

# Loren Gragert, Ph.D.

September 2025

Division of Biomedical Informatics and Genomics  
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## Education

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|------|---------------------------------------------------------------------------------------------------|
| 2014 | Ph.D., Biomedical Informatics and Computational Biology, University of Minnesota, Minneapolis, MN |
| 2001 | B.S., Biochemistry, University of St. Thomas, Saint Paul, MN                                      |
|      | B.A., Quantitative Methods / Computer Science, University of St. Thomas, Saint Paul, MN           |

## Academic Appointments

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|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2023-     | Assistant Professor, Department of Medicine, Division of Biomedical Informatics and Genomics<br>Tulane University School of Medicine, New Orleans, LA                                                                                                                                           |
| 2020-     | Associate Director, Histocompatibility and Immunogenetics Laboratory<br>S(ACHI) Board Certification #D251; LSBME CLS - Specialist License #339511<br>Department of Medicine, Section of Clinical Immunology, Allergy, and Rheumatology<br>Tulane University School of Medicine, New Orleans, LA |
| 2015-2023 | Assistant Professor, Department of Pathology and Laboratory Medicine, Tulane Cancer Center<br>Tulane University School of Medicine, New Orleans, LA                                                                                                                                             |

## Professional Experience

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|---------|------------------------------------------------------------------------------------------------|
| 2003-15 | Senior Bioinformatics Scientist, National Marrow Donor Program / Be The Match, Minneapolis, MN |
| 2001-03 | Software Engineer, Lockheed Martin Tactical Systems, Eagan, MN                                 |

## Research Support

### Ongoing

|           |                                                                                                                                                                                                    |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2025-2030 | NIDDK Parent R01 DK140336 - Role: PI<br>“Designing ABO-Compatible US Kidney Allocation”<br>Contact PI: Michal Mankowski, New York University (NYU)                                                 |
| 2024-2029 | NIDDK Parent R01 DK139240 - Role: PI<br>“Increasing Equity and Utility in Deceased Donor Kidney Allocation with HLA Molecular Matching”<br>Contact PI: Michal Mankowski, New York University (NYU) |
| 2022-2027 | NIAID Parent R01 AI173095 - Role: Co-I<br>“HLA Immunogenetics and Kidney Allograft Outcomes”<br>Contact PI: Malek Kamoun, University of Pennsylvania                                               |
| 2025-2030 | NHLBI Parent R01 HL179005 - Role: Co-I<br>“Molecular mismatch as a marker for immunologic risk in heart transplant recipients”<br>Contact PI: Bonnie Lonze, New York University (NYU)              |

### Pending

|           |                                                                                                                                                                                                                                                    |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2026-2028 | NICHD Parent R21 - Role: PI; Resubmitted August 2025, Study Section meets October 2025<br>“Non-invasive fetal HLA and KIR genotyping of cell-free DNA from maternal blood”<br>Contact PI: Danilo Augusto, University of North Carolina - Charlotte |
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[A0 submission Impact Score: 26; Percentile: 9th]

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|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2026-2031        | NIDDK Parent R01 - Role: PI - Submitted June 2025, Study Section meets November 2025<br>“Optimizing Liver Allocation Policy Using Personalized Molecular Compatibility”<br>Contact PI: Michal Mankowski, New York University (NYU)                                                    |
| 2026-2031        | NIDDK Parent R01 - Role: Co-I - Submitted May 2025, Study Section meets November 2025<br>“Maximizing Living Donor Kidney Transplant Success by Prioritizing Low Eplet Mismatch in Donor-Recipient HLA Matching”<br>Contact PI: Sommer Gentry, New York University (NYU)               |
| 2026-2031        | NHLBI Parent R01 - Role: Co-I - Submitted June 2025, Study Section meets November 2025<br>“Molecular mismatch as a marker for immunologic risk in lung transplant recipients”<br>Contact PI: Bonnie Lonze, New York University (NYU)                                                  |
| 2025-2027        | NIGMS COBRE Pilot - Tulane Center for Sex-Based Precision Medicine (CESPM) - Role: PI<br>“Antigen processing basis for CD4+ epitope dominance in sex-dependent immunity, autoimmunity, and transplant rejection”<br>[Recommended for funding; Pending administrative review by NIGMS] |
| 2025-2026        | NCATS CTSA Hub - Statistical and Analytical Methods Development Project UM1TR004471 - Role: PI<br>“Benchmarking and Standardizing HLA Antibody Data and Analysis to Support Research Studies and Clinical Trials”                                                                     |
| <u>Completed</u> |                                                                                                                                                                                                                                                                                       |
| 2020-2025        | NIAID HLA/KIR Region Genomics U01 AI152960 - Role: Co-I<br>“MHC and KIR Sequencing and Association Analyses in the iGeneTRAIN Studies”<br>Contact PI: Brendan Keating, New York University (NYU)                                                                                      |
| 2015-2025        | National Marrow Donor Program (NMDP) Sponsored Project - Role: PI<br>“HLA Bioinformatics Research”                                                                                                                                                                                    |
| 2020-2023        | United Network for Organ Sharing Sponsored Project - Role: PI<br>“Update Calculated Panel Reactive Antibody (CPRA) Calculator”<br>Implemented in OPTN US Organ Allocation System on January 26, 2023                                                                                  |
| 2024-2024        | NCATS CTSA Hub - Statistical and Analytical Methods Development Project UM1TR004471 - Role: PI<br>“Profiling performance of high-resolution HLA imputation with complementary metrics and visualizations using an open-source validation framework”                                   |
| 2025-2025        | NCATS CTSA Hub - Statistical and Analytical Methods Development Project UM1TR004471 - Role: PI<br>“Modeling Impact of Probabilistic Offer Filters based on High Resolution HLA Imputation to Reduce Histocompatibility-Related Organ Offer Refusals”                                  |

#### Trainee

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|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2024-2026 | T32 Predoctoral Training Award TL1TR003106 - Alyssa Paynter<br>Center for Clinical and Translational Science (CCTS)<br>“Modeling antigen processing to inform the prediction of HLA-derived CD4+ T-cell epitopes to improve risk stratification for HLA mismatching in kidney transplant outcomes” |
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#### **Awards**

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|------|------------------------------------------------------------------------------------------|
| 2024 | Tulane SOM Department of Medicine, Deming Departmental Award for Excellence for Research |
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|------|-------------------------------------------------------------------------------------------------------|
| 2022 | American Transplant Congress, Young Investigator Award                                                |
| 2021 | ASHI Conference, Most Clinically Relevant Poster Abstract Award                                       |
| 2020 | Tulane Scholarly Retreat Residency, A Studio In the Woods                                             |
| 2019 | Lavin Bernick Foundation Tulane Faculty Grant (Awarded to host Immune Polymorphism Workshop)          |
| 2010 | World Marrow Donor Association (WMDA) International Donor Registries Conference (IDRC), Best Abstract |
| 2009 | British Society of Histocompatibility and Immunogenetics (BSHI) Meeting, Best Abstract                |
| 2009 | European Federation of Immunogenetics (EFI) Conference, Best Abstract                                 |

### **Trainee Awards**

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|------|-------------------------------------------------------------------------------------|
| 2023 | ASHI Conference, Most Clinically Relevant Abstract Award (D. Giovanni Biagini, PhD) |
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### **Professional Organizations**

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|---------|----------------------------------------------------------------------------|
| 2004-   | American Society for Histocompatibility and Immunogenetics (ASHI)          |
| 2007-   | European Federation of Immunogenetics (EFI)                                |
| 2018-   | American Society of Transplantation (AST)                                  |
| 2022-   | Society for Immune Polymorphism (SIP); Founding Board Member and Treasurer |
| 2008-15 | World Marrow Donor Association (WMDA)                                      |
| 2006-12 | American Society of Human Genetics (ASHG)                                  |

### **Professional Activities**

#### Teaching

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|-----------|-------------------------------------------------------------------------------------|
| 2020-     | Tulane SOM GBCH 7240, Advanced Bioinformatics   Graphics and Deep Learning units    |
| 2018-2023 | Tulane SOM MCPB 6070, Molecular and Cellular Pathobiology   Bioinformatics unit     |
| 2018-2023 | Tulane SOM GBCH 7230, Intro to Bioinformatics   Python and Sequence Alignment units |
| 2016-2020 | Tulane SOM Pathology Resident Training Program   Pathology Informatics unit         |

#### Current Trainees

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|-------|-----------------------------------------------------------------------------------------------|
| 2023- | Alyssa Paynter, PhD student in Biomedical Informatics and Genomics program (CCTS TL1 Trainee) |
| 2023- | Md. Shakhaowat Hossain, PhD student in Biomedical Sciences program                            |
| 2024- | Jenna Ko, PhD candidate in Biomedical Sciences program                                        |
| 2024- | Vanessa Menard, PhD student in Biomedical Sciences program                                    |

#### Trainee Alumni

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|---------|-------------------------------------------------------------------------------------------------------|
| 2020-23 | Grace Williams (PhD in Biomedical Sciences   Health Informatician, Ochsner Health)                    |
| 2020-23 | D. Giovanni Biagini (PhD in Biomedical Sciences   Clinical Research Scientist, Natera)                |
| 2020-23 | Marian Little, (PhD in Biomedical Sciences   Research Analyst, Emergency Care Research Inst.)         |
| 2016-19 | Navchetan Kaur (Postdoctoral Fellow   Assoc. Director - Translational Medicine and Clin. Res. Natera) |
| 2016-17 | Richard Davis (MD/MPH Practicum and Culminating Experience   Clinical Informatics Fellow, Duke)       |

#### Institutional Service

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|-----------|---------------------------------------------------------------------------------------------|
| 2024-     | Associate Director of Biostatistics and Bioinformatics Core                                 |
| 2024-     | Tulane High Performance Computing (HPC) planning committee                                  |
| 2023-2024 | Associate Director of Educational Programs, Division of Biomedical Informatics and Genomics |
| 2023-     | Faculty Innovation Ambassador, Tulane Innovation Institute                                  |
| 2023-     | Tulane School of Medicine Biomedical Sciences Master's Program Steering Subcommittee        |
| 2018-2020 | Faculty Advisor, Computational Biology at Tulane student organization                       |

#### Extramural Services

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|-------|----------------------------------------------------------------------------------------------------|
| 2025- | ASHI Clinical Informatics Workshop, Program Director thru 2028, Local Organizer, and Faculty       |
| 2024- | Section Editor, Histocompatibility/HLA in Transplantation, Current Transplantation Reports journal |
| 2024- | Genome Canada Transplant Consortium, International Scientific Advisory Committee                   |
| 2024- | ASHI Science and Technology Initiatives Committee (STIC); Vice Chair 2025-2027                     |
| 2024- | ASHI Quality Assurance and Standards (QAS) Committee                                               |

2023- AST Kidney and Pancreas Community of Practice (KPCOP), Eplet Mismatch subgroup  
 2023- AST Transplant Diagnostics Community of Practice (COP) Executive Committee; Chair 2025-  
 2023- Anthony Nolan Research Review Board  
 2022- International HLA and Immunogenetics Workshop (IHIW) Councilor  
 2021-2022 Virtual Crossmatch Advisory Committee, National Marrow Donor Program / Be The Match  
 2021-2023 ASHI Education Committee, Director-In-Training Career Development Working Group  
 2021- Instructor, Basic & Population Genetics; Bioinformatics, AFDT Histocompatibility Specialist Course  
 2021-2024 Louisiana Organ Procurement Agency (LOPA) HLA Subcommittee  
 2020- Editorial Board, *Human Immunology*  
 2019 Local Organizer, 2nd Immune Polymorphism and Population Dynamics Workshop, New Orleans, LA  
 2019-2024 Immunobiology Working Committee, Center for International Blood and Marrow Transplant Research  
 2019-2023 Project Leader, HLA Dictionary, 18th International HLA and Immunogenetics Workshop  
 2018 Co-Organizer, 1st Immune Polymorphism and Population Dynamics Workshop, Ramat Gan, Israel  
 2015- Editorial Board, *HLA: Immune Response Genetics* (formerly *Tissue Antigens*)  
 2013-2015 Information Technology Committee, American Society for Histocompatibility and Immunogenetics

#### Journal Reviewing

Human Immunology (Editorial Board) | HLA: Immune Response Genetics (Editorial Board) | American Journal of Transplantation  
 | Transplantation | Current Transplantation Reports (Section Editor - Histocompatibility / HLA in Transplantation) | Cancer  
 Research | Bioinformatics | Cell Genomics | Journal of Clinical Investigation | Journal of the American Society of Nephrology  
 | Clinical Journal of the American Society for Nephrology | Transplant Immunology | Communications Biology | PLoS ONE |  
 PLoS Neglected Tropical Diseases | Kidney360 | Cytotherapy | BMC Bioinformatics | International Journal of Immunogenetics |  
 Frontiers in Genetics | Exploration of Immunology | Health Policy and Technology

#### Grant Reviewing

NIH KUFD Study Section (February 2025, June 2025, October 2025) | NIH PBKD Study Section (ECR Program - June 2020) |  
 Anthony Nolan Research Review Board | UK MRC Fellowship | Canadian Glycomics Network | Sidra Medicine Internal Research  
 Fund

### **Invited Talks**

#### National & International

09/2025 University of California - Los Angeles (UCLA) Pathology Inclusive Excellence Invited Seminar  
 "Immune Compatibility Factors in US Kidney Allocation Policy"  
 04/2025 New York University (NYU) Invited Seminar, Department of Surgery  
 "Immune Compatibility Factors in US Kidney Allocation Policy"  
 04/2025 Georgetown University, Current Topics in Histocompatibility and Transplantation Teleconference  
 "Immune Compatibility Factors in US Kidney Allocation Policy"  
 10/2024 American Society for Histocompatibility and Immunogenetics (ASHI) Annual Meeting  
 "Roadmap for Laboratory Data Standards" workshop session speaker  
 "Beyond the X and Y: A Collaborative Integration of Sex Differences in Transplant Research"  
 - Women in Transplantation session speaker  
 02/2024 American Society of Transplantation (AST) - Cutting Edge of Transplantation (CEoT) Conference  
 "Using AI for HLA Matching (Opportunities in Histocompatibility)"  
 02/2024 Georgetown University, Current Topics in Histocompatibility and Transplantation Teleconference  
 "Modeling HLA Antigenicity to Inform Virtual Crossmatch"  
 06/2023 American Transplant Congress, San Diego, CA  
 IMPACT talk - "Improving the Metric for Candidate HLA Sensitization (cPRA)"  
 IMPACT talk - HLA Amino Acid Mismatch-Based Risk Stratification of Kidney Graft Failure  
 Using a Novel Machine Learning Approach"  
 In-Depth session - "Combining HLA and Non-HLA PRS for Assessing Allograft Survival"  
 04/2023 ASHI International Committee - ASHI Speaks Your Language - National Webinar

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|---------|-----------------------------------------------------------------------------------------------------------------------------|
|         | "Predicting Histocompatibility with Population Genetics"                                                                    |
| 03/2023 | Saudi Kidney Paired Donation (KPD) Workshop                                                                                 |
|         | "Measuring Transplant Compatibility with HLA and ABO Population Genetics"                                                   |
| 12/2022 | Georgetown University, Current Topics in Histocompatibility and Transplantation Teleconference                              |
|         | "Revised CPRA Metrics"                                                                                                      |
| 12/2022 | Canadian Blood Services - HLA Webinar Series                                                                                |
|         | "Redesigning Metrics of Immunologic Compatibility for Kidney Allocation Systems"                                            |
| 07/2022 | American Society for Histocompatibility and Immunogenetics Journal Club                                                     |
|         | "Stem cell donor HLA typing improves CPRA in kidney allocation"                                                             |
| 06/2022 | American Transplant Congress - IMPACT Session Speaker, Boston, MA                                                           |
|         | "New Approaches to HLA Matching and Unacceptable Antigen Determination for Solid Organ Transplantation - Exome Matching"    |
| 03/2022 | University of Pennsylvania, Dept. of Pathology                                                                              |
|         | "Clinical Informatics and Immunogenetics in Transplant Compatibility"                                                       |
| 12/2021 | Georgetown University, Current Topics in Histocompatibility and Transplantation Teleconference                              |
|         | "Broadening Metrics for Immune Compatibility to Improve Equity in Organ Allocation"                                         |
| 04/2021 | European Federation for Immunogenetics Virtual Conference, Educational Session                                              |
|         | "Bioinformatics Tools for Research in Histocompatibility"                                                                   |
| 10/2020 | Georgetown University, Current Topics in Histocompatibility and Transplantation Teleconference                              |
|         | "Beyond Antigens: Strategies for Utilizing HLA Amino Acid Sequence Data in the Organ Allocation System"                     |
| 10/2020 | American Society for Histocompatibility and Immunogenetics (ASHI) Virtual Conference                                        |
|         | "Population Modeling of Histocompatibility and Equity"                                                                      |
| 03/2020 | One Lambda Technical Workshop, Rancho Mirage, CA                                                                            |
|         | "Informatics Tools for Precision Histocompatibility Assessments"                                                            |
| 09/2019 | American Society for Histocompatibility and Immunogenetics (ASHI) Annual Meeting, Pittsburgh                                |
|         | "Informatics Tools for Precision Histocompatibility Assessments"                                                            |
| 09/2019 | Georgetown University, Current Topics in Histocompatibility and Transplantation Teleconference                              |
|         | "Virtual Crossmatch Using Molecular HLA Typing Data"                                                                        |
| 05/2019 | Georgetown University, Current Topics in Histocompatibility and Transplantation Teleconference                              |
|         | "Applying HLA Population Genetics to Solid Organ Transplantation: Rethinking the Calculated Panel Reactive Antibody Metric" |
| 07/2018 | University of Pennsylvania, Dept. of Pathology, Histocompatibility Laboratory                                               |
| 03/2018 | Immune Polymorphism Workshop, Bar-Ilan University, Israel                                                                   |
|         | "Modeling HLA Haplotype Frequency Distributions for Transplant Matching Applications"                                       |
| 01/2015 | American Association of Blood Bankers (AABB) Audioconference                                                                |
|         | "HLA Match Likelihoods: Closing Disparities in Access to Transplant"                                                        |
| 09/2014 | Georgetown University, Current Topics in Histocompatibility and Transplantation Teleconference                              |
|         | "Fine Mapping of HLA Associations for Hematologic Diseases using Registry Data"                                             |
| 09/2012 | Georgetown University, Current Topics in Histocompatibility and Transplantation Teleconference                              |
|         | "US Haplotype Frequencies and their Applications"                                                                           |
| 10/2011 | American Association of Blood Bankers (AABB) Conference, San Diego                                                          |
|         | "Patient Match Rates: Now and in the Future"                                                                                |
| 06/2011 | Cord Blood Symposium, Plenary Session, San Francisco                                                                        |
|         | "Estimating Match Rates with Adult Donors and Umbilical Cord Blood Units in the US Registry"                                |

#### Regional & Institutional

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|---------|-------------------------------------------------------------------------------------------|
| 09/2023 | East Jefferson General Hospital, Medical Staff Grand Rounds                               |
|         | "Redesigning Measures of Immunologic Compatibility to Improve Equity in Organ Allocation" |
| 03/2023 | Tulane University School of Medicine, Department of Medicine Grand Rounds                 |
|         | "Redesigning Measures of Immunologic Compatibility to Improve Equity in Organ Allocation" |
| 03/2022 | Tulane University School of Medicine, Biomedical Informatics and Genomics seminar series  |

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| 04/2019 | <p>“Clinical Informatics and Immunogenetics in Transplant Compatibility”</p> <p>Louisiana Conference on Computational Biology &amp; Bioinformatics, LSU, Baton Rouge, LA</p> <p>“Clinical Informatics Tools for Precision Histocompatibility Assessments in Solid Organ Transplantation”</p> |
| 12/2018 | <p>Tulane University, Primate Research Center seminar series</p> <p>““MHC Disease Association Studies Using Bone Marrow Registry Genotyping Data”</p>                                                                                                                                        |
| 10/2018 | <p>Tulane University, Computer Science Department seminar series</p> <p>“Assessing Transplant Compatibility using Statistical Learning”</p>                                                                                                                                                  |
| 07/2018 | <p>University of Alabama-Birmingham, Informatics Institute seminar series</p> <p>““HLA Population Genetics and Informatics to Optimize the Kidney Allocation System”</p>                                                                                                                     |
| 01/2018 | <p>Tulane University School of Medicine, Biochemistry and Molecular Biology Department seminar series</p> <p>“HLA Population Genetics and Informatics to Optimize the Kidney Allocation System”</p>                                                                                          |
| 04/2017 | <p>LSU Health Sciences Center, Epidemiology Department seminar series</p> <p>“Genetic Epidemiology of HLA Polymorphisms in Transplantation and Cancer”</p>                                                                                                                                   |
| 03/2017 | <p>Tulane University School of Medicine, Structural and Cellular Biology Department seminar series</p> <p>“The Role of Immune Gene Polymorphisms in Cancer and Transplantation”</p>                                                                                                          |
| 11/2014 | <p>National Marrow Donor Program Council Meeting</p> <p>“HLA Match Likelihoods: Closing Disparities in Access to Transplant”</p>                                                                                                                                                             |

## Publications

### Original Investigations

1. Yu N, Panch S, Mepani K, Stanworth S, Bonet-Bub C, **Grager L**, Menard V, Mangiola M, Maiers M, Berka N. (2025) Epitope-Based Matching for Platelet Transfusion Overview ‘Is it time?’: Insights and Future Directions from the 2024 American Red Cross Symposium on Platelet Component Selection. *Transfusion* DOI: 10.1111/trf.18392.
2. Mankowski MA, **Grager L**, Keating B, Lonze BE, Segev DL, Montgomery R, Gentry SE, Mangiola M. (2025) Balancing Equity and HLA Matching in Deceased-Donor Kidney Allocation with Eplet Mismatch. *American Journal of Transplantation* 25:6 1226-1234. DOI: 10.1016/j.ajt.2024.11.030.
3. Schmauch E, Piening B, Xia B, Zhu C, Stern J, Zhang W, Dowdell A, Loza B-L, Mohebnasab M, **Grager L**, Khalil K, Camellato B, Faria de Oliveira M, O’Brien D, Weldon E, Lin X, Gao H, Kagermazova L, Kim J, Loupy A, Heguy A, Taylor S, Zhu F, Gao S, Gandla D, Reddy K, Chang A, Michael B, Jiang L, Jian R, Narula N, Linna-Kuosmanen S, Kaikkonen-Määttä M, Lorber M, Kellis M, Tatapudi V, Ayares D, Griesemer A, Mangiola M, Pass H, Snyder MP, Montgomery RA, Boeke JD, Keating BJ (2024) Integrative Multi-omic Profiling of Two Human Decedents Receiving Pig Heart Xenografts. *Nature Medicine* 2024 May 17. doi: 10.1038/s41591-024-02972-1.
4. Crane C, Niemann M, Dale B, **Grager L**, Shah M, Ingulli E, Morris GP. (2024) High-resolution HLA genotyping improves PIRCHE-II assessment of molecular mismatching in kidney transplantation. *Human Immunology* 2024 May 14:110813. doi: 10.1016/j.humimm.2024.110813.
5. Scorr LM, Kilic-Berkmen Gamze, Sutcliffe DJ, Dinasarapu AR, McKay JL, Bagchi P, Powell MD, Boss JM, Cereb N, Little M, **Grager L**, Hanfelt J, McKeon A, Tyor W, Jinnah HA. (2024) Exploration of potential immune mechanisms in cervical dystonia. *Parkinsonism & Related Disorders* 2024 Feb 17:106036. doi: 10.1016/j.parkreldis.2024.106036.
6. Lim WC, Marques da Costa ME, Godefroy K, Jacquet E, Rondof E, **Grager L**, Nhiri N, Dalfovo D, Viard M, Labaied N, Khan MA, Dessen P, Romanel A, Pasqualini C, Schleiermacher G, Carrington M, Zitvogel L, Scoazec JY, Georger B, Salmon J. (2023) Divergent HLA Variations and Heterogeneous Expression but Recurrent HLA Loss-of-Heterozygosity and Common HLA-B and TAP Transcriptional Silencing Across Advanced Pediatric Solid Cancers. *Frontiers in Immunology* Vol 14 DOI: 10.3389/fimmu.2023.1265469.
7. Ferar K, Hall TO, Crawford DC, Rowley R, Satterfield BA, Li R, **Grager L**, Karlson EW, de Andrade M, Kullo IJ, McCarty CA, Kho A, Hayes MG, Ritchie MD, Crane PK, Mirel DB, Carlson C, Connolly JJ, Hakonarson H, Crenshaw AT, Carrell D, Luo Y, Dikilitas O, Denny JC, Jarvik GP, Crosslin DR. (2023) Genetic variation in the human leukocyte antigen region confers susceptibility to *Clostridioides difficile* infection. *Scientific Reports* 13:18532.
8. Israeli S, **Grager L**, Madbouly A, Bashyal P, Schneider J, Maiers M, Louzoun Y. (2023) Combined imputation of HLA



genotype and self-identified race leads to better donor-recipient matching. *Human Immunology* 84(12):110721.

9. Li F, **Grager L**, Biagini DG, Patel JK, Kobashigawa J, Trück J, Rodriguez O, Watson CT, Gibb D, Zhang X, Kransdorf EP. (2023) IgM Marks Persistent IgG Anti-Human Leukocyte Antigen Antibodies in Highly Sensitized Heart Transplant Patients. *Journal of Heart and Lung Transplantation* 2023 Oct 2:S1053-2498(23)02055-7. PMID: 37793509.
10. Han J, Rushakoff J, Moayed Y, Henricksen E, Lee R, Luikart H, Shalakhi O, **Grager L**, Benck L., Malinowski D, Kobashigawa J., Teuteberg J, Khush K, Patel J, Kransdorf EP (2023) HLA sensitization is associated with an increased risk of primary graft dysfunction after heart transplantation. *Journal of Heart and Lung Transplantation* 2023 Oct 4:S1053-2498(23)02030-2. PMID: 37802261.
11. Johnson AC, Zhang J, **Grager L**, Hertzberg V, Larsen, CP (2023) Belatacept with Time-limited Tacrolimus Co-immunosuppression Modifies the 3-year Risk of Eplet Mismatch in Kidney Transplantation. *American Journal of Transplantation* 2023 Sep 29:S1600-6135(23)00699-8. PMID: 37778459 DOI:10.1016/j.ajt.2023.09.011
12. Mack SJ, Schefzyk D, Milius RP, Maiers M, Hollenbach JA, Pollack J, Heuer ML, **Grager L**, Spellman SR, Guethlein LA, Schneider J, Bochtler W, Eberhard HP, Robinson J, Marsh SGE, Schmidt AH, Hofmann JA, Sauter J (2023) Genotype List String 1.1: Extending the Genotype List String Grammar for Describing HLA and Killer-cell Immunoglobulin-like Receptor Genotypes. *HLA: Immune Response Genetics* 102 (2): 206-212.
13. Ansbacher-Feldman Z, Israeli S, Maiers M, **Grager L**, De Santis D, Israeli M, Louzoun Y. (2023) GRAMM - a new method for analysis of HLA in families. *HLA: Immune Response Genetics* 102 (4):477-488.
14. Narayan R, Niroula A, Wang T, Kuxhausen M, He M, Meyer E, Chen YB, Bhatt VR, Beitinjane A, Nishihori T, Sharma A, Brown VI, Kamoun M, Diaz MA, Abid MB, Askar M, Kanakry CG, **Grager L**, Bolon YT, Marsh SGE, Gadalla SM, Paczesny S, Spellman S, Lee SJ (2023) HLA Class I genotype is associated with relapse risk after allogeneic stem cell transplantation for NPM1-mutated AML. *Transplantation and Cellular Therapy* 29 (7):452.e1-452.e11.
15. Dasariraju S, **Grager L**, Wager G, McCullough K, Brown NK, Kamoun M, Urbanowicz R. (2023) HLA Amino Acid Mismatch-Based Risk Stratification of Kidney Allograft Failure Using a Novel Machine Learning Algorithm. *Journal of Biomedical Informatics* 142:104374.
16. Nilsson J, Kaabinejadian S, Yari H, Peters B, Barra C, **Grager L**, Hildebrand W, Nielsen M. (2023) Machine learning reveals limited contribution of trans-only encoded variants to the HLA-DQ immunopeptidome by accurate and comprehensive HLA-DQ antigen presentation prediction. *Communications Biology* 6(1) 442.
17. **Grager L**, Spellman S, Shaw B, Maiers M. (2023) Unrelated Stem Cell Donor HLA Match Likelihoods in the US Registry Incorporating HLA-DPB1 Permissible Mismatching. *Transplantation and Cellular Therapy* 29(4) 244-252.
18. Kim JJ, Fichtner A, Copley HC, **Grager L**, Süsal C, Strologo LD, Oh J, Pape L, Weber LT, Weitz M, König JC, Krupka K, T Burkhard, Kosmoliaptsis V (2023) Molecular HLA mismatching for prediction of primary humoral alloimmunity and graft function deterioration in paediatric kidney transplantation. *Frontiers in Immunology* 14:1092335.
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Abstracts: (170+ conference abstracts; available upon request)