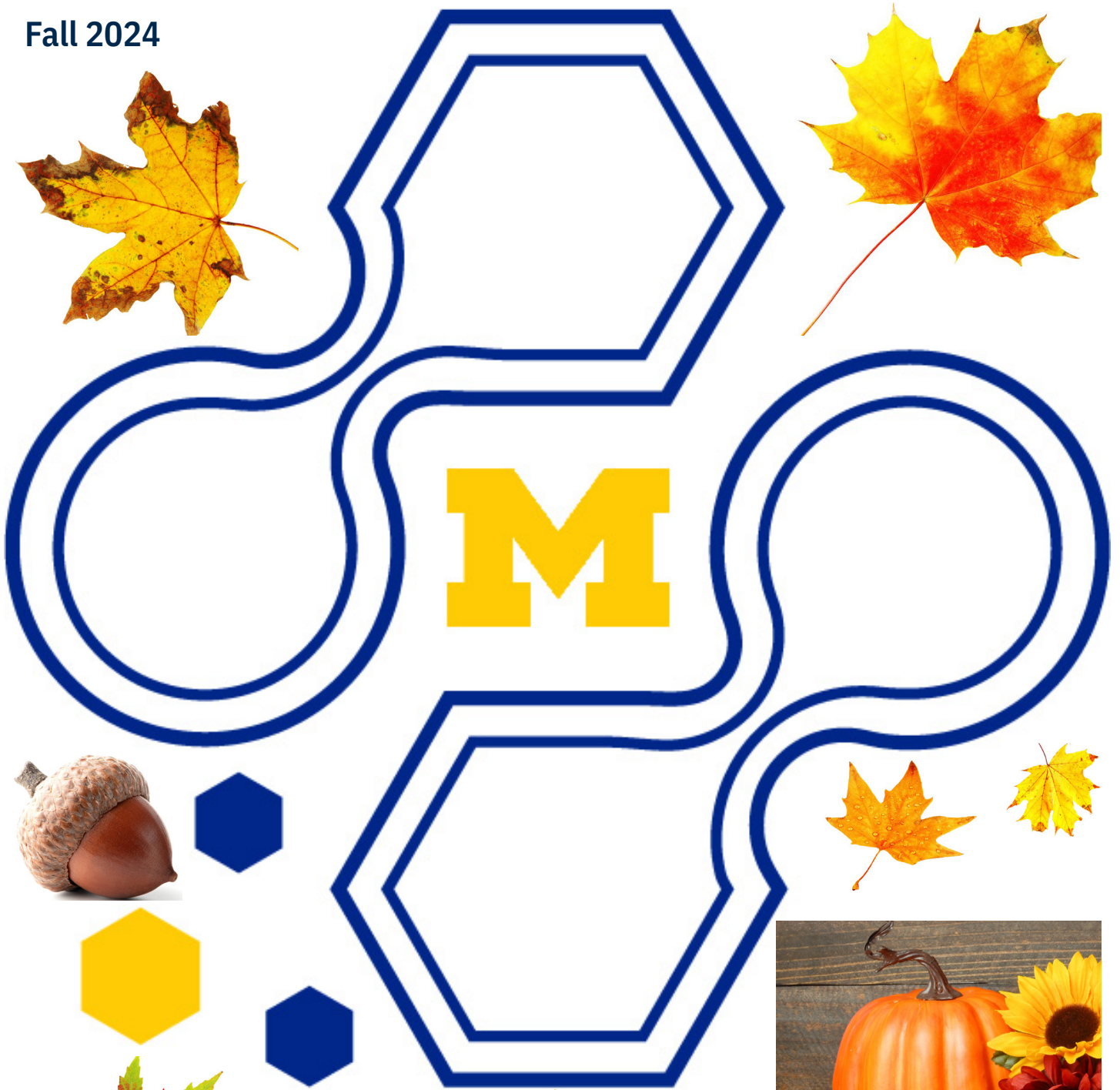


Fall 2024



Cell Plasticity  
Organ Design



CPOD

## MESSAGE FROM THE DIRECTORS

Dear Colleagues, Alumni and Friends,



We are excited to share this newsletter highlighting activities and upcoming events offered by the Center for Cell Plasticity and Organ Design (CPOD).

Abstract submissions are now open for our **14th International Symposium and Poster Session** scheduled for **Wednesday, November 13, 2024 in Kahn Auditorium/BSRB**. The CPOD Symposium will include a virtual morning session of international speakers and in-person afternoon sessions, including keynote speaker Thomas Reh. The poster session will allow CPOD community members to share their science and compete for awards. Please see the information below for registration, abstract submission, details on our speakers, and the timing for the various events.

The **2024-2025 CPOD Seminar Series** includes 3 external invited speakers for the Fall semester, starting with Joel Boerckel on October 15 speaking on “Mechanobiology of cell motility and embryo morphogenesis”. In the Winter, we will continue the New Year – New Faculty – Making Connections series to introduce five new UM faculty. Please join us to hear their science and meet these new members of our community. Additional external invited speakers will visit us later in the Winter/Spring. Mark your calendar for these **Tuesday 4-5pm** seminars.

We will celebrate the **Center’s 30th Anniversary** with a symposium and reception on **May 28, 2025, in Kahn Auditorium** that will include presentations from our former Center Directors: Deborah Gumucio, Gary Hammer, and Deneen Wellik. Please join us to celebrate the important impact that the Center has made on the University of Michigan.

Finally, check out the **CPOD Member Lab Spotlight** interview of Dr. Rachel Zemans to learn more about her research program and laboratory.

We look forward to seeing you during another vibrant year of activities!

Linda Samuelson, Ph.D.  
CPOD Director

Benjamin Allen, Ph.D.  
CPOD Associate Director



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## CPOD Marks 30th Year Anniversary (1995-2025)

We are excited to be celebrating the Center’s 30th anniversary! This significant milestone in the Center’s history not only marks CPOD’s legacy, but most importantly, its dedication and contribution to the UM scientific community.

CPOD has prided itself on creating an environment to bring scientists together to collaborate and expand their research in the fields of developmental biology, stem cell biology, cellular reprogramming, organoid technology, tissue engineering, and tissue injury and repair to solve problems relevant to organ development and homeostasis, organ disease (including cancer), and tissue regeneration. Additionally, we have had a tremendous impact

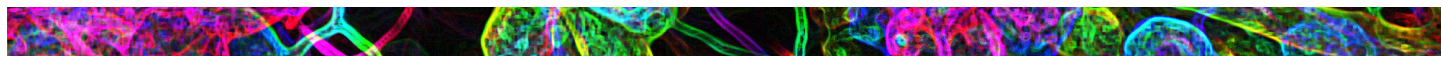


by training graduate students and postdoctoral fellows to develop the next generation of interdisciplinary scientists working in these fields of research. The Center has created unique and inspirational experiences for our community through seminars, symposia and poster sessions, and through our Emerging Scholars Program.

In honor of **CPOD’s 30th Anniversary** milestone, we will be celebrating this momentous event on **May 28, 2025, in the Biomedical Science Research Building (BSRB) Kahn Auditorium**. Our anniversary celebration will highlight our past, present and future!

**Mark your calendars and watch your emails for more details!**

# CPOD 14TH INTERNATIONAL SYMPOSIUM & POSTER SESSION



The CPOD symposium and poster session is a biennial event bringing scientists from various parts of the world to share their new and exciting research with our community. The symposium scheduled for **November 13** is an all-day event that begins with a virtual international speaker session in the morning, followed by in-person events in BSRB, including invited speaker sessions, and a poster session. These scientific sessions will be followed by a poster award ceremony and a reception. **Registration is now open!** While our symposium is free to attend, we would like you to register in advance using our **online Registration Form [LINK]**.



**Register by Oct. 28 by 11:59pm to hold your spot!**



## VIRTUAL MORNING SESSION “Modeling Cell & Tissue Development”

### Catarina Homem, Ph.D.

*“Asynchronous transcription and translation as timers of neuronal maturation in Drosophila”*

NOVA University Lisbon  
[Homem Lab](#)



### Vincent Pasque, Ph.D.

*“Modelling Early Human Embryogenesis with Naïve Pluripotent Stem Cells*  
KU Leuven”

[Pasque Lab](#)

### Xavier Trepas, Ph.D.

*“Bottom-up mechanobiology: from cell sheets to organoids*  
Institute for Bioengineering of Catalonia”

[Trepas Lab](#)



## IN-PERSON AFTERNOON SESSION

### “Maintenance, Repair & Regeneration of Sensory

#### Keynote Speaker

### Thomas Reh, Ph.D.

*“Reprogramming glia to regenerate neurons in the retina: it’s not too late to change their fate”*

University of Washington  
[Reh Lab](#)

### Alice Accorsi, Ph.D.

*“Apple snails provide a new point of view to look at eye regeneration”*

University of California Davis  
[Accorsi Lab](#)

### Linda Barlow, Ph.D.

*“Regenerating a Sense of Taste”*  
University of Colorado

[Barlow Lab](#)

### Joshua Emrick, D.D.S., Ph.D.

*“Intradental Mechano-Nociceptors Serve as Sentinels that Prevent Tooth Damage”*

University of Michigan  
[Emrick Lab](#)



### Bradley Goldstein, M.D., Ph.D.

*“Mechanisms of damage and repair in the olfactory system”*

Duke University  
[Goldstein Lab](#)

### Tatjana Piotrowski, Ph.D.

*“Mechanisms controlling proliferation and cell type specification during zebrafish sensory hair cell regeneration”*

Stowers Institute  
[Piotrowski Lab](#)



## CPOD Symposium Abstract Submission Abstracts are to be submitted by Oct. 28 by 11:59pm



To submit an abstract use our **Abstract Submission Form [LINK]**.

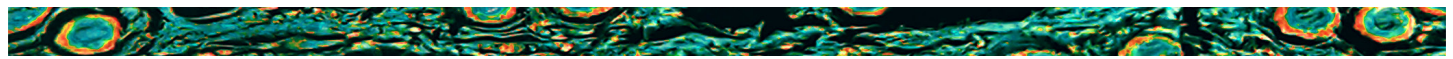
**Abstract format should follow the CPOD Abstract Guidelines provided on the submission form.**

Abstracts will be peer reviewed and ranked based on scientific merit in the category selected. The Program Committee will use these rankings to designate awards.

You will be directed to the registration & abstract submission page after scanning the QR code



# CPOD SEMINARS SERIES



We are excited to announce our 2024-2025 CPOD Seminar Series. We have 9 external invited speakers who will be on campus to meet faculty, trainees, and to present their research. In addition, we start the Winter semester with our New Year-New Faculty-Making Connections Series, with presentations from 5 new UM faculty members. Contact Angela Palek (palekang@med.umich.edu) if you would like to get on the schedule for any of our speakers.



For a detailed event and seminar schedule, visit our [Events & Seminars](#) webpage or QR code.



**\*\*ALL SEMINARS HELD ON TUESDAYS AT 4PM IN BSRB ABC SEMINAR ROOMS OR 5915 BUHL\*\***



## FALL 2024



### OCTOBER 2024

**15: Joel Boerckel, Ph.D.**  
University of Pennsylvania  
*"Mechanobiology of cell motility & embryo morphogenesis"*  
**Boerckel Lab**

**22: Xin Sun, Ph.D.**  
University of California San Diego  
*"Consider the lung as a sensory organ"*  
**Sun Lab**



### DECEMBER 2024

**17: Lauren O'Connell, Ph.D.**  
Stanford University  
*"Lessons from poison frogs on drugs and parenting"*  
**O'Connell Lab**



## NEW YEAR- NEW FACULTY- MAKING CONNECTIONS



### JANUARY 2025

**14: Junior West, Ph.D.**  
*"Barrier breakdown:  
Pathways to metastasis"*

**21: Herman Fung, Ph.D.**  
*"Title: TBD"*  
**Fung Lab**

**28: Alison Vander Roest, Ph.D.**  
*"Title: TBD"*  
**Vander Roest Lab**



### FEBRUARY 2025

**18: Sungmin Nam, Ph.D.**  
*"Multiscale Mechano-Medicine  
from mechanobiology to biomedical  
devices & materials"*  
**Nam Lab**

**25: Junichi Iwata, D.D.S., Ph.D.**  
*"Role of cholesterol metabolism and  
membrane trafficking in craniofacial  
birth defects and diseases"*  
**Iwata Lab**



## SPRING 2025



### MARCH 2025

**4: Mo Ebrahimkhani**  
University of Pittsburgh  
**Ebrahimkhani Lab**

**11: Eszter Vladar**  
CU Anschutz  
**Vladar Lab**



### APRIL 2025

**8: Jennifer Sucre**  
Vanderbilt University  
**Sucre Lab**

**29: Margaret Gardel**  
University of Chicago  
**Gardel Lab**



### MAY 2025

**13: Thomas Leung**  
University of Pennsylvania  
**Leung Lab**

**20: Katia Del Rio-Tsonis**  
Miami University  
**Rio-Tsonis Lab**



We look forward to seeing you at our events and seminars!



## CPOD Emerging Scholars Spotlight



### Adam Abraham (2022-2024)

Assistant Professor

Orthopaedic Surgery, Medical School



Among Dr. Abraham's many accomplishments during his tenure as a CPOD Emerging Scholar, he was promoted to Assistant Professor of Orthopaedic Surgery, awarded a Katz R01 in April 2024 from NIH-NIAMS for his research project "Extracellular Matrix Regulation of Inflammatory Signaling in Tendon" and opened an

independent lab in NCRC.

Congratulations on all your accomplishments Adam!



### Lauren Krumeich (2024-2026)

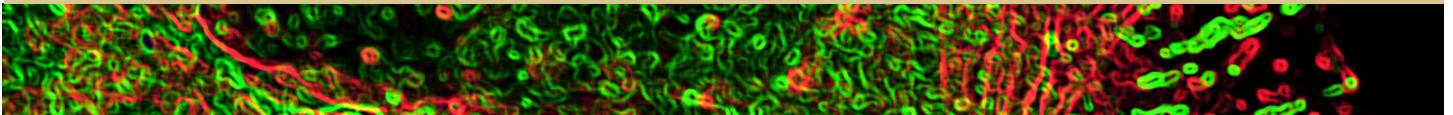
Assistant Professor

Endocrine Surgery, Medical School



Dr. Krumeich is CPOD's 2024 Emerging Scholar Recipient! Dr. Krumeich is an Assistant Professor of Surgery practicing Endocrine Surgery. Her research focuses on two main areas, the etiology of preferential growth of adrenal metastases and the immune environment in metastatic pheochromocytoma and paraganglioma.

Congratulations and Welcome to CPOD Lauren!



## CPOD Emerging Scholars Program



Visit our [Emerging Scholars Program webpage](#) for more information!



### CPOD Emerging Scholars Program

The CPOD Emerging Scholars Program supports early-stage faculty or senior postdoctoral fellows transitioning to a faculty position at the University of Michigan. This competitive award program aims to help talented junior investigators launch a successful, externally supported independent research career. CPOD Scholars will receive funds (\$25K total over a two-year period) to perform exploratory studies or generate a new research model, and an individualized mentoring committee to guide project development and grant submission. This program takes advantage of the broad research base of Center members and extends our training impact in a new and exciting direction to help launch talented junior investigators.

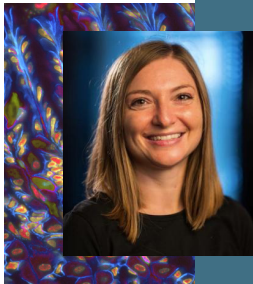


### Eligibility:

- The applicant must have a full-time faculty appointment at the University of Michigan or have an active full-time faculty appointment by the time the award takes effect.
- Be an early-stage faculty or senior postdoctoral fellow transitioning to a faculty position at the University of Michigan.
- The research project must fit the goals of the CPOD Mission Statement.
- The Scholar must commit to submitting an external career development award (e.g., K01, K08) or research grant (e.g., R01, R21) within the first year of the award.
- The Scholar (or their mentor) does not have to be a CPOD Center Member.

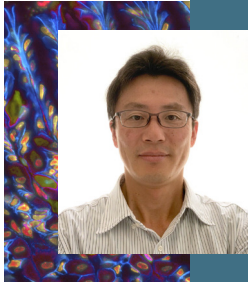
CPOD does not consider those who have already received R or K type (or equivalent) funding, or those who have received startup or grant funds in the amount of \$500,000 or more to be eligible for this award.

# WELCOME NEW CPOD MEMBERS



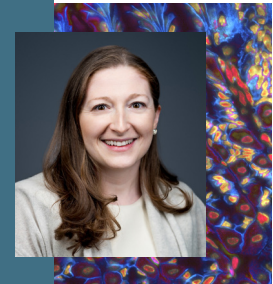
**Nadejda Bozadjieva Kramer, Ph.D.**  
Assistant Professor  
Surgery  
Medical School

**Michelle Hastings, Ph.D.**  
Professor  
Pharmacology  
Medical School  
*Hastings Lab*



**Junichi Iwata, D.D.S., Ph.D.**  
Professor  
Orthodontics and Pediatric Dentistry  
School of Dentistry  
*Iwata Lab*

**Lauren Krumeich, M.D.**  
Assistant Professor  
Endocrine Surgery  
Medical School



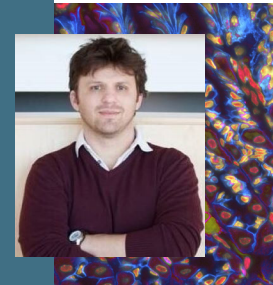
**Agnieszka Lukaszewicz, Ph.D.**  
Assistant Professor  
Human Genetics  
*Lukaszewicz Lab*

**Alexandra Piotrowski-Daspit, Ph.D.**  
Assistant Professor  
Biomedical Engineering  
College of Engineering  
*Piotrowski-Daspit Lab*



**Nataliya Razumilava, M.D.**  
Assistant Professor  
Internal Medicine  
Gastroenterology & Hepatology  
Medical School

**Tomer Stern, Ph.D.**  
Assistant Professor  
Biologic and Materials Sciences and Prosthodontics  
School of Dentistry  
*Stern Lab*



Visit our [CPOD Member webpage](#) for a complete list of members



## Rachel Zemans, M.D.



Pictured: Dr. Rachel Zemans with members of her lab.

- 1. What inspired you to join CPOD?** To foster interactions with investigators who explore the development and regeneration of various organs across diverse disciplines (e.g., developmental biology, genetics, bioengineering, bioinformatics). I am excited about the opportunity to exchange ideas, model systems, and technologies, attend the seminars, and engage with trainees in the dynamic, interdisciplinary research environment of CPOD.
- 2. Tell us about your current research project(s), including something about the P01 application you are planning.** My lab aims to understand the mechanisms of lung regeneration after injury and how they are impaired in the pathogenesis of lung disease. We explore the heterogeneity and plasticity of epithelial progenitors and the lineage trajectories and molecular mechanisms regulating cell fate decisions and cell differentiation. We have identified novel transitional states, the aberrant persistence of these states in lung diseases including ARDS and pulmonary fibrosis, and the role of TGF $\beta$ , WNT/ $\beta$ -catenin, and keratins in regulating cell differentiation. We are lucky to have developed collaborations with CPOD members, leading to manuscripts, funding, and an upcoming program project grant submission that will explore lung epithelial cell fate in lung development, regeneration, and disease across the lifespan.
- 3. When did you first know you wanted to pursue a career in this field?** Since high school, I have wanted to pursue bench research on mechanisms of disease. I went to medical school to gain an understanding of disease and facilitate my ability to do translational research, in addition to practicing medicine. I became fascinated with pulmonary physiology and disturbed by our lack of effective treatments for many lung diseases. Over the years, I have become increasingly fascinated by the fundamental unanswered questions about lung homeostasis and normal regeneration.

- 4. What do you enjoy most about your job and working with your lab team?** I love my job because it grants me the freedom to pursue any and all fundamental and translational questions that captivate my intellectual curiosity. I find great fulfillment in mentoring highly motivated and enthusiastic graduate students, postdocs, and scientists and engaging with colleagues from diverse departments across CPOD and UM.
- 5. What has been the most surprising or unexpected experience to date in your career?** The ongoing realization of how little we understand, juxtaposed with the incredible new technologies at our disposal. This dichotomy highlights the vast potential for new discoveries and serves as a constant source of inspiration, ensuring that our work remains both challenging and exciting.
- 6. Share with us a professional success story you are proud of.** I am proud that I had the courage as a new PI to take what was a risk at the time and perform the first (to my knowledge) single cell RNA sequencing study in the field of lung regeneration. I am lucky that the impact of our discoveries turned out to be greater than I had ever imagined.
- 7. What do you enjoy doing outside of work?** Whatever my kids are doing at the moment!
- 8. What is something that you've always wanted to try or learn?** The list is endless, but pretty sure there is a CPOD member doing most of them!



Dr. Zemans' is a Henry Sewall Research Professor of Pulmonary and Critical Care and Professor of Internal Medicine. She has been a CPOD member since 2023.

Please stop by our various CPOD events to introduce yourself and say "hello" to Dr. Zemans and her lab team!

To learn more about Dr. Zemans, her research and lab team, please visit her [lab webpage \[LINK\]](#).



## About CPOD

The mission of the Center for Cell Plasticity and Organ Design (CPOD) is to unite interdisciplinary research efforts towards understanding the basic mechanisms by which organs and tissues are formed and maintained and to use this knowledge to regenerate or create replacement tissues and organs, improve stem cell therapies and effective organ transplantation systems that will correct acquired and genetic human disease.

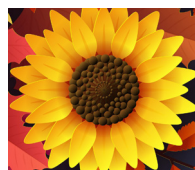
## CPOD DIRECTORS & STAFF

**Linda Samuelson**  
CPOD Director

**Benjamin Allen**  
CPOD Associate Director

**Jason Spence**  
T32 Training Program in Organogenesis Director

**Angela Palek**  
Center Administrator



## CPOD MEMBERSHIP

CPOD is continuously seeking new members to be a part of the CPOD community. Our primary objective is to identify and unite the community of Michigan faculty members whose scientific interests fall under the umbrella of organogenesis research.

Your application should include:


1. A 1-2 paragraph summary of your research program;
2. A 1-2 paragraph summary explaining why you are interested in becoming a member;
3. A description of your laboratory's training environment and list of current trainees;
4. And a full CV that includes external grant support.


If you would like to be considered for membership, please send your completed [application form](#) and CV to: [CPOD-contact@umich.edu](mailto:CPOD-contact@umich.edu).

## CONNECT WITH CPOD

Stay up to date with our events, seminars & latest news

 [CPOD-friends-requests@umich.edu](mailto:CPOD-friends-requests@umich.edu)

 [@UM\\_CPOD](https://twitter.com/UM_CPOD)

 <https://www.linkedin.com/company/center-for-cell-plasticity-and-organ-design/mycompany/>

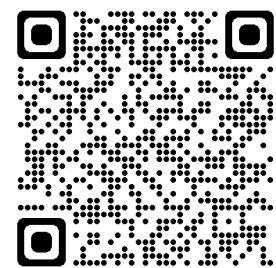
## GIVING

The Center for Cell Plasticity and Organ Design supports interdisciplinary training on the topics of how organs form, repair and are affected by disease. By combining the expertise of biologists, clinicians and engineers across the University of Michigan in the training of our students and fellows, we are better preparing the next generation of scientists to lead discoveries that impact human health.

Your generosity helps to support trainees in the program.

To give to the Center for Cell Plasticity and Organ Design, visit:

[giving.umich.edu/basket/fund/329346](https://giving.umich.edu/basket/fund/329346)



UNIVERSITY OF MICHIGAN  
MEDICAL SCHOOL  
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