

## Curriculum Vitae

Minnie Sarwal, M.D., DCH, F.R.C.P., Ph.D



Dated: December 2018

---

### Academic History

---

#### Education:

1979-1981	I.S.C. at La Martiniere, Calcutta, India. (Undergraduate) Distinctions in English Language and Literature
1981-1985	M.D. at Calcutta Medical College, Calcutta, India. Distinctions in Surgery and Obstetrics/ Gynecology
1989	Diploma in Child Health (D.C.H.), London, UK With distinction
1990	Membership of the Royal College of Physicians (MRCP), London, U.K. With distinction
1991-1995	Ph.D in Molecular Genetics, Cambridge University, U.K. Christ's College, Cambridge University Advisor: Sydney Brenner, Nobel Laureate in Medicine, 2002
2009	Elected as Fellow to the Royal College of Physicians, designated FRCP

---

### Employment History

---

1/3/16-current	<b>Chief Editor, Nature Journals</b> /Frontiers in Medicine, Nephrology
1/12/15-current	<b>Professor of Renal Medicine (Adjunct)</b> , Faculty of Health Sciences, University of Southern Denmark, Odense, Denmark, E
1/1/15-current	<b>FDA Science Board Member</b> , FDA, Washington DC
1/12/15- current	<b>Mentor and Clinical Course Lead</b> , Masters in Translational Medicine Program, Joint program between Haas School of Business at University of California Berkeley and UCSF
4/1/14- current	<b>Professor of Surgery</b> , Division of Multi-Organ Transplant, University of California San Francisco, San Francisco (UCSF), USA <b>Director, Precision Transplant Medicine</b> , UCSF, San Francisco <b>Director</b> , The Sarwal Lab, UCSF
01/2012-3/30/14	<b>Professor, Pediatrics</b> , California Pacific Medical Center, USA <b>Director of The BIOMARC Institute for Personalized Medicine</b> , Sutter Health, San Francisco, USA (set up system wide bio-banking and unified EMR for Sutter Health, established Genomic, Proteomic and Sequencing Cores for Sutter Health)
6/1/2009-current	<b>Consulting Professor, Immunology</b> , Stanford University, Palo Alto, USA
06/2010- 12/2011	<b>Research Professor, Biostatistics</b> , University of California San Francisco, USA
6/1/2009-current	<b>Founder, Chair, Scientific Advisory Board, Organ-I, Inc</b> (a spin out from Stanford University to transform transplant diagnostics): acquired by Immucor Inc 6/1/14 (successfully developed the <i>kSORT</i> blood gene assay as a diagnostic for transplant rejection, led a team of software developers and analytics to develop customized reporting software for the assay, transitioned the assay to 2 CLIA Labs, set up reimbursements and regulatory pathways for commercialization, built the business model and raised investor capital, prepared patent applications with Wilson Sonseni and Morrissey Forrester, set up 2 multicenter clinical trials in the EU and Mexico for assay validation and application)
11/2008 -12/2011	<b>Professor, Surgery</b> (courtesy appointment), Stanford University, USA
11/2008-12/2011	<b>Professor, Pediatrics</b> , Stanford University, USA
11/2008-12/2011	<b>Professor, Immunology</b> (joint appointment), Stanford University, USA
11/2008- 03/2011	<b>Medical Director, Pediatric Kidney Transplant Program</b> , Stanford University, USA

10/2003- 12/2008	<b>Associate Professor, Pediatrics</b> , Stanford University, USA
6/1998 - 09/2003	<b>Assistant Professor, Pediatrics</b> , Stanford University, USA
10/1997- 05/1998	<b>Acting Assistant Professor, Pediatrics</b> , Stanford University, USA
01/1996- 12/1997	<b>Clinical Assistant Professor, Pediatrics</b> , Stanford University, USA
07/1995- 09/1996	<b>Senior Lecturer, Pediatric Nephrology</b> , Guy's Hospital, London, UK
01/1991- 01/1995	<b>Senior Lecturer, Nephrology</b> , Addenbrooke's Hospital, Cambridge University, UK

**Post-doctoral and residency training:**

10/92-07/95	<b>Lecturer/Senior Registrar in Pediatric Nephrology</b> , Guy's Hospital, London, U.K. <i>Faculty: Sir Cyril Chantler, George Haycock, Sue Rigden, Stuart Cameron</i>
10/91-12/95	<b>PhD in Molecular Genetics</b> , The Molecular Genetics Unit, Cambridge University <i>Lab Mentor: Sydney Brenner</i> Member, Christs College, Cambridge University <i>Advisors: Sir Keith Peters (Regius Professor of Physic) and Sydney Brenner (Nobel Laureate, 2002), Cambridge University, Cambridge; Sir Cyril Chantler (Dean, Guys and St. Thomas's Trust), Kings College, London; Dissertation Review: Prof. Kathryn Wood, Oxford University, Oxford</i>
10/91-09/92	<b>Fellowship in Nephrology</b> , Addenbrooke's Hospital, Cambridge University.
10/90-09/91	<b>Lecturer/Registrar in Pediatrics</b> , Guy's Hospital, London, UK
08/90-10/90	<b>Senior House Officer in Pediatric Nephrology</b> , Guy's Hospital, London, UK
04/90-07/90	<b>Registrar in Cardiology and Cardiothoracic Surgery</b> , Groby Road Hospital, (GRH), Leicester, UK
12/89- 03/90	<b>Senior House Officer in Neonatology</b> , Leicester General Hosp. (LGH), Leicester, UK
08/-11/1989	<b>Senior House Officer in Neonatology</b> , Leicester Royal Infirmary (LRI), Leicester, UK
02/-07/1989	<b>Senior House Officer in Surgery &amp; Neonates</b> , Good Hope Hospital, Sutton Coldfield, Birmingham, UK
03/1988-02/1989	<b>Senior House Officer in Surgery &amp; Neonates</b> , Grantham and Kesteven Hospital, Grantham (GKGH), UK
06/1987-02/1988	<b>Senior House Officer in Surgery</b> , Calcutta Medical College, India.
06/1986-06/1987	<b>Residency in Medicine and Surgery</b> , Calcutta Medical College, India

**Board Certifications:**

1988	Medical Licensing Exam for the UK (P.L.A.B)
1996	E.C.F.M.G certified: U.S.M.L.E Steps 1&2
1997	U.S.M.L.E Step 3
1990	Board Certified Pediatrics, UK Board Certified Pediatric Nephrology, UK ( <b>UK Consultant in Nephrology J #slot</b> ) Board Eligible (certified at Stanford University), American Board of Pediatrics ( <b>CA licensure A70504; DEA: FS3158842</b> )
1991	<b>Membership of the Royal College of Physicians (MRCP)</b> , Royal College of Physicians, UK
1991	<b>Diploma in Child Health (DCH)</b> , University of London, UK
1995	<b>PhD. Molecular Genetics (Cambridge University), Christ's College, Cambridge, UK</b> Mentors: Professor Sydney Brenner; Professor Sir Keith Peters
2009	<b>Fellowship of the Royal College of Physicians (FRCP, by election)</b> , Royal College of Physicians, UK

**Scholarships and honors:**

1980	<b>Cadbury Fry National Scholar Athlete Award</b>
1981	<b>Dean's List and Merit Scholar</b> , La Martiniere High School, India <b>Distinction English Language &amp; Literature</b> , All India O level exams
1985	<b>Dean's List and Merit Scholar</b> . Calcutta Medical College, India Distinctions in Surgery Distinction in Obstetrics and Gynecology
1986	<b>Aesculapius Award for Outstanding Research</b> , Calcutta University, India
1991-92	Jeantet Foundation Scholarship, Cambridge University
1992-93	<b>Medical Research Council (UK) Training Fellowship Award</b> , Cambridge University, UK

1993-95	<b>National Kidney Foundation, Training Fellowship Award</b> , Cambridge University, UK
2000-current	Best Doctors in America
2000-03	<b>CCIS Clinical Scholar Faculty Award</b> , Clinical Center for Immunological Studies at Stanford University
2001-current	2000 Outstanding Scientists of the 21 <sup>st</sup> Century (UK)
2001 & 2003	<b>Junior Faculty NIH Award</b> (NIH-Child Health Research Center), Stanford University
2002	<b>Order of Excellence in Scientific Research</b> , University of Cambridge, UK
2002	<b>“Rising Star”, Lucille Packard Children’s Hospital</b>
2002-current	Best Doctors Bay Area
2004-current	Who’s Who in Medicine and HealthCare
2005	<b>Dean’s Teaching Award</b> , Stanford University, awarded for Teaching Excellence in Resident and Post-graduate Education
2005	<b>Invited Presiding Professorship, Annual Toronto Scientific Research Day</b>
2005-6	<b>Faculty Fellow, Stanford University Mentored Leadership Selection Program</b> (1 of 17 people selected from a school wide effort at developing future academic leaders)
2005-8	Associate Editor, American Journal of Transplantation
2006-7	<b>Clinical Faculty Leadership, Packard Hospital</b> (1 of 20 people selected from a Hospital wide effort at developing future clinical leaders)
2007-8	<b>Stanford University Leadership Development Program</b>
2006-2012	<b>Senator-at-Large</b> (School wide election), <b>Stanford University Med. School Faculty Senate</b>
2006-2010	<b>Elected Councilor, International Pediatric Transplant Association</b>
2007-Pres	<b>Outreach Committee Chair, International Pediatric Transplant Association</b>
2008- Pres	Editorial Board, <i>Transplantation</i> , Journal
2008- Pres	Editorial Board, <i>Pediatric Transplantation</i> , Journal
2010:	<b>Founder and Chair, <i>Transplantomics</i></b> (a new meeting for The Transplantation Society)
2010:	<b>The Transplantation Society-Roche Award for Outstanding Achievement in Transplantation Science</b> (Clinical) (International Award given every 2 years)
2012:	<b>National Kidney Foundation- Cuneo Richardson Award for Excellence in Research</b>
2014-Pres	<b>Editor, <i>Tissue Proteomics</i></b>
2014-Pres	<b>Associate Editor, <i>Nature Reviews Nephrology</i></b>
2014-15:	<b>Chair, Local Organizing Committee, 2015 International Pediatric Transplant Association Annual Meeting</b> , San Francisco
2014-17:	Elected <b>Councillor for North America, The Transplantation Society</b>
2014-15:	Member, <b>Medical School Admissions Committee</b> , University of California San Francisco
2014-15:	
6/2015-2016	<b>Clinical Course Lead in Entrepreneurship in Academic Medicine, <i>Masters in Translational Medicine</i></b> (MTM) Program; joint program between University California Berkeley & University of California, San Francisco
6/2015- current	Core Member; <b>CERSI</b> (UCSF-Stanford Center of Excellence in Regulatory Science and Innovation)
1/3/2016-current	<b>Chief Editor</b> , Nature Journals/Frontiers in Medicine, Nephrology

**National Institutes of Health:**

*Leadership:*

2003-2009	Study Chair, Co-PI, CCTPT NIH Multicenter Study in Pediatric Renal Transplantation
2004:	Chair, NIH Genomics Consortium Meeting, Bethesda.
2005:	Section Chair, NIH Study Group of Late Renal Allograft Loss

2006:	Special NIH-ORD Committee to Evaluate Research Initiatives for Cystinosis
2011:	Study Chair, NIAID Special Study Review- Clinical Site Monitoring Center (CSMC)
2012- current	CTOTC Steering Committee
2012- current	CTOT/CTOTC Publications Committee
2014- current	Member, NIH-NIAID CTOT/CTOT-C Mechanistic Studies Committee
2014- current	Member, NIH- NIAID CTOT21 Steering Committee

**Study Section Academic Review:**

2003-2007:	NIH- NIAMS Study Section
2004 -2007:	NIH- NIAID Study Section
2005:	NIH-UKGD Study Section
2005:	NIH- NIDDK Study Section
2004-6	Genome Canada Grant Review Panel
2004:	NIAID Program Project Grant
2004-8:	NIH-PBKD (NIDDK) Study Section
2007:	NHLBI Program Project Review
2008:	NIH Special Study Panel
2008:	NIH-CSR Review Panel
2009:	NIH-Challenge Grant Study Section
2009:	NIH- ZRG1 DKUS-G 51 S : Study Section
2009	NIH-PO1Special Emphasis "Kidney Transplant Rejection Mechanism" Review Panel
2010:	NIH Review Panel, ZRG1 DKUS-G(11) " R21 and SBIR Business Applications in Nephrology"
2011:	NIAID Div of Allergy, Immunology & Transplantation, CSMC Review Panel
2010-16	NIH-PBKD Study Regular Section Member
2018	NIH Review Panel, ZRG1 DKUS-P (03) Special Emphasis Panel
2018	NIAID peer review: Stimulating Access to Research in Residency (StARR) (R38)
2018	NIDDK External Expert Panel (EEP) member for CureGN Consortium
2018	2018/10 ZDK1 GRB-S (08) NIDDK Multi-Center Clinical Study Implementation Planning Cooperative Agreements

**Data Safety Monitoring Boards:**

2004-2009:	DSMB, NIDDK "Biomarker-trial design for immunosuppressants"
2003-2005:	DSMB, NIH funded study on "MPA Pharmacokinetics in Adult Renal Transplantation"
2004-2009	DSMB, NIDDK "Biomarker-assisted trial drug design"
2009-2011	DSMB, DoD "Composite Tissue Allotransplantation of the Hand"
2010:-Pres	DSMB, Louisville Kentucky Composite Tissue Allotransplant Program

**Service to and Leadership of Professional Organizations:**

2003	Co-Chair, ATC Pediatrics Committee
2005	Co-Chair, ATC Membership Committee
2001, 2003	ATC Clinical Trials Committee
2001, 2003	Chair ATC Luncheon Symposium
2003:	Chair, Genomics Symposium, ASN annual meeting (San Francisco)
2004:	Chair, Pediatric Immunosuppression Session, ATC annual meeting (Boston)
2004:	Chair, Joint meeting ASTP and ASTS, Genomics Symposium (Boston)
2004:	Symposium leader and speaker, Annual Banff Meeting (Aberdeen)
2005:	Co-Chair Membership Committee, American Transplant Congress
2006:	Chair IPTA Genomics Symposium (Cancun, Mexico)
2006, 2008, 2010:	Plenary Speaker, "Whats Hot, Whats New" (Basic Science), Biannual meeting of the International Pediatric Transplant Association (IPTA) (Cancun, Mexico)
2006	<u>Elected Councillor</u> for the International Pediatric Transplant Association (IPTA)
2002-6:	Basic Science Abstract Reviewer, ATC meetings
2006:	Basic Science Abstract Reviewer, World Transplant Congress (Boston)
2006:	Chair, Genomics Symposium, ASN annual meeting (San Diego)
2006:	Speaker, Annual Banff Meeting (Edmonton)
2006:	Speaker, Satellite Genomics Symposium, Banff Meeting (Edmonton, Canada)

2007: Co-Chair, Basic Science Committee, IPTA (Cancun, Mexico)

2007: Chair, Genomics Symposium, ASN annual meeting (San Francisco)

2007: Co-Chair, Abstract Selection Committee, ATC 2008 (Toronto, ON)

2008: Chair, Kidney - Pediatrics Session, ATC 2008 (Toronto, ON)

2008: Speaker, Cytinosis International Conference 2008 (Dublin, Ireland)

2008: Post-Graduate Education Speaker, International Congress, TTS 2008 (Sydney, Australia)

2008: Keynote Speaker, JTS Annual Meeting 2008 (Osaka, Japan)

2008: Speaker, OKTF Satellite Symposia, Japanese Transplant Society Annual Meeting (Osaka, Japan)

2008: Plenary Speaker, Annual AASHI Meeting, 2008 (Toronto, ON)

2009: Speaker, Canadian Annual Transplant Forum 2008 (Toronto, ON)

2009: Plenary Speaker, Asia Pacific Summit (Miyazaki, Japan)

2009: Speaker, Canadian Society of Transplantation Training Day, (Banff, Canada)

2009: Speaker, "What's Hot What's Not" (Basic Science) IPTA BiAnnual International Congress (Istanbul, Turkey)

2009: Speaker, Sunrise Symposium ATC Congress (Boston, MA)

2010: Symposium Speaker, American Scientific Exchange, ATC (Orlando)

2010: Chair, Abstract Review Committee, Pediatrics, ATC 2010 (San Diego)

2010: Chair, Pediatric Abstract Committee, Pediatrics, ATC 2011

2010, 2011: Chair and Speaker, Annual American Society for Reconstructive Transplantation Mtg (Chicago)

2010: Founder, Chair, Speaker, First Transplantomics Mtg for TTS (San Francisco): *organized and developed a new meeting format for the discussion of emerging biotechnologies in the space of transplantation medicine. The success of this meeting has launched a new annual meeting for the Transplantation Society*

2010: Invitrogen Advisory Board, (Del Mar, CA)

2011, 12, 13: Organizing Committee, Genentech B Cell Summit (Palos Verdes, CA)

2011: Chair and Speaker, Key Opinion Leader Meeting for the Transplantation Society (Kolkutta, Goa and New Delhi, India ) Feb 23-27: *Working with the Transplantation Society to establish a training and outreach program for developing and training transplant programs in Bombay, New Delhi, Kolkata, Chennai and with the Indian Government on issues relating to donor organ allocation systems in India*

2011: Abstract Review Committee for outstanding Fellows, Postgraduate course speaker, Annual

2011: Co-Chair AST WHCOP Executive Committee

2011: Plenary Speaker, Canadian Society of Transplantation (Mt. Tremblant, Canada)

2011: Session Co-Chair and Speaker, Second TTS International Conference on Transplantomics and Biomarkers in Organ Transplantation (Barcelona, Spain)

2011: Speaker, Joint Annual Congress of ILTS, ELITA, & LICAGE, Global Challenges and Controversies in Liver Transplantation (Valencia, Spain) June 21-24

2011: Plenary Speaker, 15<sup>th</sup> Congress of the European Society for Organ Transplantation, (Glasgow, Scotland)

2011: Plenary Speaker, 12<sup>th</sup> Congress of the Asian Society of Transplantation (Seoul, Korea)

2012: Plenary Speaker, Dutch Society of Nephrology Annual Meeting (Netherlands)

2012: Speaker, Collaborative Transplant Study (CTS) Personalizing Medicine Through OMICS, (Heidelberg, Germany)

2012: Plenary Speaker, Joint Congress of Societies of Nephrology, Hypertension and Transplantation (Pucon, Chile)

2012: Plenary Speaker, Mexican Institute for Nephrological Research (Guadalajara, Mexico)

2012: Chair, ASN Basic Science Session; Annual Meeting (Philadelphia)

2012: Chair, Basic Science Committee, International Pediatric Transplant BiAnnual Meeting, (Warsaw, Poland)

2013: Plenary Speaker: International Liver Transplant Meeting (Sydney, Australia)

2013: Symposium Speaker; American Society of Transplantation Annual Meeting (Seattle)

2013: Chair and Speaker; Third Transplantomics Conference for the Transplantation Society, (Cambridge, UK)

2014: Group Co-lead, Ethics of Pediatric Organ Donation, WHO/TTS joint consensus meeting, (Geneva, Switzerland)

2014:	Plenary and Symposium Speaker, Internatinal Pediatric Nephrology Association Annual Meeting (New Delhi, India)
2015:	Chair/ Local Organizing Committee, Plenary Chair, International Pediatric Transplant Meeting, San Francisco
2016:	Symposium Speaker, Chair, Councillor, Education Committee Member, The Transplantation Society BiAnnual Meeting, Hong Kong
2017:	Plenary Speaker, Irish Cystinosis Foundation, Dublin, Ireland; Medical Opinion on Delayed release Cystagon, Irish Network Television, Ireland
2017:	Invited Speaker, New York Society of Nephrology
2017:	Invited Grand Rounds, Winthrop Hospital, New York
2018:	American Transplant Congress Conference (20.5 AMA PRA Category 1 Credit)

#### Service to Professional Publications (key journals):

2008-Pres	<u>Editorial Board</u> , Transplantation
2008-Pres	<u>Editorial Board</u> , International Journal of Pediatrics
2005-2008:	<u>Associate Editor</u> , American Journal of Transplantation.
2003-current:	Reviewer, New England Journal of Medicine,
2004-current:	Reviewer, Lancet
2005-current:	Reviewer, Nature Medicine
2005-current:	Reviewer, Nature Genetics
2004-current:	Reviewer, Journal of Immunology
2003-current:	Reviewer, Kidney International
2001-current:	Reviewer, Transplantation
2001-current:	Reviewer, Pediatric Transplantation
2004-current:	Reviewer, Pediatrics,
2000-current:	Reviewer, Journal of the American Society of Nephrology
2004-current:	Reviewer, Journal of Adolescent Health
2000-current:	Reviewer, Pediatric Nephrology
2013: current	Editorial Board – Pediatric and Neonatal Care: Open Access
2014: current	<u>Editor</u> , Tissue Proteomics
2014: current	<u>Associate Editor</u> , Nature Reviews Nephrology
2016: current	<u>Editor</u> , Nature Reviews Nephrology
2018: current	Associate Editor, Pediatric Transplantation
2018	CTR Deputy Editor

#### Visiting Professorships:

2001:	Visiting Professor, University of California San Francisco
2003:	Visiting Professor, Boston Children’s Hospital, Boston, USA
2003:	Visiting Professor, University of Pittsburgh, Pittsburgh, USA
2004:	Visiting Professor, Gainesville University, Florida, USA
2004:	Visiting Professor, UCLA, Los Angeles, USA
2004:	Visiting Professor, Las Vegas Transplant Programs, Nevada, USA
2004:	Invited Chair, Vancouver Annual Research Day, USA
2004:	Visiting Professor, University of Alberta, Edmonton, Canada
2004:	Visiting Professor, Minnesota Transplant Program, Minnesota, USA
2005:	Visiting Professor Mayo Clinic, Rochester, USA
2005:	Invited Chair, Toronto Annual Scientific Research Day, Canada
2005:	Visiting Professor, Toronto Sick Kids Hospital, Canada
2005:	Honored Professor, Annual Transplant Research Day, Toronto University
2005:	Visiting Professor, Montreal McGill University, Canada
2006:	Visiting Professor, Albuquerque Children’s Hospital, New Mexico, USA
2006:	Visiting Professor, University of Pittsburgh, Pittsburgh, USA
2007:	Visiting Professor, Asian Transplant Meeting, Taipei, Taiwan
2007:	Visiting Professor, Bangkok University and CAST meeting, Pattaya, Thailand

2008: Visiting Professor, Children's Hospital, Northwestern University, Chicago, USA  
2008: Visiting Professor, Emory University, Atlanta, USA  
2009: Visiting Professor, Johns Hopkins University, Baltimore, USA  
2010: Visiting Professor, Nephrological Research Mexican Institute, Mexico City, Mexico  
2010: TSANZ Visiting Professor, Prince of Wales Hospital, Sydney, Australia  
2010: TSANZ Visiting Professor, Westmead Hospital, Sydney, Australia  
2011: Visiting Professor, University of New Mexico, Albuquerque, NM  
2011: Visiting Professor, All India Institute of Medical Sciences, New Delhi, India  
2012: Visiting Professor, Princess Lillian Foundation, Brussels, Belgium  
2012: Visiting Professor, Children's Hospital Mexico City, Mexico  
2013: Visiting Professor, Perth Hospital, Perth, Australia  
2013: Visiting Professor, Northwestern University, Department of Pathology, Chicago  
2013: Visiting Professor, Temple University, Department of Immunology, Philadelphia  
2014: Visiting Professor, Methodist Hospital, Department of Pathology, Houston  
2014: Visiting Professor, Columbia University, Department of Clinical and Translational Immunology, New York  
2014: Visiting Professor, Cornell University, Department of Medicine, New York  
2014: Visiting Professor, Columbia University, Department of Surgery, New York  
2015: Visiting Professor, All India Institute of Medical Sciences, New Delhi, India  
2015: Visiting Professor, Northwestern University, Department of Medicine, Chicago  
2015: Visiting Professor, National Institute of Medical Sciences and Nutrition Salvador Zubiran, Mexico  
2016: Visiting Professor, UCLA, I3T Seminar Series, Los Angeles

#### University and Public Service:

2004: Co-Chair, Planning Committee B cell summit meeting, Genentech.  
2004-8: Co-Chair, Dean's Faculty Diversity Committee, Stanford University  
2002-10: **Stanford Pediatric Residency Selection Committee, Stanford University**  
2002-4: Roche International Scientific Advisory Board  
2005: Novartis Scientific Advisory Board  
2005: Genzyme Scientific Advisory Board  
2003-10: **Genentech National Scientific Advisory Board**  
2005-7: **Stanford IT Steering Committee**  
2006-10: Stanford Medical Student Selection Committee, Stanford University  
2005-8: Transplant Advisory Group Committee  
2007-8: **Key Opinion Leader in Organ Transplantation**, Transplantation Society  
2007: Planning Committee and Session Chair, B cell summit, Genentech  
2007: Transplant Advisory Board, Invitrogen  
2007-2012: **Steering Committee, Institute for Immunity, Transplantation & Infection (ITI)**; Stanford University  
2008: **Key Opinion Leader in Organ Transplantation**, Transplantation Society  
2008-current: **Steering Committee Member, NIH CTOT and NIH CTOTC Trials, NIAID-NIH**  
2009: Chair, BMS-US Belatacept Medical Summit, Bristol-Meyers Squib  
2009: Mentor, Stanford University **Women and Medicine/CTSA networking program**  
2009: Selection Committee, Katherine McCormick Fellowship Grants, Stanford University  
2009: Outreach Clinic Pediatric Renal Transplantation, Albuquerque, NM  
2009: Genzyme Transplant Advisory Board Mtg, Denver, Colorado  
2009-12: **Stanford School of Medicine Senator-At-Large, Stanford University**  
2010: Mentor, **Clinical and Translational Research (CTR) Networking Program**, Stanford University  
2010: Genentech B cell Steering Committee, Chair and Speaker, B-cell summit meeting  
2010: Setup Outreach Clinic Pediatric Renal Transplantation, Las Vegas, NM  
2010: Setup Outreach Clinic Pediatric Renal Transplantation, Madera, CA  
2010: **Invitrogen Advisory Board**, Del Mar, CA  
2010: **Clinical Transplant Program Leadership Group**, Stanford University  
2010-11: **Chair Annual American Society for Reconstructive Transplantation Mtg**, Chicago  
2011:

**Stanford Business School Project Scientific Lead:** Evaluating Entrepreneurial Opportunities Winter/Spring Quarter, S356  
 2011: Setup Outreach Clinic Pediatric Renal Transplantation Las Vegas, NM  
 2011-12: Setup Outreach Clinic IPTA/ All India Institute of Medical Sciences , New Delhi, India  
 20110:-13 Katherine McCormick Postdoctoral Fellowship Committee, Stanford University  
 2012: current **Rose Payne Award Committee**, American Association of Histocompatibility and Immunogenetics  
 2012: **National Kidney Foundation (Florida), Cunio/ Richardson Award**  
 2011-2015 **Outreach Committee Chair, IPTA**, Re-elected for second term  
 2013-current **Fred Hutchinson Cancer Research Center**, Biomarker Advisory Group  
 2014-current **UCSF Medical School Selection Committee**, University of California San Francisco  
 2014-current **Berkeley/UCSF Masters in Translational Medicine Program**, Mentor/Steering Cmtee Member  
 2014: **Scientific Advisory Board**, Rheumatology Anti-CD20 Franchise, Genentech  
 2014-current: **Scientific Advisory Board**, Transplant Franchise, Immucor  
 2010-16: **UCSF Medical School Admissions Committee**  
 2011-current: **NIH Study Section Member**, Pathobiology of Kidney Diseases (PBKD), NIDDK-NIH  
 2014-18: **Data Safety Monitoring Board**, Louisville Hand Transplant Program  
 2015-18: **Elected Councillor (North America)**, The Transplantation Society  
 2016- current: **FDA Science Board Member**  
 2016-2019 **Scientific Advisory Board**, Terasaki Foundation  
**Member**, Elected to UCSF Academic Senate Graduate Council, University of California San Francisco  
 2016: Awarded 1<sup>st</sup> Place “KIT” **Shark Tank Award**, ASAIO, Presented by Joshua Yang, MTM. Annual Systemwide Bioengineering Symposium, UCSF Mission Bay  
 2015-current: Dept of Surgery, Resident Research Committee  
 2017: **Chair**, NIH CDRMP Grants Review Study Section  
 2017: **Chair, Genomics Symposium**, FDA Scientific Review Seminar  
 2017: **FDA Special Review Committee**, Precision Medicine Initiative (CBER)  
 2017: **External Review Committee, FDA Scientific Review**  
 2017: **Chair, Genomics Updates**, CTOT Annual Mechanistic Assays Meeting  
 2017: **Presenter**, Mechanistic Assays for HIV+ Kidney Transplant Patients, UO1 NIH Consortium  
 2017: **Co-Chair**, NIH APOL1 NIDDK UO1 Consortium Study Section  
 2017: **Reviewer**, SBIR Small Business in Kidney Disease, NIDDK NIH  
 2018: **Member**, 2018 Summer Research Training Program (SRTP) Selection and Placement Committee  
 2018: Grand Rounds and Clinical Service Conferences, UCSF (16 CME credits, Jan – June 2018)  
 2018: Grand Rounds and Clinical Service Conferences, UCSF (1 Self Assessment credits, Jan – June 2018)  
 2018-2021 **Member**, Elected to UCSF Academic Senate Privilege and Tenure, University of California San Francisco  
 2018 **Peer Review of Article Title:** Urinary Metabolomic Profiling for Noninvasive Diagnosis of Acute Cellular Rejection after Kidney Transplantation (3 CME Credits)  
 2018 Transplant 2018: Pioneering Advances in Transplantation (10.75 CME Credits)  
 2018-2019 UCSF Academic Senate Coordinating Committee on Graduate Affairs (CCGA) Representative

**Memberships (with key activities listed for each organization):**

- *American Transplant Congress (ATC)*
  - 2003: Co-Chair, ATC Pediatrics Committee
  - 2003: Speaker, Genomics Symposium
  - 2005: Co-Chair, ATC Membership Committee
  - 2002-5: ATC Clinical Trials Committee
  - 2002-2004: ATC Scientific Abstract Review Committee
  - 2001, 2003: Chair, ATC Luncheon Symposium
  - 2004: Chair, ATC Genomics Symposium
  - 2005: Chair, ATC Luncheon Symposium
  - 2006: Symposium Speaker, World Transplant Congress, B cell Symposium
  - 2007: ATC “Clinical Science: Kidney, Pediatrics” Review Committee
  - 2008: Chair, ATC Concurrent Session, Toronto, Canada



2008:	ATC Abstract Committee: Pediatrics- Chair
2008-2012:	Elected Co-Chair, Executive Committee ATC Women's Health Community of Practice (WHCOP)
2009:	AST Communications Committee Member
2009:	Plenary Speaker, ATC Winter Symposium, Banff, Canada
2009:	Abstract Reviewer , ATC Congress Boston, MA
2009:	Co-Chair, Concurrent Session, ATC Congress Boston, MA
2009:	Speaker, ATC Sunrise Symposium, Boston, MA
2010:	Chair, Abstract Reviewing Cmtee, Pediatrics, ATC Congress, San Diego, CA
2011:	Speaker, CST-AST Distinguished Fellows Research Symposium
2011:	Chair, Abstract Reviewing Cmtee, Pediatrics, ATC Congress(May), Philadelphia, PA
2011:	Chair, Pediatrics Session, ATC Congress (May), Philadelphia, PA
2011:	Speaker, AST-CST Clinical Trials Symposium , Philadelphia, PA
2012:	Co-moderator, ATC Faculty Workshop, Boston, MA
2013:	Symposium Speaker, ATC Annual Meeting, Seattle, WA
2014:	Basic Science Review Committee, San Francisco, CA
2014:	Chair, Sunrise Symposia on Proteomics, WTC, San Francisco, CA
2014:	Pre-Meeting Symposia Speaker, WTC, San Francisco, CA
2014-current:	Member, Community of Basic Scientists (COBS)
2015:	Chair, Pediatric Abstract Review Cmtee, ATC Annual Meeting, Philadelphia, PA
2016:	Abstract Review Committee, Symposium Plenary Speaker, ATC Annual Meeting, Boston

■ *International Pediatric Transplant Association (IPTA)*

2003:	Chair, IPTA Pediatrics Symposium, Rio de Janeiro, South America
2005:	Chair, IPTA Genomics Symposium, Innsbruck, Austria
2005:	Plenary, IPTA meeting, Innsbruck, Austria
2003-current:	NAPRTCS Annual meetings (SNS01 CCTPT NIH study PI)
2005:	NAPRTCS Grant Review Committee
2006-11:	Elected Councilor
2007:	Plenary, Genomics, IPTA meeting, Cancun, Mexico
2007:	Co-Chair, Basic Science Committee, IPTA
2007:	Key Note Lecturer "What's New, What's Hot" (Basic Science), IPTA, Cancun, Mexico
2008:	Abstract Reviewer; IPTA Congress Meeting 2009 (Istanbul, Turkey)
2009:	Key Note Lecturer "What's New, What's Hot" (Basic Science), IPTA, Istanbul, Turkey
2011:	Outreach Clinic IPTA/ All India Institute of Medical Sciences , New Delhi, India
2011:	Plenary Speaker, IPTA 6 <sup>th</sup> Congress (Jun 27),Montreal, Canada
2012:	Extended term Councilor, IPTA
2013:	Chair: Basic Science Session, IPTA Annual Meeting, Warsaw, Poland
2014:	Chair: Basic Science Abstract Review, IPTA Annual Meeting, San Francisco, CA
2014-2015:	Co-Chair: Local Organizing Committee, IPTA Annual Meeting, San Francisco, CA
2017:	Abstract Review Committee

■ *The Transplantation Society (TTS)*

2003:	Symposium Speaker, International Transplant Meeting, Rome, Italy
2005:	Plenary, International Transplant Congress, Vienna, Austria
2006:	State of the Art Webcast
2006:	World Transplant Congress, Special B-cell Symposium Speaker
2007:	Key Opinion Leader, Hong Kong
2008:	Key Opinion Leader, Costa Rica
2008:	Post- Graduate Education Speaker, Sydney, Australia
2008:	Pediatric Symposium Chair and Speaker, XXII International TTS Congress, Sydney
2010:	<b>Chair and Founder, First Conference on Transplantomics &amp; Biomarkers in Organ Transplantation, San Francisco, CA</b>
2010:	Symposium Speaker XXIII International Congress, TTS Vancouver, Canada
2010:	Speaker, First Annual Mtg., Spanish Transplant Society, Seville, Spain

- |       |  |
|-------|--|
| 2010: | Speaker, Annual Mtg Transplantation Soc of Australia and New Zealand, Canberra, Australia          |
|       | Speaker, Key Opinion Leader Meetings in Goa, Calcutta, and New Delhi, India                        |
| 2011: | Session Co-Chair and Speaker, 2 <sup>nd</sup> International Conference on Transplantomics and      |
| 2012: | Biomarkers in Organ Transplantation, Barcelona, Spain  |
| 2013: | Speaker, Dutch Society of Nephrology/ TTS, Netherlands   |
| 2013: | Speaker, International Liver Transplant Meeting/ TTS, Sydney, Australia                            |
| 2013: | Speaker and Chair, International Transplantation Society; 3 <sup>rd</sup> Transplantomics Meeting, |
| 2013: | Cambridge, UK  |
| 2013: | Speaker and Chair, International Pediatric Transplant Meeting, Warsaw, Poland                      |
| 2013: | Speaker, 12 <sup>th</sup> Annual Banff Conference, Comandatuba-Bahia, Brazil                       |
| 2015: | Speaker, 13 <sup>th</sup> Annual Banff Conference, Vancouver, Canada                               |
| 2015: | FDA/TTS Meeting on designing clinical trials, Washington DC  |
| 2016: | Speaker, Chair; TTS Biannual meeting, Hong Kong  |
| 2017: | TTS Leadership Series Faculty; Research Leadership Coach   |
- 
- |   |   |
|---|---|
| <p>■ <i>American Society of Transplant Surgeon (ASTS): Combined Meeting with the AST to form the ATC after 2007</i></p> |   |
| 2003:   | Speaker, Basic Science Symposium, Tucson, Arizona                                 |
| 2004:   | Plenary, Annual Meeting of the Canadian Transplant Society, Mt. Tremblant, Canada |
| 2005:   | Speaker and Committee member, Fujisawa and ASTS Advisory Meeting                  |
| 2006:   | Plenary, Annual Meeting of the ASTS, Miami, Florida                               |
| 2007 – Present  | Speaker at ATC/AST Annual Meetings  |
| 2013  | PCOP-ASTS/AST Executive Committee Member  |
| 2013  | WHCOP-ASTS/AST Executive Committee Member   |
  
  - |  |   |
|--|---|
| <p>■ <i>American Society of Nephrology (ASN)</i></p> |   |
| 2003-2006:   | ASN Grants Review Committee   |
| 2004-6:  | ASN Scientific Board  |
| 2004:  | Chair, Genomics Symposium   |
| 2003-6:  | TAG Committee for Nephrology Grant Reviews  |
| 2006:  | Co-Chair, Genomics and Proteomics Symposium   |
| 2009:  | Speaker, Annual Scientific Meeting, San Diego, CA   |
| 2012:  | Abstract Category Chair: 404 Genomics/Proteomics/Systems Biology of Renal Disease         |
| 2012 – 2018  | <b>ASN Grant Review Committee</b>   |
| 2013   | ASN Chair, Basic Science, Annual Scientific Meeting, Philadelphia, PA                     |
| 2013   | ASN Kidney Week, Moderator, Novel Biomarkers in Clinical Transplantation Atlanta, Georgia |
| 2013-19  | ASN Abstract Review Committee   |
  
  - |  |  |
|--|--|
| <p>● <i>American Society of Histocompatibility and Immunogenetics (ASHI)</i></p> |  |
| 2005:  | Speaker, Annual Meeting, San Francisco, CA |
| 2012:  | Speaker, Annual Meeting, New Orleans       |
| 2014:  | Speaker, Annual Meeting, Denver, CO        |
| 2012-current   | Roase Payne Committee, AASHI               |
  
  - |   |  |
|---|--|
| <p>■ <i>International Pediatric Nephrology Association (IPNA)</i></p> |  |
| 2003:   | Plenary, IPNA meeting, Seattle, USA                                    |
| 2004:   | Symposium Speaker, IPNA meeting, Adelaide, Australia                   |
| 2005:   | Satellite Symposium, Speaker, IPNA Growth meeting, Heidelberg, Germany |
| 2007:   | Plenary, IPNA Annual meeting, Budapest                                 |
| 2007:   | Immunosuppression symposium, IPNA meeting, Budapest                    |
| 2010:   | Invited Speaker, IPNA Annual meeting, New York                         |
| 2013:   | Invited Speaker, IPNA Annual meeting, Shanghai, China                  |
| 2014:   | Plenary and 2 Symposia Lectures, IPNA meeting, New Delhi India         |
  
  - |   |  |
|---|--|
| <p>■ <i>International Cystinosis Foundation</i></p> |  |
|---|--|

2003:	Plenary, International Cystinosis Meeting, Bergamo, Italy
2005	NIH-ORD Special Session Participant to Evaluate Research Needs in Cystinosis, Washington DC
2005:	Plenary, International Cystinosis Meeting, Tarragona, Spain
2008:	Plenary, International Cystinosis Meeting, Dublin, Ireland
2002-10:	Scientific Advisory Board, International Cystinosis Foundation
2015:	Symposium Speaker, NKF Annual meeting, Symposium on Cystinosis

■ *Cystinosis Research Foundation (USA) and the Cystinosis Foundation (Ireland)*

2003-11:	Scientific Advisory Board (SAB) Member
2003:	Symposia, National Cystinosis Meeting, Las Vegas, USA
2005:	Plenary, National Cystinosis Meeting, Salt Lake City, Utah, USA
2007:	Plenary Speaker, Cystinosis Meeting, Barcelona, Spain
2008:	Symposium Speaker, Cystinosis Foundation Meeting Dublin, Ireland
2011:	SAB Meeting, CRN Family Conference, San Francisco
2019-14:	Principal Investigator, RP103/104 trials, Raptor Pharmaceuticals, USA
2014:	KDIGO Cystinosis Consensus Meeting, Lisbon, Portugal
2015:	Plenary Speaker, Cystinosis Research Network Annual Meeting, Chicago
2017:	Plenary Speaker, Cystinosis Ireland Annual Meeting, Dublin

■ *Clinical Immunological Society*

2000-3:	Clinical Immunological Society Scholarship
2004:	Plenary, FOCIS meeting, Colorado, USA
2005:	Symposia, FOCIS meeting, Boston, USA
2008:	Plenary, FOCIS meeting, Boston, USA
2014:	Plenary, FOCIS meeting, Boston, USA

• *American Society for Reconstructive Transplantation*

2010:	Chair, Speaker, Annual Meeting, Chicago
2012:	Speaker, Bi-annual Meeting, Chicago
2014:	Speaker, Bi-annual Meeting, Chicago

• *European Society of Organ Transplantation*

2014	Plenary, ESOT Annual Meeting, Madrid
2014:	Special Symposia on Immune Monitoring, ESOT, Madrid
2015:	Plenary Speaker, ESOT Annual Meeting, Brussels

---

**Research Activity:**

**Active Research Support:**

1. **Droplet Single-cell RNA sequencing (Dsc-RNASeq) to assess the effect of IL-6 Inhibition with Tocilizumab to Promote Tregs and Control Sub-Clinical Renal Graft Inflammation** (Sarwal)

NIAID	9/1/2018 – 8/31/2019	1 calendar
	\$235,082	

2. **R01 DK109720-02** (Sarwal/Reiser)

NIH/NIDDK	05/01/17– 04/30/22	1.20 calendar
	\$560,227	

CD40 autoantibody and FSGS recurrence  
The major goal of this project is to study CD40 Abs role in FSGS recurrence after kidney transplantation.

3. **Service Core 2: Proteomics Core – Validating and Advancing a Plasma/Serum Proteomics Pipeline** (Sarwal)

NIH	08/21/18-11/30/18	.33 calendar
	80,000	

4. **T32AI125222** (Sarwal/Stock)

NIH/NIAID	08/01/16– 07/31/21	2.40 calendar
	\$146,52	(Effort provided by Department)

Filling a Void of Research Training for Transplant Surgeons (FAVOR)  
 Training grant for transplant surgeons

5. <b>R21TR001761</b> (Sarwal) NIH/NCATS Drug Repositioning in Diabetic Nephropathy The major goal of this project is to evaluate in vitro and in vivo efficacy of repositioning drugs for treating diabetic nephropathy.	09/01/16– 07/31/19 \$200,000	0.60 calendar
6. <b>U01 AI113362-01</b> (Vincenti) NIH/NIAID CTOT Treg and Tocilizumab Therapy for Sub-Clinical Inflammation in Renal Allografts The major goal of this study is to treat patients with poly and darTreg infusions to alleviate sub-clinical inflammation on 6 month protocol biopsies. Also use IL6RmAb to treat the same condition.	09/01/14– 08/31/21 \$215,886	0.60 calendar
7. <b>U01AI063594</b> (Vincenti/Sarwal) NIH/NIAID Icahn SOM, Mount Sinai (CTOT-ancillary) The goal of this proposed ancillary study is to investigate the VDJ sequencing for predicting risk of rejection and sub-clinical inflammation in the Treg trial.	09/01/15– 08/31/17 \$199,173	0.12 calendar
8. <b>U01AI118594-01</b> (Stock) NIH/NIAID Impact of CCR5 Blockade in HIV+ Kidney Transplant Recipients The major goal of this project is to identify biomarkers to predict risk for acute rejection in HIV+ kidney transplantation.	07/01/15– 06/30/20 \$23,940	0.12 calendar
9. <b>Genentech IST</b> (Sarwal) Genentech Genomics of IgAN The major goal of this genomic study is to investigate the efficacy and safety of Rituxan for treatment of IgA Nephropathy.	07/01/09– 07/24/18 \$16,128	no FTE requested
10. <b>Natera IST</b> (Sarwal) Natera cfDNA analysis in plasma The major goal of this project is the evaluation of donor specific cell free DNA in plasma of kidney transplant patients.	07/01/14– 06/30/21 \$74,627	0.12 calendar
11. <b>MRCG-2016-7</b> (Sarwal) Health Research Board, Ireland MRCG/HRB-Cystinosis Ireland The major goal of this project is to monitor autophagy and novel therapy for nephropathic cystinosis.	01/05/17– 01/04/20 €300,000	0.12 calendar
12. <b>R01 DK103735-01</b> (Cooper/Baron) NIH/NIDDK Clinical and immunological study of treatment withdrawal in E-AG negative hepatitis B.	12/01/16– 02/28/20 \$314,611	0.12 calendar
13. <b>U19 U19AI128913</b> (Sarwal /Reed) NIH/NIAID Mapping Immune Responses to CMV in Transplant Patients The major goal of this project is to study the systems biology of CMV infection.	03/01/17-02/28/22 \$1,600,000	2.4 calendar
14. <b>UG3DK114937</b> (Laszik/ Sarwal) NIH/NIDDK Multidimensional cellular interrogation of the kidney in AKI and CKD	6/30/17-22 \$750,000	01 calendar
15. <b>Catalyst Plus/ CTSI grant</b> (Sarwal) CTSI/NIH Customizing post tx risk of rejection with the TRAP assay	6/1/17-7/1/18 \$100,000	no FTE

16. <b>NIH-A130430</b> (Sarwal)	11/1/17-8/1/18	no FTE
NIH/ NIAID; Icahn School of Medicine, Sinai	\$190, 000	
CYTOF analysis for transplant rejection and subclincial inflmamation		

**Pending Research Support:**

1 <b>P0530947</b> (Sarwal PI/ Silvia Pineda San Juan)	06/01/2018 – 05/31/2019	0.12 calendar
NIH-NIAID, Yale University(YALE U)	40,000	\$
Identification, Standardization and Dissemination of HIPC Immune Signatures.		

2. <b>R34</b> (Sarwal/Vincenti)	01/12/17 – 01/12/18	0.12 calendar
NIH/NIAID	\$150,000	
Personalizing Costimulation Blockade Efficacy in Renal Transplantation (PACER)		
The major goal of this project is precision medicine with biomarker monitoring to select patients for belatacept induction.		

3. <b>RC2</b> (Sarwal/ Nolan)	6/1/18-23	0.24 calendar
NIH/ NIDDK	\$10 million	
The normal human kidney cell atlas and its pertubations with age		

**Completed Research Support:**

1. **CRAD001A US 106T** Sarwal M (PI) 3/01/12–11/01/14  
*Serial Monitoring of novel antibody biomarkers for NODAT*  
 Major Goal: Ab biomarkers to predict new onset of diabetes mellitus after Transplantation (NODAT)
2. **CTOT-C NIH/ NIAID Grant 1U01 AI077821** Kirk (PI), Sarwal (P Leader) 3/01/08-02/28/14  
*Development of Transplant Strategies Uniquely Responsive to the Needs of Children*  
 Major Goal: Investigate innate alloimmune responses after organ transplantation in children
3. **Bristol Myers Squibb IST** Sarwal (PI), Alberu (Co-PI) 1/07/13-12/31/18  
*Novel cell subset analysis in long-term Belatacept treated renal transplant recipients.*  
 Major Goal: Are ther differences in B cell phenotypes in Belatcept treated transplant patients?
4. **NIH/NLBI P01 HL-075462/NLBI** Strober(P Dir), Sarwal (P Lead) 12/01/03-05/31/13  
*Blood Stem Cell transplantation as Immunotherapy*  
 Major Goal: To obtain a deeper understanding of the immunobiology of nonmyeloablative Allogeneic hematopoietic cell transplantation.
5. **NIH/NIAID (1)RO1AI-085024-01** Sarwal , Strober (PIs ) 9/25/09-08/31/13  
*Gene and Cytokine Expression in Tolerance and GVHD*  
 Major Goal: Enhance and improve the immune monitoring of peripheral blood mononuclear cells.
6. **Raptor Therapeutics Inc** Sarwal (PI) 11/12/10–1/4/14  
*A Long-term, Open-Label, Safety and Efficacy Study of Cysteamine Bitartrate delayed-release capsules (RP103) in Patients with Nephropathic Cystinosis*  
 Major Goal: To establish genomic markers for intragraft and non-invasive immune monitoring of pediatric renal transplant recipients by microarray profiling.
7. **California Institute for Regenerative Medicine (CIRM)** Contag (PI), Sarwal (Co-PI) 10/01/10-09/30/13  
*Engineering Embryonic Stem Cell Allografts for Operational Tolerance*  
 Major goal: Contribute to the experimental design, drawing on genomics database of transplant Patients, oversee microarray analysis of mice receiving engineered stem cell transplants, and Participate in the publication of the results.
8. **NIH RO1 LM 009719-01A1** Butte (PI), Sarwal (Co-Inves) 9/30/08-09/29/12  
*Integrating Micoarray and Proteomic Data by Ontology-based Annotation*  
 Major Goal: To assimilate genomic, proteomic and antibody measures in transplantation to evaluate novel biomarkers for monitoring transplant health and dysfunction.
9. **NIH/NIAID: (UO1AI063594-06) ARRA** Heeger (P.Dir) Sarwal (P.Leader) 9/13/10-09/12/12  
*NIH/Mt. Sinai School of Medicine (Heeger)*  
*Mechanistic Studies Supplemental to Clinical Trials in Organi Transplantation (CTOT) and CTOTC Consortia*  
 Major Goal: Build upon findings resulting from previous 4 years of studying biomarkers and mechanisms of injury in heart and kidney transplant recipients to develop therapies tailored to Individual patients.
10. **Bristol Myers Squibb Award** Sarwal (PI) 11/01/10-02/01/12

*Analysis of Genomics of Belatacept in Preserving Renal Function*

Major Goal: To find biomarkers for chronic graft injury with CNI agents and accommodative genes with Belatacept.

11. **Raptor Therapeutics Inc** Sarwal (PI) 8/17/10-08/16/11  
*A Pharmacokinetic and pharmacodynamic study to determine the safety and efficacy of Cysteamine Bitartrate delayed-release capsules (RP103), compared to Cystagon in patients with nephropathic cystinosis.*  
Major Goal: to determine the 2 weeks of treatment at steady-state with Q12H dosing of RP103 results in comparable depletion of white blood cell cystine levels relative to Q6H dosing of Cystagon.
12. **ARRA Supplement (2) U01 AI077821** Kirk (PI), Sarwal (Site PI) 9/13/10-09/12/11  
*Development of Transplant Strategies Uniquely Responsive to the Needs of Children*  
Major Goal: Investigate innate alloimmune responses after organ transplantation in children
13. **NIH/NIAID ARRA Award 1R21 AI-075256-01A2** Sarwal (PI) 6/01/09-05/31/11  
*Novel Urinary Proteomic Biomarkers for Acute Renal Transplant Rejection*  
Major goal: Study the diagnostic and prognostic urinary non-invasive biomarkers for acute rejection in pediatric kidney transplantation.
14. **NCCR Program Project Grant** David Camp (PI) Sarwal (Site Chair) 2/01/07-01/31/12  
*Urinary Proteomics in Renal Transplantation*  
Major Goal: Urinary proteomics in transplant rejection.
15. **Cystinosis Foundation (Ireland)** Sarwal (PI) 3/01/09-02/28/12  
*Investigation of a Protective Mechanism against Renal Injury in Patients with Nephropathic Cystinosis*  
Major goal: Investigate the mechanisms that explain the molecular function of Clu.
16. **Wyeth CNI-W Study** Sarwal (PI) 10/01/08-07/31/11  
*Novel Pilot Trial of Sirolimus, Mycophenolate Mofetil and Corticosteroids Versus an Historic Control Population Receiving Calcineurin Inhibitors Based Immunosuppression.*  
Major Goal: To study the hypothesis that the use of Sirolimus (SRL) in pediatric kidney transplantation will allow the withdrawal of Calcineurin inhibitor and improve kidney function and long term survival in patients.
17. **IST Genentech Grant (IgA Nephropathy)** Sarwal (PI) 8/26/09 –05/31/12  
*A multicenter, Randomized Prospective, Open-Label Trial of Rituximab in the Treatment of Progressive IgA Nephropathy (Mayo Clinic)*  
Major Goal: A clinical study of the efficacy and safety of Rituxan for treatment of IgA Nephropathy
18. **LPCH Pediatric Research fund** Sarwal (Mentor) 1/03/11-01/02/12  
*An integrative study of chronic allograft injury in pediatric renal transplantation. (Fellow- Vialone)*
19. **National Kidney Foundation Fellowship** Sarwal (Mentor) 7/01/09-06/30/11  
*Urinary Biomarker Discovery and Validation for Diagnosis and Risk Stratification of Acute Renal Transplant Rejection. (Fellow- Abanti Chaudhuri)*  
Major Goal: Evaluation of urine genes to predict acute rejection in the transplant without a biopsy
20. **CHRI Morgridge & Gallo Fellowship Award** Sarwal (Mentor) 7/01/09-06/30/10  
*“Web-based Learning Portfolios in Pediatric Rheumatology Education”*  
Fellowship awarded to Maria Caimol (postdoctoral fellow) to investigate the number and function of NKT cells as well as T and B cells in SLE kidney biopsies.
21. **Transplant/Tissue Engineer Ctr of Excellence Award** Sarwal (Med Direct- Clinic) 9/01/10-01/31/11  
Stanford University Childrens’ Health Initiative Grant  
*Travel Budget for Pediatric Renal Transplant “Outreach” Development in selected cachement areas Across Western US.*  
Major Goal: Develop additional patient referrals for Lucile Packard Children’s Hospital at Stanford
22. **NCCR Small Project Grant** Sarwal (PI) 12/01/06-11/30/10  
*A Urinary Proteome Map*  
Major Goal: Urinary normal proteome map
23. **CHRP Grant** Sarwal (PI) 12/01/08-11/30/09  
*Novel Urinary Proteomic Biomarker for Acute Renal Transplant Rejection*  
Major Goal: The discovery of non-invasive urinary biomarker for diagnosis of acute rejection in renal transplant recipients
24. **Bio-X Interdisciplinary Initiative Program/BioX** Sarwal (PI) 1/01/09–12/31/10  
*Integrative Proteo-Genomics to Develop Common Non-invasive Diagnostic Assays for Graft Injury*  
Major Goal: Integrative Proteo-Genomics for Transplant Biomarker discovery

25. **NIH/CCTPT Grant (U01 AI55795-02)** Sarwal (Co-PI, Study Chair) 9/01/03-08/31/09  
*New NAPRTCS Trails in Steroid-Free Immunosuppression*  
Major Goal: To demonstrate safety and efficacy of steroid-free Rx in pediatric kidney transplantation.
26. **Alexion Pharmaceuticals** Sarwal (PI) 9/01/07-09/01/09  
*An open-label, multi-center controlled clinical trial of Eculizumab in adolescent patients with plasma therapy-resistant or sensitive atypical hemolytic uremic syndrome (AHUS).*  
Major Goal: to determine if eculizumab is safe and effective in the treatment of aHUS in adolescent patients who have not been adequately helped or have suffered side effects from the current available treatments.
27. **Hyperaccelerated Grant (R01 AI 61739-01)** Sarwal (PI) 6/08/06-05/31/09  
*Defining Biomarkers in Pediatric Renal Transplantation*  
Major Goal: To establish genomic markers for intragraft and non-invasive immune monitoring of pediatric renal transplant recipients by microarray profiling.
28. **IST Genentech Grant (Transplant Rejection)** Sarwal (PI) 11/30/06-04/30/09  
*A Prospective Open-Labeled Randomized Study of Rituximab Versus Standard of Care*  
Major Goal: To study the efficacy and safety of Rituxan for treatment of IgA Nephropathy
29. **European Cystinosis Foundation (Ireland)** Sarwal (PI) 11/01/06-04/30/09  
*Investigation of a Protective mechanism Against Renal Injury in a Mouse Cystinosis Model (-/-); based on the Microarray Gene Expression Analysis of Mouse and Human Nephropathic Cystinosis.*  
Major Goal: To study the role of mitochondrial ATP Synthase genes for the pathogenesis of nephropathic cystinosis
30. **Fujisawa Clinical Trial Grant** Sarwal (PI) 9/01/03-08/30/08  
*Steroids versus No-steroids in pediatric renal transplantation using FK, MMF and Daclizumab (Incorporated funds in UO1 award)*  
Major Goal: To demonstrate safety and efficacy of steroid-free Rx in pediatric kidney transplantation
31. **Dean's Fellowship** Sarwal (PI) 2/01/07-01/31/08  
*Urinary Proteomics*  
Major Goal: Urinary proteomics by peptidome analysis
32. **Glaser Mentored Fellowship Award** Sarwal (PI) 6/01/04-05/31/06  
*Non-invasive biomarkers for Renal Allograft Rejection*  
Major Goal: To investigate non-invasive diagnostic biomarkers for AR in blood and urine
33. **ASN Mentored Fellowship Grant** Sarwal (PI) 5/01/03-04/30/04  
*Microarray analysis of CTNS -/- KO mice (mentored award in Sarwal Lab; mentee: F. Alemi)*  
Major Goal: To understand transcriptional differences between wild type and KO mice with Cystinosis
34. **Syreon Cooperation ROAR Study** Scandling (PI), Sarwal (Co-PI) 8/01/01-12/31/04  
*De Novo Rapamycin in renal transplantation*  
Major goal: To study with de novo use of sirolimus in pediatric transplantation
35. **Roche Pharmaceuticals Project Grant** Sarwal (PI) 4/01/01-00/12/03  
*Steroid free transplantation in infant recipients and genomic analysis using cDNA microarrays*  
Major goal: Pilot study of complete steroid avoidance in infant kidney recipients, with genomic profiling
36. **Clinical Scholar Faculty Award (NIH), Stanford** Sarwal (PI) 10/01/00-09/30/03  
*Microarray Analysis of Transplant Rejection*  
Major goal: To define graft dysfunction using cDNA microarrays
37. **Genentech-Rituximab Multicenter Study** Webber (PI), Sarwal (Site-PI) 10/01/01-09/30/03  
*Use of Rituxan in pediatric solid organ transplant recipients with post-transplant lymphoproliferative disorders: an Open Label Phase 11 Multicenter Non-randomized Study*  
Major goal: To establish efficacy of Rituximab in PTLD
38. **Roche Pharmaceuticals Project Grant** Scandling (PI), Sarwal (Co-PI) 7/19/01-06/30/03  
*Steroid free immunosuppression in adult renal recipients of first allografts*  
Major goal: A pilot study of a complete steroid avoidance in adult recipients
39. **Fujisawa Investigational Award** Sarwal (PI) 2/02/00-02/02/03  
*Cytokine gene profiles in vitro in steroid free and steroid based immunosuppression*  
Major goal: To differentiate cytokine gene expression in steroid-free and steroid-based kidney recipients
40. **Innovations in Patient Care Grant, Stanford** Sarwal (PI) 12/01/99-11/30/02

*A program to enhance treatment compliance in pediatric renal transplant recipients*

Major goal: To improve compliance

- |  |                                 |                   |
|--|---------------------------------|-------------------|
| <b>41. <u>Child Health Initiative Grant, Stanford</u></b>  | Sarwal (PI)                     | 6/01/00-06/01/02  |
| <i>Consequences of adult-sized kidney transplantation in infants</i>   |                                 |                   |
| Major goal: To study hemodynamic changes accompanying adult-sized kidneys transplanted into infants.   |                                 |                   |
| <b>42. <u>CHRC-NIH Junior Faculty Award</u></b>  | Sarwal (PI)                     | 6/01/01-05/31/02  |
| <i>Gene expression profiling of transplant dysfunction</i>   |                                 |                   |
| Major goal: To profile different forms of transplant dysfunction using DNA microarrays   |                                 |                   |
| <b>43. <u>Roche Pharmaceuticals Project Grant</u></b>  | Sarwal (PI)                     | 2/01/00-01/31/02  |
| <i>Steroid free immunosuppression in pediatric renal transplantation in 5-21 year old recipients</i>   |                                 |                   |
| Major goal: Pilot study of complete steroid-free immunosuppression   |                                 |                   |
| <b>44. <u>Epidemiology Research Multicenter Study: PTLD</u></b>  | Webber (PI), Sarwal (Site-PI)   | 12/01/99-12/31/01 |
| <i>Multicenter case control study of severe PTLD in renal transplant patients</i>  |                                 |                   |
| Major goal: A retrospective case review of immunosuppression usage and its possible connection to PTLD   |                                 |                   |
| <b>45. <u>NIH CHRC Grant</u></b>   | Cohen (PI), Sarwal (P. Lead)    | 11/01/99-10/31/01 |
| <i>Characterizing granulysin in renal allograft rejection</i>  |                                 |                   |
| Major goal: To characterize granulysin as a non-invasive marker in renal allograft rejection   |                                 |                   |
| <b>46. <u>NKF Fellowship Grant</u></b>   | Sarwal (PI)                     | 8/01/00-07/31/01  |
| <i>Analysis of cytokine genes in a steroid free immunosuppressive regime</i>   |                                 |                   |
| Major goal: To analyze cytokine gene profiles in a steroid-free immunosuppression regime   |                                 |                   |
| <b>47. <u>Dean's Mentored Fellowship Award</u></b>   | Sarwal (PI)                     | 4/01/00-03/30/01  |
| <i>Analysis of cytokine genes in a steroid free immunosuppressive regime</i>   |                                 |                   |
| Major goal: To analyze cytokine gene profiles in a steroid-free immunosuppression regime   |                                 |                   |
| <b>48. <u>LPCH- CHRF Training Grant</u></b>  | Sarwal (PI)                     | 2/01/98-02/01/00  |
| <i>Instigation of a pilot study to establish a role for granulysin in children with kidney transplant rejection.</i>   |                                 |                   |
| Major goal: To characterize granulysin in renal allograft rejection.   |                                 |                   |
| <b>49. <u>NKF Faculty Grant</u></b>  | Sarwal (PI)                     | 12/01/98-11/30/99 |
| <i>Gene chip analysis of novel genetic markers for acute allograft rejection in children</i>   |                                 |                   |
| Major goal: To profile transplant dysfunction using DNA microarrays  |                                 |                   |
| <b>50. <u>NIH CHRC Training Grant</u></b>  | Cohen (PI), Sarwal (Site-Chair) | 10/01/98-09/30/99 |
| <i>Granulysin in acute renal allograft rejection</i>   |                                 |                   |
| Major goal: To characterize granulysin in renal allograft rejection  |                                 |                   |
| <b>51. <u>Medical Research Council (MRC) Fellowship</u></b>  | Sarwal (PI)                     | 10/01/91-09/30/92 |
| <i>Random genomic analysis of the puffer fish <i>Fugu</i> by shotgun sequencing and sequencing restriction enzyme genomic libraries</i>  |                                 |                   |
| <b>52. <u>PhD dissertation, Cambridge University (Mentor: Sydney Brenner)</u></b>  | Sarwal (PI)                     | 10/01/92-09/30/95 |
| National Kidney Research Fund Fellowship   |                                 |                   |
| <i>Studies on the G protein multigene family in the novel vertebrate genome of the puffer fish, <i>Takifugu rubripes</i> (<i>Fugu</i>)</i> PhD dissertation, Cambridge University (Mentor: Sydney Brenner) |                                 |                   |

---

**Invited Lectures/Presentations** (selected out of over 400)

**Selected International Lectures (selected from over 150)**

1. *Transplantomics: Toward Precision Medicine in Transplantation*, SITO, Bologna, Italy (November, 2018)
2. *"Precision Transplant Medicine-handling Bytes for better Insights"*, China Annual Organ Transplant Conference, Beijing, China (October, 2018)
3. *"Donor derived cfDNA as Biomarker"*, China Annual Organ Transplant Conference, Beijing, China (October, 2018)
4. *Reclassifying Transplant Injury* AANZ Conference, Sydney, Australia, (September 2018)
5. *Precision Transplant Medicine: Dawn of a New Age*, AANZ Conference, Sydney, Australia, (September 2018)
6. *"Focal Segmental Glomerulosclerosis (FSGS): It is not just about Proteinuria"*, AANZ Conference, Sydney, Australia, (September 2018)
7. *"Plasma Donor-Derived Cell-Free DNA Quantification by massively multiplex PCR Distinguishes Kidney Transplant Acute Rejection"*, TTS, Madrid, Spain, (July, 2018)



8. *"The Results of the PRISM (Prediction of Rejection In Sensitized patient blood saMples) Trial with a Novel Bioassay"*, TTS, Madrid, Spain, (July, 2018)
9. *"Moderator: Lunch and Learn Session: "Precision Transplant medicine: what's next?"*, TTS, Madrid, Spain, (July, 2018)
10. *"Moderator: TTS: Lunch & Learn- Precision Transplant medicine: what's next?"*, TTS, Madrid, Spain, (July, 2018)
11. *"Novel Biomarkers for allograft rejection in SOT"*, 32nd European Immunogenetics and Histocompatibility Conference, Venice, Italy, (5/10/2018)
12. *"Mitochondrial Abnormalities in Nephropathic Cystinosis"* Plenary, Cystinosis Ireland, Dublin (2/1/17)
13. *"Precision Medicine in Transplantation"* Key Note Lecture, University of Southern Denmark, Odense (9/30/15)
14. *"Understanding Transplant Tolerance"* University Hospital Mexico, Mexico City (7/5/15)
15. *"The kSORT assay for transplant monitoring"* The Danish Transplant Meeting (10/1/15)
16. *"The Personome in Transplantation"* The Wadden Symposium, The Netherlands (6/5/15)
17. *"Biomarkers for Transplant Injury"* Asian Transplant Forum, Jeju, South Korea (3/1/15)
18. *"The role of Antibodies in Graft Injury"* Bastion des Hospices de Beaune French Transplant Meeting (5/4/15)
19. *"Cystinosis Basic Science"* KDIGO Workshop, Lisbon, Portugal (12/11/14)
20. *"nHLA Antibodies and Graft Injury"* Bastion des Hospices de Beaune French Transplant Meeting (6/4/14)
21. *"Personalizing Medicine Through OMICS"* Plenary Talk at the ESOT Annual Meeting, Madrid (10/17/14)
22. *"Sorting Applies from Oranges: the kSORT Assay for Profiling Immune Risk"*, ESOT Annual Meeting, Madrid (10/18/14)
23. *"Gene Expression in protocol biopsies as a predictor of chronic allograft injury"* 12<sup>th</sup> Banff Conference, Brazil (8/19/2013)
24. *"Application of Genomics to Solid Organ Transplantation"* IPTA 2013, Warsaw, Poland (7/15/2013)
25. *"Gene Signature of Tolerance and Clinical Liver Transplantation"* ILTS 2013, Sydney, Australia (6/15/2013)
26. *"Tolerance Markers in Kidney Transplantation"* WAKTS, Perth, Australia (6/10/2013)
27. *"B Cells, friends or foes?"* French Transplant Meeting, Beaune, France (5/30/2013- 5/31/2013)
28. *"Non-invasive diagnosis of solid organ transplant rejection"* Sociedad Espanola de Trasplante, Seville, Spain (4/2/2013)
29. *"Management of recurrent glomerulosclerosis after transplantation"* TTS 2013, Cambridge, UK (4/5/2013)
30. *"Biomarkers in solid organ transplantation: establishing personalized transplantation medicine"* Guadalajara, Mexico (12/06/2012)
31. *"Steroid-free immunosuppression in kidney transplantation – Success with Daclizumab and Thymoglobulin"* Dinner symposium, Guadalajara, Mexico (12/07/2012).
32. *"Understanding Common Rejection Pathways Uncovers Novel Immunosuppressive Drugs in Solid Organ Transplantation"* Pucon, Chile (9/26/2012).
33. *"Can we Monitor for Tolerance in Organ Transplantation?"* Pucon, Chile (9/27/2012).
34. *"Novel Insights into Mechanisms and Therapy for FSGS"* Pucon, Chile (9/27/2012).
35. *"Three Year Results of the NIH Multi-center US Steroid Avoidance Trial"* Pucon, Chile (9/28/2012).
36. *"Unravelling Omics for Personalized Medicine"* University of Heidelberg, Germany (5/18/2012).
37. *"Proteomic and Metabolomic-based Biomarkers in Organ Transplantation"* Beaune, France (5/22/2012).
38. *"Prediction of Chronic Renal Allograft Injury"* Beaune, France (5/20/2012)
39. *"Biomarkers in Organ Transplantation" Theme: Transplantation.* Dutch Nephrology Days, Netherlands, Amsterdam (4/3/2012).
40. *"Personalized Medicine Through OMICS Strategies, The Hunt for Biomarkers and Novel Drug Targets in Organ Transplantation,"* University Hospitals Leuven, Belgium (4/2/2012).
41. *"Advanced HLA Technical Workshop, Clinical Histocompatibility Workshop"* Honolulu, Hawaii (3/6/2012).
42. *"Tolerance Monitoring in Kidney Transplantation"* 12<sup>th</sup> Congress of the Asian Society of Transplantation, Seoul, Korea (9/26/2011).
43. *"Omics, Heat-Maps and Gene Expression Profiles: What they are and what they mean"* 15<sup>th</sup> Congress of the European Society for Organ Transplantation, Glasgow, Scotland (9/05/2011).
44. *"What's New What's Hot"* IPTA 6<sup>th</sup> Congress, Montreal, Canada (6/28/2011).
45. *"Gene Array, Proteomics, and Biomarkers for the Clinician"* (6/27/11) IPTA 6<sup>th</sup> Congress, Montreal, Canada
46. *"Biomarkers in the Identification of Rejection and Tolerance"* Satellite Symposium to the 2011 Joint Annual Congress of ILTS, EIITA, & LICAGE, Valencia, Spain (6/22/2011).
47. *"Biomarkers to Improve Patient Management in Solid Organ Transplantation"* 2<sup>nd</sup> International Conference on Transplantomics and Biomarkers in Organ Transplantation, Barcelona, Spain (3/14/2011).
48. *"Genomic and Proteomic Diagnosis of Acute Rejection"* Annual Meeting Canadian Society of Transplantation, Mt Tremblant, Canada (3/03/2011).
49. *"A Primer on Manuscript Writing and Publishing"* CST-AST Distinguished Fellows Research Symposium, Mt Tremblant, Canada (3/02/2011)
50. *"Steroid Free Immunosuppression – Is the Time Ripe"*, Renal Transplant Summit, nKOL Mtg, Kolkata & New Delhi, India (2/23 & 2/27/2011).

51. "Biomarkers to Optimize/Individualize Therapy" Renal Transplant Summit, nKOL Mtg, Goa, India (2/26/2011).
52. "Transplantomics: Report of the First International Meeting", Genome BC Symposium, The Transplantation Society 2010 Congress, Vancouver, Canada (8/17/2010).
53. "Antibody-Mediated Rejection- an Ounce of Prevention is Worth a Pound of Cure" ROTRF Sunrise Symposium, The Transplantation Society 2010 Congress, Vancouver, Canada (8/16/2010).
54. "Bringing 'Omics' to Transplantation" The Transplantation Society 2010 Congress, Vancouver, Canada (8/14/2010)
55. "B-cells and Antibodies in Transplantation: To B or not to B in Transplantation" Transplantation Society of Australia and New Zealand Annual Scientific Meeting, Sydney Australia (6/25/2010).
56. "Customizing Immunosuppression by Omics in Transplantation," Transplantation Society of Australia and New Zealand Annual Scientific Meeting, Sydney Australia (6/23/2010)
57. "Molecular Markers of Tolerance: Moving to the clinical application" First Annual Mtg of Spanish Transplant Society, Seville, Spain (6/06/2010).
58. "B Cell Signatures of Rejection in Kidney Transplantation" Seminar in Transplant Research, Beaune, France (5/28/2010).
59. "Genetic Profile in Acute Rejection" XVIII Annual Update of the Nephrological Research Mexican Institute, Mexico City, Mexico. (4/07/2010 & 4/08/2010).
60. "Tolerance Mechanisms" XVIII Annual Update of the Nephrological Research Mexican Institute, Mexico City, Mexico (4/07/2010).
61. "Customizing Immunosuppression in Organ Transplantation" Symposium Speaker, Genetics in Transplantation Workshop, Royal Society, London, U.K (11/17/2009).
62. "Immunological Monitoring in Transplant: Is it Possible to Individualize the Immunosuppression" (10/16/09) Speaker, 11<sup>th</sup> Brazilian Congress of Transplantation, Recife, Brazil.
63. "Transplantation in Infants" (10/16/09) Speaker, 11<sup>th</sup> Brazilian Congress of Transplantation, Recife, Brazil
64. "Minimization in Children" (10/16/09) Speaker, 11<sup>th</sup> Brazilian Congress of Transplantation, Recife, Brazil
65. "Basic Science" in "What's New/What's Hot" (4/21/09) Plenary Speaker: 5<sup>th</sup> IPTA Congress, Istanbul, Turkey.
66. "Antibody-mediated and B-cell Rich Rejection: Lessons from the Transcriptome", (3/4/09) Dual Speaker: Joint Meeting between AST Winter Symposium and CST Symposium, Banff, Canada
67. "Current Approaches for Immune-monitoring in Kidney Transplantation" (2/14/09) Speaker" Asia-Pacific Summit, Miyazaki, Japan.
68. "Immunosuppression for the Pediatric Patient" (11/22/08) . Annual Meeting, Canadian Transplant Forum, Toronto, Canada.
69. "Genomic Profile of Operational Tolerance"(10/29/08) Plenary II. Annual Meeting, ASHI, Toronto, Canada
70. "Desensitization in Renal Transplantation" (9/20/08). Keynote Lecture. Annual Meeting Japan Society for Transplantation, Osaka Japan.
71. "Molecular Heterogeneity in Acute Renal Allograft Rejection"(9/21/08). OKTF Satellite Symposium. Annual Meeting Japan Society for Transplantation, Osaka Japan.
72. "Minimizing Immunosuppression in the Transplant Patient" (8/12/08). State-of-the-Art Symposium "Maximizing Long-Term Graft Survival". The Transplantation Society 2008 Congress, Sydney Australia.
73. "Changing Face of Rejection" (8/10/08). Pre-Meeting Symposium. The Transplantation Society 2008 Congress, Sydney, Australia.
74. "Transplantation in the Immunocompromised" (8/10/08). Postgraduate Weekend Education Session. The Transplantation Society 2008 Congress, Sydney, Australia.
75. "Molecular insights into renal injury mechanism in cystinosis and management of end stage renal disease." ( 6/28/08) Annual Meeting, Cystinosis Foundation, Dublin, Ireland
76. "Genomic Monitoring Strategies" ( 6/5/07). Key Note. IPTA meeting, Budapest, Hungary.
77. "Steroid avoidance is a reality for pediatric transplantation" (6/6/07). Symposium. IPTA meeting, Budapest, Hungary
78. "The role of B cells in graft injury" (8/20/07). Key Note. Asian Transplant Meeting, Taipei, Taiwan
79. "The application of high throughput technologies in transplantation" (12/6/07). Key Note. CAST meeting, Pattaya, Thailand.
80. "Immunosuppression for the Child" (12/7/07). Symposium Chair and Speaker. CAST meeting, Pattaya, Thailand.
81. "Proteomics, Genomics, and Biomarker Discovery" (3/18/07). Plenary, International Pediatric Transplantation Association 4<sup>th</sup> Congress, Cancun, Mexico.
82. "Microarrays: Monitoring to Stay" (2/24/07). Plenary. Catalan Transplant Society Meeting, Barcelona, Spain.
83. "Key Topics in Transplantation Genomics" (1/26/07). Special Key Topics Symposium, Chair: Kathryn Wood, Hong Kong
84. "Applications of Microarrays to clinical transplantation" (1/22/06). Plenary, Swiss Transplantation Meeting.
85. "Microarrays: Tools for the Transplant Clinician" (11/25/05). Keynote Address. Toronto Scientific Research Day, Toronto University, Canada.
86. "Arraying the Orchestration of Allograft Pathology "(6/15/2005). Genomic Symposium, Banff Workshop, Edmonton, Canada.
87. "Farewell to Steroids in Renal Transplantation" (9/2005). Plenary. International Pediatric Transplant Meeting, Innsbruck, Austria.

88. *"Arrays Amaze: The many faces of allograft rejection"* (6/16/05). Plenary. International Banff Meeting, Edmonton, Canada.
89. *"Unraveling the transcriptosome in Cystinosis"* (3/1/2005). Plenary. International Cystinosis Meeting, Barcelona, Spain.
90. *"Arrays and Transplantation"* (5/10/2005) Novartis Advisory Summit (Moderators: Vincente F and Wood K). Madrid, Spain.
91. *"Progress in Pediatric Transplantation"* (10/1/05). Key Note. Indian Transplant Meeting, Jaipur, India.
92. *"Novel Tools for Transplantation Research"* (10/3/05). Plenary, Indian Transplant Meeting, Jaipur, India.
93. *"Lessons from Microarrays"* (9/5/05). Plenary. International Transplant Meeting, Vienna, Austria.
94. *"Steroid Elimination in Pediatric Renal Transplantation"* (10/5/2004). Symposia Talk. International Pediatric Nephrology Meeting, Adelaide, Australia.
95. *"Unprecedented growth with Steroid Elimination in Pediatric Transplantation"* (3/1/2004). International Pediatric Nephrology Association Satellite Symposium on Growth, Heidelberg, Germany.
96. *"Steroid Avoidance- the debate"*(6/15/2003). International Pediatric Transplant Meeting, Puerto Rico, South America.
97. *"Exploring arrays in transplantation"* (3/1/2003). Annual Transplant Symposium, Hanover, Germany.
98. International Congress of the 18<sup>th</sup> International Transplantation Society; Rome, Italy.
99. *"Gene Expression Allows Identification of Differing Etiologies of Graft Dysfunction"* (3/1/02). Plenary Session. Canadian Transplantation Meeting, Mount Tremblant, Montreal, Canada.
100. *"Cystinosis and Transplantation"* (6/1/2002). International Cystinosis Conference, Paris, France.
101. *"Profiling Chronic Transplant Rejection using cDNA Microarrays"* (6/15/01). Plenary Presentation and Chair, Alexis Carrel Conference on Chronic Transplant Dysfunction, Riksgaarsen, Sweden. Also Session Chair for Symposia Session.
102. *"Understanding Chronic Transplant Dysfunction by Gene Expression Profiling"* Plenary Presentation, 8<sup>th</sup> NAT meeting on Chronic Rejection, Nantes, France (6/22/2001).
103. *"Novel molecular studies in Allograft Rejection"* State of the Art Presentation (9/01/2000).
104. *"What's new in renal transplantation"* Plenary Presentation, International Cystinosis Conference; Bergamo, Italy (9/04/2000).

#### **Selected National Lectures and Grand Rounds (selected from over 125):**

1. *"Immunosuppression in Kidney Transplantation"*, UCSF TRANSPLANT 2018 - Pioneering Advances In Transplantation (November, 2018), Napa, CA
2. *"Moderator: Concurrent Session: Biomarkers, Immune Monitoring and Outcomes: Clinical"*, ATC (June, 2018), Seattle, WA
3. *"Moderator: Is It Time to Change the Pediatric Kidney Allocation Paradigm from Expedited Transplantation or to Delay Transplantation to Focus On Better Class II HLA Epitope Matching?"* ATC (June, 2018), Seattle, WA
4. *"Precision Transplant Medicine: Coming of Age"* Ellis Distinguished Professor Series, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania (March, 2018)
5. *"Precision Medicine in Organ Transplantation"*, New York Society of Nephrology (3/1/17), New York
6. *"Recurrent FSGS: Updates on Pathogenesis"*, Grand Rounds, Winthrop Hospital (3/3/17), New York
7. *"NIH CTOT Mechanistic Workshop: CTOT/CTOTc overview"* (4/12/16), CTOT/CTOTc Mechanistic Committee Meeting, NIH, Bethesda, Washington DC
8. *"Precision Medicine in Transplantation"* I3T Seminar Series, UCLA, Los Angeles, CA
9. *"Antibody Management in the transplant recipient"* (4/8/16) Dallas Antibody Seminar, Baylor College of Medicine, Texas
10. *"Precision Medicine in Organ Transplantation"* (6/12/2015). Pediatric Grand Rounds, Northwestern University, Chicago, IL.
11. *"Unravelling FSGS"* (6/12/2015). Medicine Grand Rounds, Northwestern University, Chicago, IL.
12. *"Lysosomal Storage Disorders: Optimizing the Transition from Pediatric to Adult"* (6/15/2015). CME Video for Medscape Nephrology.
13. *"Mechanisms of Injury in Cystinosis"* (5/1/15). National Kidney Foundation Annual Meeting Invited Symposium, Texas.
14. *"OMIC Approaches to Immune Monitoring"* FOCIS Annual Meeting, Boston (6/23/14)
15. *"The kSORT assay to monitor transplant rejection"* HLA Immucor Symposium, Phoenix, Arizona (9/22/14)
16. *"Monitoring Immune Risk by OMICS"* AMLI Annual Meeting, Seattle, Washington (8/9/14)
17. *"Predicting rejection in Kidney and Pancreas Transplantation"*, World Transplant Congress, San Francisco (7/29/14)
18. *"Immunosuppression Minimization"* Surgery Grand Rounds, Columbia University (4/1/14)
19. *"Personalization of Management of the Transplant Recipient"* Medicine Grand Rounds. Cornell (1/15/2014)
20. *"Tolerance Markers in Liver Transplantation"* Sir Charles Gairdner Hospital, Perth, Australia (6/10/2013)
21. *"An OMICS Approach to transplant customization"* UCSF Surgery Grand Rounds, San Francisco (2/13/2013).
22. *"Customizing Care for the Transplant Recipient"* Temple University Grand Rounds (Pathology) (3/01/13)
23. *"Immune Monitoring in VCA: Omic Technologies as a Tool for Immunomonitoring in Reconstructive Transplantation"* American Society for Reconstructive Transplantation, Chicago, IL (11/16/2012).
24. *"Mathematics, Mice and Men: The Hunt for New Drug targets in Organ Transplantation"* Combined Transplant Conference, Oregon Health & Science University, Portland, Oregon (11/08/2012).

25. *"An Omic Approach for Personalizing Immunosuppression in Organ Transplantation"* Research Conference, Department of Pathology, Feinberg School of Medicine of Northwestern University, Chicago, IL (10/22/2012).
26. *"Mathematics, Mice and Men: The Hunt for New Drug Targets in Organ Transplantation"* Renal Grand Rounds (5/03/2012) Cunio-Richardson Award Lecture, University of Miami, Miller School of Medicine, Miami, Florida.
27. *"The OMICS of Personalizing Transplant Care"* Medical Grand Rounds, (5/02/2012) Cunio-Richardson Award Lecture. University of Miami, Miller School of Medicine, Miami, Florida.
28. *"Introducing Mechanistic and Translational Studies into Clinical Trials"* (4/29/11) AST-CST Clinical Trials Symposium, Philadelphia, PA.
29. *"Monitoring for Tolerance in Solid Organ Transplantation"* (12/08/10) Reconstructive Tissue Transplant Meeting, Chicago
30. *"Application of B cell depletion in pediatric organ transplantation"* (12/1/2010) Immunology Summit, Palos Verdes, CA
31. *"Use of Protoarrays in Organ Transplantation"* (5/29/10) Invitrogen Ad Board Meeting, Del Mar, CA
32. *"Biomarkers for Acute Rejection"* (2/24/10), Transplantomics Meeting for the TTS, San Francisco
33. *"Biomarkers of graft loss, chronic rejection and acute rejection with potential clinical utility"* (9/28/10) Pharmacodynamic and Pharmacogenomic Biomarkers in Transplantation FDA Workshop, Washington, D.C.
34. *"The roadmap to the future of clinical trials in Transplantation"* (5/02/2010) BMS American Transplant Congress, San Diego, CA
35. *"Steroid-free IS: Does it Really Make a Difference"* (05/01/2010) American Transplant Congress, San Diego, California
36. *"New technologies and New Molecular Insights in Allograft Rejection"* Speaker CME ATC-ASE Dinner Symposium (12/4/09), Orlando, Fla.
37. *"Gene Arrays May Predict Stable Clinical Kidney Tolerance and Support Safe Immunosuppression Withdrawal"* (12/3/09) Plenary Speaker, First AST -American Scientific Exchange (ASE) Mtg, Orlando, Fla
38. *"Genomic Profiles of Operational Tolerance: Lessons from the Fortunate Few"*, (12/02/09) Georgetown University Audio conference
39. *"Targeting B Cells in Clinical Renal Transplantation"* (11/01/09) Speaker, American Society of Nephrology Annual Meeting, San Diego, CA
40. *"Antibiotics and the Kidney"* (1/30/09) Symposium Speaker, Scripps Genomics Symposium, La Jolla, CA
41. *"The Promise of Immunosuppression Minimization"* (5/14/08). Symposium Speaker. Emory University, Atlanta, GA.
42. *"The Lucky Few in Kidney Transplantation"* (4/09/08). Symposium Speaker "The Dream of Tolerance in Heart and Lung Transplantation". International Society for Heart and Lung Transplantation Annual Meeting, Boston, MA.
43. *"Signatures of Tolerance in Human Organ Transplantation"* (12/13/07). Immune Monitoring Symposium, Institute for Immunity, Transplantation and Infection; Stanford University.
44. *"Genomics and Proteomics in Kidney Disease and Development"* (11/17/06). Symposium Chair and Speaker, American Society of Nephrology Annual Meeting, San Diego.
45. *"Rejection and its biomarkers"* (6/01/06). NIAID Genomics, Genetics and Proteomics Symposium, Scripps, San Diego
46. *"The problem with Steroids"* (10/01/06). Western Society of Pediatric Nephrology Annual Meeting.
47. *"Monitoring Acute rejection"* (2/01/06). Transplant Summit, San Francisco.
48. *"Biomarkers for rejection"* (2/02/06), Transplant Summit, San Francisco.
49. *"Microarrays and Patient Monitoring: When Will They Be at the Bedside?"* (5/16/05). Speaker, American Society of Pediatric Nephrology Annual Meeting, Washington DC.
50. *"Heterogeneity in Renal Rejection"* (1/05/05). Pediatric Academic Society Meeting, Washington DC.
51. *"Microarrays for the transplant patient"* (10/04/04). Symposium Chair and Speaker, American Society of Nephrology Annual Meeting, San Francisco.
52. *"The SNS Study Protocol"* (9/1/2002). NAPRTCS Investigator Meeting, Las Vegas.
53. *"Arrays as a Research tool in Transplantation/Tolerance"* (1/24/2001). Plenary Presentation, Sixth International Conference on Tolerance Induction; Tucson, Arizona.
54. *"Gene Expression Profiling in Renal Transplantation"* (9/02/01). Symposia Presentation, International Pediatric Nephrology Association Conference, Seattle, USA.
55. *"Application of a Baboon Chronic Vasculopathy model to Human Transplantation"* (5/06/01). Single Subject Symposia Presentation, Federation of Clinical Immunological Society (FOCIS) first Annual Meeting, Boston.
56. *"Microarrays as a tool for transplantation studies"* (5/11/01). State of the Art Lecture, Basic Science Symposia, Annual Meeting of the American Society of Transplantation, Chicago.
57. *"Monitoring Acute Allograft Rejection"* (5/13/01). Luncheon Workshop Co-Chair at the Annual Meeting of the American Society of Transplantation, Chicago.
58. *"Gene Expression Profiling in Allograft Dysfunction"* (5/01/01). Plenary Presentation, Annual Histocompatibility and Immunogenetics Meeting, San Francisco, California.
59. *"Steroid free Immunosuppression in the Pediatric Patient"* (10/25/01). Symposia Presentation, Immunosuppression 2001, Minnesota.

60. "cDNA Microarray analysis in Pediatric Renal Transplantation (5/16/2000). State of the Art Lecture, Annual Meeting of the American Society of Transplantation, Chicago.
61. "Out with the Old, In with the New: Unexpected Benefits of Steroid Avoidance in Pediatric Kidney Transplantation" (2/03/11), Grand Rounds, UNM, Albuquerque, NM.
62. "Customizing Immunosuppression for Transplant Recipients: New Genomics Insights" (5/1/09) Grand Rounds for Comprehensive Transplant Research Lecture. Johns Hopkins University, Baltimore, MD.
63. "Customized Immunosuppression Monitoring for Transplant Recipients" (3/21/08). Pediatric Grand Rounds. Northwestern University, Chicago, IL.
64. "Steroid Avoidance: A Reality?" (12/6/06). Visiting Professorship, University of Pittsburgh.
65. "Farewell to Steroids in Pediatric Transplantation" (3/2005). Mayo Clinic, Grand Rounds. Rochester.
66. "Arrays for Profiling Allograft Rejection" (4/20/2003). Immunogenetics Grand Rounds, UCLA.
67. "Steroid Free Immunosuppression in Pediatric Renal Transplantation" (9/5/01). Free Communication, International Pediatric Nephrology Association Conference, Seattle, USA
68. "Genomic Scanning to improve outcomes in Pediatric Renal Transplantation" (2/17/2000). Medicine Grand Rounds, Harvard University, Boston.
69. "Genomic Analysis of Renal Allograft Dysfunction using cDNA Microarrays" (7/21/2000). Transplant Grand Rounds, University of Pittsburgh.

#### **Selected Local Grand Rounds and Lectureships (selected from 59):**

1. "UCSF Biobanking and Biospecimen Science Symposium"- Plenary", CTSI Symposium, UCSF, San Francisco(2/19/16)
2. "Precision Medicine in Transplantation" Surgery Grand Rounds, UCSF (9/30/15)
3. "Cystinosis: Everything you wanted to know but afraid to ask" CPMC Pediatric Grand Rounds, San Francisco (01/11/2013).
4. "Omic Deconvolutions of Organ Injury" 2011 Genentech Guest Speaker Immunology Series, (1/06/11) Genentech, South San Francisco, CA
5. "Mechanisms and Monitoring for Transplant Tolerance" (10/11/10) ITI Symposium New Technologies in Immune Monitoring, Stanford University
6. "Creating and Sustaining Successful Scientific Collaborations" 2010 Scientific Management Series (4/22/10), Stanford University
7. "Steroid Free Immunosuppression in Pediatric Renal Transplantation: Achieving the Goal" (5/03/02). Pediatric Grand Rounds, Stanford University.
8. "Current Research in Pediatric Renal Transplantation" (11/04/2000). Research Conference, Department of Surgery, Stanford University
9. "Managing the child with kidney dysfunction" (4/19/2000). Essentials for the Pediatric Acute Care Nurse Course at LPCH.
10. "An approach to the management of hematuria in children" (2/09/99) Pediatric Grand Rounds: The Community Hospital of the Monterey Peninsula.
11. "Novel molecular studies in transplantation" (10/10/99). Presentation at Surgery Grand Rounds, Stanford University.
12. "The role of Granulysin in Renal Allograft Rejection" (10/30/98) Renal Transplant Conference, Stanford University

---

#### **Mentorship**

1. **Thomas Satterwhite:** Stanford Med Student: 2 summer electives (2002, 2003). Completed surgical fellowship at Stanford University, currently Faculty, Plastic Surgery, Stanford University. Work resulted in first author publication
  - Satterwhite T, Chua M-S, Hsieh S-C, Chang S, Scandling J, Salvatierra O, Sarwal M: Increased expression of cytotoxic effector molecules: Different interpretations for steroid-based and steroid-free immunosuppression. *Pediatr Transplantation* 2003;7:53-58.
  - Sarwal M, Chua M-S, Kambham N, Hsieh S-C, Satterwhite T, Masek M, Salvatierra O: "Molecular heterogeneity in acute renal allograft rejection identified by DNA microarray profiling". *N Engl J Med* 2003;349:123-136.
2. **Farzad Alemi:** Stanford Med Student, ASN Fellowship: 3 summer electives: 2003, 2004, oral abstract presentation at International Cystinosis Meeting in Barcelona. Completed UCSF Surgery residency; currently General Surgery Faculty, St. Lukes Health System, Kansas City, Mo
3. **Annie Chao:** Stanford Med Student: 2 summer electives, 2004, 2005. Currently Family practitioner in San Jose, CA
4. **Christina Yeh:** Undergraduate Student summer elective 2006. Currently medical school UCLA
5. **Rosa Liu:** Undergraduate Student 1 year, 2003. Currently Computer systems Analyst, Trinita, San Francisco
  - Nagarajan S, Mansfield E, Hsieh S, Liu R, Hsieh F, Li L, Salvatierra O, Sarwal MM. "Transplant reno-vascular stenoses associated with early erythropoietin use". *Clin Transplant.* 2007 Sep;21(5):597-608.
6. **Jay Vidhun:** International Medical Student 1 year, 2001.
  - Vidhun JR, Sarwal MM. Corticosteroid avoidance in pediatric renal transplantation. *Pediatr Nephrol.* 2005 ;20(3):418-26

7. **Suja Nagarajan**: International Medical Student 1 year 2002. Currently Nephrology Faculty, Redwood City General Practice, CA
  - **Nagarajan S**, Mansfield E, Hsieh S, Liu R, Hsieh F, Li L, Salvatierra O, Sarwal MM. "Transplant reno-vascular stenoses associated with early erythropoietin use". *Clin Transplant*. 2007 Sep;21(5):597-608.
  - Kambham N, **Nagarajan S**, Shah S, Li L, Salvatierra O, Sarwal MM. "A Novel Semiquantitative, Clinically Correlated Calcineurin Inhibitor Toxicity Score For Renal Allograft Biopsies". *Clin J Am Soc Nephrol*, 2: 135 – 142, 2007.
  - **Nagarajan S**, Enns GM, Millan MT, Winter S, Sarwal MM. Management of methylmalonic acidemia by combined liver-kidney transplantation. *J Inher Metab Dis*. 2005;28(4):517-24.
8. **Snehal Mohile**: Graduate Student 6 months 2005. Currently Clinical Trials Consultant, San Francisco
  - Beaunoyer M, **Mohile S**, Li L, Concepcion W, Salvatierra O, Sarwal MM. "Optimizing outcomes for neonatal ARPKD". *Pediatr Transplant.*, 2007 May;11(3):267-71.
9. **Sam Rice-Townsend**: Stanford Med Student summer elective 2006. Currently Pediatric Surgeon, Harvard University.
10. **Sepideh Gholami**: Stanford Med Student 1 year 2006-7. Currently Breast Cancer Surgery Faculty at Stanford University
11. **Monica Enirez-Wiemer**: Stanford Med Student summer elective 2005. Currently Primary Health Care Physician
  - **Eneriz-Wiemer M**, Sarwal MM, Donovan D, Costaglio C, Concepción W, Salvatierra O. "Successful Renal Transplantation in High-Risk Small Children With A Completely Thrombosed Inferior Vena Cava". *Transplantation*, 2006, 15;82(9):1148-52.
12. **Leah Bartsch**: Stanford Med Student summer elective 2002. Currently Pediatric Faculty, MGH, Boston
  - Sarwal M, **Bartsch L**, Salvatierra O: Posterior urethral valves with renal insufficiency: the choice of management is critical. *Nephrology Rounds*. 2000; 3 (10):1-6
13. **Paul Didominico**: Stanford Resident 2001. Currently Radiology Attending, VA St. Louis Health Care, Missouri
  - **DiDomenico P**, Berry G, Bass D, Fridge J, Sarwal M. Noncirrhotic portal hypertension in association with juvenile nephropathic cystinosis: case presentation and review of the literature. *J Inher Metab Dis*. 2004;27(5):693-9.
14. **Lauren Weintraub**; Nephrology Fellow, Glaser Pediatric Research Fund Award, 2005-7. Currently Pediatric Nephrology Faculty, Inova Fair Oaks Hospital, Virginia
  - **Weintraub LA**, Sarwal MM. "Microarrays: A Monitoring Tool for transplant patients?" *Transpl Int* 2006; 19(10):775-88
  - Li L, Chaudhuri A, **Weintraub LA**, Hsieh F, Shah S, Alexander S, Salvatierra O, Sarwal MM. "Sub-clinical CMV and EBV viremia are associated with adverse outcomes in pediatric renal transplantation". *Pediatr Transplantation*, 2007: 11: 187-195.
  - **Weintraub L**, Li L, Kambham N, Alexander S, Concepcion W, Miller K, Wong C, Salvatierra O, Sarwal M. "Patient selection critical for calcineurin inhibitor withdrawal in pediatric kidney transplantation". *Pediatr Transplant*. 2008 Aug; 12(5): 541-9. (PMID: 18564305).
15. **Amir Belson**: Nephrology Fellow, Deans fellowship and NKF Fellowship, 2001-2. Currently Entrepreneur, San Francisco
  - **Belson A**, Fisher P, Alcorn D, Yorgin P and Sarwal MM. "Case report: pseudotumor cerebri in an infant on peritoneal dialysis". *Pediatr. Neph.*, 2000, 16 (3): 216-8.
16. **Anette Melk**: Nephrology Fellow, Heidelberg University, 2003-4. Currently, Pediatric Nephrology Faculty, University of Heidelberg, Germany
  - **Melk A**, Mansfield E, Hsieh S, Hernandez-Boussard T, Grimm P, Rayner D, Halloran P, Sarwal MM. "Transcriptional analysis of the molecular basis of human kidney aging using cDNA microarray profiling". *Kidney International*, 2005, 68:2667-2679..
17. **Mona Beaunoyer**: Surgery Fellow, Stanford University, 2005. Currently MultiOrgan Transplant Surgeon, Montreal University, Canada
  - **Beaunoyer M**, Mohile, S, Li, L, Concepcion W, Salvatierra O, **Sarwal MM**. "Optimizing outcomes for neonatal ARPKD". *Pediatr Transplant.*, 2007 May;11(3):267-71.
18. **Maarten Naesens**: Nephrology Research Fellow (Belgium), 2006-8 (48 publications total: 22 first author). Currently Associate Professor, Nephrology. University of Leuven, Belgium
  - **Naesens M**, Kuypers D, Sarwal MM. "The bumpy road of genomic medicine in transplantation: lessons from studies on calcineurin inhibitor nephrotoxicity" *Transplantation* 2012 Mar 27; 93(6): 578-9. No abstract available.
  - **Naesens M**, Khatri P, Li L, Sigdel TK, Vitalone MJ, Chen R, Butte AJ, Salvatierra O, Sarwal MM. "Progressive histological damage in renal allografts is associated with expression of innate and adaptive immunity genes" *Kidney Int*. 2011 Dec;80(12): 1364-76 doi: 10.1038/ki.2011.245. Epub 2011 Aug 31.
  - **Naesens M** "Switching from calcineurin inhibitors to Mammalian target of rapamycin inhibitors – finally caught the right wave?" *Transplantation* 2011 Oct 15; 92(7):728-30. No abstract available.
  - **Naesens M**. "Replicative Senescence in Kidney Aging, Renal Disease, and Renal Transplantation" *Discov med* 2011 Jan; 11 (56): 65-5. Review
  - **Naesens M**, Sarwal MM, Kuypers DR. "Organ Transplantation after Cardiac Death" *Lancet* 2011 Jan 15; 377 (9761): 203; author reply 204-5. No abstract available.
  - **Naesens M**, Sarwal MM. "Harnessing the diversity of the human T Cell Repertoire : A Monitoring Tool for Transplantation Tolerance?" *Eur J Immunology* 2010 Nov;40(11):2986-9.
  - **Naesens M**, Sarwal MM "Molecular Diagnostics in Transplantation" *Nat Rev Nephrol* 2010 Oct;6(10):614-28.

- **Naesens M**, Sarwal MM. “Monitoring Calcineurin Inhibitor Therapy: Localizing the Moving Target” *Transplantation* 2010 Jun 15;89(11):1308-9.
  - **Naesens M**, Li L, Ying L, Sansanwal P, Sigdel TK, Hsieh S-C, Kambham N, Lerut E, Salvatierra O, Butte A, Sarwal MM. “Expression of complement components differs between kidney allografts from living and deceased donors. *J Am Soc Nephrol* 2009 Aug;8:1839-1851
  - **Naesens M**, Butte AJ, Sarwal MM. “C3 Polymorphisms and Outcomes of Renal Allografts”. *N Engl J Med* 2009 Jun: 360(23): 2478-2479
  - **Naesens M**, Kuypers DR, Sarwal M. “Calcineurin inhibitor nephrotoxicity” *Clin J Am Soc Nephrol* 2009 Feb; 4(2): 481-508
  - **Naesens M**, Lerut E, Sarwal M, Van Damme B, Vanrenterghem Y, Kuypers DR. “Balancing efficacy and toxicity of kidney transplant immunosuppression. *Transplant Proc.* Oct 2009: 41(8): 3393-3395.
  - **Naesens M**, Sarwal MM. “Looking into the crystal chip: can microarrays predict graft function?” *Transplantation*, 2008 Feb 27: 85(4): 499-500. 2008.
  - Li L, Ying L, **Naesens M**, Xiao W, Sigdel T, Hsieh S, Martin J, Chen R, Liu K, Mindrinos M, Davis R, Sarwal M. Interference of globin genes with biomarker discovery for allograft rejection in peripheral blood samples. *Physiol Genomics*. 2008 Jan 17;32(2):190-7. Epub 2007 Oct 30. (PMID: 17971501).
  - **Naesens M**, Kambham N, Concepcion W, Salvatierra O, Sarwal MM. “The evolution of non-immune histological injury and its clinical relevance in adult-sized kidney grafts in pediatric recipients”. *Am J Transplant.* 2007 Nov;7(11):2504-14.
  - Young Investigator Award 2008
  - New Key Opinion Leader in Transplantation 2008
19. **Scott Sutherland**: Nephrology Fellow, 2006-8 (7 publications total:4 first author). Currently, Assistant Professor, Pediatric Nephrology, Stanford University
- **Sutherland SM**, Hong DK, Balagtas J, Gutierrez K, Dvorak CC, Sarwal M. “Liposomal Amphotericin B Associated With Severe Hyperphosphatemia”. *Pediatr Infect Dis J.* 2008 Jan;27(1):77-79.
  - **Sutherland SM**, Alexander SR, Sarwal MM, Berquist WE, Concepcion W. “Combined liver-kidney transplantation in children: indications and outcome”. *Pediatr Transplant.* 2008 Dec; 12(8): 835-46.
  - **Sutherland S**, Li L, Sigdel T, Wadia P, Miklos D, Butte AJ, **Sarwal MM**. Protein Microarrays Identify non-HLA Alloantibody Targets in Pediatric Renal Transplant Recipient Experiencing Acute Rejection: Antibodies to Protein Kinase C-zeta Associated with Greater Allograft Loss Risk. *Kidney Int* 2009 Oct]. (PMID:19812540)
20. **Anita Talisetti**: Gastroenterology Fellow, 2008-9. Currently Faculty Pediatric Gastroenterology, Kaiser Permanente
- **Talisetti A**, Hurwitz M, Sarwal M, Berquist W, Castillo R, Bass D, Concepcion W, Esquivel CO, Cox K. “Analysis of Clinical Variables Associated with Tolerance in Pediatric Liver Transplant Recipients” *Pediatr Transplant* 2010 Dec;14(8):976-9
21. **Li Li**: Senior Statistician, 2005- 2012 (43 publications total: 10 first author). Currently Research Scientist, Mount Sinai School of Medicine, New York
- **Li L**, Khatri P, Sigdel TK, Tran T, Ying L, Vitalone MJ, Chen A, Hsieh S, Dai H, Zhang M, Naesens M, Zarkhin V, Sansanwal P, Chen R, Mindrinos M, Xiao W, Benfield M, Ettenger RB, Dharnidharka V, Mathias R, Portale A, McDonald R, Harmon W, Kershaw D, Vehaskari VM, Kamil E, Baluarte HJ, Warady B, David R, Butte AJ, Salvatierra O, Sarwal MM. A peripheral blood diagnostic test for acute rejection in renal transplantation. *Am J Transplant.* 2012 Oct; 12(10):2710-8.
  - **Li L**, Wozniak LJ, Rodder S, Heish S, Talisetti A, Wang Q, Esquivel C, Cox K, Chen R, McDiarmid SV, Sarwal MM. A common peripheral blood gene set for diagnosis of operational tolerance in pediatric and adult liver transplantation. *Am J Transplant* 2012 May; 12(5): 1218-28 Epub 2012.
  - **Li L**, Chaudhuri A, Chen A, Zhao X, Bezchinsky M, Concepcion W, Salvatierra O Jr, Sarwal MM. Efficacy and Safety of Thymoglobulin Induction as an Alternative Approach for Steroid-Free Maintenance Immunosuppression in Pediatric Renal Transplantation. *Transplantation.* 2010 Dec 27; 90(12): 1516-20. Doi: 10.1097/TP.0b013e3181fc8937. (PMID: 20935596).
  - **Li L**, Sigdel T, Vitalone M, Lee SH, Sarwal M. Differential Immunogenicity and Clinical Relevance of Kidney Compartment Specific Antigens after Renal Transplantation. *J Proteome Res.* 2010 Dec 3;9(12):6715-21.
  - **Li L**, Chen A, Chaudhuri A, Kambham N, Sigdel TK, Chen R, Sarwal MM. Compartmental Localization and Clinical Relevance of MICA Antibodies after Renal Transplantation. *Transplantation* 2010 Feb 15; 89(3): 312-9.
  - **Li L**, Chang A., Naesens M., Kambham N., Waskerwitz J., Martin J., Wong C., Alexander S., Grimm P., Concepcion W., Salvatierra O., and Sarwal M.M. Steroid-Free immunosuppression since 1999: 129 pediatric transplants with sustained graft and patient benefits. *Am J. Transplant* 2009 Jun;9(6):1362-1372.
  - **Li L**, Wadia P, Chen R, Kambham N, Naesens M, Sigdel, TK, Miklos, DB, Sarwal MM, Butte AJ. Identifying compartment-specific alloimmune targets after renal transplantation by integrating transcriptome and “antibodyome” measures. *Proc. Nat. Acad. Sci USA* 2009 Mar 17: 106(11):4148-4153.
  - **Li L**, Weintraub L, Concepcion W, Martin JP, Miller K, Salvatierra O, Sarwal MM. Potential influence of tacrolimus and steroid avoidance on early graft function in pediatric renal transplantation. *Pediatr Transplant*, 2008 Sep 85(4):499-500.

- **Li L**, Ying L, Naesens M, Xiao W, Sigdel T, Hsieh S, Martin J, Chen R, Liu K, Mindrinos M, Davis R, Sarwal M. Interference of globin genes with biomarker discovery for allograft rejection in peripheral blood samples. *Physiol Genomics*. 2007: 32(2):190-197
  - **Li L**, Chaudhuri A, Weintraub LA, Hsieh F, Shah S, Alexander S, Salvatierra O, Sarwal MM. Sub-clinical CMV and EBV viremia are associated with adverse outcomes in pediatric renal transplantation. *Pediatr Transplantation*, 2007: 11: 187-195.
  - Young Investigator Award from American Society of Transplantation 2008
  - Young Investigator Award from American Society of Transplantation 2009
  - Young Investigator Award from American Society of Transplantation 2010
  - Distinguished Research Fellow from American Society of Transplantation 2009
  - Young Innovator Travel Award from American Society of Transplantation 2009
22. **Valeriya Zarkhin**, Research Associate, 2005-2011. (11 publications total: 11 first author). *Currently Consulting Scientist, San Francisco*
- **Zarkhin V**, Sarwal MM. "The coin toss of B Cells in rejection and tolerance: Danger versus defense" *Semin Immunol*. 2011 Oct 27. (Epub ahead of print).
  - **Zarkhin V**, Bezchinsky M, Li L, Sarwal MM. "Soluble human leukocyte antigen-G in pediatric renal transplantation" *Transplantation* 2011 Jul 15, 92(1): e1-2. No abstract available.
  - **Zarkhin V**, Lovelace PA, LL, Hsieh S, Sarwal MM. "Phenotypic Evaluation of B cell subsets after Rituximab for Treatment of Acute Renal Allograft Rejection in Pediatric Recipients". *Transplantation* 2011, Mar 11. [Epub ahead of print] (PMID:21403590)
  - **Zarkhin V**, Talisetti A, Li L, Wozniak LJ, McDiarmid SV, Cox K, Esquivel C, Sarwal MM. "Expression of soluble HLA-G identifies favorable outcomes in liver transplant recipients". *Transplantation* 2010 Nov 15;90(9):1000-5.
  - **Zarkhin V**, Chalasani G, Sarwal MM, "The yin and yang of B Cells in graft rejection and tolerance" *Transplant Reviews* 2010 Apr;24(2):67-78.
  - **Zarkhin V**, Li L, Sarwal MM., BAFF May Modulate the Rate of B-Cell Repopulation After Rituximab Therapy for Acute Renal Transplant Rejection. *Transplantation* 2009 Nov; 88(10):1229-1230.
  - **Zarkhin V**, Li L, Kambham N, Sigdel T, Salvatierra O, Sarwal MM. "A randomized, prospective trial of Rituximab for Acute Rejection on Pediatric Renal Transplantation" *Am J. Transplant* 2008 Dec;8(12): 2607-2617
  - **Zarkhin V**, Sarwal MM. "Microarrays: monitoring for transplant tolerance and mechanistic insights." *Clin Lab Med*. 2008 Sep; 28(3): 385-410
  - **Zarkhin V**, Li L, Sarwal MM. "To B or not to B: B Cells and Graft Rejection." *Transplantation* 2008 Jun 27; 85(12): 1705-1714. (PMID 18580460).
  - **Zarkhin V**, Kambham N, Li L, Kwok S, Hsieh S, Salvatierra O, Sarwal MM. "Characterization of Intra-graft B-cells in renal allograft rejection". *Kidney Int* 2008 Sep 74(5) 664-673.
  - Distinguished Research Fellow from American Society of Transplantation 2008
24. **Lihua Ying**, Research Associate, 2006-2009. *Currently Research Associate, Stanford University*
- Sarwal MM, **Ying L**, Li L, Khatri P, Sigdel TK, Chen A, Hsieh S-C, Hong D, Kambham N, Zhang M, Naesens M, Zarkhin V, Sansanwal P, Mindrinos M, Xiao W, Concepcion W, Chen R, Butte AJ, Davis R, Salvatierra O. "A Peripheral Blood Five-Gene Set and Prediction of Acute Rejection" *N Engl J Med* 2009 (Accepted).
  - Ling XB, Sigdel TK\*, Lau K, **Ying L**, Lau I, Schilling J, Sarwal MM, Integrative Urinary Peptidomics in Renal Transplantation Identifies Novel Biomarkers for Acute Rejection, *J Am Soc Nephrol* (2009) (\*first equal author)
  - Sansanwal P, Yen B, Gahl WA, Ma Y, **Ying L**, Wong LC, Sarwal MM: Mitochondrial autophagy may be a critical cellular injury mechanism in nephropathic cystinosis. *J Am Soc Nephrol*, 2009 Dec 3. [Epub ahead of print] (PMID: 19959713).
  - Naesens M, Li L, **Ying L**, Sansanwal P, Sigdel TK, Hsieh S-C, Kambham N, Lerut E, Salvatierra O, Butte A, Sarwal MM. "Expression of complement components differs between kidney allografts from living and deceased donors. *J Am Soc Nephrol* 2009 Aug;8:1839-1851
  - **Ying L**, Sarwal MM. "In Praise of Arrays". *Pediatr Nephrol*, 2009 Sep; 24(9): 1643-1659; quiz 1655, 1659.
  - Li L, **Ying L**, Naesens M, Xiao W, Sigdel T, Hsieh S, Martin J, Chen R, Liu K, Mindrinos M, Davis R, Sarwal M. "Interference of globin genes with biomarker discovery for allograft rejection in peripheral blood samples". *Physiol Genomics*. 2007: 32(2):190-197
25. **Brian Klassen**: Stanford Undergraduate Student, summer internship 2008 (Medical Scholar Award). *Currently Faculty in anesthesia, UCSF*
- Sigdel TK, **Klassen RB**, Sarwal MM. "Interpreting the Proteome and Peptidome in Transplantation." *Adv Clin Chem* . 2009;47:139-169. Elsevier Ltd. Edited by Dr. Greg Makowski 2009.
26. **Katy Concepcion**: High School Student, summer internship 2008. *Currently postgrad student at UC Berkeley*
27. **Amery Chen**: Lab Internship; 2008; LSRA 1 2009-2010. *Currently fellowship in vet school, UCLA*



- Sarwal MM, Ying L, Li L, Khatri P, Sigdel TK, **Chen A**, Hsieh S-C, Hong D, Kambham N, Zhang M, Naesens M, Zarkhin V, Sansanwal P, Mindrinos M, Xiao W, Concepcion W, Chen R, Butte AJ, Davis R, Salvatierra O. "A Peripheral Blood Five-Gene Set and Prediction of Acute Rejection" *N Engl J Med* 2009 (Accepted).

**28. Tara Sigdel:** Postdoctoral Fellow 2006-9 (40 publications total: 17 first author) Research Associate 2009- 2011 Research Scientist (2012 – 2013) , Currently Research Assistant Professor, Sarwal Lab, UCSF

- **Sigdel TK**, Sarwal MM. Moving beyond HLA: A review of nHLA antibodies in organ transplantation. *Hum Immunol.* 2013 Nov;74(11):1486-90.
- **Sigdel TK**, Sarwal MM. Discovery and customized validation of antibody targets by protein arrays and indirect ELISA. *Methods Mol Biol.* 2013;1034:373-84.
- **Sigdel TK**, Vitalone MJ, Tran TQ, Dai H, Hsieh SC, Salvatierra O, Sarwal MM. A rapid noninvasive assay for the detection of renal transplant injury. *Transplantation* 2013 Jul 15;96(1):97-101.
- **Sigdel TK**, Shoemaker LD, Chen R, Li L, Butte AJ, Sarwal MM, Steinberg GK. Immune response profiling identifies autoantibodies specific to Moyamoya patients. *Orphanet J Rare Dis.* 2013 Mar 21;8:45.
- **Sigdel TK**, Gao X, Sarwal MM. Protein and peptide biomarkers in organ transplantation. *Biomark Med.* 2012 Jun;6(3):259-71.
- **Sigdel TK**, Li L, Tran TQ, Khatri P, Naesens M, Sansanwal P, Dai H, Hsieh SC, Sarwal MM. Non-HLA antibodies to immunogenic epitopes predict the evolution of chronic renal allograft injury. *J Am Soc Nephrol.* 2012 Apr;23(4):750-63.
- **Sigdel TK**, Sarwal MM. Cell-free DNA as a measure of transplant injury. *Clin Transpl.* 2012:201-5.
- **Sigdel TK**, Woo SH, Dai H, Khatri P, Li L, Myers B, Sarwal MM, Lafayette RA. Profiling of autoantibodies in IgA nephropathy, an integrative antiomics approach. *Clin J Am Soc Nephrol.* 2011 Dec;6(12):2775-84.
- **Sigdel TK**, Sarwal MM. Recent advances in biomarker discovery in solid organ transplant by proteomics. *Expert Rev Proteomics* 2011 Dec;8(6):705-15.
- **Sigdel TK**, Lee S, Sarwal MM. Profiling the proteome in renal transplantation. *Proteomics Clin Appl* 2011 Jun;5(5-6):269-80.
- **Sigdel TK**, Kaushal A, Gritsenko M, Norbeck AD, Qian WJ, Xiao W, Camp DG, Smith RD, Sarwal MM, Shotgun Proteomics Identifies Proteins Specific for Acute Renal Transplant Rejection, *Proteomics Clin Appl* 2010 Jan 1;4(1):32-47.
- Ling XB, **Sigdel TK\***, Lau K, Ying L, Lau I, Schilling J, Sarwal MM, Integrative Urinary Peptidomics in Renal Transplantation Identifies Novel Biomarkers for Acute Rejection, *J Am Soc Nephrol* 2010 Apr;21(4):646-53 (\*first equal author)
- **Sigdel TK**, Klassen RB, Sarwal MM. Interpreting the proteome and peptidome in transplantation. *Adv Clin Chem* . 2009;47:139-169.
- **Sigdel TK**, Sarwal MM. The Proteogenomic Path Towards Biomarker Discovery. *Pediatr Transplantation.* 2008 Nov; 12(7):737-747.
- **Sigdel TK**, Lau K, Schilling J, Sarwal M. Optimizing protein recovery for urinary proteomics, a tool to monitor renal transplantation. *Clin Transplant.* 2008, 22(5) 617.

**29. Poonam Sansanwal:** Postdoctoral Fellow 2007-2013 (13 publications total: 6 first author). Currently Senior Application Scientist at Microsonic Systems, Inc.,

- **Sansanwal P**, Sarwal MM. p62/SQSTM1 prominently accumulates in renal proximal tubules in nephropathic cystinosis. *Pediatr Nephrol.* 2012 Nov; 27(11): 2137-44. Doi: 10.1007/s00467-012-2227-4. Epub 2012 Jun 20.
- **Sansanwal P**, Li L, Hsieh SC, Sarwal MM. Insights into Novel Cellular Injury Mechanisms by Gene Expression Profiling in Nephropathic Cystinosis. *J. Inherit Metab Dis.* 2010 Dec;33(6):775-86.
- **Sansanwal P**, Sarwal MM. Abnormal Mitochondrial Autophagy in Nephropathic Cystinosis. *Autophagy* 2010 Oct 1;6(7):971-3.
- **Sansanwal P**, Yen B, Gahl WA, Ma Y, Ying L, Wong LC, **Sarwal MM**: Mitochondrial autophagy may be a critical cellular injury mechanism in nephropathic cystinosis. *J Am Soc Nephrol* 2010 Feb;21(2):272-83.
- **Sansanwal P**, Kambham N, Sarwal MM. Caspase-4 may play a role in loss of proximal tubules and renal injury in nephropathic cystinosis. *Pediatr Nephrol* 2009 Aug 25 [Epub ahead of print].
- Keystone Symposia Scholarship to attend Cell Death Pathways: Apoptosis, Autophagy, and Necrosis, March 2010, Vancouver, Canada.

**30. Purvesh Khatri:** Postdoctoral Fellow, 2008-2011. Currently Clinical Assistant Professor, Bioinformatics, Stanford University

- **Khatri P**, Roedder S, Kumura N, DeVusser K, Morgan AA, Gong Y, Fischbein MP, Robbins RC, Naesens M, Butte AJ, Sarwal MM. A common rejection module (CRM) for acute rejection across multiple organs identifies novel therapeutics for organ transplantation. *J Exp Med* 2013 Oct 21;210(11):2205-21.
- Li L, **Khatri P**, Sigdel TK, Tran T, Ying L, Vitalone MJ, Chen A, Hsieh S, Dai H, Zhang M, Naesens M, Zarkhin V, Sansanwal P, Chen R, Mindrinos M, Xiao W, Benfield M, Ettenger RB, Dharnidharka V, Mathias R, Portale A, McDonald R, Harmon W, Kershaw D, Vehaskari VM, Kamil E, Baluarte HJ, Warady B, David R, Butte AJ, Salvatierra O, Sarwal MM. A peripheral blood diagnostic test for acute rejection in renal transplantation. *Am J Transplant* 2012 Oct;12(10):2710-8.
- **Khatri P**, Sarwal MM, Butte AJ. Applications of translational bioinformatics in transplantation. *Clin Pharmacol Ther* 2011 Aug;90(2):323-7.

- **Khatrri P** and Sarwal MM. Functional Pathway Analysis for Understanding Immunologic Signature of Rejection: Current Approaches and Outstanding Challenges. *Immunologic Signatures of Rejection* Edited by Marincola, FM and Wang E. Springer, 2010
  - Sigdel TK, Li L, Tran TQ, **Khatrri P**, Naesens M, Sansanwal P, Dai H, Hsieh SC, Sarwal MM. Non-HLA antibodies to immunogenic epitopes predict the evolution of chronic renal allograft injury. *J Am Soc Nephrol* 2012 Apr;23(4):750-63.
  - Sigdel TK, Woo SH, Dai H, **Khatrri P**, Li L, Myers B, Sarwal MM, Lafayette RA. Profiling of autoantibodies in IgA nephropathy, an integrative antibiomics approach. *Clin J Am Soc Nephrol* 2011 Dec;6(12):2775-84.
  - **Khatrri, P** Sarwal, MM. Using gene arrays in diagnosis of rejection. *Cur Opin Organ Transplant* 2009 Feb; 14(1) 34-39. .
  - Young Investigator Award from American Society of Transplantation 2010
31. **Abanti Chaudhuri**: Postdoctoral Fellow 2008 – 2010 : Lab Internship 2005-2006. *Currently Assistant Professor, Pediatric Nephrology, Stanford University.*
- Li L, Chen A, **Chaudhuri A**, Kambham N, Sigdel TK, Chen R, Sarwal MM. “Compartmental Localization and Clinical Relevance of MICA Antibodies after Renal Transplantation. *Transplantation* 2009.
  - **Chaudhuri A**, Salvatierra Jr O, Sarwal MM. “Extended daclizumab monotherapy for rejection-free survival in non-adherent adolescent recipients of renal allografts. *Pediatr Transplant* 2009 Nov(7): 927-932.
  - Li L, **Chaudhuri A**, Weintraub LA, Hsieh F, Shah S, Alexander S, Salvatierra O, Sarwal MM. “Sub-clinical CMV and EBV viremia are associated with adverse outcomes in pediatric renal transplantation”. *Pediatr Transplantation*, 2007: 11: 187-195.
  - **Chaudhuri A**, Salvatierra O Jr, Alexander SR, Sarwal MM. “Option of pre-emptive nephrectomy and renal transplantation for Bartter's syndrome”. *Pediatr Transplant*. 2006 Mar;10(2):266-70
32. **Usha Vallamdas**: Clinical Fellow 2008-2009. *Currently General Pediatrician, Fresno, California*
33. **Maria Caimol**: Clinical Fellow 2008-2011. *Currently General Pediatrician, Alaska*
34. **Christine Hwang** Clinical Fellow 2009. *Currently Faculty Assistant Professor Rheumatology, San Diego*
35. **Sophia Cornew**: High School Student, summer internship 2009. *Currently Biotech Law, New York*
36. **Maria Bezchinsky**: UCLA undergraduate, summer internship 2009. *Currently, surgery resident, UCSF*
- Li L, Chaudhuri A, Chen A, Zhao X, **Bezchinsky M**, Concepcion W, Salvatierra O Jr, Sarwal MM. Efficacy and Safety of Thymoglobulin Induction as an Alternative Approach for Steroid-Free Maintenance Immunosuppression in Pediatric Renal Transplantation. *Transplantation*. 2010 Dec 27;90(12):1516-20. PMID: 20935596.
37. **Sang Ho Lee**: Visiting Scholar 2009-2010, *Currently, Associate Professor of Nephrology, University of Southern Korea, South Korea*
- Li L, Sigdel T, Vitalone M, **Lee SH**, Sarwal M. Differential Immunogenicity and Clinical Relevance of Kidney Compartment Specific Antigens after Renal Transplantation *J Proteome Res*. 2010 Dec 3;9(12):6715-21.
38. **Matthew Vitalone**- Postdoctoral Fellow 2009-2013 (11 Publications, 3 first author). *Currently, Research Scientist, Stanford University*
- Li L, Sigdel T, **Vitalone M**, et al. A peripheral blood diagnostic test for acute rejection in renal transplantation. *Am J Transplant* 2012 Oct; 12(10): 2710-8.
  - Sigdel TK, **Vitalone MJ**, et al. A rapid noninvasive assay for the detection of renal transplant injury. *Transplantation* 2013 Jul 15;96(1):97-101. Doi: 10.1097/TP.0b013e318295ee5a.
  - Li L, Sigdel T, **Vitalone M**, Lee SH, Sarwal M. Differential Immunogenicity and Clinical Relevance of Kidney Compartment Specific Antigens after Renal Transplantation *J Proteome Res*. 2010 Dec 3;9(12):6715-21.
  - Roedder S, **Vitalone M**, Sarwal MM. Biomarkers in Transplantation (accepted) *Genome Medicine*, 2010
39. **Silke Roedder** – Postdoctoral Fellow 2010-Present (5 Publications 3 first author). *Currently Patent Law Attorney, Germany*
- **Roedder S**, Sigdel T, Salomonis N, et al. The kSORT Assay to Detect Renal Transplant Patients at High Risk for Acute Rejection: Results of the Multicenter AART Study. *PLoS Med*. 2014 Nov;11(11):e1001759. doi: 10.1371/journal.pmed.1001759. PMID: 25386950
  - **Roedder S**, ATC 2013 Plenary Session: A Common Rejection Module (CRM) across Multiple Transplant Organs Identifies Novel Therapeutics for Treatment of Acute Rejection in Solid Organ Transplantation” (Young Investigator Award).
  - Pidala J, Sarwal M, **Roedder S**, Lee SJ. Biologic markers for chronic GvHD. *Bone Marrow Transplant* 2013 Jul 22. Doi: 10.1038/bmt.2013.97.
  - **Roedder S**, Gao X, Sarwal MM. The pits and pearls in translating operational tolerance biomarkers into clinical practice. *Curr Opin Organ Transplant* 2012 Dec; 17(6):655-62. Doi: 10.1097/MOT.0b013e32835a6f62. Review.
  - Li L, Wozniak LJ, **Rodder S**, et al. A common peripheral blood gene set for diagnosis of operational tolerance in pediatric and adult liver transplantation. *Am J Transplant* 2012 May;12(5):1218-28. Doi:10.1111/j.1600-6143.2011.03928.x. Epub 2012.
  - Roedder S, Vitalone M, **Sarwal MM**. Biomarkers in solid organ transplantation: establishing personalized transplantation medicine. *Genome Medicine*, 2011 Jun 8;3(6):37. PMID: 21658299.
  - **Roedder S**, Vitalone M, Sarwal MM. “Biomarkers in Transplantation” (accepted) *Genome Medicine*, 2010
40. **Marianne Delville** – Visiting Scholar 2010 – 2011. *Currently Research Assistant Professor, Necker, France*

- Annette M. Jackson, Tara K. Sigdel, Marianne Delville, Serena Bagnasco MD, Robert A. Montgomery MD, PhD, and **Minnie M. Sarwal**. Endothelial cell reactive antibodies: novel antigenic targets associated with rejection and microvascular injury in kidney transplantation. *J Am Soc Nephrol*. 2014 Nov 7. pii: ASN.2013121277. [Epub ahead of print] PMID: 25381426
- Marianne Delville, Tara K. Sigdel, Changli Wei, Alessia Fornoni, George W Burke, Maarten Naesens, Annette Jackson, Nada Alachkar, Guillaume Canaud, Christophe Legendre, Jochen Reiser, Dany Anglicheau and **Minnie M. Sarwal**. A Circulating Antibody Panel for Pre-transplant Prediction of FSGS Recurrence after Kidney Transplantation. *Sci Transl Med*. 2014 Oct 1;6(256):256ra136. doi: 10.1126/scitranslmed.3008538. PMID: 25273097

41. **Robert Pollack** – 2012 Summer Intern (Volunteer). *Currently postgraduate, UC Berkeley*

42. **Charlotte Vigneron** – 2013 Summer Intern (Volunteer). *Currently medical student, Necker, France*

43. **Nathan Salomonis** – Associate Scientist 2012 – 2013. *Currently, Assistant Professor, Bioinformatics, Cincinnati Children's Hospital*

- Sigdel TK, Salomonis N, Nicora CD, Ryu S, He J, Dinh V, Orton DJ, Moore RJ, Hsieh SC, Dai H, Thien-Vu M, Xiao W, Smith RD, Qian WJ, Camp DG 2nd, **Sarwal MM**. The identification of novel potential injury mechanisms and candidate biomarkers in renal allograft rejection by quantitative proteomics. *Mol Cell Proteomics*. 2014 Feb;13(2):621-31. doi: 10.1074/mcp.M113.030577. Epub 2013 Dec 12. PMID:24335474

44. **Minh-Thien Vu** - Biostatistician 2012 – 2013. *Currently, Scientist, Genentech*.

- Woo SH Woo, Sigdel T, Dinh VT, Minh V, **Sarwal MM** and Lafayette R. Mapping Novel Immunogenic Epitopes in IgA Nephropathy. *Clin J Am Soc Nephrol*. 2014 Dec 26. pii: CJN.02390314

45. **Nicole Dvorak**- 2014/5. *Currently medical student, Sweden*

46. **Nisreen Soufi**- 2014/5. *Currently Pediatric GI Assistant Professor, CHLA*

47. **Dessislava Kopchaliiska**- 2015. *Currently Assistant Professor of Surgery, UCSF*

48. **Mark Nguyen**-2014/5, Nephrology T32 training grant, UCSF, postdoc fellow, UCSF. *Nephrology private practice, Oregon*

49. **Nick Starsiz**-2015, Nephrology T32 training grant, UCSF, post doc fellow, UCSF

50. **Anna Graedts**-2015- Medical student, Maastricht University, Rotterdam, Netherlands

51. **Yoshiko Matsuda**-2015/6- Associate Professor, Nephrology, Tokyo, Japan. *Assistant Professor, University of Tokyo, Japan*.

52. **Sharvin Nandoe**: 2016. Medical student, Maastricht University, Rotterdam, Netherlands

53. **Geraldine Marania**. 2016 UCSF summer high school program (SEP)

54. **Joshua Yang**. 2015/2016 Masters in Translational Medicine Program. *Now MD, PhD at Johns Hopkins University*

55. **Michael Nasr**. 2015/2016 Masters in Translational Medicine Program. *Now in Biotech, Bay area*

56. **Tyler Schmeckpeper**. 2015/2016 Masters in Translational Medicine Program. *Start Up business management. Bay Area*

57. **Katherine So**. 2016/17 Masters in Translational Medicine Program. *IP officer, Utah*

58. **Devon Livingstone**. 2016/17 Masters in Translational Medicine Program. *ENT Fellowship, Toronto, Canada*

59. **Arjun Chaudhuri**. 2016/17 Masters in Translational Medicine Program

60. **Michael Liang**. 2016/17 Masters in Translational Medicine Program. *Software Engineer, Non-Profit for global health*.

61. **Victoria Lee**. 2016/17 SEP High School Student Internship program.

---

## Publications

### Peer-reviewed publications (out of over 200)

**#209** Tara K. Sigdel, Neil Mercer, Sharvin Nandoe, Carrie D. Nicora, Kristin Burnum-Johnson, Wei-Jun Qian, **Minnie M. Sarwal**. Urinary Virome Perturbations in Kidney Transplantation *Front. Med.*, 19 April 2018

**#208** Chitranon Chan-on, Juliane M. Liberto **Minnie M. Sarwal**. Mechanisms and biomarkers of immune quiescence in kidney transplantation *Human Immunology* 2018 Feb.

**#207** Silvia Pineda, Tara K. Sigdel, Jieming Chen, Annette M. Jackson, Marina Sirota, and **Minnie M. Sarwal**. Novel Non-Histocompatibility Antigen Mismatched Variants Improve the Ability to Predict Antibody-Mediated Rejection Risk in Kidney Transplant *Front Med* 2017 Dec PMID: 29259604

**#206** Silke Roedder, Tara Sigdel, Szu-Chuan Hsieh, Jennifer Cheeseman, Diana Metes, Camila Macedo, Elaine F. Reed, H. A. Gritsch, Adriana Zeevi, Ron Shapiro, Allan D. Kirk and **Minnie M. Sarwal**. Expression of Mitochondrial-Encoded Genes in Blood Differentiate Acute Renal Allograft Rejection. *Front Med (Lausanne)*. 2017 Nov. PMID: 29164120

**#205** Arjun Chakraborty & **Minnie Sarwal** (2017): Protein biomarkers in renal transplantation, *Expert Review of Proteomics*, DOI: 10.1080/14789450.2018.1396892 PMID: 29106314

**#204**. Chan-On C, **Sarwal MM**. A Comprehensive Analysis of the Current Status and Unmet Needs in Kidney Transplantation in Southeast Asia. *Front Med (Lausanne)*. 2017 Jun 23 PMID: 28691007

**#203**. S. Chandran, Q. Tang, **M. Sarwal**, Z. G. Laszik, A. L. Putnam, K., Lee, J. Leung, V. Nguyen, T. Sigdel, E. C. Tavares, J. Y. C. Yang, M. Hellerstein, M. Fitch, J. A. Bluestone, F. Vincenti. Polyclonal Regulatory T Cell Therapy for Control of Inflammation in Kidney Transplants *Am J Transplant*. 2017 Nov;17 PMID: 28675676

**#202** Sigdel TK, **Sarwal MM**. Assessment of Circulating Protein Signatures for Kidney Transplantation in Pediatric Recipients. *Front Med (Lausanne)*. 2017 Jun 16 PMID: 28670579

- #201** Retrospective evaluation of the efficacy and safety of belatacept with thymoglobulin induction and maintenance everolimus: A single-center clinical experience. Wojciechowski D, Chandran S, Yang JYC, **Sarwal MM**, Vincenti F. *Clin Transplant*. 2017 Sep;31(9). doi: 10.1111/ctr.13042. Epub 2017 Jul 21. PMID: 28662293
- #200** A combined biomarker and clinical panel for chronic graft versus host disease diagnosis. Pidala J, Sigdel TK, Wang A, Hsieh S, Inamoto Y, Martin PJ, Flowers ME, Hansen JA, Lee SJ, **Sarwal MM**. *J Pathol Clin Res*. 2016 Nov 29;3(1):3-16. doi: 10.1002/cjp2.58. eCollection 2017 Jan. PMID: 28138397
- #199** Transplantomics: Toward Precision Medicine in Transplantation Research. Sirota M, **Sarwal MM**. *Transplantation*. 2017 Aug;101(8):1777-1782. doi: 10.1097/TP.0000000000001664. Review. PMID: 28121910
- #198** Chan-On, C., **Sarwal, MM**. A Comprehensive Analysis of the Current Status of Unmet Needs in Kidney Transplantation in Southeast Asia. *Frontiers in Medicine*. 2017 Jun 23; 4:84. doi: 10.3389/fmed.2017.00084. eCollection 2017.
- #197** Chan-on, C., **Sarwal, MM**. Non-HLA Antibodies in Clinical Transplantation. *Clinical Transplants 2016*. 2017 Jun; 6:45-61. PMID: 28564522
- #196** Yang J Y.C., **Sarwal, MM** .Transplant Genetics and genomics. *Nature Reviews Genetics*. 2017. doi:10.1038/nrg.2017.12 PMID: 28286337
- #195** Crespo E, Roedder S, Sigdel TK, Hsieh SC, Lague S, Cruzado JM, Tran TQ, Grinyo JM, **Sarwal MM**, Bestard O. Molecular and Functional Noninvasive Immune Monitoring in the ESCAPE Study for Prediction of Subclinical Renal Allograft Rejection. *Transplantation*. 2016 Jun 29. DOI: 10.1097/TP.0000000000001287 PMID: 27362314
- #194** Ettenger R, Chin H, Kesler K, Bridges N, Grimm P, Reed EF, **Sarwal MM**, Sibley R, Tsai E, Warshaw B, Kirk Ad. Relationship Among Viremia/Viral Infection, Alloimmunity, and Nutritional Parameters in the First Year After Pediatric Kidney Transplantation. *AM J Transplant*. 2016 Dec 18. doi: 10.1111/ajt.14169. PMID: 27989013
- #193** Sigdel TK, Bestard O, Salomonis N, Hsieh SC, Torras J, Naesens M, Tran TQ, Roedder S, **Sarwal MM**. Intagraft Antiviral-Specific Gene Expression as a Distinctive Transcriptional Signature for Studies in Polyomavirus-Associated Nephropathy. *Transplantation*. 2016 Oct;100(10):2062-70. doi: 10.1097/TP.0000000000001214.
- #192** Langman CB, Barshop BA, Deschênes G, Emma F, Goodyer P, Lipkin G, Midgley JP, Ottolenghi C, Servais A, Soliman NA, Thoene JG, Levchenko EN; Collaborators: Amon O., ... **Sarwal MM**, ...Van't Hoff W. Controversies and research agenda in nephropathic cystinosis: conclusions from a "Kidney Disease: Improving Global Outcomes" (KDIGO) Controversies Conference. *Kidney Int*. 2016 Jun;89(6):1192-203. doi: 10.1016/j.kint.2016.01.033. PMID: 27181776
- #191** Matsuda Y and **Sarwal MM** (2016) Unraveling the Role of Allo-Antibodies and Transplant Injury. *Front. Immunol*. 7:432. doi: 10.3389/fimmu.2016.00432 PMID: 27818660
- #190** Nasr M, Sigdel TK, Sarwal MM. Advances in diagnostics for transplant rejection. Expert Review of Molecular Diagnostics. 2016. DOI: 10.1080/14737159.2016.1239530 PMID: 27677432
- #189** Yang JY, Sigdel TK, **Sarwal MM**. Self-antigens and rejection: a proteomic analysis. *Curr Opin Organ Transplant*. 2016. doi: 10.1097/MOT.0000000000000328. PubMed PMID: 27214090.
- #188**. Intragraft Antiviral-Specific Gene Expression as a Distinctive Transcriptional Signature for Studies in Polyomavirus-Associated Nephropathy. Sigdel TK, Bestard O, Salomonis N, Hsieh SC, Torras J, Naesens M, Tran TQ, Roedder S, **Sarwal MM**. *Transplantation*. 2016 May 2. [Epub ahead of print; PMID:27140517
- #187**. Mining the human urine proteome for monitoring renal transplant injury. Sigdel TK, Gao Y, He J, Wang A, Nicora CD, Fillmore TL, Shi T, Webb-Robertson BJ, Smith RD, Qian WJ, Salvatierra O, Camp DG 2nd, **Sarwal MM**. *Kidney Int*. 2016 Jun;89(6):1244-52. doi: 10.1016/j.kint.2015.12.049. Epub 2016 Mar 4. PMID: 27165815
- #186**. **Sarwal MM**. Fingerprints of transplant tolerance suggest opportunities for immunosuppression minimization. *Clinical Biochemistry*. 2016 Mar. doi:10.1016/j.clinbiochem.2016.01.007 PMID: 26794635
- #185**. Klionsky DJ, ..., **Sarwal MM**, ... , Zughair SM. Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). *Autophagy*. 2016 Jan 2;12(1):1-222. PMID: 26799652
- #184**. Wei C, Sigdel TK, **Sarwal MM**, Reiser J. Circulating CD40 autoantibody and suPAR synergy drives glomerular injury. *Ann Transl Med*. 2015 Nov;3(19):300. doi: 10.3978/j.issn.2305-5839.2015.11.08. PMID: 26697460
- #183**. Wang A and **Sarwal MM**. Computational Models for Transplant Biomarker Discovery. *Front Immunol*. 2015 Sep 8;6:458. doi: 10.3389/fimmu.2015.00458. eCollection 2015. Review. PMID: 26441963
- #182**. Sigdel TK, Bestard O, Tran TQ, Hsieh SC, Roedder S, Damm I, Vincenti F, **Sarwal MM**. A Computational Gene Expression Score for Predicting Immune Injury in Renal Allografts. *PLoS One*. 2015 Sep 14;10(9):e0138133. doi: 10.1371/journal.pone.0138133. eCollection 2015. PMID: 26367000. *PLoS One*. 2015
- #181**. Martin DE, Nakagawa TA, Siebelink MJ, Bramstedt KA, Brierley J, Dobbels F, Rodrigue JR, **Sarwal M**, Shapiro R, Dominguez-Gil B, Danovitch G, Sweet SC, Trompeter RS, Moazam F, Bos MA, Delmonico FL; Transplantation Society. Pediatric Deceased Donation-A Report of the Transplantation Society Meeting in Geneva. *Transplantation*. 2015 Jul;99(7):1403-9. Doi: 10.1097/PMID: 25996634
- #180**. Ng YW, Singh M, **Sarwal MM**. Antibody-mediated rejection in pediatric kidney transplantation: pathophysiology, diagnosis, and management. *Drugs*. 2015 Apr;75(5):455-72. doi: 10.1007/s40265-015-0369-y. Review. PMID: 25813498
- #179**. Joseph Pidala, Gregory C. Bloom, Steven Eschrich, **Minnie Sarwal**, Steve Enkemann, Brian C. Betts, Francisca Beato, Sean Yoder, Claudio Anasetti. Toleranc associated gene expression following allogeneic hematopoietic cell transplantation. *Plos One*, 10

(3): e0117001. doi:10.1371/journal.pone.0117001

- #178.** Tara K. Sigdel ,YolandaW. Ng, Sangho Lee, Carrie D. Nicora, Wei-Jun Qian, Richard D. Smith, David G. Camp II 3 and **Minnie M. Sarwal**. Perturbations in the urinary exosome in transplant rejection. *Frontiers in Medicine* 1(57), 2015 Jan, doi: 10.3389/fmed.2014.00057
- #177.** Woo SH Woo, Sigdel T, Dinh VT, Minh V, **Sarwal MM** and Lafayette R. Mapping Novel Immunogenic Epitopes in IgA Nephropathy. *Clin J Am Soc Nephrol*. 2014 Dec 26. pii: CJN.02390314
- #176.** Bestard O, **Sarwal MM**. Antibody-mediated rejection in young kidney transplant recipients: the dilemma of noncompliance and insufficient immunosuppression. *Pediatr Nephrol*. 2014 Dec 11. [Epub ahead of print]; PMID: 25503324
- #175.** Annette M. Jackson, Tara K. Sigdel, Marianne Delville, Serena Bagnasco MD, Robert A. Montgomery MD, PhD, and **Minnie M. Sarwal**. Endothelial cell reactive antibodies: novel antigenic targets associated with rejection and microvascular injury in kidney transplantation. *J Am Soc Nephrol*. 2014 Nov. pii: ASN.2013121277. [Epub ahead of print] PMID: 25381426
- #174.** Roedder S, Sigdel T, Salomonis N, Hsieh S, Dai H, Bestard O, Metes D, Zeevi A, Gritsch A, Cheeseman J, Macedo C, Peddy R, Medeiros M, Vincenti F, Asher N, Salvatierra O, Shapiro R, Kirk A, Reed E, **Sarwal MM**. The kSORT Assay to Detect Renal Transplant Patients at High Risk for Acute Rejection: Results of the Multicenter AART Study. *PLoS Med*. 2014 Nov;11(11):e1001759. doi: 10.1371/journal.pmed.1001759. PMID: 25386950
- #173.** Silke Roedder, Li Li, Mike Alonso, Szu-Chuan Hsieh, Minh Thien Vu, Hong Dai, Tara K. Sigdel, Ian Bostock, Camila Macedo, Diana Metes, Adrianna Zeevi, Ron Shapiro, Oscar Salvatierra, John Scandling, Josefina Alberu, Edgar Engleman, **Minnie M. Sarwal**. A 3-gene assay for Monitoring Immune Quiescence in Kidney Transplantation. *J Am Soc Nephrol*. 2014 Nov. pii: ASN.2013111239. [Epub ahead of print]; PMID: 25429124
- #172.** Marianne Delville, Tara K. Sigdel, Changli Wei,Alessia Fornoni,George W Burke, Maarten Naesens, Annette Jackson, Nada Alachkar, Guillaume Canaud, Christophe Legendre, Jochen Reiser , Dany Anglicheau and **Minnie M. Sarwal**. A Pivotal Circulating Antibody Panel for Pre-transplant Prediction of FSGS Recurrence after Kidney Transplantation. *Sci Transl Med*. 2014 Oct 1;6(256):256ra136. doi: 10.1126/scitranslmed.3008538. PMID: 25273097
- #171.** Vitalone MJ, Ganguly B, Hsieh S, Latek R, Kulbokas EJ, Townsend R, **Sarwal MM**. Transcriptional profiling of belatacept and calcineurin inhibitor therapy in renal allograft recipients. *Am J Transplant*. 2014 Aug;14(8):1912-21. doi: 10.1111/ajt.12746.
- #170.** Sansanwal P, Li L, **Sarwal MM**. Inhibition of Intracellular Clusterin Attenuates Cell Death in Nephropathic Cystinosis. *J Am Soc Nephrol*. 2014 Jul. pii: ASN.2013060577. [Epub ahead of print]. PMID: 25071085
- #169.** Langman CB, Greenbaum LA, Grimm P, **Sarwal M**, Niaudet P, Deschenes G, Cornelissen EA, Morin D, Cochat P, Elenberg E, Hanna C, Gaillard S, Bagger MJ, Rioux P. Quality of Life is Improved and Kidney Function Preserved in Patients with Nephropathic Cystinosis Treated for 2 Years with Delayed-Release Cysteamine Bitartrate. *J Pediatr*. 2014 Jun. pii: S0022-3476(14)00432-6. doi: 10.1016/j.jpeds.2014.05.013.
- #168.** Sigdel TK, Nicora CD, Hsieh SC, Dai H, Qian WJ, Camp DG 2nd, **Sarwal MM**. Optimization for peptide sample preparation for urine peptidomics. *Clin Proteomics*. 2014 Feb 25;11(1):7. doi: 10.1186/1559-0275-11-7.PMID:24568099
- #167.** Sigdel TK, Salomonis N, Nicora CD, Ryu S, He J, Dinh V, Orton DJ, Moore RJ, Hsieh SC, Dai H, Thien-Vu M, Xiao W, Smith RD, Qian WJ, Camp DG 2nd, **Sarwal MM**. The identification of novel potential injury mechanisms and candidate biomarkers in renal allograft rejection by quantitative proteomics. *Mol Cell Proteomics*. 2014 Feb;13(2):621-31. doi: 10.1074/mcp.M113.030577. Epub 2013 Dec 12. PMID:24335474
- #166.** Haas M, Sis B, Racusen LC, Solez K, Glotz D, Colvin RB, Castro MC, David DS, David-Neto E, Bagnasco SM, Cendales LC, Cornell LD, Demetris AJ, Drachenberg CB, Farver CF, Farris AB 3rd, Gibson IW, Kraus E, Liapis H, Loupy A, Nicleleit V, Randhawa P, Rodriguez ER, Rush D, Smith RN, **Sarwal M**, Tan CD, Wallace WD, Mengel M. Banff 2013 meeting report: inclusion of c4d-negative antibody-mediated rejection and antibody-associated arterial lesions.; Banff meeting report writing committee. *Am J Transplant*. 2014 Feb;14(2):272-83. doi: 10.1111/ajt.12590. PMID:24472190
- #165.** **Sarwal M**, Sigdel T. A common blood gene assay predates clinical and histological rejection in kidney and heart allografts. *Clin Transpl*. 2013:241-7
- #164.** Sigdel TK, **Sarwal MM**. Discovery and customized validation of antibody targets by protein arrays and indirect ELISA. *Methods Mol Biol*. 2013; 1034: 373-84. Doi: 10.1007/978-1-62703-493-7\_24. PMID: 23775752.
- #163.** LiLi, Khush K, **Sarwal M**, et al. Identification of common blood gene signatures for the diagnosis of renal and cardiac acute allograft rejection. *PLOS one*. 2013 Dec, 8(12):e82153 ; pone-D-13-3637.
- #162.** Khatri P, Roedder S, **Sarwal MM**, et al. A common rejection module (CRM) for acute rejection across multiple organs identifies novel therapeutics for organ transplantation. *J Exp Med* 2013 Oct 21;210 (11): 2205-21. Doi: 10.1084/jem.20122709 Epub 2013 Oct 14. PMID: 24127489.
- #161\*.** **Sarwal MM**, Bagga A. Quality of Life after Organ Transplantation in Children. *Curr Opin Organ Transplant* 2013 Aug [Epub ahead of print]. PMID 23995378.
- #160.** Pidala J, **Sarwal M**, Roedder S, Lee SJ. Biologic markers of chronic GVHD. *Bone Marrow Transplant* 2013 Jul. Doi: 10.1038/bmt.2013.97. PMID: 23872737.
- #159.** Keslar KS, Lin M, **Sarwal MM**, et al. Multicenter evaluation of a standardized protocol for noninvasive gene expression profiling. *Am J Transplant*. 2013 Jul; 13(7): 1891-7. Doi: 10.1111/ajt.12284. PMID: 23802725.

- #158.** Sigdel TK, **Sarwal MM**. Moving Beyond HLA: A Review of nHLA Antibodies in Organ Transplantation. *Hum Immunol*. 2013 Jul 19. Doi: pii: S0198-8859(13)00202-4. 10.1016/j.humimm. 2013.07.001. Epub 2013 Jul. PMID: 23876683.
- #157.** Kohrt HE, Tian L, **Sarwal M**, et al. Identification of gene microarray expression profiles in patients with chronic graft-versus-host disease following allogeneic hematopoietic cell transplantation. *Clin Immunol*. 2013 Jul; 148(1): 124-35. Doi: 10.1016/j.clim. 2013.04.013. Epub 2013 May 1. PMID: 23685278.
- #156.** Sigdel TK, Vitalone MJ **Sarwal MM**, et al. A rapid noninvasive assay for the detection of renal transplant injury. *Transplantation*. 2013 Jun. [Epub ahead of print]. PMID: 2375676].
- #155.** Sigdel TK, Shoemaker LD, **Sarwal MM**, et al. Immune response profiling identifies autoantibodies specific to Moyamoya patients. *Orphanet J Rare Dis*. 2013 Mar; 8:45. Doi: 10.1186/1750-1172-8-45. PMID: 23518061 [PubMed – in process].
- #154.** Roedder S, Kumura N, **Sarwal MM**, et al. Significance and Suppression of Redundant IL17 Responses in Acute Allograft Rejection by Bioinformatics based drug repositioning of fenofibrate. *PLoS One* 2013 Feb; 8(2): e56657. Doi: 10.1371/journal.pone.0056657 Epub 2013 Feb 20. PMID 23437201.
- #153.** Chaudhuri A, Ozawa M, **Sarwal MM**, et al. The Clinical Impact of Humoral Immunity in Pediatric Renal Transplantation. *JASN* 24, 2013 doi: 10.1681/ASN.20170663. Epub 2013 Feb 28. PMID: 23449533.
- #152.** Roedder S, Gao X, **Sarwal MM**. The Pits and Pearls in Translating Operational Tolerance Biomarkers into Clinical Practice. *Curr Opin Organ Transplant*. 2012 Dec; 17 (6) 655-62. Doi: 10.1097/MOT.0b013e32835a6f62. PMID: 23080065.
- #151.** Sansanwal P, **Sarwal MM**. p62/SQSTM1 Prominently accumulates in renal proximal tubules in nephropathic cystinosis. *Pediatr Nephrol*. 2012 Nov; 27(11):2137-44. Doi: 10.1007/s00467-012-4. PMID: 22714671.
- #150.** Maarten M, Salvatierra O, Befield M, Ettenger R, Dharnidharka V, Harmon W, Mathias R, **Sarwal M for the SNS01-NIH-CCTPT Multicenter Trial**. Subclinical Inflammation and Chronic Renal Allograft Injury in a Randomized Trial on Steroid Avoidance in Pediatric Kidney Transplantation. *Am J Transplant* 2012 Oct; 12(10): 2730-43. doi:10.1111/j. 1600-6143.2012.04144.x. PMID: 22694733.
- #149.** **Sarwal M**, Ettenger R, et al. Complete Steroid Avoidance is Effective and Safe in Children with Renal Transplants: A Multicenter Randomized Trial with Three-Year Follow-up. *Am J Transplant* 2012 Oct; 12(10): 2719-29. Doi: 10.1111/j.1600-6143.2012.04145.x PMID: 22694755.
- #148.** Li L, Khatri P, Sigdel TK, **Sarwal MM** et al. A Peripheral Blood Diagnostic Test for Acute Rejection in Renal Transplantation. *Am J Transplant* 2012 Oct; 12(10): 2710-2718. Doi: 10.1111/j. 1600-6143. 2012.04253x. PMID 23009139.
- #147.** Sigdel TK, Gao X, **Sarwal MM**. Protein and peptide biomarkers in organ transplantation. *Biomark Med* 2012 Jun (3): 259 – 71. PMID: 22731899.
- #146.** Lee S, Naesens M, Li L, **Sarwal M**. Stanniocalcin supports the functional adaptation of adult-sized kidneys transplanted into the pediatric recipients. *Transplantation* 2012 Jun, 93 (11):1130-5. PMID: 22588538.
- #145.** Li L, Wozniak J, Roedder S, Hsieh S, Talisetti A, Wang Q, Esquivel C, Cox K, Chen R, McDiarmid SV, **Sarwal MM**. A Common Peripheral Blood Gene Set for Diagnosis of Operational Tolerance in Pediatric and Adult Liver Transplantation. *Am J of Transplant* 2012 May; 12(5): 1218-28. doi: 10.1111/j.1600-6143.2011.03928.x. PMID: 22300520.
- #144.** Scandling JD, Busque S, Dejbakhsh-Jones S, Benike C, **Sarwal M**, Millan MT, Shizuru JA, Lowsky R, Engleman EG, Strober S. Tolerance and Withdrawal of Immunosuppressive Drugs in Patients Given Kidney and Hematopoietic Cell Transplants. *Am J Transplant*. 2012 May 12(5): 1133-45. doi: 10.1111/j. 1600-6143.2012.03992.x. PMID: 22405058.
- #143.** Langman CB, Greenbaum LA, **Sarwal M**, Grimm P, Niaudet P, Deschenes G, Cornelissen E, Morin D, Cochat P, Matossian D, Gaillard S, Bagger MJ, Rioux P. A Randomized Controlled Crossover Trial with Delayed-Release Cysteamine Bitartrate in nephropathic Cystinosis: Effectiveness on White Blood Cell Cystine Levels and Comparison of Safety. *Am J. Transplant*. 2012 May 12(5):1133-1145 . doi: 10.1111/j.1600-6143.2012.03992.x. PMID: 22405058.
- #142.** Klionsky DJ, Abdalla FC, Abeliovich H, **Sarwal M**, et al. Guidelines for the use and interpretation of assays for monitoring autophagy. *Autophagy* 2012 Apr; 8(4): 445-544. PMID: 22966490.
- #141.** Naesens M, Kuypers D, **Sarwal MM**. The bumpy road of genomic medicine in transplantation: lessons from studies on calcineurin inhibitor nephrotoxicity. *Transplantation*. 2012 Mar; 93 (6): 578-9: PMID: 22328032.
- #140.** Sigdel TK, Li L, Tran TQ, Khatri P, Naesens M, Sansanwal P, Dai H, Hsieh SC, **Sarwal MM**. Non-HLA Antibodies to Immunogenic Epitopes Predict the Evolution of Chronic Renal Allograft Injury *J Am Soc Nephrol*. 2012 Feb. PMID: 22302197
- #139.** Sigdel TK, **Sarwal MM**. Recent advances in biomarker discovery in solid organ transplant by proteomics. *Expert Rev Proteomics*. 2011 Dec;8(6):705-15. PMID: 22087656.
- #138.** Sigdel TK, Woo SH, Dai H, Khatri P, Li L, Myers B, **Sarwal MM**, Lafayette RA. Profiling of autoantibodies in IgA nephropathy, an integrative antiomics approach. *Clin J Am Soc Nephrol*. 2011 Dec;6(12):2775-84. PMID: 22157707.
- #137.** Zarkhin Valeriya, **Sarwal MM**. “The coin toss of B cells in rejection and tolerance: Danger versus defense” *Semin Immunol* 2011 Oct: 86-91 [Epub 2011 Oct 27]. PMID: 22035649.
- #136.** Vitalone MJ, Naesens M, Sigdel T, Li L, Hsieh S, **Sarwal MM**. The Dual Role of Epithelial-to-Mesenchymal Transition in Chronic Allograft Injury in Pediatric Renal Transplantation. *Transplantation*. 2011 Oct 15;92(7):787-95. PubMed PMID: 21952304.
- #135.** **Sarwal MM**, Sigdel TK, Salomon DR. Functional proteogenomics-Embracing complexity. *Semin Immunol*. 2011 Sep. PubMed PMID: 21908202.
- #134.** Naesens M, Khatri P, Li L, Sigdel TK, Vitalone MJ, Chen R, Butte AJ, Salvatierra O, **Sarwal MM**. Progressive histological damage

in renal allografts is associated with expression of innate and adaptive immunity genes. *Kidney Int.* 2011 Aug; 80(12): 1364-76. doi: 10.1038/ki.2011.245. PMID: 21881554.

**#133.** Khatri P, **Sarwal MM**, Butte AJ Applications of translational bioinformatics in transplantation.. *Clin Pharmacol Ther.* 2011 Aug;90(2):323-7. doi: 10.1038/clpt.2011.120. PMID: 21716268.

**#132.** Dudley JT, Sirota M, Shenoy M, Pai RK, Roedder S, Chiang AP, Morgan AA, **Sarwal MM**, Pasricha PJ, Butte AJ. Computational repositioning of the anticonvulsant topiramate for inflammatory bowel disease. *Sci Transl Med.* 2011 Aug 17;3(96):96ra76. Doi.1126/scitranslmed. 3002648. PMID: 21849664.

**#131.** Zarkhin V, Bezchinsky M, Li L, **Sarwal MM**. Soluble Human Leukocyte Antigen-G in Pediatric Renal Transplantation. *Transplantation.* 2011 Jul; Volume 92:1. DOI: 10.1097/TP.0b013e31821d91a1.

**#130.** Wei C, El Hindi S, Li J, Fornoni A, Goes N, Sageshima J, Maignel D, Karumanchi SA, Yap HK, Saleem M, Zhang Q, Nikolic B, Chaudhuri A, Daftarian P, Salido E, Torres A, Salifu M, **Sarwal MM**, Schaefer F, Morath C, Schwenger V, Zeier M, Gupta V, Roth D, Rastaldi MP, Burke G, Ruiz P, Reiser J. Circulating urokinase receptor as a cause of focal segmental glomerulosclerosis.. *Nat Med.* 2011 Jul;17(8):952-60. doi: 10.1038/nm.2411. PMID: 21804539.

**#129.** Chaudhuri A, Kambham N, **Sarwal M**, et al. Rituximab treatment for recurrence of nephrotic syndrome in a pediatric patient after renal transplantation for congenital nephrotic syndrome in Finnish type. *Pediatr Transplant.* 2011 Jun;16(5): PMID: 21672106.

**#128.** Sigdel T, Lee S, and **Sarwal MM**. Profiling the proteome in renal transplantation. *Proteomics: Clin Appl.* 2011 Jun; 5(5-6): 269-80. Doi: 10.1002/prca.201000117. PMID: 21520424.

**#127.** Roedder S, Vitallone M, **Sarwal MM**. Biomarkers in solid organ transplantation: establishing personalized transplantation medicine. *Genome Medicine,* 2011 Jun 8;3(6):37. PMID: 21658299.

**#126.** Matas AJ, Granger D, Kaufman DB, **Sarwal MM**, Ferguson RM, Woodle ES, Gill JS. Steroid Minimization for Sirolimus-Treated Renal Transplant Recipients. *Clin Transplant* 2011 May-Jun; 25(3): 457-67. 19. doi: 10.1111/j.1399-0012. PMID: 20497196.

**#125.** Zarkhin V, Lovelace PA, LL, Hsieh S, **Sarwal MM**. Phenotypic Evaluation of B cell subsets after Rituximab for Treatment of Acute Renal Allograft Rejection in Pediatric Recipients. *Transplantation* 2011, Mar. PMID: 21403590.

**#124.** Butte, AJ, Sigdel TK, Wadia PP, Miklos DB, **Sarwal MM**. Protein Microarrays Discover Angiotensinogen and PRKRIP1 as Novel Targets for Autoantibodies in Chronic Renal Disease. *Mol Cell Proteomics.* 2011 Mar 10(3):M110.000497. PMID: 21183621.

**#123.** **Sarwal MM**, Benjamin J, Butte AJ, Davis MM, Wood K, Chapman J. Transplantomics and Biomarkers in Organ Transplantation: a report from the first international conference. *Transplantation* 2011 Feb27;91(4):379-382. PMID: 21278631.

**#122.** Naesens M, **Sarwal MM**, Kuypers DR, Organ Transplantation after Cardiac Death *Lancet* 2011 Jan 15;377(9761):203; author reply 204-5. Doi: 10.1016/S0140-6736(1)60037-8. No abstract available. PMID: 21278631.

**#121.** Talisetti A, Hurwitz M, **Sarwal M**, Berquist W, Castillo R, Bass D, Concepcion W, Esquivel CO, Cox K. Analysis of Clinical Variables Associated with Tolerance in Pediatric Liver Transplant Recipients. *Pediatric Transplant* 2010 Dec;14(8):976-9. PMID: 211087505.

**#120.** Sansanwal P, Li L, Hsieh SC, **Sarwal MM**. Insights into Novel Cellular Injury Mechanisms by Gene Expression Profiling in Nephropathic Cystinosis. *J. Inherit Metab Dis.* 2010 Dec;33(6):775-86. PMID: 20865335.

**#119.** Li L, Chaudhuri A, Chen A, Zhao X, Bezchinsky M, Concepcion W, Salvatierra O Jr, **Sarwal MM**. Efficacy and Safety of Thymoglobulin Induction as an Alternative Approach for Steroid-Free Maintenance Immunosuppression in Pediatric Renal Transplantation. *Transplantation.* 2010 Dec 27;90(12):1516-20. PMID: 20935596.

**#118.** Li L, Sigdel T, Vitalone M, Lee SH, **Sarwal M**. Differential Immunogenicity and Clinical Relevance of Kidney Compartment Specific Antigens after Renal Transplantation. *J Proteome Res.* 2010 Dec 3;9(12):6715-21. PMID: 20923235.

**#117.** Naesens M, **Sarwal MM**. Harnessing the diversity of the human T Cell Repertoire: A Monitoring Tool for Transplantation Tolerance? *Eur J Immunol* 2010 Nov;40(11):2986-9. PMID: 21064083.

**#116.** Zarkhin V, Talisetti A, Li L, Wozniak LJ, McDiarmid SV, Cox K, Esquivel C, **Sarwal MM**. Expression of Soluble HLA-G Identifies Favorable Outcomes in Liver Transplant Recipients. *Transplantation* 2010 Nov 15;90(9):1000-5. PMID: 20814356.

**#115.** Morgan AA, Khatri P, Jones RH, **Sarwal MM**, Butte AJ. Comparison of multiplex meta analysis techniques for understanding the acute rejection of solid organ transplants. *BMC Bioinformatics.* 2010 Oct 28;11 Suppl 9:S6. PMID: 21044364.

**#114.** Nasesens M, **Sarwal MM**. Molecular Diagnostics in Transplantation. *Nat Rev Nephrol* 2010 Oct;6(10):614-28. PMID: 20736923.

**#113.** Sansanwal P, **Sarwal MM**. Abnormal Mitochondrial Autophagy in Nephropathic Cystinosis. *Autophagy* 2010 Oct 1;6(7):971-3. PMID: 20729635.

**#112.** Chen R, Sigdel TK, Li L, Kambham N, Dudley JT, Hsieh SC, Klassen RB, Chen A, Caohuu T, Morgan AA, Valantine HA, Khush KK, **Sarwal MM**, Butte AJ. Differentially Expressed RNA from Public Microarray Data Identifies Serum Protein Biomarkers for Cross-Organ Transplant Rejection and Other Conditions. *PLoS Comput Biol* 2010 Sep 23;6(9). PMID: 20885780.

**#111.** Naesens M, **Sarwal MM**. Monitoring Calcineurin Inhibitor Therapy: Localizing the Moving Target. *Transplantation* 2010 Jun 15;89(11):1308-9. PMID: 20458272.

**#110.** Shapiro R, **Sarwal MM**. Pediatric Kidney Transplantation. *Pediatr Clin North Am.* 2010 Apr;57(2):393-400. PMID: 20371043.

**#109.** Shen-Orr SS, Tibshirani R, Khatri P, Bodian DL, Staedtler F, Perry NM, Hastie T, **Sarwal MM**, Davis MM, Butte AJ. Cell type-specific gene Expression Differences in Complex Tissues. *Nat Methods* 2010 Apr;7(4):287-9. PMID: 20208531.

- #108.** Gulati A, **Sarwal MM**. Pediatric renal transplantation: an overview and update. *Curr Opin Pediatrics* 2010 Apr;22(2):189-96. PMID: 20125027.
- #107.** Zarkhin V, Chalasani G, **Sarwal MM**, et al. The yin and yang of B Cells in graft rejection and tolerance. *Transplant Reviews* 2010 Apr;24(2):67-78. PMID: 20149626.
- #106.** Ling XB, Sigdel TK\*, Lau K, Ying L, Lau I, Schilling J, **Sarwal MM**. Integrative Urinary Peptidomics in Renal Transplantation Identifies Biomarkers for Acute Rejection, *J Am Soc Nephrol* 2010 Apr;21(4):646-53. PMID: 20150539.
- #105.** Stevenson T, Millan MT, Wayman K, Berquist WE, **Sarwal MM**, Johnston EE, Esquivel CO, Enns GM. Long-term outcome following pediatric liver transplantation for metabolic disorders. *Pediatr Transplant* 2010 Mar;14(2):268-75. PMID: 19671092.
- #104.** Gholami S, **Sarwal MM**, Naesens M, Ringertz HG, Barth RA, Balise RR, Salvatierra O. Standardizing resistive indices in healthy pediatric transplant recipients of adult-sized kidneys. *Pediatr Transplant* 2010 Feb; 14(1):126-31. PMID: 19413712.
- #103.** Li L, Chen A, Chaudhuri A, Kambham N, Sigdel TK, Chen R, **Sarwal MM**. Compartmental Localization and Clinical Relevance of MICA Antibodies after Renal Transplantation. *Transplantation* 2010 Feb; 89(3):312-9. PMID: 20145522.
- #102.** Sansanwal P, Yen B, Gahl WA, Ma Y, Ying L, Wong LC, **Sarwal MM**: Mitochondrial autophagy may be a critical cellular injury mechanism in nephropathic cystinosis. *J Am Soc Nephrol* 2010 Feb;21(2):272-83. PMID: 19959713.
- #101.** Sansanwal P, Kambham N, **Sarwal MM**. Caspase-4 may play a role in loss of proximal tubules and renal injury in nephropathic cystinosis. *Pediatr Nephrol* 2010 Jan; 25(1): 105-9. Doi: 10.1007/s00467-009-1289-4. PMID: 19705160.
- #100.** Sigdel TK, Kaushal A, Gritsenko M, Norbeck AD, Qian WJ, Xiao W, Camp DG, Smith RD, **Sarwal MM**, Shotgun Proteomics Identifies Proteins Specific for Acute Renal Transplant Rejection, *Proteomics Clin Appl* 2010 Jan 1;4(1):32-47. PMID: 20543976.
- #099.** Sigdel TK, Klassen RB, **Sarwal MM**. Interpreting the proteome and peptidome in transplantation. *Adv Clin Chem* . 2009;47:139-69. PMID: 19634780.
- #098.** Sutherland S, Li L, Sigdel T, Wadia P, Miklos D, Butte AJ, **Sarwal MM**. Protein Microarrays Identify non-HLA Alloantibody Targets in Pediatric Renal Transplant Recipient Experiencing Acute Rejection: Antibodies to Protein Kinase C-zeta Associated with Greater Allograft Loss Risk. *Kidney Int* 2009, Dec;76(12):1277-83. PMID: 19812540.
- #097.** Zarkhin V, Li L, **Sarwal MM**. BAFF May Modulate the Rate of B-Cell Repopulation After Rituximab Therapy for Acute Renal Transplant Rejection. *Transplantation* 2009 Nov; 88(10):1229-1230. PMID: 19935379.
- #096.** Chaudhuri A, Salvatierra Jr O, **Sarwal MM**. Extended daclizumab monotherapy for rejection-free survival in non-adherent adolescent recipients of renal allografts. *Pediatr Transplant* 2009 Nov(7): 927-932. PMID: 19017291.
- #095.** **Sarwal MM**. Deconvoluting the 'omics for organ transplantation. *Curr Opin Organ Transplant* 2009 Oct;14(5):544-51. PMID: 19644370.
- #094.** Naesens M, Lerut E, **Sarwal M**, Van Damme B, Vanrenterghem Y, Kuypers DR. Balancing efficacy and toxicity of kidney transplant immunosuppression. *Transplant Proc*. 2009 Oct; 41(8): 3393-5. PMID: 19857756.
- #093.** Tilney N, Murray J, **Sarwal M**. Promotion of altruistic donation *Transplantation*. 2009 Sep 27;88(6):847. Erratum in: *Transplantation*. 2009 Nov 15;88(9):1145-7. PMID: 19920786.
- #092.** Ying L, **Sarwal MM**. In Praise of Arrays. *Pediatr Nephrol*, 2009 Sep; 24(9): 1643-1659; quiz 1655, 1659. PMID: 18568367.
- #091.** Naesens M, Li L, Ying L, Sansanwal P, Sigdel TK, Hsieh S-C, Kambham N, Lerut E, Salvatierra O, Butte A, **Sarwal MM**. Expression of complement components differs between kidney allografts from living and deceased donors. *J Am Soc Nephrol* 2009 Aug; 20(8):1839-51 PMID: 19443638.
- #090.** Sutherland SM, Li L., Concepcion W., Salvatierra O., **Sarwal MM**. Steroid-Free Immunosuppression in pediatric renal transplantation: rationale outcomes following conversion to steroid based therapy. *Transplantation* 2009 Jun 87(11):1744-8. Erratum in: *Transplantation*. 2009 Sep 27; 88(6):852. PMID: 19502970.
- #089.** Naesens M, Butte AJ, **Sarwal MM**. C3 Polymorphisms and Outcomes of Renal Allografts. *N Engl J Med* 2009 Jun; 360(23): 2478-2479. PMID: 19504761.
- #088.** Li L, Chang A., Naesens M., Kambham N., Waskerwitz J., Martin J., Wong C., Alexander S., Grimm P., Concepcion W., Salvatierra O., and **Sarwal MM**. Steroid-Free immunosuppression since 1999: 129 pediatric transplants with sustained graft and patient benefits. *Am J Transplant* 2009 Jun;9(6):1362-72 PMID: 19459814.
- #087.** Salvatierra O, Concepcion W, **Sarwal M**. A critical look at the immunologically favorable adult-sized kidney transplant in small children. *Pediatr Transplant*.2009 May;13(3):265-7. Epub 2008 Nov 26. PMID: 19067918.
- #086.** Li L, Wadia P, Chen R, Kambham N, Naesens M, Sigdel, TK, Miklos, DB, **Sarwal MM**, Butte AJ. Identifying compartment-specific alloimmune targets after renal transplantation by integrating transcriptome and "antibodyome" measures. *Proc. Nat. Acad. Sci USA* 2009 Mar; 106 (11):4148-53. PMID: 19251643.
- #085.** Naesens M, Kuypers DR, **Sarwal M**. Calcineurin inhibitor nephrotoxicity. *Clin J Am Soc Nephrol* 2009 Feb; 4(2): 481-508. PMID: 19218475.
- #084.** Kahtri, P. and **Sarwal, MM**. Using gene arrays in diagnosis of rejection. *Cur Opin Organ Transplant* 2009 Feb; 14(1) 34-39. PMID: 19337144.
- #083\*.** **Sarwal MM**. Genomic Applications to Transplantation Medicine. *Indian J Med Sci*, 2008.
- #082\*.** **Sarwal MM**. Steroid Avoidance: the time has come". *Indian J Med Sci*, 2008.



- #081.** Zarkhin V, Li L, Kambham N, Sigdel T, Salvatierra O, **Sarwal MM**. A randomized, prospective trial of Rituximab for Acute Rejection on Pediatric Renal Transplantation. *Am J Transplant* 2008 Dec;8(12): 2607-17 PMID: 18808404.
- #080.** Sutherland SM, Alexander SR, **Sarwal MM**, Berquist WE, Concepcion W. Combined liver-kidney transplantation in children: indications and outcomes. *Pediatr Transplant* 2008 Dec; 12(8): 835-46. PMID: 19000066.
- #079. Sarwal, MM.** Out with the old, in with the new: immunosuppression minimization in children. *Curr Opin Organ Transplant* 2008 Oct; 13:513-521. Review. Erratum in: *Curr Opin Organ Transplant*. 2008 Dec; 13(6):683. PMID: 19060535.
- #078.** Salvatierra O Jr, Concepcion W, **Sarwal MM**. Renal transplantation in children with thrombosis of the inferior vena cava requires careful assessment and planning. *Pediatr Nephrol* 2008 Dec (12):2107- 9. PMID: 18688652.
- #077.** Sigdel T, **Sarwal MM**. The Proteogenomic Path Towards Biomarker Discovery. *Pediatr Transplantation*. 2008 Nov; 12(7):737-747 PMID: 18764911.
- #076.** Zarkhin V., **Sarwal MM**. Microarrays: monitoring for transplant tolerance and mechanistic insights. *Clin Lab Med*. 2008 Sep; 28(3): 385-410. PMID: 19028259.
- #075.** Sigdel T, Lau K, Schilling J, **Sarwal M**. Optimizing protein recovery for urinary proteomics, a tool to monitor renal transplantation. *Clin Transplant*. 2008 Sep, 22(5) 617. PMID: 18459997.
- #074.** Li L, Weintraub L, Concepcion W, Martin JP, Miller K, Salvatierra O, **Sarwal MM**. Potential influence of tacrolimus and steroid avoidance on early graft function in pediatric renal transplantation. *Pediatr Transplant*, 2008 Sep 12(6): 701-7. PMID: 18179640.
- #073.** Weintraub L, Li L, Kambham N, Alexander S, , Concepcion W, Miller K, Wong C, Salvatierra O, **Sarwal MM**. Patient Selection Critical for Calcineurin Inhibitor Withdrawal in Pediatric Kidney Transplantation. *Pediatr Transplant*, 2008 Aug;12(5): 541-9. PMID: 18564305.
- #072.** Zarkhin V, Li L, **Sarwal MM**. To B or not to B: B Cells and Graft Rejection. *Transplantation* 2008 Jun; 85(12): 1705-14. PMID: 18580460.
- #071.** Zarkhin V, Kambham N, Li L, Kwok S, Hsieh S, Salvatierra O, **Sarwal MM**. Characterization of Intra-graft B-cells in renal allograft rejection. *Kidney Int* 2008 Jun 74(5) 664-73. PMID: 18547992.
- #070.** Naesens M, Salvatierra O, Li L, Kambham N, Concepcion W, **Sarwal M**. Maturation of dose-corrected tacrolimus predose trough levels in pediatric kidney allograft recipients. *Transplantation*. 2008 Apr 27; 85(8):1139-45. PMID: 18431234.
- #069.** Naesens M, **Sarwal MM**. Looking into the crystal chip: can microarrays predict graft function?. *Transplantation*, 2008 Feb 27; 85(4): 499-500. PMID: 18347526.
- #068\*.** Sutherland SM, Hong DK, Balagtas J, Gutierrez K, Dvorak CC, **Sarwal M**. Liposomal Amphotericin B Associated With Severe Hyperphosphatemia. *Pediatr Infect Dis J*. 2008 Jan;27(1):77-79. PMID: 18162947.
- #067.** Li L, Ying L, Naesens M, Xiao W, Sigdel T, Hsieh S, Martin J, Chen R, Liu K, Mindrinos M, Davis R, **Sarwal M**. Interference of globin genes with biomarker discovery for allograft rejection in peripheral blood samples. *Physiol Genomics*. 2007; 32(2):190-7. PMID: 17971501.
- #066.** Naesens M, Kambham N, Concepcion W, Salvatierra O, **Sarwal MM**. The evolution of non-immune histological injury and its clinical relevance in adult-sized kidney grafts in pediatric recipients. *Am J Transplant*. 2007 Nov;7(11):2504-14. PMID: 17725681.
- #065. Sarwal MM**, Pascual J. Immunosuppression minimization in pediatric transplantation. *Am J Transplant*. 2007 Oct;7(10):2227-35. PMID: 17711553.
- #064.** Brouard S, Mansfield E, Braud C, Li L, Giral M, Hsieh S, Baeten D, Zhang M, Ashton-Chess J, Bradeau C, Hsieh F, Sherlock G, Dupont A, Pallier A, Moreau A, Louis S, Ruiz C, Salvatierra O, Souillou J, **Sarwal MM**. Identification of a peripheral blood transcriptional biomarker panel associated with operational renal allograft tolerance. *Proc Natl Acad Sci USA*, 2007 Sept; 104(39):15448-53. PMID: 17873064.
- #063.** Nagarajan S, Mansfield E, Hsieh S, Liu R, Hsieh F, Li L, Salvatierra O, **Sarwal MM**. Transplant reno-vascular stenoses associated with early erythropoietin use. *Clin Transplant*. 2007 Sep;21(5):597-608. PMID: 17845633.
- #062.** Abdurrahman Z, **Sarwal M**, Millan M, Robertson S, Filler G. Sirolimus is not always responsible for new-onset proteinuria after conversion for chronic allograft nephropathy. *Pediatr Transplant*. 2007 May;11(3):336-9. PMID: 17430494
- #061.** Beaunoyer M, Mohile, S, Li, L, Concepcion W, Salvatierra O, **Sarwal MM**. Optimizing outcomes for neonatal ARPKD. *Pediatr Transplant.*, 2007 May;11(3):267-71. PMID: 17430481.
- #060.** Li L, Chaudhuri A, Weintraub LA, Hsieh F, Shah S, Alexander S, Salvatierra O Jr, **Sarwal MM**. Subclinical cytomegalovirus and Epstein-Barr virus viremia are associated with adverse outcomes in pediatric renal transplantation. *Pediatr Transplant*. 2007 Mar: 11: 187-195. DOI: 10.1111/j.1399-3046.2006.00641.x.
- #059.** Li L, Chaudhuri A, Weintraub LA, Hsieh F, Shah S, Alexander S, Salvatierra O, **Sarwal MM**. Sub-clinical CMV and EBV viremia are associated with adverse outcomes in pediatric renal transplantation. *Pediatr Transplant*, 2007 Mar: 11(2): 187-95. PMID: 17300499.
- #058.** Kambham N, Nagarajan S, Shah S, Li L, Salvatierra O, **Sarwal MM**. A Novel Semiquantitative, Clinically Correlated Calcineurin Inhibitor Toxicity Score For Renal Allograft Biopsies. *Clin J Am Soc Nephrol*, 2007 Jan; 2: 135 – 142. PMID: 17699397.
- #057.** Chua AN, Alexander SR, **Sarwal MM**, Millan M, Salvatierra O, Yorgin PD. Proteinuria in pediatric renal transplant recipients during the first 60 post-transplant days. *Pediatr Transplantation*, 2006 Dec; 10(8):957-61. PMID: 17096766.

- #056.** Eneriz-Wiemer M, **Sarwal MM**, Donovan D, Costaglio C, Concepción W, Salvatierra O. Successful Renal Transplantation in High-Risk Small Children With A Completely Thrombosed Inferior Vena Cava. *Transplantation*, 2006 Nov, 15;82(9):1148-52. PMID: 17102765.
- #055\*.** **Sarwal MM**. Acute renal failure management. *Pediatric Transplantation*, 2006 Nov;21 (1):2-4. PMID: 16623769.
- #054.** **Sarwal MM**, Li L. Designer genes: Filling the Gap in Transplantation. *Transplantation*, 2006 Nov;82(10):1261-72.
- #053.** **Sarwal MM**, Sutherland S. Three cases of suspected antibody-mediated rejection. *Clin. Transplant*, 2006 Oct:473-476. PMID: 18365406.
- #052.** Weintraub, LA, **Sarwal MM**. Microarrays: A Monitoring Tool for transplant patients? *Transpl Int* 2006 Oct, 19(10): 775-88. PMID: 16961768.
- #051.** **Sarwal MM**. Chipping into the human genome: novel insights for transplantation. *Immunol Rev*. 2006 Apr; 210:138-55. PMID: 16623769.
- #050.** Chaudhuri A, Salvatierra O Jr, Alexander SR, **Sarwal MM**. 2006. Option of pre-emptive nephrectomy and renal transplantation for Bartter's syndrome. *Pediatr Transplant*. 2006 Mar;10(2):266-70. PMID: 16573620.
- #049.** **Sarwal MM**. Steroid Elimination is coming of age. *Pediatr. Neph*, 2006 Jan, 21:2-4; DOI 10. 1007/s00467-005-2042-2.
- #048.** Nagarajan S, Enns GM, Millan MT, Winter S, **Sarwal MM**. Management of methylmalonic acidemia by combined liver-kidney transplantation. *J Inherit Metab Dis*. 2005;28(4):517-24. PMID: 15902554.
- #047.** Melk A, Mansfield E, Hsieh S, Hernandez-Boussard T, Grimm P, Rayner D, Halloran P, **Sarwal MM**. Transcriptional analysis of the molecular basis of human kidney aging using cDNA microarray profiling. *Kidney International*, 2005 Dec, 68:2667-2679. PMID: 16316342.
- #046.** Ettenger R, **Sarwal MM**. Mycophenolate mofetil in pediatric renal transplantation. *Transplantation*, 2005 Oct; 80(2 Suppl):S201-10. PMID: 16251853.
- #045.** Chua A and **Sarwal MM**. Acute renal failure management in the neonate. *Neoreviews* 6:e369-e376, 2005 Aug.
- #044.** Lee BP, Mansfield E, Hsieh SC, Hernandez-Boussard T, Chen W, Thomson CW, Ford MS, Bosinger SE, Der S, Zhang ZX, Zhang M, Kelvin DJ, **Sarwal MM**, Zhang L. Expression profiling of murine double-negative regulatory T cells suggest mechanisms for prolonged cardiac allograft survival. *J Immunol*. 2005 Apr, 15;174(8):4535-44. PMID: 15814674.
- #043.** Kleta R, Kaskel F, Dohil R, Goodyer P, Guay-Woodford LM, Harms E, Ingelfinger JR, Koch VH, Langman CB, Leonard MB, Mannon RB, **Sarwal M**, Schneider JA, Skovby F, Sonies BC, Thoene JG, Trauner DA, Gahl WA; NIH Office of Rare Diseases. First NIH/Office of Rare Diseases Conference on Cystinosis: past, present, and future. *Pediatr Nephrol*. 2005 Apr;20(4):452-4.. PMID: 15747161.
- #042.** Vidhun JR, **Sarwal MM**. Corticosteroid avoidance in pediatric renal transplantation. *Pediatr Nephrol*. 2005 Feb;20(3):418-26. Epub 2005 Feb 3 Review PMID: 15690189.
- #041.** Salvatierra O, **Sarwal M**. Vulnerability of small pediatric recipients to laparoscopic living donor kidneys. *Am J Transplant*. 2005 Feb;5(2):201-2. PMID: 15643977.
- #040.** Nagarajan S, Friedrich T, Garcia M, Kambham N, **Sarwal MM**. Gastrointestinal leukocytoclastic vasculitis: an adverse effect of sirolimus. *Pediatr Transplant*. 2005 Feb;9(1):97-100. PMID: 15667620.
- #039.** Aavik E, Mahapatra A, Boldrick J, Chen X, Barry C, Dutoit D, **Sarwal M**, Hayry P. Correlation between gene expression and morphological alterations in baboon carotid after balloon dilatation injury. *FASEB J*. 2005 Jan;19(1):130-2. PMID: 15496494.
- #038.** Vidhun JR and **Sarwal MM**. Corticosteroid avoidance in pediatric renal transplantation: can it be achieved? *Paediatr Drugs*. 2004;6(5):273-87. Review. PMID: 15449967.
- #037\*.** Shah S, **Sarwal MM**. Microarrays: interrogating the transplant transcriptome. *Clinical Transplants*, 2004; 261-7. PMID 16704157.
- #036.** DiDomenico P, Berry G, Bass D, Fridge J, **Sarwal M**. Noncirrhotic portal hypertension in association with juvenile nephropathic cystinosis: case presentation and review of the literature. *J Inherit Metab Dis*. 2004;27(5):693-9. PMID: 15669688.
- #035.** Hahn JS, Lannin WC, **Sarwal MM**. Microangiopathy of brain, retina, and inner ear (Susac's syndrome) in an adolescent female presenting as acute disseminated encephalomyelitis. *Pediatrics*, 2004 Jul;114(1):276-81. PMID: 15231946.
- #034.** Mansfield E and **Sarwal M**: Arraying the orchestration of allograft pathology. *Am J Transplant*. 2004 Jun;4(6):853-62.
- #033.** Wapensky T, Alexander S and **Sarwal MM**: Postdialysis albumin: a better nutrition marker in pediatric hemodialysis patients? *J Ren Nutr*. 2004 Jan;14(1):45-51. PMID: 14740330.
- #032\*.** Mansfield, E, Hernandez-Boussard T, **Sarwal M**. Arrays Amazeunraveling the transcriptome in transplantation. *American Society of ImmunoGenetics and Histocompatibility Quarterly Journal*, 2003, 27(1): 44-50.
- #031.** Shaw RJ, Palmer L, Blasey C, **Sarwal M**. A typology of non-adherence in pediatric renal transplant recipients. *Pediatr Transplant*. 2003 Dec;7(6):489-93. PMID: 14870900.
- #030.** Millan MT, Berquist WE, So SK, **Sarwal MM** et al. 100% patient & kidney allograft survival with liver and kidney transplantation in infants with primary Hyperoxaluria. *Transplantation*. 2003 Nov;76(10):1458-63. PMID: 14657686.
- #029.** **Sarwal M**, Vidhun J, Alexander S, Millan M and Salvatierra O: Continued Superior Outcomes of Steroid-Free Immunosuppression in Pediatric Renal Transplantation. *Transplantation*. 2003 Nov;76(9):1331-9. PMID: 14627912.

- #028\***. Chua M, Mansfield E and **Sarwal M**. Applications of microarrays in renal transplantation- progress and possibilities. *Front Biosci*, 2003, Sep; 8; s913-23. PMID: 12957854.
- #027**. Vidhun J, Masciandro J, Varich L, Salvatierra O, **Sarwal M**: Safety and risk stratification of percutaneous biopsies of adult-sized renal allografts in infant and older pediatric recipients. *Transplantation* 2003 Aug;76 (3):552-7. PMID: 12923443.
- #026**. **Sarwal M**, Chua MS, Kambham N, Hsieh SC, Satterwhite T, Masek M, Salvatierra O: Molecular heterogeneity in acute renal allograft rejection identified by DNA microarray profiling. *N Engl J Med* 2003 Jul, 349(2): 125-38. PMID: 12853585.
- #025**. Häyry P, Aavik E, **Sarwal M**, du Toit D, Vamvakopoulos J. Chronic rejection: Prospects for therapeutic intervention in fibroproliferative vascular disease. *Exp Clin Transplant* 2003, Jun; 1(1):35-8. PMID: 15859905.
- #024**. Chua MS, **Sarwal M**: Microarrays: new tools for transplantation research. *Pediatr Nephrol* 2003 Apr;18(4):319-217. PMID: 12700956.
- #023**. Satterwhite T, Chua M-S, Hsieh S-C, Chang S, Scandling J, Salvatierra O, **Sarwal M**: Increased expression of cytotoxic effector molecules: Different interpretations for steroid-based and steroid-free immunosuppression. *Pediatr Transplantation* 2003 Feb;7:53-58. PMID: 12581329.
- #022**. Chua M, Barry C, Chen X, Salvatierra O, **Sarwal M**: Molecular profiling of anemia in acute renal allograft rejection using DNA microarrays. *Am. J Transplantation* 2003 Jan;3:17-22. PMID: 12492705.
- #021**. Chua M and **Sarwal M**. Exploiting DNA microarrays in renal transplantation. *Graft* 2002, 5(4):223-231.
- #020**. Yorgin PD, Belson A, Sanchez J, Al Uzri AY, **Sarwal M**, Bloch DA, Oehlert J, Salvatierra O, Alexander SR. Unexpectedly high prevalence of posttransplant anemia in pediatric and young adult renal transplant recipients. *Am J Kidney Dis* 2002 Dec;40(6):1306-18. PMID: 12460052.
- #019**. Bartsh L, **Sarwal M**, Orlandi P, Yorgin P, Salvatierra O. Limited surgical interventions in children with posterior urethral valves can lead to better outcomes following renal transplantation. *Ped. Transplant*, 2002, Oct 6 (5):400-5. PMID: 12390427.
- #018**. Hayry P, du Toit D, **Sarwal M**, Aavik E, Hoffren A, Vamvakopoulos J. Rational drug design: making drugs that make a difference. *Transplant Proc* 2002 Sep;34(6):2000-2. PMID: 12270291.
- #017**. **Sarwal M**, Chang S, Barry C, Chen X, Alizadeh A, Salvatierra O, Brown P. Genomic Analysis of Renal Allograft Dysfunction Using cDNA Microarrays. *Transplant Proc*, 2001; 33:297-298. PII S0041-1345(01)01917-0.
- #016**. Yorgin P, Belson A, **Sarwal M** and Alexander S. Sodium ferric gluconate therapy in renal transplant and renal failure patients. *Pediatr Neph.*, 2001, Dec 15 (3-4): 171-5. PMID: 11149105.
- #015**. Shaw RJ, Palmer L, Hoyte H, Yorgin P and **Sarwal M** Case study: Treatment adherence in a 13-year-old deaf adolescent male. *Clinical Child Psychology and Psychiatry*, 2001 Oct, 6 (4): 551-562.
- #014**. **Sarwal M**, Yorgin P, Alexander S, Major C, Granucci L, Castaglio C, Millan M, Belanger N, Orlandi P and Salvatierra O. Promising early outcomes with a novel steroid free immunosuppression protocol in pediatric renal transplantation. *Transplantation* 2001 Jul; 72(1):13-21 PMID: 11468528.
- #013**. Belson A, Alcorn D, Yorgin PD, Fisher PG, **Sarwal MM**. Case report: pseudotumor cerebri in an infant on peritoneal dialysis. *Pediatr. Neph.*, 2001 Mar, 16 (3): 216-218. PMID: 11266826
- #012**. **Sarwal M**, Chang S, Barry C, Chen X, Alizadeh A, Salvatierra O, Brown P: Novel molecular approaches in acute allograft rejection. *Transplant Proc* 2001; Feb-Mar 33:297-298. PMID: 11266826
- #011**. **Sarwal M**, Jani K, Chang S, Huie P, Salvatierra O, et al. Granulysin expression is a marker for acute rejection and steroid resistance in human transplant rejection. *Hum Immunol* 2001, Jan 62 (1): 21-31. PMID: 11165712
- #010\***. **Sarwal M**, Bartsch L, Salvatierra O: Posterior urethral valves with renal insufficiency: the choice of management is critical. *Nephrology Rounds* 2000; 3(10):1-6.
- #009**. **Sarwal M**, Cecka JM, Millan MT, Salvatierra O: Adult-sized kidneys without ATN provide exceedingly superior long term graft outcomes for infants and small children: a single center and UNOS analysis. *Transplantation* 2000 Dec; 70(12):1728-1736. PMID: 1152105
- #008**. Millan MT, **Sarwal M**, Lemley, KV, Yorgin P, et al. A 100% 2-year graft survival can be attained in high risk 15-kg or smaller infant recipients of kidney allografts. *Arch Surg* 2000 Sep; 135(9):1063-8; discussion 1068-9. PMID: 10982511.
- #007**. Salvatierra O and **Sarwal M**: Renal perfusion of infant recipients with adult sized kidneys is a critical risk factor. *Transplantation* 2000 Aug; 70:412-413. PMID: 10949179.
- #006**. Mackie, F., Umetsu, D., Salvatierra, O, **Sarwal, M** Pulmonary capillary leak syndrome with intravenous cyclosporin A in pediatric renal transplantation. *Pediatr Transplant*, 2000 Feb 4(1): 35-38. PMID: 10731056
- #005\***. Salvatierra O, **Sarwal M**, Alexander S, Lemley KV, et al. A new, unique and simple method for ureteral implantation in kidney recipients with small, defunctionalized bladders. *Transplantation* 1999; Sep 68:731-738. PMID: 10515372.
- #004**. Salvatierra O, Singh T, Shifrin R, **Sarwal M**, et al. Transplantation of adult sized kidneys into infants requires major blood flow changes. *Transplant Proc* 1999 Feb-Mar; 31 (1-2): 236-237. PMID: 10083090.
- #003**. Salvatierra O, Singh T, Shifrin R, **Sarwal M**, et al. Successful transplantation of adult sized kidneys into infants requires maintenance of high aortic blood flow. *Transplantation* 1998 Oct; 66 (7): 819-823. PMID: 9798687
- #002**. **Sarwal M**, Sontag J-Me; Lieu H; Brenner S. and Wilkie T.M. G protein alpha subunit multigene family in the Japanese Puffer fish Fugu Rubripes: PCR from a compact vertebrate genome. *Genome Research*, 1996 Dec, 6, (12) 1207-15. PMID: 8973916.

#001. **Bhagat M** and Reid C.J.D. Clinical Quiz: Lesch-Nyhan Syndrome. *Pediatric Nephrology*, 1991 Nov 5(6), 758-760. PMID: 1768590

#### Book Chapters:

1. Nguyen, M., Geraedts, A., **Sarwal MM**, Immune Monitoring in Kidney Transplantation. Kidney Transplantation, Bioengineering and Regeneration. Oxford: Academic Press, 2017, pp. 403-418.
2. Mehra, N. K., Baranwal, A. K., **Sarwal MM**, , Tait, B. D., eds. (2017). Antibody Repertoire and Graft Outcome Following Solid Organ Transplantation. Lausanne: Frontiers Media. doi: 10.3389/978-2-88945-241-5
3. **Sarwal MM**. Management of the Pediatric Renal Transplant Patient. Nelsons Textbook in Pediatric Nephrology (2015)
4. Detrick et al and **Sarwal MM** “Manual of Molecular and Clinical Laboratory Immunology”, 8<sup>th</sup> Edition (Sep 30, 2013).
5. **Sarwal MM** et al. ANR Agence Nationale de la Recherche (2013).
6. **Sarwal MM**, Sigdel TK. Discovery and customized Validation of Antibody Targets by Protein Arrays and Indirect ELISA. Book Chapter on Protein Array.
7. **Sarwal MM**, Bagga A. Current Opinion in Organ Transplantation 2013. Quality of Life after Organ Transplantation in Children. PMID: 23995378.
8. **Sarwal MM**, Shapiro R. Oxford Textbook of Clinical Nephrology OTCN 2013: Clinical Trials in Pediatric Transplantation.
9. Butte A, Sigdel T and **Sarwal MM** “*Molecular and Cellular Proteomics*” (accepted).
10. Shapiro R and **Sarwal MM**. “Pediatric Kidney Transplantation”. *Pediatric Clinics of North America 2010 Apr; 57(2): 393-400*. Table of contents. Review PMID: 20371043.
11. Khatri, P and **Sarwal MM**. “Functional Pathway Analysis for Understanding Immunologic Signature of Rejection: Current Approaches and Outstanding Challenges” Immunologic Signatures of Rejection Edited by Marincola, FM and Wang E. Springer, 2010.
12. Wang, C and **Sarwal MM**. “Pediatric Renal Transplantation” Nelson Textbook of Pediatrics 19<sup>th</sup> Edition Edited by Kliegman R. M. W.B. Saunders, 2011.
13. Sigdel TK, Klassen B, and **Sarwal MM**. “Interpreting the Proteome and Peptidome in Transplantation” Advances In Clinical Chemistry, Elsevier Ltd. Edited by Dr. Greg Makowski 2008.
14. Mansfield ES, **Sarwal MM**. “Genomics and Proteomics as Research Tools.” Pediatric Solid Organ Transplantation, Second Edition. Blackwell Publishing, 2007
15. **Sarwal MM** and Ettenger R. 2007. “Management of the Pediatric Renal Transplant Patient.” KIDNEY TRANSPLANTATION: Principles and Practice, 6TH Edition. Eds. Sir Peter J Morris and Stuart Knechtle.
16. Benefield M and **Sarwal MM**. “Pediatric Transplantation.” Transplant Manual. Astellas Health Care, 2006
17. Alemi F and **Sarwal MM**. “Genomics.” Measuring Immunity. Basic Science and Clinical Practice. Eds. Michael T. Lotze and Angus W. Thomson. Elsevier Science, 2005
18. **Sarwal MM** and Salvatierra O. “Preparing the Pediatric patient for transplantation”. Pediatric Dialysis. 2005
19. Busque S, Roorzakh H, **Sarwal MM**. “Nanotechnology in Transplantation.” Nanotechnology. 2004
20. Vamvakopoulos J, Einari Aavik, Danie Du Toit, Hayry P, **Sarwal Minnie**. “Transplant Arteriopathy- Pathogenesis, Pathology and Prospects of Treatment.” Principles of Molecular Cardiology. 2003
21. **Sarwal M**, Krensky A. “Costimulation In Pediatric Solid Organ Transplantation.” Pediatric Solid Organ Transplantation. 2000

#### Selected Abstracts/Oral Presentations: (total over 400, presentations of ranked merit highlighted)

1. “Drug Repositioning in Organ Transplantation” Plenary Abstract, **AST Young Investigator Award** (6/2015)
2. “Pivotal factor for recurrent FSGS” World Transplant Congress, San Francisco (7/27/14)
3. “rFSGS Pathogenesis” ASN, Philadelphia (11/12/14)
4. “kSORT a non-invasive marker for acute rejection” World Transplant Congress, San Francisco (7/28/14)
5. “Gene Signature of Tolerance and Clinical Liver Transplantation” ILTS 2013, Sydney, Australia (6/15/2013)
6. “Lineage Profiler: A Novel Informatics Tool for Unraveling Transplant Injury” ATC 2013, Seattle (5/2013).
7. New Frontiers in Pediatric Transplantation: “CNI Minimization of Steroid Minimization, which is optimal for Children?” ATC 2013, Seattle, Washington (5/2013)
8. “A Pivotal Circulating Antibody Panel for Pre-Transplant Prediction of FSGS Recurrence after Kidney Transplantation” ATC 2013, Seattle, Washington. (5/2013)
9. “B Cells, friends or foes?” French Transplant Meeting, Beaune, France (5/30/2013- 5/31/ 2013)
10. “Non-invasive diagnosis of solid organ transplant rejection” Sociedad Espanola de Trasplante, Seville, Spain (4/2/13)
11. “Management of recurrent glomerulosclerosis after transplantation” TTS 2013, Cambridge, UK (4/5/13)
12. “Biomarkers in solid organ transplantation: establishing personalized transplantation medicine” Guadalajara, Mexico (12/06/2012)
13. “Steroid-free immunosuppression in kidney transplantation – Success with Daclizumab and Thymoglobulin” Dinner symposium, Guadalajara, Mexico (12/07/2012).

14. "Understanding Common Rejection Pathways Uncovers Novel Immunosuppressive Drugs in Solid Organ Transplantation" (9/26/2012), Pucon, Chile.
15. "Can we Monitor for Tolerance in Organ Transplantation?" (9/27/2012), Pucon, Chile
16. "Novel Insights into Mechanisms and Therapy for FSGS" (9/27/2012), Pucon, Chile.
17. "Three Year Results of the NIH Multi-center US Steroid Avoidance Trial" (9/28/2012), Pucon, Chile.
18. "Unravelling Omics for Personalized Medicine" (5/18/2012), University of Heidelberg, Germany
19. Bachman MH, Kusy S, LiLi, **Sarwal MM**, Contag CH, et al. "In vivo identification of immunomodulatory gene networks that prevent rejection of embryonic stem cell allografts." 2<sup>nd</sup> Int'l Conference on Immune Tolerance, Amsterdam (Oct 2011).
20. Bachman MH, Kusy S, LiLi, **Sarwal MM**, Contag CH, et al. "In vivo identification gene networks that prevent rejection of embryonic stem cell allografts". 2<sup>nd</sup> International Conference on Immune Tolerance, Amsterdam (Oct 23 – 25, 2011).
21. Li Li, Sue Hsieh, John Scandling, Tara Sigdel and **Minnie Sarwal** " A Highly Specific Novel 3 Gene-set Non-invasively Predict Operational Renal Allograft Tolerance". TTS Congress Vancouver (Aug 14-18, 2010) **Astellas / TTS Young Investigator Award**
22. Li Li, Anita Talisetti, Sue Hsieh, Ken Cox, Carlos Esquivel, Waldo Concepcion and **Minnie Sarwal**. "A Peripheral Blood 12 Gene-Set Diagnosis of Pediatric Liver Allograft Tolerance". TTS Congress Vancouver (Aug 14-18, 2010) **Distinguished Abstract Award**
23. Mathew J. Vitalone, Maarten Naesens, Li Li, Tara Sidgel, Sue Hsieh<sup>1</sup>, **Minnie Sarwal** " Epithelial-to-mesenchymal transition gene expression is associated with early tubulointerstitial damage in pediatric renal transplant recipients" TTS Congress Vancouver (Aug 14-18, 2010)
24. Valeriya Zarkhin, Anita Talisetti, Kenneth Cox, Melissa Hurwitz, Carlos Esquivel and **Minnie Sarwal**. "HLA-G" A Novel Serological Marker for Liver Transplant Tolerance". ATC Congress San Diego (May 1-5, 2010)
25. Li Li, Abanti Chaudhuri, Amery Chen, **Minnie Sarwal**. " Thymo versus Daclizumab Induction for Steroid free immunosuppression: safety and efficacy data at one year, TTS Vancouver, 2010.
26. Tara Sigdel, Li Li, **Minnie Sarwal** " Urinary Peptidomics in Organ Transplantation" HUPO Meeting, Sydney, Australia, 2010
27. Poonam Sansanwal, Sue Hsieh, **Minnie Sarwal** "Novel Aspects of Mitophagy in Nephropathic Cystinosis", Keystone Meeting, Vancouver. **Keystone Symposia Scholarship Award**
28. Tara Sigdel, Bruce Ling, Ken Lau, Lihua Ying, Irwin Lau, James Schilling and **Minnie Sarwal** "Integrative Urinary Peptidomics in Renal Transplantation Identifies Novel Biomarkers for Acute Rejection". ATC Congress San Diego (May 1-5, 2010)
29. Maarten Naesens, Sangho Lee, Tara Sigdel, Neeraja Kambham and **Minnie Sarwal** " Renal stanniocalcin-1 is involved in functional adaption of adult-sized kidneys transplanted into pediatric recipients". ATC Congress San Diego (May 1-5, 2010)
30. Li Li, Anita Talisetti, Sue Hsieh, Ken Cox, Carlos Esquivel, Waldo Concepcion and **Minnie Sarwal**. "A Peripheral Blood 12 Gene-Set Diagnosis of Pediatric Liver Allograft Tolerance". ATC Congress San Diego (May 1-5, 2010)
31. Li Li, Sue Heish, John Scandling, Tara Sigdel and **Minnie Sarwal** " A Highly Specific Novel 3 Gene-set Non-invasively Predict Operational Renal Allograft Tolerance". ATC Congress San Diego (May 1-5, 2010)
32. Maarten Naesens, Li Li, Tara Sigdel, Neeraja Kambham, Oscar Salvatierra, Atul Butte and **Minnie Sarwal** "Adaptive and Immune Gene Expression Dynamics and Progression of Chronic Histological Damage of Renal Allografts". ATC Congress San Diego (May 1-5, 2010)
33. Purvesh Khatri, Tara Sigdel, L Li, and **Minnie Sarwal** "MicroRNAs cross organ identified by Bioinformatic Data Mining" ATC meeting San Diego, 2010. **Young Investigator Award**
34. Purvesh Khatri, Shai Shen-Orr, Robert Tibshirani, Atul J Butte and **Minnie M Sarwal** "Novel Cell-type Specific Deconvolution of Whole-Blood Gene Expression Profiles in Renal Acute Rejection" ATC Congress San Diego (May 1-5, 2010)
35. Li Li, Sue Hsieh, Lihua Ying, Tara Sigdel and **Minnie Sarwal** " Identification of a Peripheral Blood Transcriptional Biomarker Panel for Diagnosis and Prediction of Renal Allograft Tolerance" First Annual AST-ASE Mtg, Orlando, Fla (**FellowsTravel Award**) (Dec 3-5, 2009)
36. Li Li, Anita Talisetti, Sue Hsieh, Ken Cox, Carlos Esquivel, Waldo Concepcion and **Minnie Sarwal** " A peripheral Blood 13 Gene-Set for Diagnosis of Pediatric Liver Allograft Tolerance" First Annual AST-ASE Mtg, Orlando Fla (Dec 3-5 2009)
37. Li Li, Sue Hsieh, Tara Sigdel and **Minnie Sarwal** "Monitoring for Operational Tolerance", ATC Congress, Boston, Ma (**Young Investigator Award**) May 29-Jun 3, 2009
38. Purvesh Khatri, Li Li, Silkie Roedder and **Minnie Sarwal** " Data Mining for microRNAs in organ transplantation" ATC Congress, Boston, (**Young Investigator Award**) May 29-Jun 3, 2009
39. Valeriya Zarkhin, Patty Lovelace, Li Li, David L Hirschberg and **Minnie Sarwal**. " Reconstitution of peripheral blood-B cells after tituximab treatment of acute renal transplant rejection in pediatric patients. ATC Congress (Boston, MA) May 29-Jun 3, 2009.
40. **Minnie Sarwal**, Li Li, Szu-chuan Hsieh, Robert Lowsky, Stephan Busque, John Scandling, Susan Jones, Samuel Strober. "Gene Arrays may Predict Stable Clinical Tolerance and Support Safe Immunosuppression Withdrawal. ATC Congress" (Boston, MA) May 29-Jun 3, 2009.
41. Li Li, **Minnie Sarwal**. Differential Immunogenicity and Clinical Relevance of Kidney Compartment Specific Antigens after Renal Transplantation". ATC Congress (Boston, MA) May 29-Jun 3, 2009.

42. Tara Sigdel, Xuefeng Ling, Ken Lau, Li Li, James Schilling, and **Minnie Sarwal**. "Integrated peptidomic and Genomic Analyses of Renal Allograft Dysfunctions Revealed Altered Protein Catabolism Resulting Predictive Urine Peptide Biomarkers". ATC Congress (Boston, MA) May 29-Jun 3, 2009.
43. Li Li, Amery Chen, and **Minnie Sarwal**. "Compartmental Localization and Clinical Relevance of MICA Antibodies after Renal Transplantation." ATC Congress (Boston, MA) May 29-Jun 3, 2009.
44. Maarten Naesens, Neeraja Kambham, Oscar Salvatierra, and **Minnie Sarwal**. The Subclinical Histological Evolution of Pediatric Recipient Kidneys Transplants in and the Impact of Complete Steroid Avoidance: 2 Year Results of the NIH-CCTPT Multicenter Trial. ATC Congress (Boston, MA) May 29-Jun 3, 2009. ATC Congress (Boston, MA) May 29-Jun 3, 2009.
45. Li Li, Amery Chen, Sue Hsieh, Rong Chen, Oscar Salvatierra, and **Minnie Sarwal**. "Coordinated Peripheral blood Transcriptional Changes with Steroid-Avoidance in Pediatric Kidney Transplantation". (*Young Investigator Award*) ATC Congress (Boston, MA) May 29-Jun 3, 2009.
46. Li Li, Waldo Concepcion, Oscar Salvatierra, and **Minnie Sarwal**. One year results of a prospective, randomized, multicenter trial of steroid avoidance in pediatric renal transplantation. (*Late breaking Abstract*) IPTA Congress (Istanbul, Turkey) April 18-21,2009
47. Li Li, Persis Wadia, Rong Chen, Neeraja Kambham, Maarten Naesens, Tara K. Sigdel, David B. Miklos, **Minnie Sarwal** and Atul J. Butte. Kidney compartment-specific alloimmune non-HLA targets identification after renal transplantation by a novel integrative analysis of transcriptome and antibodyome measure. IPTA Congress (Istanbul, Turkey) April 18-21,2009.
48. Valeriya Zarkhin, Patty Lovelace, Li Li, David L Hirschberg and **Minnie Sarwal**. Reconstitution of peripheral blood B-cells after rituximab treatment of acute renal transplant rejection in pediatric patients. IPTA Congress (Istanbul, Turkey) April 18-21,2009.
49. Valeriya Zarkhin, Tara Sigdel, Neeraja Kambham, and **Minnie M Sarwal**. Trends in immunoglobulin depletion in pediatric patients after rituximab treatment for acute renal transplant rejection. IPTA Congress (Istanbul, Turkey) April 18-21,2009.
50. Valeriya Zarkhin, Li Li, Neeraja Kambham, Tara Sigdel, Oscar Salvatierra and **Minnie M Sarwal**. A randomized, prospective trial of rituximab for acute rejection in pediatric renal transplantation. IPTA Congress (Istanbul, Turkey) April 18-21,2009.
51. Valeriya Zarkhin, Li Li and **Minnie Sarwal**. Baff monitoring after B-cell depletion therapy for acute renal transplant rejection. IPTA Congress (Istanbul, Turkey) April 18-21,2009.
52. Tara Sigdel, Amit Kaushal, Marina Gritsenko, Angela Norbeck, Wenzhong Xiao, David Camp, Richard Smith and **Minnie Sarwal**. Urinary Proteomics Identifies Protein Biomarkers Specific for Acute Renal Transplant Rejection. IPTA Congress (Istanbul, Turkey) April 18-21,2009.
53. Lihua Ying, Li Li, Jonathan Martin, Sue Hsieh and **Minnie Sarwal**. A Minimal, Highly Specific And Sensitive Gene-Set For Peripheral Blood-Based Diagnosis And Prediction Of Acute Renal Transplant Rejection (*Wyeth nKOL Award*). TTS International Congress (Sydney, Australia) August 10-14, 2008
54. Maarten Naesens, MD, Neeraja Kambham, MD, Oscar Salvatierra, MD, Li Li, MD and **Minnie Sarwal**. A protocol Biopsy Analysis from an NIH Multicenter Pediatric Renal Transplant Trial Reveals no Adverse Effect of Steroid Avoidance on the Histological Evolution of Chronic Graft Injury. (*Wyeth nKOL Award*) TTS International Congress (Sydney, Australia) August 10-14, 2008
55. Li Li, Persis Wadia, Rong Chen, Maarten Naesens, Shiquan Wu, David Miklos, Atul Butte and **Minnie Sarwal**. Integrative Genomics To Identify Non-HLA Allogenic Kidney-Specific Targets After Kidney Transplantation. TTS International Congress (Sydney, Australia) August 10-14, 2008
56. Valeriya Zarkhin, Neeraja Kambham, Shirley Kwok, Szu-Chuan Hsieh, **Minnie Sarwal**. Evaluation of intra-graft B-cells in renal allograft rejection. (*Astellas Clinical Award*) TTS International Congress (Sydney, Australia) August 10-14, 2008.
57. Lihua Ying, Amery Chen, Tara Sigdel, Sue Hsieh, Hong Dai, Stephanie Sosa and **Minnie Sarwal**. Identification of potential biomarker for acute rejection of renal transplant in urinary cell pellets. TTS International Congress (Sydney, Australia) August 10-14, 2008.
58. Maarten Naesens, Li Li, Li Hua, Oscar Salvatierra, and **Minnie Sarwal**. Gene expression differences between living and deceased donor kidneys in human transplantation. XLV ERA-EDTA Congress (Stockholm, Sweden), May 10-13, 2008
59. Maarten Naesens, Neeraja Kambham, Oscar Salvatierra, Li Li, and **Minnie Sarwal**. Physiological and molecular mechanisms underlying the functional adaptation of adult-sized kidneys transplanted into pediatric recipients. XLV ERA-EDTA Congress (Stockholm, Sweden), May 10-13, 2008 (*AST Young Investigator Award*)
60. Lihua Ying, Li Li, Jonathan Martin, Sue Hsieh and **Minnie Sarwal**. A Minimal, Highly Specific And Sensitive Gene-Set For Peripheral Blood-Based Diagnosis And Prediction Of Acute Renal Transplant Rejection. American Transplant Congress, 2008
61. Scott Sutherland, Persis Wadia, David Miklos, Atul Butte and **Minnie Sarwal**. Identification of Non-HLA Antigen Targets During Acute Renal Allograft Rejection Using a Human Protoarray Platform. American Transplant Congress, 2008
62. Valeriya Zarkhin, Snehal Mohile, Li Li, Jonathan Martin and **Minnie Sarwal**. BAFF Monitoring After B-Cell Depletion Therapy For Acute Renal Transplant Rejection. American Transplant Congress, 2008
63. Valeriya Zarkhin, Snehal Mohile, Li Li, Jonathan Martin, Tara Sigdel, Neeraja Kambham and **Minnie Sarwal**. Trends In Immunoglobulin Depletion In Pediatric Patients After Rituximab Treatment For Acute Renal Transplant Rejection. American Transplant Congress, 2008
64. T Sigdel, X Ling, K Lau, J Schilling, and **Minnie Sarwal**. Novel Urinary Peptidomic Analysis For Acute Rejection Monitoring. American Transplant Congress, 2008

65. **Minnie Sarwal**, M Benfield, R Ettenger, V Dharnidharka, R Mathias, R McDonald, W Harmon, D Kershaw, V Vehaskari, E Kamil, H Baluarte, B Warady, D Ikle, N Bridges and O Salvatierra. One Year Results Of A Prospective, Randomized, Multicenter Trial Of Steroid Avoidance In Pediatric Renal Transplantation. American Transplant Congress, 2008
66. Maarten Naesens, Neeraja Kambham, Oscar Salvatierra, Li Li, and **Minnie Sarwal**. Physiological and molecular mechanisms underlying the functional adaptation of adult-sized kidneys transplanted into pediatric recipients (*AST Young Investigator Award*) American Transplant Congress, 2008
67. Maarten Naesens, Oscar Salvatierra, Li Li, and **Minnie Sarwal**. Maturation of tacrolimus pharmacokinetics in pediatric kidney allograft recipients. American Transplant Congress, 2008
68. Maarten Naesens, Li Li, Li Hua, Oscar Salvatierra, and **Minnie Sarwal**. Gene expression differences between living and deceased donor kidneys in human transplantation. American Transplant Congress, 2008
69. Li Li, Persis Wadia, Rong Chen, Maarten Naesens, Shiquan Wu, David Miklos, Atul Butte and **Minnie Sarwal**. Integrative Genomics To Identify Non-HLA Allogenic Kidney-Specific Targets After Kidney Transplantation. American Transplant Congress, 2008
70. Li Li, L Ying, M Naesens, W Xiao, T Sigdel, S Hsieh, J Martin, R Chen, K Liu, M Mindrinos, R Davis and **Minnie Sarwal**. Extended Enrollment and Analysis of a Prospective Steroid-Free Immunosuppression Trial Supports Study Safety and Efficacy (*AST Young Investigator Award*). American Transplant Congress, 2008
71. Valeriya Zarkhin, Neeraja Kambham, Li Li, Shirley Kwok, Szu-Chuan Hsieh, **Minnie Sarwal** (2006). Oral Presentation 4<sup>th</sup> Congress of the International Pediatric Transplant Association. Pivotal role of intra-graft b-cells in renal transplant rejection.
72. Valeriya Zarkhin, Neeraja Kambham, Shirley Kwok, Szu-Chuan Hsieh, **Minnie Sarwal** (2006). Oral Presentation World Transplant Congress. Pivotal role of intra-graft B-cells in renal transplant rejection.
73. Lauren A Weintraub, Valeriya Zarkhin, **Minnie M Sarwal** (2006). Oral Presentation World Transplant Congress. Oral. Efficacy and safety of rituximab for treatment of recalcitrant acute renal allograft rejection.
74. Rebecca S Bernard, Li Li, Dawn Maxey, Jon Howlett, Samantha Wolffs, **Minnie Sarwal**, Richard Shaw (2006). Oral Presentation World Transplant Congress. Transition from pediatric to adult-centered care: patients' perception of the transfer process.
75. Lauren A Weintraub, Li Li, Steven R Alexander, Oscar Salvatierra, **Minnie M Sarwal**. (2006) Oral Presentation World Transplant Congress. The impact of steroid avoidance on early and intermediate renal allograft function.
76. Lauren A Weintraub, Li Li, Steven R Alexander, **Minnie M Sarwal** (2006). Oral Presentation World Transplant Congress. Calcineurin inhibitor withdrawal in children: step with care.
77. Poonam Sansanwal, William A Gahl, Gregory M Enns, Neeraja Kambham and **Minnie Sarwal** (2006). Oral presentation ASN meeting. Genomic expression analysis suggests novel molecular mechanisms for end-organ injury in Nephropathic Cystinosis
78. Elaine S. Mansfield, Meixia Zhang, Szu-Chuan Hsieh, Sheryl Shah, Oscar Salvatierra and **Minnie M. Sarwal** (2005). Adaptive genomic responses observed in infant recipients of adult-size kidneys: possible mechanisms for improved transplant outcomes. Oral presentation. ATC meeting.
79. Meixia Zhang, Elaine S. Mansfield, Sheryl Shah, Szu-Chuan Hsieh and **Minnie M. Sarwal** (2005). Non-invasive biomarkers for prediction of acute rejection and graft loss in pediatric renal allograft patients. Oral presentation. ATC meeting.
80. Meixia Zhang, Elaine S. Mansfield, Sheryl Shah, Szu-Chuan Hsieh and **Minnie M. Sarwal** (2005). Customized genomic monitoring for acute rejection prognosis. Concurrent Session. ATC Meeting.
81. S. Shah, R. Liu, C. Reddy, F. S. Hsieh and **M. Sarwal** (2005). Herpesvirus viremia, without disease, is a significant risk factor for renal allograft dysfunction. Oral Session. ATC Meeting.
82. Annie B. Chao, Sheryl Shah, Oscar Salvatierra and **Minnie M. Sarwal** (2005). Extended analysis of steroid-free immunosuppression supports study safety and efficacy. Concurrent Session. ATC Meeting.
83. Annabelle N. Chua, Steven R. Alexander, **Minnie M. Sarwal**, Maria Millan, Oscar Salvatierra, Jr., Peter D. Yorgin (2005). Proteinuria in pediatric renal transplant recipients during the first posttransplant month. Oral Session. ATC Meeting.
84. Boris P.-L. Lee, Elaine Mansfield, Szu-Chuan Hsieh, Wenhao Chen, Christopher W. Thomson, Megan S. Ford, Steven E. Bosinger, Sandy Der, Zhu-xu Zhang, Meixia Zhang, David J. Kelvin, **Minnie M. Sarwal** and Li Zhang (2005). Gene expression profiling of murine double negative regulatory t cells suggests mechanisms for prolonged cardiac allograft survival. Oral Session. ATC Meeting.
85. Elaine Mansfield, Xin Chen, Szu-Chuan Hsieh and **Minnie Sarwal** (2004). Transcriptional Analysis of the Molecular Basis of Drug-induced Nephrotoxicity and Hypertension by Cyclosporine and Tacrolimus using cDNA microarray profiling. Oral presentation. ATC meeting.
86. Elaine Mansfield, Sophie Brouard, Alexandre Dupont, Magali Giral, Frank Hsieh, Szu-chuan Hsieh, Rosa Liu, Sheryl Shah, Cécile Braudeau, Stéphanie Louis, Annaik Pallier, Jean-Paul Souillou and **Minnie Sarwal** (2004). Identification of peripheral blood-based gene expression profiles highly-predictive of partial and complete immune tolerance in long-term renal allograft recipients. Oral presentation. ATC meeting.
87. Vidhun J, Salvatierra O and **Sarwal MM** (2003). Retrospective risk stratification and outcome analysis of extra- and transperitoneal pediatric renal allograft biopsies. Oral presentation. ATC meeting.
88. Mansfield E and **Sarwal MM** (2003). Expression profiling identifies prognostic and therapeutic gene markers for acute renal allograft rejection. Oral presentation. ATC meeting.

89. **Sarwal MM**, Vidhun J and Salvatierra O (2003). Analysis of an extended dose daclizumab induction protocol in pediatric renal transplantation: more is better. Oral presentation. ATC meeting.
90. **Sarwal M**, Yorgin P, Alexander S, Orlandi P and Salvatierra O (2002). "Steroid-Free Immunosuppression: 1 year follow up". Oral presentation at the International Transplantation Society, Miami.
91. Melk A, Halloran P and **Sarwal M** (2002). "The molecular differences between aging kidneys". Oral presentation at the American Transplant Congress (ATC), Washington.
92. Aavik E, Mahapatra A, DuToit D, Salvatierra O, Brown P, Hayry P and **Sarwal M** (2001). " Gene expression profiling and application to human chronic rejection in a baboon chronic vasculopathy model". Oral presentation at the FOCIS meeting, Boston.
93. **Sarwal M**, Alexander S, Yorgin P, Millan M, Orlandi P and Salvatierra O (2000). "Complete steroid free immunosuppression in pediatric renal transplantation". Oral presentation at the International Pediatric Transplant Association, Venice.
94. **Sarwal M**, Yorgin P, Belson A, Alexander S, Orlandi P and Salvatierra O (2000) " Adult sized kidneys confer immunologic privilege in infant recipients of kidney allografts" Oral presentation at the Conference of the American Society of Transplantation (AST), Chicago.
95. **Sarwal M**, Huie P, Krensky A, Pavlakis M, and Sibley R (1998). "Granulysin- a novel tissue marker of pediatric renal allograft rejection", oral presentation to the conference of the American Society of Nephrology. (ASN); JASN Vol 9, pp.696A.