

BIOGRAPHICAL SKETCH

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NAME: Emamaullee, Juliet

eRA COMMONS USER NAME (credential, e.g., agency login): juliet.emamaullee

POSITION TITLE: Assistant Professor of Clinical Surgery, Department of Surgery

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
University of Alabama, Tuscaloosa, AL	BS	05/2000	Chemistry (Honors)
University of Alberta, Edmonton, Alberta	PHD	06/2005	Immunology
University of Alberta, Edmonton, Alberta	MD	06/2010	Medicine (Special Training in Research)
University of Alberta, Edmonton, Alberta	Postdoctoral Fellow	05/2010	Experimental Surgery
Emory University, Atlanta, GA	Resident	06/2015	General Surgery
University of Alberta, Edmonton, Alberta	Fellow	06/2017	Transplant and HPB Surgery

A. Personal Statement

I am a transplant surgeon-scientist identifying and characterizing the immune response within the transplanted liver. Liver transplant is a life-saving operation that has excellent long-term outcomes for patients with end-stage liver disease. As a transplant surgeon I see and treat the effects of long-term immunosuppression and graft loss due to rejection in this patient population. Unfortunately, little is known about which lymphocyte populations mediate acute and chronic rejection post-liver transplant and thus makes it difficult to diagnose and treat rejection accurately.

My lab has developed novel mass cytometry-based approaches to characterize and analyze which lymphocytes mediate immune responses, including rejection, post-liver transplant. This work has broad scientific application to the understanding of transplant rejection and will provide me with additional structured mentorship to collect important preliminary data and a publication record to establish a career as a translational surgeon-scientist with an expertise in liver transplant immunology. Most importantly, positive results can be rapidly translated to clinical trials designed to using our assays to track the immune profile of rejection and identify new therapeutic targets.

1. R. Hogen*, *M. Kim, *H. Aziz, M. Lo, A. Sedra, J. Kahn, Y. Qazi, L. O'Brien, J. Kim, L. Sher, Y. Genyk, and **J. Emamaullee**. Liver Transplantation in Patients with Sickle Cell Disease: an Analysis of the Scientific Registry of Transplant Recipients. J Surg Res. 2020 Jun 12 (255):23-32. PMID: [32540577](#). (Trainees under my supervision)
2. **J. Emamaullee**, A.N. Zaidi, T. Schiano, J. Kahn, P.L. Valentino, R.E. Hofer, T. Taner, J. Bucuvalas, and R. Fischer. Fontan-Associated Liver Disease (FALD): Screening and management considerations. 2020 *Circulation*, *Forthcoming*.
3. *M. Kim, *A. Nguyen, M. Lo, S.R. Kumar, J. Bucuvalas, R. Fischer, and **J. Emamaullee**. Big data in transplantation practice - the devil is in the detail - Fontan Associated Liver Disease. 2020 *Transplantation*, 2020 Jul 2. PMID: 32639398. (*Trainees under my supervision)
4. *M. Raza, *H. Aziz, M. Lo, N. Kaur, Y. Genyk, and **J. Emamaullee**. Global Experience and Perspective on Anonymous Nondirected Live Donation in Living Donor Liver Transplantation. Clin Transplant. 2020 Apr;34(4):e13836. PubMed PMID: [32154620](#). (*Trainees under my supervision)

B. Positions and Honors

Positions and Employment

- 2017 - Assistant Professor of Clinical Surgery, Department of Surgery, USC, Los Angeles, CA
- 2017 - Attending Transplant Surgeon, Children's Hospital-Los Angeles, Los Angeles, CA
- 2017 - Attending Transplant Surgeon, Keck Hospital of USC, Los Angeles, CA
- 2019 - Assistant Professor of Molecular Microbiology and Immunology, USC, Los Angeles, CA
- 2019 - Associate Chief, Division of Clinical Research, Department of Surgery, USC, Los Angeles, CA

Other Experience and Professional Memberships

- 2006 - 2008 Chair, National Medical Student Committee, Association of Women Surgeons
- 2008 - 2010 Medical Student Member, Women in Surgery Committee, American College of Surgeons
- 2008 - 2018 Member, Grants and Awards Review Panel, Association of Women Surgeons Foundation
- 2010 - 2016 Resident Member, Women in Surgery Committee, American College of Surgeons
- 2012 - 2013 Chair, Communications Committee, ACS Resident and Associate Society
- 2013 - 2018 Member, Surgical Research Committee, American College of Surgeons
- 2015 - Diplomate, American Board of Surgery
- 2015 - 2016 Committee Chair, National Resident and Fellow Committee, Association of Women Surgeons
- 2016 - Fellow, Royal College of Physicians and Surgeons of Canada
- 2019 - Fellow, American College of Surgeons
- 2017 - 2019 Chair, RAS Associate Fellow Committee, American College of Surgeons
- 2018 - 2019 CHLA Representative, Regional MELD/PELD Review Board, Region 5, UNOS
- 2018 - 2021 Executive Committee, Surgical Research Committee, American College of Surgeons
- 2018 - 2021 Committee Member, Bylaws Committee, American Society of Transplant Surgeons
- 2018 - 2020 Executive Committee Member, AST Pediatric Community of Practice
- 2020 - 2022 Executive Committee Member, AST Liver and Intestinal Community of Practice
- 2020 - 2022 Basic and Translational Science Committee, Association for Academic Surgery
- 2020 - Chair, North American Living Liver Donation Innovation Group
- 2020 - 2020 COVID-19 Research Prioritization and Review Committee Member, USC

Honors

- 1996 - 2000 Presidential Scholarship, University of Alabama
- 1996 Award for Academic Excellence, University of Alabama Varsity Volleyball
- 1996 National Merit Scholar, College Board
- 1996 National Hispanic Scholar, College Board
- 2000 Phi Kappa Phi Research Award, University of Alberta
- 2000 Undergraduate Research Fellowship, University of Alabama
- 2000 McWane Fellowship for Creativity in Research, University of Alabama
- 2000 Undergraduate Research Award, University of Alabama Dept. of Chemistry
- 2000 Randall Undergraduate Research Award, University of Alabama
- 2000 - 2001 Fast-Track PhD Studentship Award, Alberta Heritage Foundation for Medical Research
- 2001 - 2005 Ph.D. Studentship Award, Alberta Heritage Foundation for Medical Research
- 2002 Graduate Scholarship, Arthritis Association of Edmonton
- 2005 Young Investigator Award, International Pancreas and Islet Transplantation Association
- 2005 Finalist, Governor General's Gold Medal, University of Alberta
- 2005 - 2008 Postdoctoral Fellowship Award, Alberta Heritage Foundation for Medical Research
- 2006 - 2008 Postdoctoral Fellowship Award, American Society for Transplantation
- 2006 - 2009 Jason Lang Scholarship, University of Alberta
- 2007 Young Investigator Award, American Transplant Congress
- 2007 Young Investigator Award, International Pancreas and Islet Transplantation Association
- 2007 - 2008 Rhind Autoimmunology Research Scholarship, University of Alberta

2007	Student Involvement Award, University of Alberta
2007	Best Presentation Award, Genzyme Canada Transplant Academy
2007	Laurence Decore Award for Student Leadership, University of Alberta
2007	Astellas Travel Award, Canadian Society of Transplantation
2007	Poster of Distinction Award, American Transplant Congress
2008	Presidential Student Member Award, American Society of Transplant Surgeons
2008	Outstanding Oral Presentation, Alberta Diabetes Institute Research Symposium
2008	Best Presentation by a New Member, Association for Academic Surgery
2008	Travel Award, Canadian Society of Transplantation
2008	Best Medical Student Presentation, Association for Academic Surgery
2008	Travel Award, Association for Academic Surgery
2008	Pediatric Group Travel Award, Canadian Society of Transplantation
2008 - 2009	Harold and Opal Bess Award, University of Alberta
2009	Poster of Distinction, American Transplant Congress
2009	Patricia Numann Medical Student Award, Association of Women Surgeons
2010	Peter Loughheed Leadership Scholarship, University of Alberta
2010	Award for Young Leaders in Medicine, Canadian Medical Association
2013	Travel Award, American College of Surgeons Leadership Summit
2018	Travel Award, American Society of Transplantation
2018	Travel Award, SPLIT Consortium
2019	Young Investigator Award, American Transplant Congress
2020	Alternate, American College of Surgeons Faculty Development Grant
2020	Finalist, Association for Academic Surgery Roslyn Career Development Award
2020	Travel Award, International Liver Transplant Society
2020	Translational Faculty Development Research Grant, American Society of Transplantation (declined for ineligibility after K08 Award funded)

C. Contribution to Science

Complete Bibliography: <https://www.ncbi.nlm.nih.gov/myncbi/1r9WzyeM5uw5Z/bibliography/public/>

1. **Clinical Liver transplantation, including analyses of large institutional and national clinical datasets.**
 - a. *M. Raza, *M. Kim, L. Ding, C. Romero, L. Sher, T.L. Fong, Y. Genyk, and **J. Emamaullee**. Long-Term Medical, Financial, Psychosocial, and Overall Health-Related Quality of Life After Living Donation in Liver Transplantation. J Surg Res. 2020 Apr 19;253:41-52. PubMed PMID: [32320896](#). (*Trainees under my supervision)
 - b. *Kim MH, Akbari O, Genyk Y, Kohli R, **Emamaullee J**. Immunologic benefit of maternal donors in pediatric living donor liver transplantation. Pediatr Transplant. 2019 Nov;23(7):e13560. PubMed PMID: [31402535](#). (*Trainee under my supervision)
 - c. *Pita A, Kaur N, ****Emamaullee J**, Lo M, Nguyen B, Sabour A, Tristan V, Nadim M, Genyk Y, Sher L. Outcomes of Liver Transplantation in Patients on Renal Replacement Therapy: Considerations for Simultaneous Liver Kidney Transplantation Versus Safety Net. Transplant Direct. 2019 Oct;5(10):e490. PubMed PMID: [31723585](#); PubMed Central PMCID: [PMC6791601](#). (*Trainee under my supervision, **corresponding author)
 - d. **Emamaullee JA**, Bral M, Meeberg G, Montano-Loza AJ, Bain VG, Burak KW, Bigam D, Shapiro AMJ, Kneteman N. HCV Eradication with Direct-Acting Antivirals Does Not Impact HCC Progression on the Waiting List or HCC Recurrence after Liver Transplantation. Can J Gastroenterol Hepatol. 2019;2509059. PubMed PMID: [30775356](#); PubMed Central PMCID: [PMC6354133](#).
2. **Caspase inhibition for cytoprotection and to facilitate tolerance in islet transplantation.** This work was the focus of my postdoctoral research fellowship. I studied caspase inhibitor therapy in pre-clinical mouse models of islet auto-transplantation, human islet transplantation, allogeneic mouse islet transplantation, and porcine islet autotransplantation.

- a. McCall MD, Maciver AM, Kin T, **Emamaullee J**, Pawlick R, Edgar R, Shapiro AM. Caspase inhibitor IDN6556 facilitates marginal mass islet engraftment in a porcine islet autotransplant model. Transplantation. 2012 Jul 15;94(1):30-5. PubMed PMID: [22706322](#).
 - b. **Emamaullee JA**, Davis J, Pawlick R, Toso C, Merani S, Cai SX, Tseng B, Shapiro AM. Caspase inhibitor therapy synergizes with costimulation blockade to promote indefinite islet allograft survival. Diabetes. 2010 Jun;59(6):1469-77. PubMed PMID: [20332344](#); PubMed Central PMCID: [PMC2874708](#).
 - c. **Emamaullee JA**, Davis J, Pawlick R, Toso C, Merani S, Cai SX, Tseng B, Shapiro AM. The caspase selective inhibitor EP1013 augments human islet graft function and longevity in marginal mass islet transplantation in mice. Diabetes. 2008 Jun;57(6):1556-66. PubMed PMID: [18356409](#).
 - d. **Emamaullee JA**, Stanton L, Schur C, Shapiro AM. Caspase inhibitor therapy enhances marginal mass islet graft survival and preserves long-term function in islet transplantation. Diabetes. 2007 May;56(5):1289-98. PubMed PMID: [17303806](#).
3. **Autoimmunity and Tolerance:** I have a broad background studying the impact of various therapies and cell types in pre-clinical models of islet transplantation and Type 1 Diabetes. The work in reference (a) characterized a novel population of T cells in autoimmune diabetes and has been cited by the Web of Science as a Top 1% of cited works published in 2009.
- a. **Emamaullee JA**, Davis J, Merani S, Toso C, Elliott JF, Thiesen A, Shapiro AM. Inhibition of Th17 cells regulates autoimmune diabetes in NOD mice. Diabetes. 2009 Jun;58(6):1302-11. PubMed PMID: [19289457](#); PubMed Central PMCID: [PMC2682686](#).
 - b. Merani S, Edgar RL, Toso C, **Emamaullee J**, Thiesen A, Shapiro AM. AEB-071 has minimal impact on onset of autoimmune diabetes in NOD mice. Autoimmunity. 2009 Mar;42(3):242-8. PubMed PMID: [19301207](#).
 - c. Toso C, **Emamaullee JA**, Merani S, Shapiro AM. The role of macrophage migration inhibitory factor on glucose metabolism and diabetes. Diabetologia. 2008 Nov;51(11):1937-46. PubMed PMID: [18612626](#).
 - d. **Emamaullee JA**, Merani S, Larsen CP, Shapiro AM. Belatacept and basiliximab diminish human antiporcine xenoreactivity and synergize to inhibit alloimmunity. Transplantation. 2008 Jan 15;85(1):118-24. PubMed PMID: [18192921](#).
4. **Diabetes, islet engraftment, and islet transplantation.**
- a. Toso C, McCall M, **Emamaullee J**, Merani S, Davis J, Edgar R, Pawlick R, Kin T, Knudsen LB, Shapiro AM. Liraglutide, a long-acting human glucagon-like peptide 1 analogue, improves human islet survival in culture. Transpl Int. 2010 Mar 1;23(3):259-65. PubMed PMID: [19821955](#).
 - b. **Emamaullee JA**, Merani S, Toso C, Kin T, Al-Saif F, Truong W, Pawlick R, Davis J, Edgar R, Lock J, Bonner-Weir S, Knudsen LB, Shapiro AM. Porcine marginal mass islet autografts resist metabolic failure over time and are enhanced by early treatment with liraglutide. Endocrinology. 2009 May;150(5):2145-52. PubMed PMID: [19131571](#).
 - c. Truong W, **Emamaullee JA**, Merani S, Anderson CC, James Shapiro AM. Human islet function is not impaired by the sphingosine-1-phosphate receptor modulator FTY720. Am J Transplant. 2007 Aug;7(8):2031-8. PubMed PMID: [17617868](#).
 - d. **Emamaullee JA**, Shapiro AM, Rajotte RV, Korbitt G, Elliott JF. Neonatal porcine islets exhibit natural resistance to hypoxia-induced apoptosis. Transplantation. 2006 Oct 15;82(7):945-52. PubMed PMID: [17038911](#).

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

1. National Cancer Institute K08 Career Development Award, 1 K08 CA245220-01

Period: 06/01/2020-05/31/2025

Budget: \$266,870/year

Role: PI

Title: Immunologic Biomarkers of Rejection in Clinical Liver Transplantation

2. Clinical, Translational, and Outcomes Research Award, American Assoc. for the Study of Liver Diseases

Period: 07/01/2020-06/30/2022

Budget: \$100,000/year

Role: PI

Title: Multiplex Immune Profiling of Acute Rejection in Pediatric Liver Transplantation

3. Faculty Development Grant, American Society of Transplant Surgeons

Period: 07/01/2020-06/30/2022

Budget: \$50,000/year

Role: PI

Title: CyTOF-based Analysis of Acute Rejection in Clinical Liver Transplantation

4. Center for Liver Diseases Pilot Grant, University of Southern California

Period: 10/01/19-9/30/20

Budget: \$50,000

Role: PI

Title: Immunologic phenotype of rejection in clinical liver transplantation

6. Dean's Pilot Grant, University of Southern California

Period: 12/01/18-9/30/2020

Budget: \$50,000

Role: PI

Title: Biomarkers of rejection in pediatric liver transplantation

Completed Research Support

- NHLBI Diversity Supplement, 3R01HL141857-01S1

Period: 04/01/2019-05/30/2020

Budget: \$255,475/year

Role: Career Development Trainee (75% Protected Time)

PI: Young Kwon Hong, Ph.D.

Title: Cooperative regulation of mechanotransduction for lymphatic valve development

Overlap with current application: none, ended when K08 grant was awarded.