



Information Session

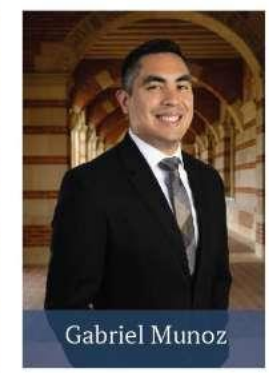
September 29th, 2025
6:00 - 7:00 PM

Bruin Beans Health Club

2025

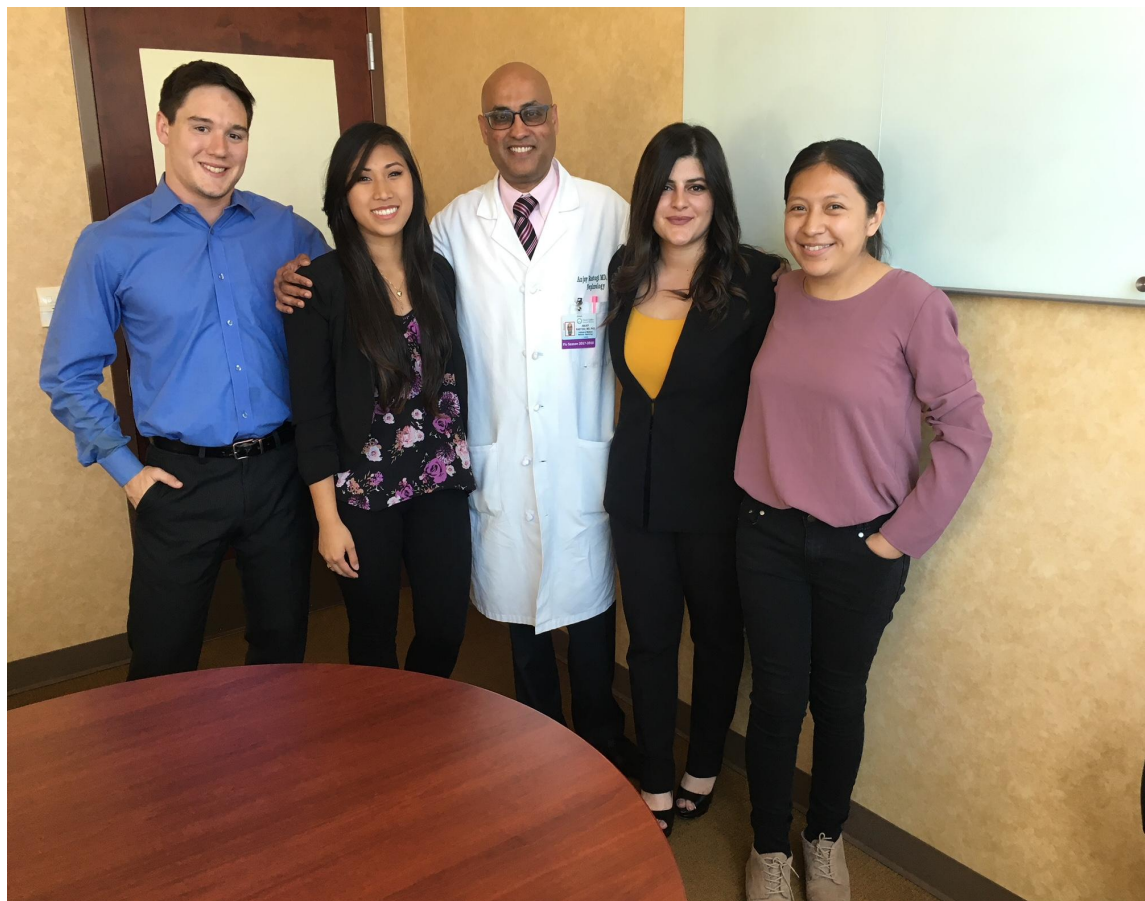
BRUIN BEANS
HEALTH CLUB

2026



CORE
KIDNEY

Bruin Beans Founders



Bruin Beans was founded in 2015 to provide undergraduates working at our offices with mentorship to help them achieve their professional goals. The club was founded with 5 members and has grown each year since then. With its expanded program, Bruin Beans now has a total of 16 members.

Bruin Beans Board of Directors



Presidents:
Rain Wong
Simran Ovalekar

Board of Directors:
Outreach Director → Alisha Chowdhary
Clinical Director → Siddhant Watwani
Research Director → Ariv Tandon
Finance Director → Sohum Bhargava
Digital Director → Ashley Kuo

ANJAY RASTOGI, MD PhD



- Clinical Chief of Nephrology, UCLA Health
- Bruin Beans Health Club Director and Chair of the Board
- **TRUE BRUIN:**
 - PhD: Pharmacology under mentorship of Nobel Laureate Louis Ignarro
 - Internship: UCLA School of Medicine
 - Residency: UCLA School of Medicine
 - Fellowship: Nephrology, UCLA School of Medicine

Bruin Beans Mission

- Mentor the future leaders in healthcare by giving access to opportunities in health education and patient outreach, observership, clinical research, and career development
- Provide opportunities for students to support a community of healthcare providers, staff, and patients in the mission to raise awareness of kidney health and disease
- To learn how to foster a culture of care and empower patients to become their own best advocates

CORE Kidney Health Program

Our CORE Mission...

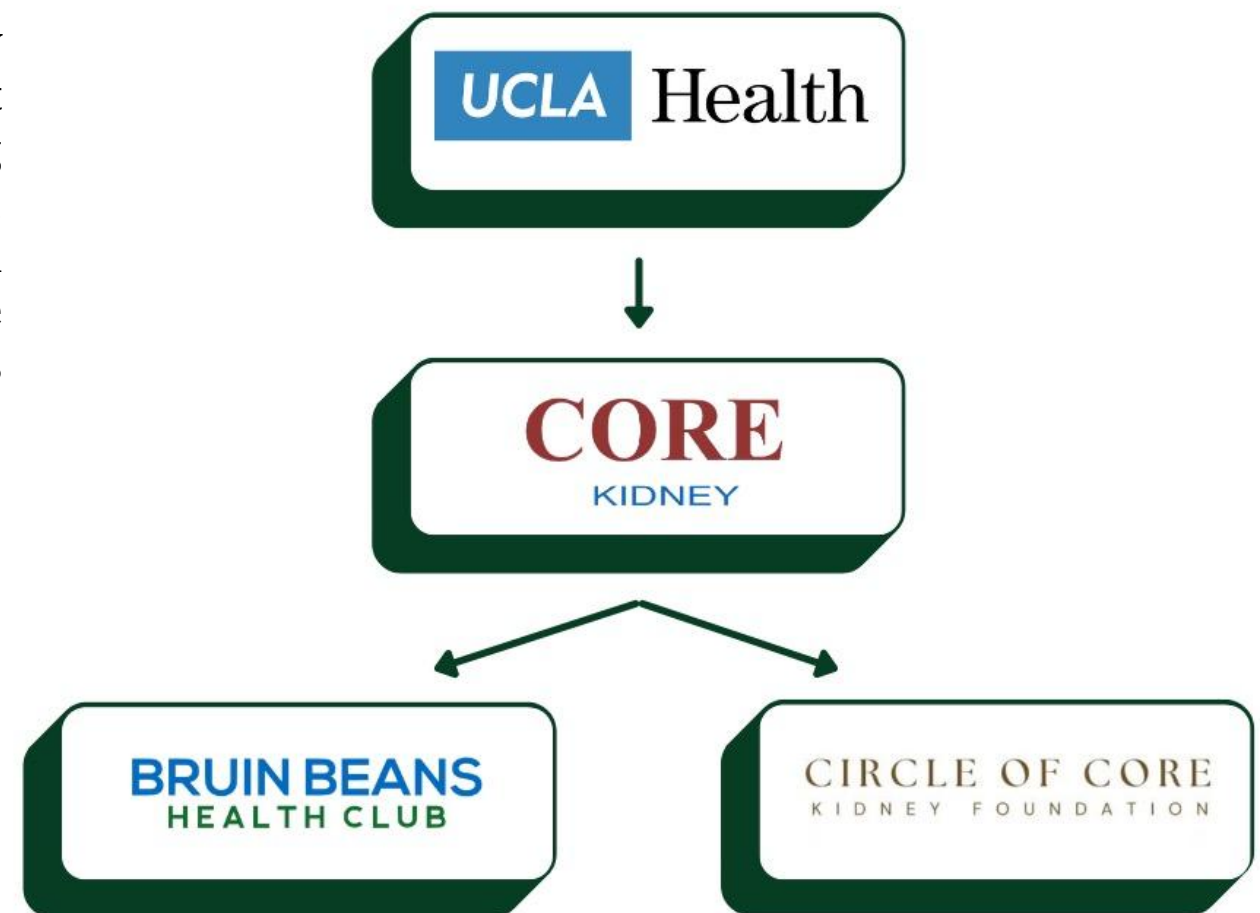
To empower individuals impacted by kidney disease by providing education, funding, and support throughout their journey. We are committed to facilitating living kidney donation, advocating for streamlined processes, and celebrating the selflessness of donors. Through outreach and care coordination, we aim to improve patient well-being and foster a community of awareness and support.

Clinical Excellence

Outreach

Research

Education



CORE Kidney History



Christina Lopez, B.Acc., MBA

- . Manager | UCLA Health
- . 2009: Planting the seeds
- . Unmet need for education
- . Internal programs
- . 2015: Health Fair
- . Website launched in 2016
- . Global Kidney Awareness

Circle of CORE



Patient Speaker - Mary Beth Barry

After receiving a kidney in 2016, Mary Beth Barry has been a champion for kidney patients across the globe. She has been an invaluable member of the CORE Kidney program, inspiring others with her warm and cheerful energy.



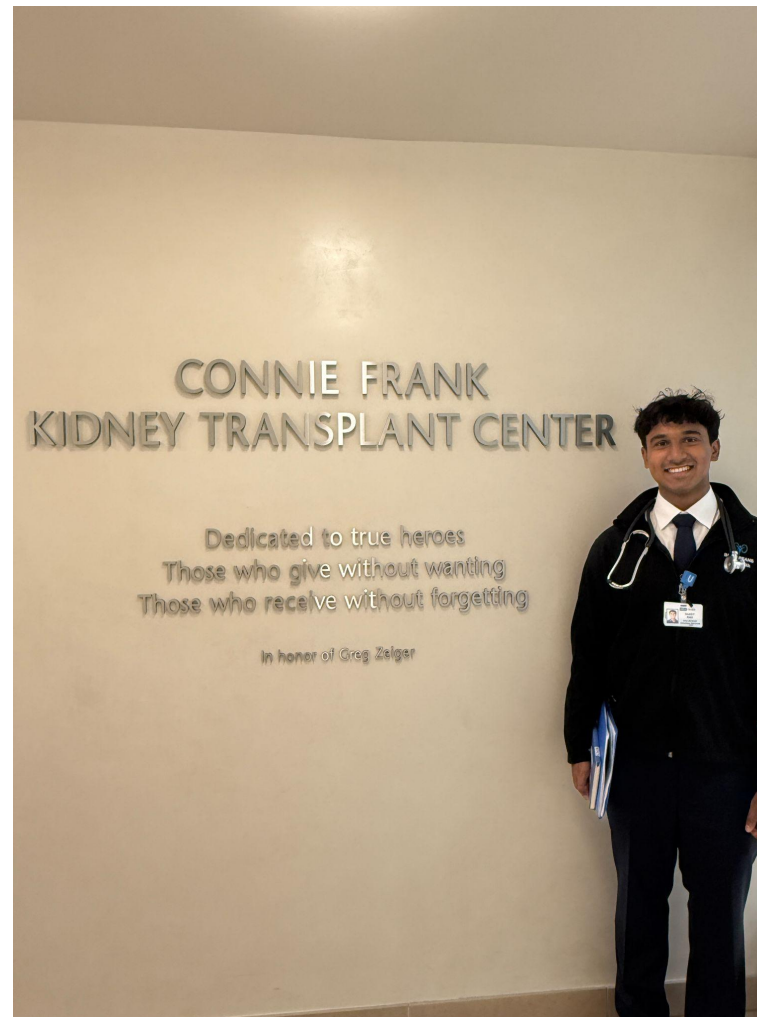
What Does Bruin Beans Offer?

- Clinical Experience
 - Patient Integration
 - Shadowing
 - Patient Journeys
- Research
 - Conferences
 - SRP 99/199
 - Publications
- Outreach
 - Patient Summit
 - Monthly Educational Webinars
 - Screenings
- Finance
 - Medical Grant Writing
 - Gap Year Opportunities
 - Work Study
- Digital
 - Cookbook
 - Career Development
 - KHILP
- Community

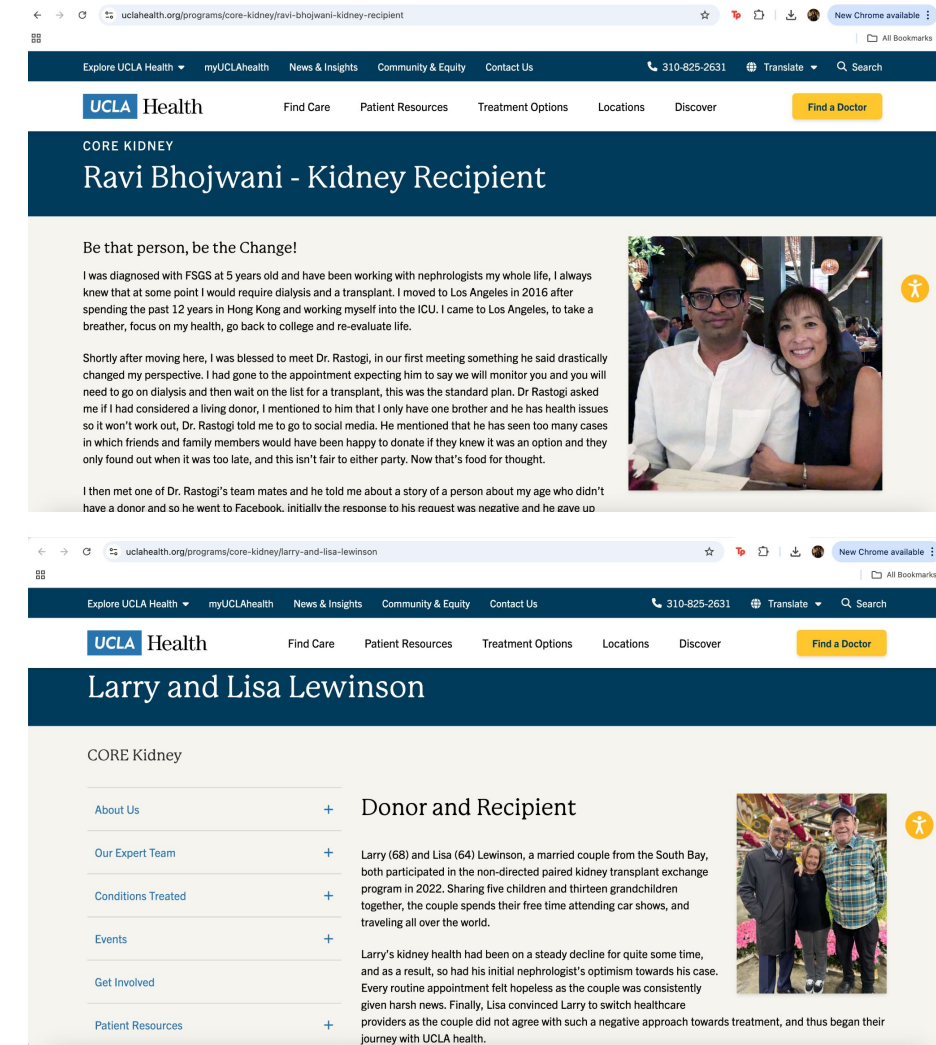
Clinical Experience



Patient
Integration



Observership
(Shadowing)



Patient
Journeys

OUTREACH



Santa Monica City Council



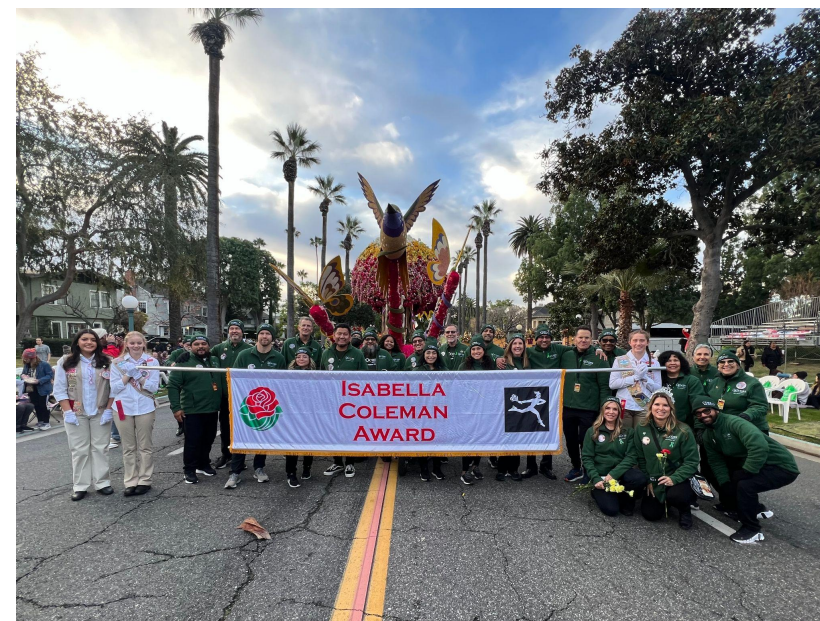
CORE Kidney Gala



Annual Tijuana Service Trip



Surf City Artisan Fair



2025 Rose Parade




Annual PKD Walk

Monthly Chats

By helping to organize Monthly Chats, Bruin Beans have an opportunity to connect with the CORE leadership members.

UCLA CORE Kidney Health Program Presents:

CHAT




with Dr. Rastogi
& CORE Kidney

Kidney Health |
What a Patient Should Know

1st of Every Month, 5:00 PM - 6:00 PM PST

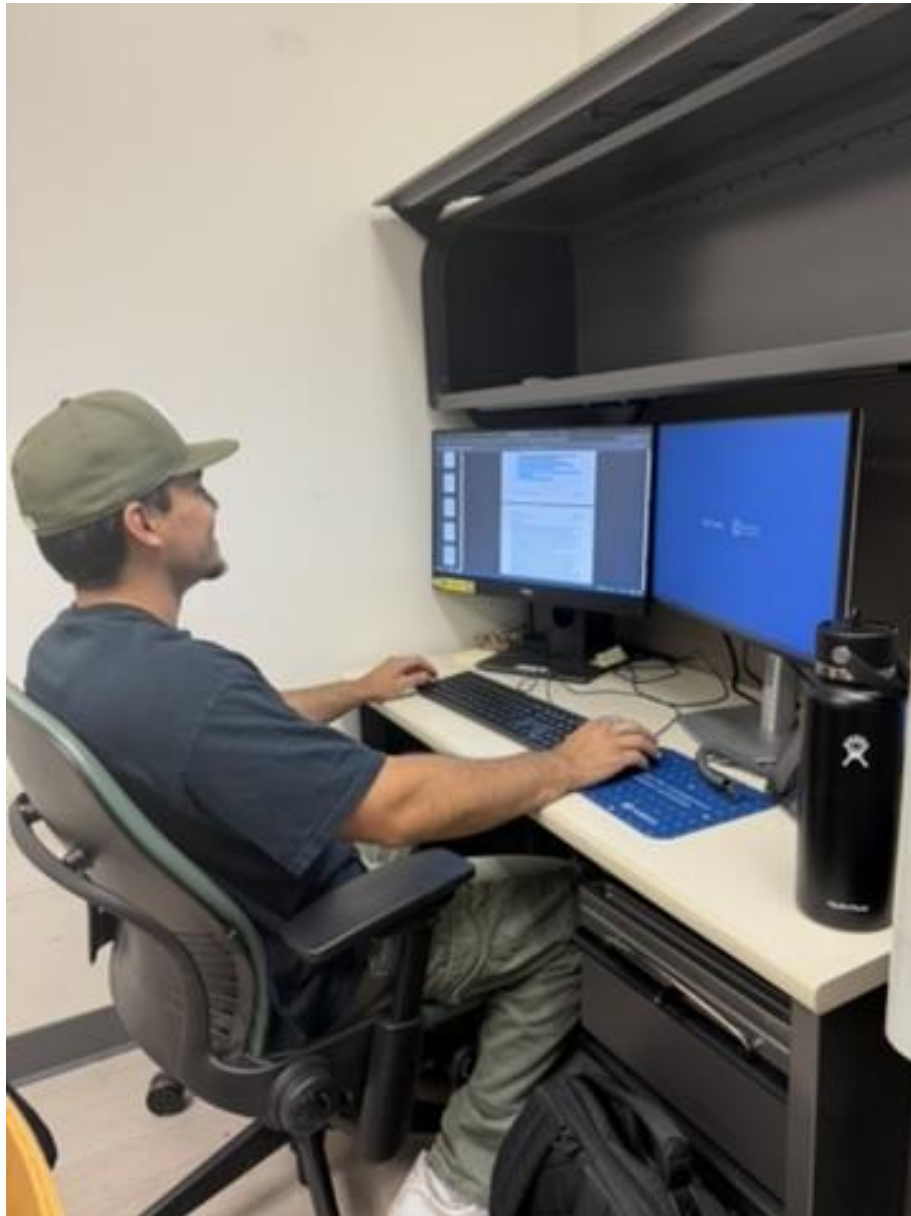
Register: tinyurl.com/rastogi-chat



 uclahealth.org/programs/core-kidney
COREKidney@mednet.ucla.edu
(310) 954-2692

FREE | VIRTUAL | INTERACTIVE

Work Opportunities



Work Study Opportunity



Gap Year Opportunities



\$3,100 procured
for blood pressure
monitors and
glucose machines
last year

**Medical Grant
Writing**

Research



Quarterly student research projects (SRP)

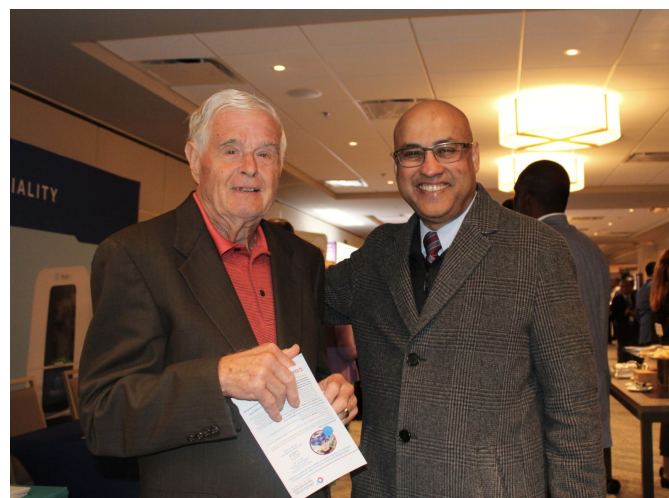
ASN

American Society of Nephrology

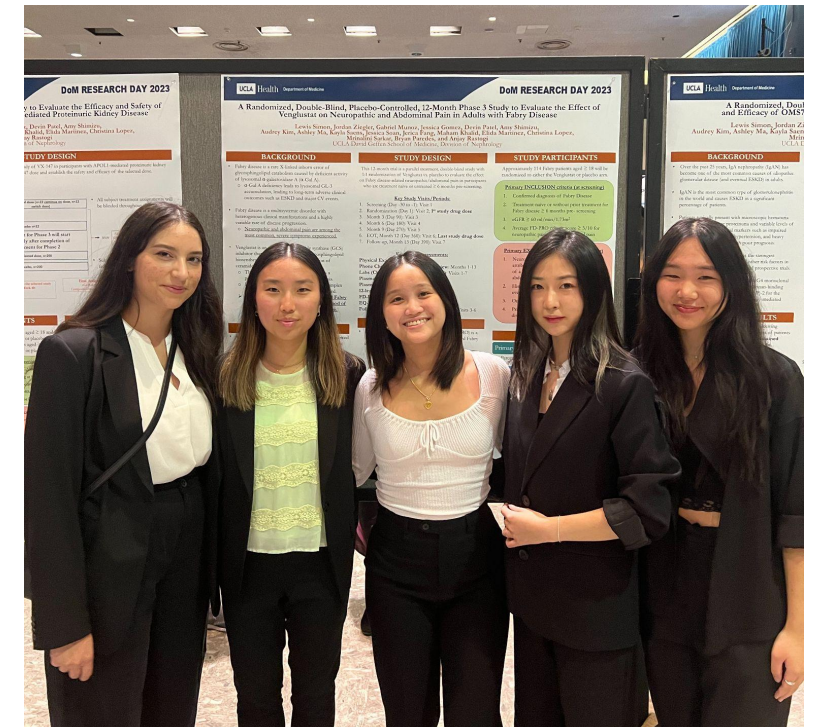
Earn publications at high impact factor journals



Undergraduate Research Week (URW)



Network with leading physicians at prestigious conferences



Department of Medicine Research Day

Additional opportunities:

- Work with clinical experts to create patient registries for rare kidney diseases
- Obtain clinical volunteership through UCLA Ronald Reagan Hospital
- Case report studies and presentations

CAREER DEVELOPMENT

KAPLAN

KHILP



MEDSCHOOLCOACH

Partnerships
(up to 50% discount + free resources)



- **Academic Peer Mentorship**
 - Mentor mentee pair
- **Guest Lecturers**
 - Physicians, Nurses, Medical Students, Ph.D Candidates, Dental students, PA Students

Printing Life: The Future of Kidney Transplants

Ria Ovalekar, Srisai Vuppuluri, Tanisha Samuel, Moitri Santra, Rain Wong

Background

Chronic Kidney Disease (CKD) is a global health crisis, impacting over 850 million individuals worldwide. Every year, thousands die while waiting for a kidney transplant, and dialysis, though life-sustaining, significantly reduces quality of life and has high long-term costs. Bioprinting offers a groundbreaking alternative. This technology uses layer-by-layer 3D printing of living cells and biomaterials to create functional kidney tissues.

By combining patient-derived cells with kidney-specific biomaterials, researchers can design organs that are:

- Personalized** - matched to the patient's immune profile, reducing rejection risk
- Scalable** - potentially ending transplant waitlists
- Versatile** - providing realistic models for drug screening and kidney disease research

In this study, we explore the **kdECMMA** bioprinting approach, which uses **methacrylated kidney extracellular matrix hydrogels** to recreate the kidney microenvironment, enabling regeneration of both glomerular and tubular structures.

Method & Procedure

Bioprinting Approach:

- Decellularized ECM (dECM):** Native kidney tissue is processed to remove cells while retaining its biochemical cues.
- kdECMMA Bioink:** Kidney-specific ECM is methacrylated to form a UV-crosslinkable, biologically active hydrogel.
- 3D Bioprinting:** Bioink is loaded into an extrusion-based printer to create hydrogel constructs mimicking kidney microarchitecture.
- Crosslinking & Maturation:** Structures are UV-cured and cultured in a bioreactor to promote cell viability and tissue organization.

Procedure Summary:

1. Source donor kidney tissue → decellularize.
2. Process ECM into kdECMMA hydrogel.
3. Load bioink into bioprinter; print kidney-mimetic constructs.
4. UV crosslink; mature in controlled conditions.

Results, Tables & Figures

The **kdECMMA** bioink demonstrated high print fidelity, retaining stable **3D structures after fabrication**. Cell viability remained between 92-95% after seven days, significantly surpassing that of non-kidney-specific hydrogels. Constructs printed with kdECMMA promoted **25-30% more tubular and glomerular-like structures**, alongside elevated expression of kidney-specific markers such as nephrin and AQP1, indicating successful functional differentiation. Additionally, these bioprinted tissues exhibited dose-dependent responses to nephrotoxic drugs, underscoring their potential as human-relevant platforms for drug testing and future transplantable kidney tissues.

Parameter	kdECMMA Constructs	Generic Hydrogel
Print Fidelity Score	High	Moderate
Cell Viability (Day 7)	92% ± 3%	85% ± 4%
Tubular Density (per mm²)	1.25%	Baseline

Image from Frontiers in Bioengineering and Biotechnology

Discussion

The **kdECMMA** bioprinting method demonstrates the feasibility of creating kidney-mimetic tissues that retain native biochemical properties. Results show that kdECMMA supports higher cell viability, enhanced tubular formation, and improved vascularization compared to generic hydrogels. While promising, challenges remain, including scaling constructs for full-organ functionality and integrating large-scale vascular networks to ensure nutrient delivery. This approach has potential for patient-specific drug testing, disease modeling, and eventual transplantable tissues.

Conclusion

Bioprinting with kdECMMA bioink could revolutionize kidney regenerative medicine by overcoming organ shortages and reducing dependence on dialysis. Although further refinement is needed for clinical application, the technology offers a realistic pathway toward on-demand, lab-grown kidneys.

References

Organ Procurement and Transplantation Network. (2025). National data waiting list. U.S. Department of Health and Human Services. <https://optn.transplant.hrsa.gov/data/view-data-reports/national-data/#>

Reisinger, A., Serrano, P. R., Chinnai, S., Zhu, S., Datta, R., & Srinivas, S. (2022). Precision nephrology: A patient-centric paradigm with kidney disease research and care. *Kidney International*, 102(3), 467-478. <https://doi.org/10.1016/j.kint.2021.11.024>

Reisinger, A., et al. (2020). Advances in chronic kidney disease: Integrating regenerative medicine and nephrology. *Seminars in Nephrology*, 40(4), 343-355. <https://doi.org/10.1016/j.semneph.2020.05.006>

Serrano, D., Ibrahim, M., Shewak, G., Wu, C., Perle, A., & Bero, L. (2022). Decellularized extracellular matrix hydrogels as scaffolds for 3D bioprinting in tissue engineering. *Annals. International Journal of Molecular Sciences*, 23(5), 2814. <https://doi.org/10.3390/ijms23052814>

United States Renal Data System. (2023). 2023 USRDS Annual Data Report: Epidemiology of kidney disease in the United States. National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases. <https://www.USRDS.org>

Wong, Y. Y., & Wessendael, A. (2017). Advances in engineering hydrogels. *Science*, 356(6351), eaaf917. <https://doi.org/10.1126/science.aaf917>

Community

Bruin Beans Members are a family and are proud to call the club a second home. Outside of medical related events, we have plenty of club socials!



**Big Bear
Retreat**



**Pismo Beach/Solvang
Retreat**



**Universal Studios
Horror Nights**



**Dinner at
Dr. Rastogi's House**



**Holiday Party at
Nanette Zumwalt's
(patient) House**



Networking Events

Patient HCP Summit



UCLA Health

CORE KIDNEY PATIENT SUMMIT

CORE Kidney presents the **2025 Patient Summit**, an event dedicated to educate and raise awareness regarding kidney disease to the community!

• • • •

DATE
November 1st, 2025

TIME
8:00 AM - 5:00 PM

TOPICS OF DISCUSSION

 GENETICS & KIDNEY HEALTH	 GLOMERULO-NEPHRITIS	 CARDIOVASCULAR KIDNEY METABOLIC SYNDROME
 HOME DIALYSIS: WHAT YOU SHOULD KNOW	 KIDNEY TRANSPLANTATION	 HIGH BLOOD PRESSURE
 PETS	 MENTAL HEALTH	 DIET & NUTRITION

COMMITMENTS

- 1 Outreach event per quarter
- 2 Monthly chats per year
- 1 Fundraiser per quarter
- **Shifts at Center for Health Sciences**
 - 8 hours per week
- 1 hour biweekly general meetings (every odd week)
- 1 Social per quarter
- Additional meetings as applicable
- Beans are held accountable by Bruin Beans board and CORE Kidney leadership
- **Attend Patient Summit on November 1st**

TIMELINE

1. **Sept 22**
 - a. Applications Open + EAF
 2. **Sept. 29**
 - a. Info. Session
 3. **October 7**
 - a. Applications due
 - b. Application review is anonymous, reviewers do not see names on the application
 4. **October 13-17 (week 3)**
 - a. Group Interviews
 - b. 30 Students Selected for 10 interviews (3 students per interview)
 - c. 45 mins- 1 hour
 5. **October 20-24 (week 4)**
 - a. Individual Interviews
 - b. 15 Students Selected from Group Interviews
 - c. 30 minutes
 6. **November 1st**
 - a. Patient Summit- Mandatory
- Final Decisions will be made by week 5
 - There will be an orientation for all the New Beans Week 5 before Patient Summit
 - Week 6-10: onboarding

HOW TO APPLY

Applications

- <https://tinyurl.com/rckxrfe>
 - Form also linked in our Instagram Bio (@bruinbeans)
 - Form is also available through our UCLA Website, at uclahealth.org/core-kidney/bruin-beans
- Applications are currently open!
- Applications due ***Tuesday, October 7th, 2025 @ 11:59PM***



Alumni Speaker - Arjun Anumula

- **UCLA '25**
- Former Bruin Beans Health Club President (2024 to 2025)
- M1 at Kaiser Permanente Bernard J. Tyson School of Medicine
- Pasadena, CA



Alumni Speaker - Harshita Talkad

- **UCLA '22**
- Former Bruin Beans Board Member (2021 to 2022)
- M4 at the University of Arizona, College of Medicine – Tucson
- Tucson, AZ



Contact



bruinbeanshc@gmail.com



uclahealth.org/core-kidney/bruin-beans



@bruinbeans @COREkidney



linkedin.com/company/bruin-beans-health-club/

CORE Kidney - YouTube

Virtual UCLA Health Conference 2021

<https://youtu.be/67QnhyP5d9U>

Kidney Health Fair 2019

<https://youtu.be/wMEP4SJyFiA>

Kidney Disease: What You Should Know

<https://www.youtube.com/watch?v=WoOmgjNRSIE>

Drugs and Medications: What You Should Know

<https://youtu.be/Yx-KcPpQZfk>



Celebrating 10 Years of

BRUIN BEANS

HEALTH CLUB

