

CURRICULUM VITAE

BIOGRAPHICAL

Name: Khodor Ibrahim Abou-Daya, MD

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EDUCATION & TRAINING

UNDERGRADUATE:

2009 – 2011 American University of Beirut (AUB) BS with distinction (Biology)
Beirut, Lebanon

GRADUATE:

2011 – 2015 American University of Beirut (AUB) MD
Beirut, Lebanon

POSTGRADUATE:

2015 – 2016 Medical Intern Program Director: Salah Zeineddine, MD
American University of Beirut Internal Medicine
School of Medicine
Beirut, Lebanon

2016 – 2019 Research Fellow Mentor: Fadi G. Lakkis, M.D.
University of Pittsburgh Transplantation Immunology
Department of Surgery
Starzl Transplantation Institute
Pittsburgh, PA U.S.A.

APPOINTMENTS and POSITIONS

2020 – 2020 Starzl Transplantation Institute Research Instructor
Department of Surgery
University of Pittsburgh
Pittsburgh, PA U.S.A.

2020 – 2022	Starzl Transplantation Institute Department of Surgery University of Pittsburgh Pittsburgh, PA U.S.A	Research Assistant Professor
2022 – Present	Starzl Transplantation Institute Department of Surgery University of Pittsburgh Pittsburgh, PA U.S.A	Assistant Professor of Surgery

MEMBERSHIPS in PROFESSIONAL and SCIENTIFIC SOCIETIES

2016 – present	American Society of Nephrology (ASN)
2017 – present	American Association of Immunologists (AAI)
2016 – present	American Society of Transplantation (AST)
2019 – present	Community of Transplant Scientists (COTS)

HONORS

2017	Ben J. Lipps Fellowship, American Society of Nephrology
2019	Young Investigator Award, American Transplant Congress
2019	Young Investigator Award, American Association of Immunologists
2019	Mentor-Mentee Award, International Transplantation Science Meeting (co-organized by American, European, and International Transplantation societies)
2019	Brian N. Seidel Award for Excellence in Research, University of Pittsburgh
2020	Young Investigator Award, American Transplant Congress
2020	Trainee Abstract Award, American Association of Immunologists
2020	Stuart K. Patrick Grant for Transplant Innovation, University of Pittsburgh
2023	American Society of Transplantation Career Transition Grant

ORIGINAL PUBLICATIONS

1. **Abou Daya K**, Abu Daya H, Nasser Eddine M, Nahhas G, Nuwayri-Salti N. Effects of rosiglitazone (PPAR γ agonist) on the myocardium in non-hypertensive diabetic rats (PPAR γ). *Journal of Diabetes*. 2015 Jan;7(1):85-94.
2. Zhang Q, Dai H, Yatim KM, **Abou-Daya K**, Williams AL, Oberbarnscheidt MH, Camirand G, Rudd CE, Lakkis FG. CD8+ Effector T Cell Migration to Pancreatic Islet Grafts Is Dependent on Cognate Antigen Presentation by Donor Graft Cells. *Journal of Immunology*. 2016 Aug 15;197(4):1471-6.
3. Dai H, Friday AJ, **Abou-Daya KI**, Williams AL, Mortin-Toth S, Nicotra ML, Rothstein DM, Shlomchik WD, Matozaki T, Isenberg JS, Oberbarnscheidt MH, Danska JS, Lakkis FG. Donor SIRP α polymorphism modulates the innate immune response to allogeneic grafts. *Science Immunology*. 2017 Jun 23;2(12).
4. Hughes AD, Zhao D, Dai H, **Abou-Daya KI**, Tieu R, Rammal R, Williams AL, Landsittel DP, Shlomchik WD, Morelli AE, Oberbarnscheidt MH, Lakkis FG. Cross-dressed dendritic cells sustain effector T cell responses in islet and kidney allografts. *Journal of Clinical Investigation*. 2020 Jan 2;130(1):287-294.
5. Dai H, Lan P, Zhao D, **Abou-Daya KI**, Liu W, Chen W, Friday AJ, Williams AL, Sun T, Chen J, Chen W, Mortin-Toth S, Danska JS, Wiebe C, Nickerson P, Li T, Mathews LR, Turnquist HR, Nicotra ML, Gingras S, Takayama E, Kubagawa H, Shlomchik MJ, Oberbarnscheidt MH, Li XC, Lakkis FG. Paired immunoglobulin-like receptors mediate innate myeloid cell memory to non-self MHC molecules. *Science*. 2020 May 7.

6. **Abou-Daya KI**, Tieu R, Zhao D, Rammal R, Sacirbegovic F, Williams AL, Shlomchik WD, Oberbarnscheidt MH, Lakkis FG. Resident memory T cells form in the setting of persistent antigen and cause allograft rejection. *Science Immunology*. 2021 Mar 19;6(57).
7. Sasaki K, Al Moussawy M, **Abou-Daya KI**, Macedo C, Hosni A, Liu S, Juya M, Zahorchak AF, Metes DM, Lakkis FG, Abdelsamed HA. Activated-memory T cells influence naïve T cell fate: a noncytotoxic function of human CD8 T cells. *Communications Biology*. 2022 Jun 29 ;5(1):634.

REVIEWS

1. Zhao D, **Abou-Daya KI**, Dai H, Oberbarnscheidt MH, Li XC, Lakkis FG. Innate allorecognition and memory in transplantation. *Frontiers in Immunology*. 2020 May 28.
2. **Abou-Daya KI**, Oberbarnscheidt MH. Innate allorecognition in transplantation. *Journal of Heart and Lung Transplantation*. 2021 Mar 29.

PENDING ORIGINAL PUBLICATIONS

1. Zhao D, Zhou J, Abu Ali A, Tieu R, Lakkis FG, Oberbarnscheidt MH, Tevar A, Chen Z, **Abou-Daya KI**. Transplantation and Re-transplantation of Mouse Kidney Grafts to Study Local Immune Responses. *Protocol Exchange* 2021 DOI: 10.21203/rs.3.pex-1679/v2. (Pre-print)
2. Tieu R, Zeng Q, Zhao D, Manandhar P, Williams AL, Popp B, Wood-Trageser M, Demetris AJ, Tso JY, Johnson AJ, Kane LP, **Abou-Daya KI**, Shlomchik WD, Martin H. Oberbarnscheidt, Fadi G. Lakkis. Tissue-resident memory T cells require cognate antigen and IL-15 for their maintenance. *Science Immunology*. (In Review)
3. Cherukuri A, **Abou-Daya KI**, Chowdhury R, Mehta R, Hariharan S, Randhawa P, Rothstein DM. Transitional B cell Cytokines Risk Stratify Early Borderline Rejection After Renal Transplantation. *Kidney International*. (In Press)

RECENT ABSTRACT SUBMISSIONS

1. Jason Ossart, Neda Feizi, Matthieu Heitz, Hehua Dai, Amanda Williams, Fadi Lakkis, Geoffrey Schiebinger, Martin Oberbarnscheidt, **Khodor Abou-Daya**. The epigenetic and transcriptional landscape of monocytes responding to allogeneic non-self. *Cold Spring Harbor Laboratory Meeting*.
2. Zuhayr A. Ansari, Mohammad Mahdi Al Ess, **Khodor I. Abou-Daya**. GoFlow: a Web Based, Semi-Automated Pipeline for the Processing and Analysis of High Dimensional Flow Cytometry Data. *University of Pittsburgh Department of Surgery 20th Annual Research Day*.

PAST GRANTS

- | | |
|-------------|---|
| 2017 – 2019 | American Society of Nephrology Ben J. Lipps Fellowship Grant
PI: Abou-Daya |
| 2020-2022 | University of Pittsburgh Stuart K. Patrick Grant for Transplant Innovation
Leveraging Artificial Intelligence to Identify Therapeutic Targets in
Transplantation PI: Abou-Daya |

CURRENT GRANTS

- | | |
|-------------|---|
| 2018 – 2023 | NIH-NIAID (R01 AI099465) PI: Lakkis
Innate Recognition of Allogeneic Non-self
Role: Co-Investigator |
| 2019 – 2024 | NIH-NIAID (R01 AI145881) PI: Oberbarnscheidt
Tertiary Lymphoid Organs in Transplantation
Role: Collaborator |
| 2020 – 2025 | NIH-NIAID (R01 AI49466) PI: Lakkis
T Cell Memory in Organ Transplantation
Role: Co-Investigator |

- 2022 – 2027 NIH-NIAID (R01 AI72973) PI: Lakkis
Innate Allorecognition in Clinical Transplantation
Role: Co-Investigator
- 2022 – 2027 NIH-NHLBI (R01 HL122489) PI: Turnquist
Immunoregulatory mechanisms of IL-33 in heart transplantation
Role: Co-Investigator
- 2023 – 2025 AST Career Transition Grant PI: **Abou-Daya**
Leveraging AI to Build a Discovery Platform for Transplantation Immunology

PENDING GRANTS

- 2023 – 2028 NIH-NIAID (R01 AI175452) PI: Turnquist
Elucidating How “Tissue Injury Signals” Program and Sustain the Alloimmune Responses Causing Graft-Versus-Host-Disease
Role: Co-Investigator

TEACHING

Past Students: Connor Leemhuis, Carnegie Mellon University, Computational Finance Class of 2022
Anahita Kodali, Dartmouth College, Biology & WGSS Class of 2023
Zoe Lakkis, Fox Chapel Area High School Class of 2022

Current Undergraduate Student: Zuhayr Ansari, University of Pittsburgh Health Sciences Research Training Program, Thomas Jefferson High School Class of 2022

Current Postdoctoral fellows: Jason Ossart PhD, Gang Zhang MD, & Zeping Gui MD (With Dr. Lakkis)

ABSTRACT PRESENTATIONS AT NATIONAL AND INTERNATIONAL MEETINGS

- 2018 The American Transplant Congress
2019 The American Transplant Congress
2019 The American Society of Nephrology Kidney Week
2020 The American Transplant Congress
2020 The American Association of Immunologists

INVITED TALKS AT NATIONAL AND INTERNATIONAL MEETINGS

- 2019 Great Lakes Transplant Immunology Forum
2020 Tumor, Transplant and Tolerance Scientific Retreat
2021 Boston Children's Hospital Special Seminar
2022 Thomas E. Starzl Transplantation Institute Scientific Retreat

INVITED REVIEWS OF MANUSCRIPTS, ABSTRACTS, & GRANTS

- 2018 Bulletin of the World Health Organization (WHO Bulletin)
2020 Kidney International Reports (KI Reports)
2020 28th International Congress of The Transplantation Society (TTS 2020)
2020 Journal of Cellular Physiology (JCP)
2020 Journal of American Society of Nephrology (JASN)
2021 Bulletin of the World Health Organization (WHO Bulletin)
2021 Transplantation
2021 American Transplant Congress (ATC 2022)
2021 Journal of Visualized Experiments (JoVE)
2021 Frontiers in Inflammation & Transplantation Immunology Review Editor

- 2022 Seminars in Immunopathology (SIM)
- 2022 PLOS ONE
- 2022 Journal of Clinical Investigation (JCI)
- 2022 Thomas E. Starzl Transplantation Institute Stuart K. Patrick Grant for Transplant Innovation
- 2022 American Transplant Congress (ATC 2023)
- 2023 Thomas E. Starzl Transplantation Institute Stuart K. Patrick Grant for Transplant Innovation

INVITED SESSION MODERATOR AT NATIONAL AND INTERNATIONAL MEETINGS

- 2022 American Transplant Congress: Rapid Fire Oral Abstract Session
“*Biomarkers: -omics and Systems Biology*”
- 2022 American Transplant Congress: Impact Session
“*Visualizing Immune Responses and Rejection*”

LIST OF CURRENT RESEARCH INTERESTS

- Intra-graft adaptive and innate immune responses
- Genetic and epigenetic mechanisms of immunological memory
- Application of artificial intelligence in basic and clinical research