

ADVANCEMENTS

In Organ Donation Research

CALL TO ACTION

BY KAYLA GRAY

When the Organ Donation Research Council met December 2019, it became abundantly clear that when it came to research, there was an unmet need. There was no source for OPOs to utilize enabling us to share our research and advancements. At that moment, it struck the group as obvious and necessary that organ procurement professionals would significantly benefit from a one-stop, readily accessible location for information in relationship to research. This would allow for research publications to be shared, other organ procurement practice-related material and resources to be readily available to everyone, and to have a space for collaboration to thrive.

... Advancements in Organ Donation Research was born.

Without a common place for information and the exchange of ideas, OPOs are limited in their ability to share research, best practices, and advances in donation as a whole. The hope for this chronicle would be that all departments associated with donation, have a place to share successes, questions, and collaborative endeavors.

We as a community want to help shape the future of organ donation and Advancements in Organ Donation Research can assist those goals. We will be able to learn faster, innovate better, and foster increased purposeful collaboration among OPOs and academic and industry research entities across the US. By working together, we can be the driving forces for innovation within the field.

With that in mind, we invite you to become involved and help shape the future of Advancements in Organ Donation Research. Your participation is essential for success. We ask that you:

- Share Comments
- Submit Material
- Suggest Spotlight
- Join Editorial Team
- Provide Feedback and Ideas

This chronicle will evolve over time and will continue to update features to meet your needs. Your material, participation and insights will be instrumental.

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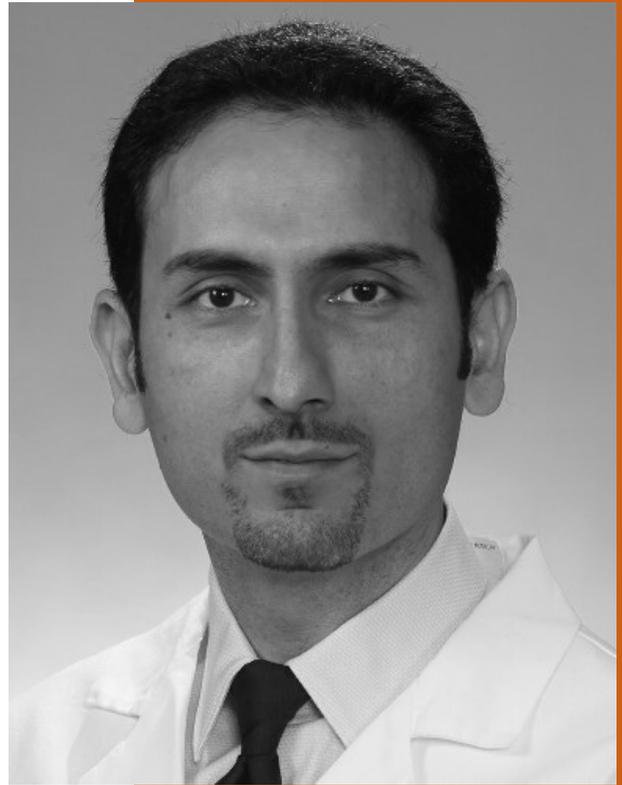
WHAT IS RESEARCH?

BY RAJ DHAR, MD

Research may at first appear a scary and nebulous process, something only performed in ivory towers and animal laboratories. However, it is more broad and relatable than you might think. Research is simply performing an investigation with a goal of contributing some new knowledge to the broader community. This process of discovery applies the scientific method in a series of steps: asking a question, collecting and analyzing data, and sharing your findings.

Research is a naturally collaborative process: its goal is to share and enhance knowledge across borders and organizations. Its ultimate goal is to change our practice—something that the OPO world is very attuned to. Research is simply a rigorous and systematic way of achieving this.

The importance of research (compared with inferences based on non-systematic observations) is that it is more likely to lead to meaningful change that improves what we do. We end up with more meaningful knowledge – of what works, doesn't work, and ultimately, how our world (and the world of organ and tissue donation) can best function and succeed.



ODRC PROJECTS & INITIATIVES

Education: Program & Content Development

- Develop strategies and tactics on ways ODRC can help facilitate OPO research
- Meetings
- Webinars

Best Practices & Research Standards

- Develop simple practices and forms for OPOs to utilize to advance research efforts
- Share collective lists of research resources
- Create a standard application for OPO and external research partners
- Communicate relevant research advancements to the OPO Community

Facilitate Collaboration

- Develop working groups of OPOs to lead research initiatives
- Share research projects focused on donor management and other advancements in the donation process
- Promote presentations of research findings within the OPO Community

SPOTLIGHTS

GARY MARKLIN, MD



Gary Marklin, MD has been the Chief Medical Officer at Mid-America Transplant since 2014. He is a board certified pulmonary and critical care physician with over 30 years of experience in private practice in St Louis. He personally manages the care of the organ donors in their independent organ recovery ICU and has been involved in donor management research since 2010. He has published multiple articles on organ donor management.

A Randomized Trial of Intravenous Thyroxine for Brain-Dead Organ Donors With Impaired Cardiac Function

Current research studies:

Prospective randomize trial of fluid resuscitation in the brain dead donor using the Flotrac versus the Cheetah to measure stroke volume. The Stroke volume will also be measured by echocardiography and with a metabolic monitor which measures VO₂ (Fick equation) to establish a reference standard. The goal of the study is to determine the accuracy of the Cheetah and Flotrac in a brain dead donor.

Prospective trial of prone ventilation in the hypoxic brain dead donor. Forty donors have been treated with prone ventilation for >12 hours, demonstrating a significant increase in PO₂ (about 140 mm Hg within 4 hours) and an increase in lungs transplanted. Published abstract in JHLT 2020. Manuscript to be submitted for publication in the near future.

A prospective comparative study of the accuracy of the i-STAT and the GEM 4000 blood gas analyzers in measuring the PO₂ in the range >300 mm Hg. The study demonstrated that the i-STAT underestimates the PO₂ by 50 mm Hg compared to the GEM 4000 in the high PO₂ range and more lungs were transplanted with changing to the GEM 4000. The manuscript has been submitted for publication.

Starting a multi-OPO randomized placebo-control trial of T₄ vs NS in brain dead donors to evaluate the effectiveness of T₄ in increasing the number of transplanted hearts and its effect on vasopressor weaning. Target 800 heart eligible donors. Listed on clinicaltrials.gov.

<https://clinicaltrials.gov/ct2/show/NCT04415658?term=Dhar&cond=brain+dead+donor&draw=2&rank=2>

READ MORE

COLLABORATIVE OPPORTUNITIES

APOLLO Study

APOLLO is a national observational study. The purpose of this study is to test kidney donors and kidney transplant recipients for variants (or forms) of the apolipoprotein L1 gene (called APOL1) to determine whether they impact outcomes. APOLLO will follow individuals who receive a kidney from an eligible (living or deceased) kidney donor. In addition, APOLLO will follow individuals with African descent who donate a kidney to assess the impact of the APOL1 gene. This study is being done to improve outcomes after kidney donation and kidney transplantation.

For more information about this study, please visit:

www.TheApolloNetwork.org

Contact: APOLLOstudy@wakehealth.edu

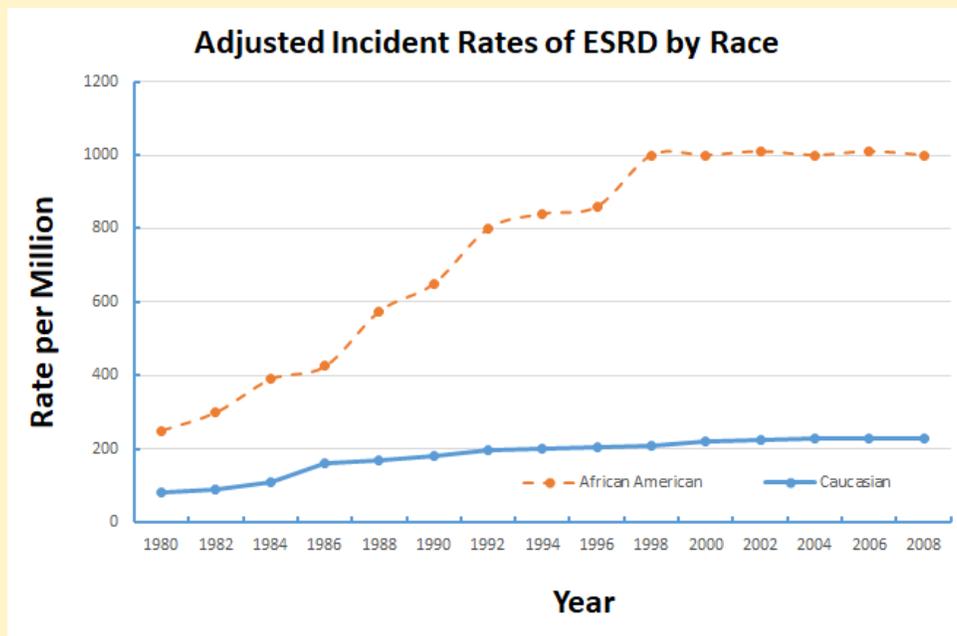


Fig. A significant high incidence of end-stage kidney disorders in African Americans throughout years. Source: Kidney Care Partners. Kidney Care: A National Overview (Connecticut). 2013. <http://kidneycarepartners.org/files/Connecticut.pdf>

WHAT'S NEW AT ODRC

The Executive Committee has decided to further utilize the ODRC for vetting all research projects/requests that are submitted to AOPO. This will certainly help in streamlining the evaluation process. AOPO receives requests for partnership that arrive from the entire country and by setting up the standard that these go through the ODRC will set a professional and consistent tone in the research community.

CHAIR

AHMAD SALEHI, MD

Ahmad Salehi, Vice Chair of ODRC assumed the role of Chair of the Council. Ahmad Salehi, MD, PhD is the Director of Research at Donor Network West in San Ramon. He is currently an Adjunct Professor at the Department of Psychiatry and Behavioral Sciences, Stanford Medical School. Following his medical studies, he obtained his PhD in neurobiology at the Netherlands Institute for Brain Research. For a decade, he worked as a Senior Scientist and the Director of Stanford Brain Bank in Stanford Medical School. In 2010, he received the World Technology Award in the field of Biotechnology in Manhattan, New York for his innovative use of mouse models of neurodegeneration. He has published numerous papers in high impact factor journals, among which, 7 have been featured on the cover.



VICE-CHAIR

KAYLA GRAY

Through a yearly election among all OPOs, Kayla Gray was elected as the new Vice Chair of ODRC. Kayla Gray has over 13 years of clinical and research experience and currently serves as the Research Coordinator at Donor Network of Arizona. She has a broad range of experience in clinical research, innovation and program development. Kayla has authored numerous articles and has been an invited presenter at symposiums and conferences in many countries. Kayla's most recent degree is from Parson's New School of Design, Masters of Science in Strategic Design and Innovation Management and her most impactful publication is Gray KE, Benetz BA, Stoeger CG, Lass JH. Current and New Technologies in Corneal Donor Tissue Evaluation: Comparative Image Atlas. *Cornea*. 2018;37 Suppl 1:S1-S4.

