cell arteritis". Vasculitis: An Update-International Congress, Parma, Italy, March 7-9, 2013.
217. "New Insights in the Pathogenesis of Giant Cell Arteritis". 16<sup>th</sup> International Vasculitis and ANCA Workshop, Paris, France, April 14-17, 2013.
218. "Macrophage function in atherosclerosis". Translational Immunology Lecture, Stanford University, April 1, 2013.
219. "Aging and the Immune System?" Congress of Clinical Rheumatology 2013, Destin, FL, May 3, 2013.
220. "Update on Giant Cell Arteritis". Congress of Clinical Rheumatology 2013, Destin, FL, May 3, 2013.
221. "Churg Strauss Vasculitis". Rheumatology Tuesday Noon Conference, Stanford University, May 14, 2013.
222. "DNA Damage and Autoimmunity – Lessons Learned from Rheumatoid Arthritis". Medicine Grand Rounds, The Methodist Hospital, Houston, TX, May 21, 2013.
223. "Large Vessel Vasculitis". Department of Medicine Residents/Fellows Conference, The Methodist Hospital, Houston, TX, May 21, 2013.
224. "Churg Strauss Vasculitis, Part 2". Rheumatology Tuesday Noon Conference, Stanford University, May 28, 2013.
225. "Vasculo-Immunology". CVI Science Talk, Stanford University, Stanford, CA, June 26, 2013.
226. "Pathophysiology of Giant Cell Arteritis". 13<sup>th</sup> International Scleroderma Workshop, Boston, MA, August 3-7, 2013.
227. "DNA damage responses, immune aging and rheumatoid arthritis". Symposium: From the Laboratory to the Clinic: Novel Therapeutic Targets, Trinity College, Oxford, England, September 24, 2013.
228. "DNA Repair Mechanisms in Rheumatoid Arthritis". King's College, London, England, September 26, 2013.
229. "Large Vessel Vasculitis". University of Heidelberg, Heidelberg, Germany, September 27, 2013.

230. "Vasculitis of medium and large arteries". Institute for Cardiovascular Regeneration. University of Frankfurt, Frankfurt, Germany, September 27, 2013.
231. "Vasculitis in the Elderly: Influence of NEI". Neuro Endocrine Immunology Study Group, ACR Annual Meeting, San Diego, CA, October 28, 2013.
232. "Pathogenesis of Large Vessel Vasculitis". Basic Science Symposium: Novel Insight into the Pathogenesis of Systemic Vasculitis, ACR Annual Meeting, San Diego, CA, October 29, 2013.
233. Pathoimmunobiology of Vascular Inflammation". Cardiac Rheumatology: Mechanisms and Management, American Heart Association Meeting, Dallas, TX, November 16, 2013.
234. "Building a Team and Creating an Effective Work Environment". Mentoring Workshop, J. Kahn and C. M. Weyand, Stanford University, November 19, 2013.
235. "Vasculitis of the Aorta and its Branches". Internal Medicine Grand Rounds, The Ohio State University, Wexner Medical Center, Division of Rheumatology and Immunology, Columbus, OH, March 13, 2014.
236. "Rheumatoid Arthritis – How Telomeres and Glucose Protect from Autoimmunity". Lane Lecture Medicine Grand Rounds, University of Washington, Seattle, WA, March 20, 2014.
237. "Large Vessel Vasculitis – A Trilogy of Pathogenic Immunity". Rheumatology Lecture, University of Washington, Seattle, WA, March 21, 2014.
238. "Dendritic Cell Function in Large Vessel Vasculitis". IMMUNOLOGY 2014/AAI Annual Meeting, Pittsburgh, PA, May 6, 2014.
239. "Large vessel vasculitis - A triple-hit model". California Rheumatology Association, San Francisco, CA, May 17, 2014.
240. "Immune Aging and Autoimmune Disease". Radboudumc Summer Frontiers Symposium: Age and Immunity, Nijmegen, The Netherlands, June 13, 2014.
241. "Immunosenescence". 2nd Barcelona International Conference on Healthy Ageing, Barcelona, Spain, June 20, 2014.
242. "Clinical Case Presentation: Rare Mutations and Rare Complications". Medicine Grand Rounds, Stanford University, July 30, 2014.
243. "Telomere damage responses and immune aging". Immunity in the Elderly Program, NIAID and NIA, NIH, Rockville, MD, September 8, 2014.
244. "Immune Aging in Rheumatoid Arthritis". University of Erlangen, Germany, September 30, 2014.
245. "Immune Aging and Autoimmune Disease". University of Heidelberg, September 2014.
246. "Rheumatoid Arthritis – A Model System for Accelerated Immune Aging". Ludwig-Maximilians-Universität Munich, October 2014.
247. "The Year-in-Review 2013-2014". Annual Meeting of the American College for Rheumatology, Boston, November 14-19, 2014.
248. "Immunological Underpinnings of Atherosclerosis". Annual Meeting of the American College for Rheumatology, Boston, November 14-19, 2014.
249. "Autophagy and Autoimmune Disease". Annual Meeting of the American College for Rheumatology, Boston, November 14-19, 2014.
250. "Telomeric damage and metabolic reprogramming in autoimmune T cells". The Immune System in Health and Disease. International Symposium, German Cancer Research Center. December 8, 2014.
251. "Rheumatoid arthritis – How to shield telomeres and reset metabolic pathways to protect from autoimmunity". Genentech, South San Francisco, CA, January 5, 2015.
252. "Large Vessel Vasculitis". California Vasculitis Patient and Family Conference, Stanford University, February 7, 2015.
253. "Misbehaved T cells in Rheumatoid Arthritis". Rheumatology Grand Rounds, UCSF, San Francisco, CA, March 31, 2015.
254. "T cell aging in rheumatoid arthritis – a story of telomeres and glucose". KNUH Rheumatology Symposium: Advances in Rheumatologic Issues, Kyungpook National University and Hospital, Daegu, Korea, May 12, 2015.
255. "T cell Metabolism in Rheumatoid Arthritis". Medical Grand Rounds, Seoul National University, Seoul, Korea, May 14, 2015.



256. "Large Vessel Vasculitis". The 35<sup>th</sup> Korean College of Rheumatology Annual Scientific Meeting and the 9<sup>th</sup> International Symposium, Sejong University Convention Center, Seoul, Korea, May 16, 2015.
257. "Large Vessel Vasculitis – Immuno-stromal Interactions Defining Tissue Tropism". Institute of Cardiology, Catholic University of the Sacred Heart, Rome, Italy, June 10, 2015.
258. "Immune mechanisms in medium and large-vessel vasculitis". Annual European Congress of Rheumatology/EULAR 2015, Rome, Italy, June 10-13, 2015.
259. "Large Vessel Vasculitis". 2015 International Vasculitis Symposium, Jacksonville, FL, June 20, 2015.
260. "Telomere damage responses and immune aging". Immunity in the Elderly Program Annual Meeting, NIAID/NIH, Vienna, Austria, September 4, 2015.
261. "Fatal Attraction – The Immune System in Aortitis". Internal Medicine Grand Rounds, Mayo Clinic, Rochester, MN, September 23, 2015.
262. "Pathogenic Immune Responses in Large Vessel Vasculitis". NHLBI Symposium on Cardiovascular Regenerative Medicine, Washington, DC, September 29-30, 2015.
263. "Immune Aging in Rheumatoid Arthritis". Rheumatology Seminar, University of Utah, Salt Lake City, UT, September 9, 2015.
264. "Large Vessel Vasculitis – A Breakdown in the Immune Privilege of the Aortic Wall". Annual SSLIM Lecture Medicine Grand Rounds, University of Utah, Salt Lake City, UT, September 9, 2015.
265. "The Aging Immune System". TransAtlantic Conference on Lung Diseases: Aging and regeneration in the lungs, Lucerne, Switzerland, January 13-15, 2016.
266. "Healthy Aging – Polymyalgia Rheumatica and Giant Cell Arteritis". SiriusXM Radio Show, February 22, 2016.
267. "Large Vessel Vasculitis". Southern California Rheumatology Society, Los Angeles, CA, February 24, 2016.
268. "Immune pathways in medium and large vessel vasculitis". Prothena Biosciences Group, South San Francisco, CA, March 1, 2016.
269. "T Cells in Rheumatoid Arthritis- Failing the Glucose Balance". NCAF COE Meeting, Stanford University, March 25, 2016.
270. "Giant Cell Arteritis". South Texas Association of Rheumatologists 2016 Annual Meeting, San Antonio, TX, April 2, 2016.
271. "Giant Cell Arteritis 2016". North Carolina Rheumatology Association Annual Meeting, Charlotte, NC, April 9, 2016.
272. "Immune Aging in Rheumatic Disease". North Carolina Rheumatology Association Annual Meeting, Charlotte, NC, April 9, 2016.
273. "Immune Aging as a Risk Factor for Inflammatory Disease". Medicine Research Day Keynote Speaker, New York University, New York, NY, May 26, 2016.
274. "Large Vessel Vasculitis - Opportunities for Reparative Immunotherapy". Rheumatology Grand Rounds, New York University, New York, NY, May 27, 2016.
275. "Inflammaging in Rheumatoid Arthritis". DRFZ, Berlin, Germany, July 5, 2016.
276. "Inflammaging in Rheumatoid Arthritis". Fritz Lipman Institute Colloquium, Jena, Germany, July 7, 2016.
277. "Giant Cell Arteritis". Florida Society of Rheumatology 2016, Orlando, FL, July 15, 2016.
278. "The Aging Immune System". Florida Society of Rheumatology 2016, Orlando, FL, July 16, 2016.
279. "Vascular Inflammation/Arteritis". American Physiologic Conference on Inflammation, Immunity and Cardiovascular Disease, Westminster, CO, August 24-27, 2016.
280. "Uncontrolled Inflammation in Large Vessel Vasculitis". BHF Centre of Cardiovascular Science, Queen's Medical Research Institute, Edinburgh, Scotland, September 9, 2016.
281. "Telomere damage responses and immune aging". Immunity in the Elderly Program Annual Meeting, NIAID, NIA and NIH, Bethesda, MD, October 4, 2016.
282. "Metabolic Repression of T cells in Rheumatoid Arthritis". UCI Seminars in Immunology 2017 Series, University of California-Irvine, Institute for Immunology, Irvine, CA, February 16, 2017.
283. "Metabolic Signatures and Maladaptive T-cell Aging in Rheumatoid Arthritis". NIH: Inflammatory Diseases Interest Group, Bethesda, Maryland, February 28, 2017.
284. "The Aging Immune System: Rheumatoid Arthritis as a Disease of Premature Immune Aging". State of Texas Association of Rheumatologists 2017 Annual Meeting, San Antonio, TX, March 3-5, 2017.

285. "Metabolic Signatures in Rheumatoid Arthritis". Rheumatology Grand Rounds, Beth Israel Deaconess Medical Center, Boston, MA, March 10, 2017.
286. "T-Cell Immunity in Large Vessel Vasculitis". 4<sup>th</sup> Conference of Translational Medicine on Pathogenesis and Therapy of Immune-Mediated Diseases: Innate immunity, inflammation and human models of diseases, Palermo, Italy, March 27-29, 2017.
287. "T cells in Rheumatoid Arthritis." Aging and Immunity Symposium, Bethesda, MD, NIAID/NIH May 10-11, 2017.
288. "T cell aging as a risk factor for tissue inflammation – The role of cell-intrinsic metabolic programs". Rheumatology Grand Rounds, Johns Hopkins University School of Medicine, Baltimore, MD, May 12, 2017.
289. "Immune Aging as a Risk Factor for Inflammatory Disease". Joint Meeting of the Australian & New Zealand Bone & Mineral Society & the International Federation of Musculoskeletal Research Societies in Conjunction with the Japanese Society for Bone & Mineral Research, Brisbane, Australia, June 18, 2017.
290. "Immunometabolic Signatures in Autoimmunity". Translational Research Institute, The University of Queensland Diamantina Institute, Woolloongabba, Queensland, Australia., June 20, 2017.
291. "Immune Checkpoint Deficiencies in Large Vessel Vasculitis". Kennedy Institute External Seminars, Kennedy Institute of Rheumatology, Oxford, UK, September 6, 2017.
292. "Metabolic Control of Pro-inflammatory T cells". From the Laboratory to the Clinic: Immune-Tissue Cell Interactions. Trinity College, Oxford, UK, September 7, 2017.
293. "Telomere Damage Responses and Immune Aging". Immunity in the Elderly Program Annual Meeting, NIAID, NIA and NIH, Rockville Pike, MD, September 26, 2017.
294. "Aortitis and Large Vessel Vasculitis". Medicine Grand Rounds, Stanford University, October 18, 2017.
295. "Telomere damage responses and immune aging". Immunity in the Elderly Program Annual Meeting, NIAID, and NIH, Rockville, MD, September 26-27, 2017.
296. "Giant Cell Arteritis: Pathogenesis". American College of Rheumatology Annual Meeting, San Diego, CA, November 6, 2017.
297. "The Microvascular Niche Instructs Pathogenic T Cells in Medium and Large Vessel Vasculitis". Oral Presentation, American College of Rheumatology Annual Meeting, San Diego, CA, November 8, 2017.
298. "Metabolic and telomeric control of pro-inflammatory T cells". Inflammation, Aging and Chronic Disease Conference, Stanford Institute for Immunity, Transplantation and Infection, Stanford, CA, November 28, 2017.
299. "Immunometabolism in Rheumatoid Arthritis". XLVI Mexican Congress of Rheumatology, Chihuahua, Mexico, February 17, 2018.
300. "Metabolic regulation of immune responses in inflammatory disease". Advanced Immunology I, Stanford University, March 7, 2018.
301. "The Immunopathogenesis of GCA". 2018 International Conference on large Vessel Vasculitis and Related Disorders, Rochester, MN, March 16, 2018.
302. "Giant Cell Arteritis 2018". Uveos Session, Sonoma Eye Meeting, Sonoma, CA, March 25, 2018.
303. "Rheumatoid Arthritis: How Inflammatory Cells Fuel Their Bad Habits". 36th Carl M. Pearson Memorial Symposium Frontiers of Rheumatology, Marina Del Rey, CA, April 14, 2018.
304. "Macrophage Phenotypic Modulation in Coronary Artery Disease". Experimental Biology 2018 Session: Innate and Adaptive Immunity in Cardiovascular Physiology, San Diego, CA, April 22, 2018.
305. "Inflammation – Friend or Foe?" Medical Alumni Day, Stanford University, April 28, 2018.
306. "Metabolic Strategies of Pro-inflammatory T Cells in Rheumatoid Arthritis." The Doyt L. Conn Annual Rheumatology Lecture, Emory University, Atlanta, GA, May 4, 2018.
307. "Bioenergetics and Genome Instability in T Cell Aging". TRANS-NIH Workshop on Generative Ideas in Geroscience, Rockville, MD, May 14, 2018.
308. "Metabolic rewiring of inflammatory T cells". Joint Meeting of CCIC-ImmunoBC 2018, Vancouver, BC, Canada, June 20, 2018.
309. "Rheumatoid Arthritis – Understanding the energy needs of inflammatory cells". 2018 Shanghai Puji CTD Workshop, Shanghai, China, August 4, 2018.

310. "Immunometabolismus bei chronischer Entzündung". 46. Kongress der Deutschen Gesellschaft für Rheumatologie (DGRh), Mannheim, Germany, September 21, 2018.
311. "Bio-energetic strategies of pro-inflammatory T cells". Cell Symposia: Aging & Metabolism, Sitges, Spain, September 25, 2018.
312. "The metabolic signature of pro-inflammatory T cells". Multi-cellular Differentiation-Related Changes in the Immune System during Ageing, Keynote Lecture, British Society of Immunology, London, England, September 28, 2018.
313. "Fan the Flame, Feed the Fire". ITMAT Symposium, University of Pennsylvania, Philadelphia, PA, October 16, 2018.
314. "The Role of Aging T Cells and Rheumatoid Arthritis". ACR/ARHP 2018 Annual Meeting, Chicago, IL, October 21, 2018.
315. "T cell Metabolic Fitness in Chronic Inflammation". Duke Molecular Physiology Institute, Duke University, Durham, NC, December 18, 2018.
316. "Vascular and Extravascular Giant Cell Arteritis". Rheumatology Grand Rounds, Duke University, Durham, NC, December 18, 2018.
317. "Immunometabolism in Inflammatory Disease". Clinical Fellows and Faculty Seminar, Louisiana State University Health Sciences Center, Shreveport, LA, February 4, 2019.
318. "T cell metabolic fitness in chronic inflammatory disease". Advanced Immunology Lecture, Stanford University, March 4, 2019.
319. "Nurturing Inflammation – What inflammatory cells eat to support their bad behavior". Rheumatology Grand Rounds, MedStar Georgetown University Hospital, Washington, DC, March 13, 2019.
320. "Medium and Large Vessel Vasculitis". Medicine Grand Rounds, MedStar Georgetown University Hospital, Washington, DC, March 14, 2019.
321. "Understanding Giant Cell Arteritis." Rheumatology Society, Washington, DC, March 13, 2019.
322. "Vascular and Extravascular Disease in Giant Cell Arteritis". Sonoma Eye 2019 Meeting, Sonoma, CA, March 23, 2019.
323. "Immune Checkpoint Deficiency in Large Vessel Vasculitis". Experimental Biology/ASIP 2019, Orlando, FL, April 9, 2019.
324. "Metabolic fitness of T cells in aging and inflammation." Immunology 2019, AAI/NIA/NIH Symposium: Immune Metabolism, Inflammation, and Aging, San Diego, CA, May 12, 2019.
325. "Metabolic Reprogramming in Pro-inflammatory T cells." Department of Pathology, Cedars-Sinai, Los Angeles, CA, May 24, 2019.
326. "Immune Checkpoints in Large Vessel Vasculitis". Pathology Grand Rounds, Cedars-Sinai, Los Angeles, May 24, 2019.
327. "Medium and Large Vessel Vasculitis—From Bench to Bedside". Medicine Grand Rounds, University of Chicago, Chicago, IL, June 11, 2019.
328. "Medium and Large Vessel Vasculitis". Neuroimmunology Conference, Stanford University, June 17, 2019.
329. "Immunometabolism in Autoimmune Disease". Feinstein Institutes for Medical Research, Manhasset, NY, August 5, 2019.
330. "Immunometabolism in Rheumatoid Arthritis". U. of California Los Angeles, CA, August 19, 2019.
331. "Medium and large vessel vasculitis: an update". EXcite Meeting, Melbourne, Australia, September 14, 2019.
332. "Immunometabolism in chronic inflammation". EXcite Meeting, Melbourne, Australia, September 14, 2019.
333. "T cell Metabolism and Susceptibility to Inflammatory Disease." Michigan Biology of Cardiovascular Aging (M-BoCA) Program, University of Michigan, Ann Arbor, MI, September 24, 2019.
334. "Bioenergetic Strategies of Proinflammatory T cells". Annual Meeting of the International Cytokine & Interferon Society (ICIS), Vienna, Austria, October 22, 2019.
335. "Immune Checkpoints in Medium and Large Vessel Vasculitis". University of Vienna, Austria, October 22, 2019.
336. "Metabolic Checkpoints in Autoimmune T cells". Trinity College, Dublin, Ireland, September 24, 2019.

337. "Medium and Large Vessel Vasculitis". EULAR Centre of Excellence, Centre for Arthritis and Rheumatic Disease, St. Vincent's University Hospital, Dublin, Ireland, September 23, 2019.
338. "Bioenergetics in Pro-inflammatory T cells". AARDA Colloquium, Washington, DC, October 26, 2019.
339. "GM-CSF is a pro-inflammatory cytokine in experimental vasculitis on medium and large arteries." American College of Rheumatology Meeting, Atlanta, GA, November 11, 2019.
340. "Lysosomal placement of the energy sensors AMP and mTORC1 controls tissue inflammation in rheumatoid arthritis." American College of Rheumatology Annual Meeting, Atlanta, GA, November 12, 2019.
341. "Leaky Immune Checkpoints in Vasculitis." Rheumatology Grand Rounds, Western University, London, Ontario, Canada, December 6, 2019.
342. "Large Vessel Vasculitis (GCA/Takayasu)". Rheumatology Fellows Conference, Division of Immunology and Rheumatology, Stanford School of Medicine, February 7, 2020.
343. "Mitochondrial DNA Damage in Immune Aging and Tissue Inflammation." Immunity in the Elderly Program, NIAID and NIA, NIH, Bethesda, MD, February 21, 2020."
344. "Food for Thought: Metabolic Interference for Immunosuppression in Rheumatoid Arthritis". STAR Annual Meeting, Houston, TX, February 29, 2020.
345. "Giant Cell Arteritis". ARISE International Symposium 2021, Melbourne, Australia, February 2021.
346. "Metabolic Control of T cell Aging". Center for AIDS Research, Miami, February 9, 2021.
347. "Fuel feeds Function. Metabolomics of Effector T Cells". RHEOS Medicines, Boston, February 11, 2021.
348. "Metabolic Control of T cell Function". Immunology 201, Stanford University, March 2, 2020.
349. "Metabolic Regulation of Aging Immune Cells". Healthy Aging, BIOMED International Symposium, Hasselt University, Belgium, March 6, 2021.
350. "Immunometabolism in Rheumatoid Arthritis". Grand Rounds, Rheumatology, Allergy and Immunology, U. of California, San Diego (UCSD), San Diego, March 12, 2021.
351. "Giant Cell Arteritis". Research Seminar, Rheumatology, Allergy and Immunology, U. of California, San Diego (UCSD), San Diego, March 12, 2021.
352. "How Mitochondria and Lysosomes cause Autoimmune Disease". AAP/ASCI Annual Meeting 2021, Chicago, April 8, 2021.
353. "Mitochondria and Lysosomes in Proinflammatory T Cells". European Federation of immunological Societies (EFIS) Symposium, AAI Meeting, May 10th, 2021.
354. "Energy Sensing and Utilization in Autoimmune T Cells". King's College, School of Immunology and Microbial Sciences Research Seminar, London, June 22, 2021.
355. "Immunometabolism in Rheumatoid Arthritis". Florida Society of Rheumatology annual Meeting 2021, Orlando, July 10, 2021.
356. "Aging of the Immune System". Florida Society of Rheumatology annual Meeting 2021, Orlando, July 10, 2021.
357. "Immune Checkpoints in Vasculitis". 2021 Congress of Clinical Rheumatology-East, Destin, July 14, 2021.
358. "Immuno-senescence in Cardiovascular Disease". 27th Mayo-Karolinska Institute Annual Scientific Research Meeting, Sept 21, 2021.
359. "Mitochondria, the Endoplasmic Reticulum and Lysosomes in Autoimmunity". Hematology Research Seminar, Mayo Clinic College of Medicine and Science, October 6, 2021.
360. "Immunometabolic Control of Rheumatoid Arthritis". Rheumatology Research Conference, Medical University of South Carolina (MUSC), October 7, 2021.
361. "Immune Checkpoints in Large Vessel Vasculitis". Medicine Grand Rounds, Medical University of South Carolina (MUSC), KROC Lectureship, October 7, 2021.
362. "Mitochondrial Aging in Autoimmune Disease". Masoro-Barshop Conference on Aging, UT San Antonio, October 13, 2021.
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366. "Mitochondria-ER Crosstalk in Rheumatoid Arthritis". Rheumatology Grand Rounds, Beth Israel Deaconess Medical Center, Boston, January 21, 2022.
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