

CONTACT INFORMATION	Johns Hopkins University School of Medicine, Department of Surgery 2000 E. Monument St. Baltimore, MD 21205 USA	<i>E-mail:</i> alvin@jhmi.edu <i>Github:</i> alvinthomas <i>Twitter:</i> @alvinthomas13 <i>LinkedIn:</i> @alvinthomas13
RESEARCH INTERESTS	Advancing Epidemiologic Methods in Transplantation: My research explores clinically important epidemiologic questions at the intersections of solid organ transplantation, aging, infectious disease, and health policy. Often these questions require advanced biostatistical tools such as survival with competing risks, longitudinal data analysis, or machine learning. I am also involved in the development of a number of eHealth tools designed to connect, educate, and empower transplant donors and recipients.	
CURRENT POSITION	Research Data Analyst , Johns Hopkins University School of Medicine, Department of Surgery Epidemiology Research Group in Transplantation	August 2016 to present
EDUCATION	Johns Hopkins University Bloomberg School of Public Health , Baltimore, MD MSPH, International Health, May 2016 <ul style="list-style-type: none"> • Focus: Global Disease Epidemiology and Control (GDEC) • Thesis: <i>The mLAKE Community Trial: Using mHealth to Empower CHWs to Encourage Combination HIV Prevention</i> • Adviser: Larry W. Chang, MD, MPH Washington and Lee University , Lexington, VA BS, Chemistry-Engineering, May 2014 <ul style="list-style-type: none"> • <i>Honors</i> in Engineering • Minor in Poverty and Human Capabilities • Thesis: <i>Plasticity in Dissociated Neuronal Networks under Chronic Stimulation</i> • Adviser: Jonathan Erickson, PhD 	
PEER-REVIEWED JOURNAL ARTICLES	[1] Durand CM, Bowring MG, Thomas AG , Kucirka LM, Massie AB, Bohm MK, Cameron A, Desai NM, Sulkowski M, Segev DL. The Impact of the Drug Overdose Epidemic on Deceased Donation and Transplantation in the United States. <i>Annals of Internal Medicine</i> . Provisionally Accepted (requested revisions submitted). [2] Holscher CM, Jackson K, Chow EKH, Thomas AG , Haugen CE, DiBrito SR, Purcell C, Ronin M, Waterman AD, Garonzik-Wang J, Massie AB, Gentry SE, Segev DL. Kidney Exchange Match Rates in a Large Multicenter Clearinghouse. <i>American Journal of Transplantation</i> . Accepted. [3] Ruck JM, Zhou S, Thomas AG , Cramm SL, Massie AB, Montgomery JR, Berger JC, Henderson ML, Segev DL. Electronic messaging and communication with living kidney donors. <i>Clinical Transplantation</i> . In Press. doi:10.1111/ctr.13184 [4] Henderson ML, DiBrito SR, Thomas AG , Holscher CM, Shaffer AA, Bowring MG, Purnell TS, Massie AB, Garonzik-Wang JM, Waldram M, Lentine KL, Segev DL. Landscape of Living Multi-organ Donation in the United States: A Registry-Based Cohort Study. <i>Transplantation</i> . In Press. doi:10.1097/TP.0000000000002082	

- [5] Treat E, Chow EKH, Peipert JD, Waterman A, Kwan L, Massie AB, **Thomas AG**, Bowring MG, Leiser D, Flechner S, Melcher ML, Kapur S, Segev DL, Veale J. Shipping Living Donor Kidneys and Transplant Recipient Outcomes. *American Journal of Transplantation*. In Press. doi:10.1111/ajt.14597
- [6] Henderson ML[†], **Thomas AG**[†], Shaffer A, Massie AB, Luo X, Holscher CM, Purnell TS, Lentine K, Segev DL. The National Landscape of Living Kidney Donor Follow-up in the United States. *American Journal of Transplantation*. 2017 June 30. doi:10.1111/ajt.14356
- [7] Long A, Mbabali I, Hutton HE, **Thomas AG**, Bugos E, Mulamba J, Amico KR, Nalugoda F, Gray RH, Wawer MJ, Nakigozi G, Chang LW. Design and Implementation of a Community Health Worker HIV Treatment and Prevention Intervention in an HIV Hotspot Fishing Community in Rakai, Uganda. *Journal of the International Association of Providers of AIDS Care*. 2017 May 22. 5:499-505 doi:10.1177/2325957417709089
- [8] Perin J, **Thomas AG**, Oldja L, Ahmed S, Parvin T, Bhuyian SI, Sarker B, Biswas SK, Faruque AS, Sack RB, and George CM. Geophagy is associated with growth faltering in children in rural Bangladesh. *The Journal of Pediatrics*. 2016 Nov 30; 178:34-9. doi:10.1016/j.jpeds.2016.06.077

• [†]Co-first Authors

JOURNAL
ARTICLES
UNDER REVIEW

- [1] Halpern SE, **Thomas AG**, Holscher CM, Massie AB, Henderson ML, Anjum S, Alejo JL, Boyarsky BJ, Locke JE, Segev DL. Sexual Dysfunction and Living Kidney Donation. First Submitted 10/2017.
- [2] Haugen CE, **Thomas AG**, Garonzik Wang J, Massie AB, Segev DL. Minimizing Risk Associated with Older Liver Donors by Matching to Preferred Recipients: A National Validation Study. First Submitted 11/2017.
- [3] **Thomas AG**[†], Ruck JM[†], Shaffer AA, Haugen CE, Ying H, Warsame F, Chu N, Carlson MC, Gross AL, Norman SP, Segev DL, McAdams-DeMarco M. Cognitive Impairment and Graft Loss in Kidney Transplant Recipients. First Submitted 12/2017.
- [4] Haugen CE, Mountford A, Warsame F, Berkowitz R, **Thomas AG**, Brown C, Brennan D, Neufeld KJ, Carlson MC, Segev DL, McAdams-DeMarco M. Burden, Risk Factors, and Sequelae of Post-Kidney Transplant Delirium. First Submitted 1/2018.
- [5] Holscher CM, Bae S, **Thomas AG**, Henderson ML, Haugen CE, DiBrito SR, Muzaale AD, Garonzik-Wang JM, Massie AB, Lentine KL, Segev DL. Early Hypertension and Diabetes after Living Kidney Donation. First Submitted 1/2018.

JOURNAL
ARTICLES
UNDER REVISION

- [1] Shaffer AA, **Thomas AG**, Bowring MG, Van Pilsum Rasmussen SE, Kucirka L, Alqahtani S, Gurakar A, Sulkowski M, Cameron A, Segev DL, Durand CM. Changes in Practice and Perception of Hepatitis C and Liver Transplantation: Results of a National Survey. First Submitted 10/2017.
- [2] McAdams-DeMarco MA, Ying H, **Thomas AG**, Warsame F, Shaffer AA, Haugen CE, Garonzik Wang JM, Desai NM, Varadhan R, Walston J, Norman SP, Segev DL. Frailty, Inflammation, and Mortality Among Patients with End-Stage Renal Disease. First Submitted 2017.

- [3] Henderson ML, Adler JT, Van Pilsum Rasmussen SE, **Thomas AG**, Herron PD, Waldram M, Ruck JM, Purnell TS, DiBrito SR, Holscher CM, Haugen CE, Alimi Y, Konel JM, Garonzik-Wang JM, Gordon EJ, Lentine KL, Schaffer RL, Cameron AM, Segev DL. How Should Social Media Be Used in Transplantation? A Survey of The American Society of Transplant Surgeons. First Submitted 2017.
- [4] Kumar K, Tonascia JM, Muzaale AD, Purnell TS, Ottmann SE, Al Ammary F, Bowring MG, Poon A, King EA, Massie AB, Chow EKH, **Thomas AG**, Ying H, Borja M, Konel JM, Henderson ML, Cameron AM, Garonzik-Wang JM, Segev DL. Racial differences in completion of the living kidney donor evaluation process. First Submitted 2017.
- [5] Van Pilsum Rasmussen SE, **Thomas AG**, Garonzik Wang J, Henderson ML, Stith SS, Segev DL, Nicholas LH. Reported Effects of the SRTR 5-tier Rating System on US Transplant Centers. First Submitted 2017.
- [6] Ruck J, Henderson ML, DiBrito SR, Eno AK, Van Pilsum Rasmussen SE, **Thomas AG**, Li R, Singer L, Massie I, Zonnenberg N, Garonzik-Wang JM, Purnell T, Lentine K, Waterman AD, Segev DL. Use of Twitter in Communicating Living Donation Information to the Public: An Exploratory Study of Living Donors and Transplant Professionals. First Submitted 2017.

CONFERENCE
TALKS

- [1] Henderson ML, **Thomas AG**, Massie A, Luo X, Shaffer A, Holscher C, Segev DL. The Unfunded OPTN/UNOS Mandate of Living Kidney Donor Follow-up: Fewer than 50% of Centers in Compliance. In: *American Transplant Congress*, Chicago, IL, USA, April 29 - May 3, 2017.
- [2] Ruck JM, **Thomas AG**, Shaffer AA, Haugen CE, Ying H, Warsame F, Chu N, Carlson MC, Gross AL, Norman SP, Segev DL, McAdams-DeMarco MA Cognitive Impairment and Graft Loss in Kidney Transplant Recipients. In: *Academic Surgical Congress*, Jacksonville, FL, USA, January 30 - February 1, 2018.
- [3] Holscher C, Chow E, **Thomas AG**, Purcell C, Ronin M, Garonzik-Wang J, Massie, A, Gentry S, Segev DL. Time to Match in a Large, Multi-center Kidney Paired Donation Registry. In: *Academic Surgical Congress*, Jacksonville, FL, USA, January 30 - February 1, 2018.
- [4] Holscher C, Jackson K, **Thomas AG**, Purcell C, Ronin M, Massie, A, Garonzik-Wang J, Segev DL. Kidney Paired Donation Programs Don't Become Concentrated with Highly Sensitized Candidates Over Time. In: *Academic Surgical Congress*, Jacksonville, FL, USA, January 30 - February 1, 2018.
- [5] McAdams-DeMarco MA, Ying H, **Thomas AG**, Warsame F, Shaffer AA, Haugen CE, Garonzik-Wang JM, Desai NM, Varadhan R, Walston J, Norman SP, Segev DL. Frailty, Inflammation, and Mortality Among Patients with End-Stage Renal Disease. In: *International Conference on Frailty & Sarcopenia Research*, Miami Beach, FL, USA, March 1 - 3, 2018.

CONFERENCE
POSTERS

- [1] **Thomas AG**, Shaffer AA, Ying H, Walston J, Norman SP, Segev DL, McAdams-DeMarco MA. National Estimates of Frailty Prevalence among Kidney Transplant Recipients in the United States. In: *International Conference on Frailty & Sarcopenia Research*, Miami Beach, FL, USA, March 1 - 3, 2018.
- [2] Henderson M, Adler J, Rasmussen S, **Thomas AG**, Ruck J, Eno A, Purnell T, DiBrito S, Haugen C, Almi Y, Konel J, Garonzik-Wang J, Gordon E, Lentine K, Schaffer R, Massie A, Cameron A, Segev DL. How Should Social Media Be Used

- in Transplantation? A Survey of the American Society of Transplant Surgeons. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.
- [3] Rasmussen S, **Thomas AG**, Nicholas LH, Segev DL. Predicted Effects of Proposed Transplant Quality Metrics. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.
 - [4] Shaffer AA, **Thomas AG**, Massie AB, Gustafson S, Snyder J, Shelton B, Reed R, Locke J, Segev DL. National Landscape of HIV+ Liver Transplant Candidates. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.
 - [5] Luo X, Haugen C, **Thomas AG**, Garonzik-Wang J, Segev DL. ABO-incompatible Deceased Donor Liver Transplantation. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.
 - [6] Haugen C, Luo X, **Thomas AG**, Holscher C, Garonzik-Wang J, McAdams-DeMarco M, Segev DL. Trends in Liver Transplantation with Older Liver Donors. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.
 - [7] Waldram M, **Thomas AG**, Muzaale A, Holscher C, Nguyen A, Halpern S, Anjum S, Alejo J, Boyarsky B, Ottman S, Garonzik-Wang J, Segev DL, Massie AB. Post-donation Renal Function in Living Kidney Donors with Pre-donation Renal Cysts. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.
 - [8] McAdams-DeMarco M, Ying H, **Thomas AG**, Warsame F, Shaffer AA, Haugen C, Garonzik-Wang J, Desai N, Norman S, Segev DL. Frailty, Inflammation, and Waitlist Mortality Among KT Candidates. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.
 - [9] Eno A, **Thomas AG**, Ruck J, Rasmussen S, Halpern S, Segev DL, Henderson ML. Attitudes and Perceptions of Using Mobile Health for Living Kidney Donor Follow-up and Care Management. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.
 - [10] Holscher CM, Chow E, **Thomas AG**, Pucell C, Ronin M, Garonzik-Wang J, Massie AB, Gentry S, Segev DL. Time to Match in a Large, Multi-center Kidney Paired Donation Registry. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.
 - [11] **Thomas AG**, Ruck J, Shaffer AA, Haugen C, Ying H, Warsame F, Chu N, Calson M, Gross A, Norman S, Segev DL, McAdams-Demarco M. Cognitive Impairment and Graft Loss in Kidney Transplant Recipients. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.
 - [12] Shaffer AA, **Thomas AG**, Massie AB, Garonzik-Wang J, Segev DL. Pump Use Modifies the Effect of Delayed Graft Function in Kidney Transplant Recipients. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.
 - [13] Bae S, Garonzik-Wang J, **Thomas AG**, Massie AB, Jackson K, Luo Xun, Segev DL. Predicting Survival After Deceased-donor Kidney Transplants by Donor-recipient Match. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.

- [14] **Thomas AG**, Henderson ML, Shaffer AA, Massie AB, Segev DL, Al Ammary F. Landscape of Living Donor Kidney Transplantation with International Donors in the United States. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.
- [15] **Waldram M**, Henderson ML, DiBrito S, **Thomas AG**, Holscher C, Shaffer AA, Bowring MG, Purnell T, Massie AB, Garonzik-Wang J, Lentine K, Segev DL. Living Multi-Organ Donors in the United States. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.
- [16] **Bowring MG**, Durand C, Kucirka L, **Thomas AG**, Massie AB, Sulkowski M, Cameron A, Desai N, Segev DL. Discard and Post-transplant Outcomes Associated with Organs Donated After Overdose Death. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 11-14, 2018.
- [17] **Holscher CM**, **Thomas AG**, Garonzik-Wang J, Massie AB, Segev DL, Henderson ML. Live Liver Donor Follow-up: Fewer than Half of Centers Meet Nationally Mandated Follow-Up Requirements. In: *American College of Surgeons Clinical Congress*, San Diego, CA, USA, October 22 - 26, 2017.
- [18] **Holscher CM**, Henderson ML, DiBrito SR, **Thomas AG**, Shaffer AA, Bowring MG, Purnell TS, Massie AB, Garonzik-Wang J, Waldram M, Lentine KL, Segev DL. Living Multi-organ Donors in the United States: What Do We Know? In: *American College of Surgeons Clinical Congress*, San Diego, CA, USA, October 22 - 26, 2017.
- [19] **Thomas AG**, Shaffer A, Massie A, Segev DL. Use of Pulsatile Perfusion Modifies the Effect of Delayed Graft Function on Graft Failure. In: *American Transplant Congress*, Chicago, IL, USA, April 29 - May 3, 2017.
- [20] **Thomas AG**, Massie A, Garonzik-Wang J, Lentine K, Henderson M, Segev DL. Landscape of Multiple Donations from a Living Donor in the US. In: *American Transplant Congress*, Chicago, IL, USA, April 29 - May 3, 2017.
- [21] **Shrestha P**, Rasmussen S, **Thomas AG**, Ferguson S, Massie A, Segev DL. Access to Living Donor Kidney Transplantation in Nepal. In: *American Transplant Congress*, Chicago, IL, USA, April 29 - May 3, 2017.
- [22] **Halpern SE**, **Thomas AG**, Holscher C, Massie A, Henderson ML, Anjum S, Locke J, Segev DL. Sexual Dysfunction Among Living Kidney Donors. In: *American Transplant Congress*, Chicago, IL, USA, April 29 - May 3, 2017.
- [23] **Bannon J**, Wickliffe C, **Thomas AG**, Klingbell A, Hiller J, Halpern S, Segev DL, Henderson ML. An Interdisciplinary Task Force to Engage Living Kidney Donors and Improve Follow-up Compliance. In: *UNOS Transplant Management Forum*, Orlando, FL, USA, April 25-27, 2017.
- [24] **Thomas AG**, Henderson ML, Massie AB, Shaffer A, Luo X, Holscher CM, Segev DL. Fewer than 50% of Transplant Centers Fully Comply with OPTN Living Donor Follow-up Policy. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 26-29, 2017.
- [25] **Hapern SE**, **Thomas AG**, Holscher CM, Massie AB, Henderson ML, Anjum S, Locke JE, Segev DL. Sexual Dysfunction Among Living Kidney Donors. In: *American Society of Transplant Surgeons*, Miami, FL, USA, January 26-29, 2017.
- [26] **Long A**, Hutton H, Mbabali I, **Thomas AG**, Bugos E, Mulamba J, Amico KR, Nalugoda F, Gray R, Wawer M, Nakigozi G, Chang LW. Evaluation of a Motivational Interviewing-Informed, mHealth-Supported CHW Training Program

to Promote HIV Treatment and Prevention in a HIV Hotspot Ugandan Fishing Community. In: *International Association of Providers of AIDS Care*, Fort Lauderdale, FL, USA, May 9-11, 2016.

- [27] Chang LW, Mbabali I, Kong X, Hutton H, Long A, **Thomas AG**, Bugos E, Ssekasanvu J, Kennedy C, Amico KR, Nalugoda F, Reynolds SJ, Quinn T, Serwadda D, Gray R, Wawer M, Nakigozi G. A Cluster-Randomized Trial to Promote Combination HIV Prevention Using mHealth-Supported CHWs in a High-Prevalence Ugandan Fishing Community: Design and Baseline Characteristics of the mLAKE Trial. In: *International AIDS Conference*, Durban, South Africa, July 18-22, 2016.
- [28] **Thomas AG**, Erickson J, Strickland K, Barnes A. Iterative Gaussian mixture model splitting of multimodal PSTH for studying activity dependent changes in cultured network connectivity. In: *Society for Neuroscience*, San Deigo, CA, USA, November 9-13, 2013.

- Presentor(s) underlined

INVITED TALKS

- [1] The National Landscape of Living Kidney Donor Follow-up in the United States. In: *American Society of Transplantation and American Journal of Transplantation Journal Club*, Online, December 7, 2017.

TEACHING EXPERIENCE

Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD

Guest Lecturer

May 2017

- **340.600.01: Stata Programming**
 - Graduate course in intermediate Stata programming
 - Main instructors: Dorry L. Segev, Allan B. Massie
 - Lecture: “From a Dirty Dataset to Table 1”
 - Enrollment: 281

RESEARCH EXPERIENCE

Research Data Analyst | Johns Hopkins University | 2016-Present

- Responsible for data analysis and manuscript preparation for >30 research projects in transplantation epidemiology. Manage data for an ongoing NIH-funded prospective study of living donors. Support the development of novel eHealth technologies for kidney donors engagement. Develop and maintain statistical software in R and Stata. Advisor: Dorry Segev, MD PhD

Research Assistant | Rakai Health Science Program | 2015-2016

- Trained community health workers and study staff involved in the implementation of two NIH-funded studies in Rakai, Uganda. Developed the standard operating procedures for data quality and management and contributed to the development of study questionnaires and protocols. Developed analytic R scripts to regularly generate weekly study implementation reports. Assisted in the development and testing of two mHealth applications. Advisor: Larry Chang, MD MPH.

Data Manager | Johns Hopkins University | 2016

- Performed data management activities to ensure data quality using SAS, EpiInfo, and Stata for the NSEBA Study which aims to improve detection of pediatric HIV in Zambia. Advisor: Catherine Sutcliffe, PhD.

Research Assistant | International Vaccine Access Center | 2014-2015

- Abstracted data from >100 journal articles for a systematic review that aimed to estimate the global burden of Haemophilus influenza type B, Streptococcus Pneumoniae, and Neisseria meningitides.

	<p>Student Reseracher Shepherd Poverty Program 2013</p> <ul style="list-style-type: none"> Analyzed data from the CDC Health, 2011 report to present longitudinal data analysis on the relationship between socioeconomic status and health status. Funded by the University Research Scholarship. Advisor: Harlan Beckley, PhD <p>Biomedical Engineering Technician Engineering World Health 2013</p> <ul style="list-style-type: none"> Fully repaired 20 medical devices, took full inventories of the Rubavu hospital and its ten surrounding health clinics, and conceptualized a novel medical device to perform lab equipment calibrations in resource-scarce environments.
AMERICORPS SERVICE	<p>Robotics Program Founder Lexington City Schools 2011-2014</p> <ul style="list-style-type: none"> Created and ran a program that uses Lego NXT robots to introduce middle school and elementary students to robotics, computer science, and engineering design utilizing a \$2500 grant from NSF. <p>Shift Leader Campus Kitchens Project 2011-2014</p> <ul style="list-style-type: none"> Addressed local hunger as a ServSafe-certified manager by supervising shifts that collected, prepared, and served over 300 meals/week. <p>Trip Coordinator Volunteer Venture Program 2011-2013</p> <ul style="list-style-type: none"> Coordinated three weeklong service trips for incoming students, which involves budget management and logistical planning. <p>Therapeutic Nursery Intern Kennedy Krieger Institute 2011</p> <ul style="list-style-type: none"> Conducted play-therapy sessions with toddlers and families experiencing homelessness. Provided care for the children and assisted with an active study in child psychology. <p>Patient Eligibility Intern Rockbridge Area Health Center 2010-2012</p> <ul style="list-style-type: none"> Helped manage the medical database, helped eligible patients acquire free medication from pharmaceutical companies, and answered patient questions by phone.
SOFTWARE SKILLS	<p>Statistical/Numerical Analysis:</p> <ul style="list-style-type: none"> Stata, R, SAS, MATLAB, Maple <p>Computer Programming:</p> <ul style="list-style-type: none"> Java, C++, C, Python, SQL <p>Version Control:</p> <ul style="list-style-type: none"> Git (GitHub/GitLab) <p>Productivity and Editing Software:</p> <ul style="list-style-type: none"> Atom, Xcode, RStudio \TeX (\LaTeX, \BibTeX) Microsoft Office, LibreOffice, Google Docs, iWork, EndNote GIMP, Adobe Photoshop <p>Operating Systems:</p> <ul style="list-style-type: none"> Apple MacOS, Microsoft Windows, Linux (Fedora, SGE)
AWARDS	<p>American Transplant Congress 2017</p> <ul style="list-style-type: none"> Best of Congress Poster for "Use of Pulsatile Perfusion Modifies the Effect of Delayed Graft Function on Graft Failure" Poster of Distiction for "Use of Pulsatile Perfusion Modifies the Effect of Delayed Graft Function on Graft Failure"

Johns Hopkins University Bloomberg School of Public Health

- Center for Global Health Established Field Placement/Pilot Grant, 2015

Washington and Lee University

- Algernon Sydney Sullivan Award, 2014
- Omicron Delta Kappa Leader of the Year, 2014
- Sigma Pi Sigma Physics Honor Society, 2013
- Johnson Opportunity Grant, 2013
- Evans International Grant, 2013
- Avis P. Waring Scholarship, 2013
- Omicron Delta Kappa Leadership Honor Society, 2013
- Beta Beta Beta Biological Honor Society, 2011
- Bonner Scholarship, 2010
- Johnson Scholarship, 2010-2014

ACTIVITIES

Memberships

- Trainee Member, Society for Epidemiologic Research (SER), 2017
- Trainee Member, American Society of Transplant Surgeons (ASTS), 2016
- Student Member, Society for Neuroscience (SFN), 2013