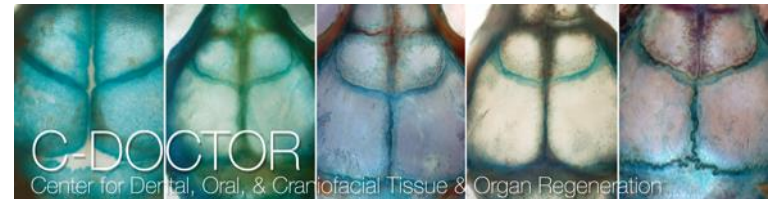


# FIRST ANNUAL JOINT DOCTRC RETREAT Resource Center updates



Michigan • Pittsburgh • Wyss  
Regenerative Medicine Resource Center

David Kohn, PhD



Yang Chai, DDS, PhD  
Jeffrey Lotz, PhD

# WELCOME AND THANK YOU!



## ADVISORS AND PARTNERS

# DOCTRC LEADERSHIP

Yang Chai, DDS, PhD (co-PI, USC)

Jeffrey Lotz, PhD (co-PI, UCSF)

Scott Fraser, PhD (USC)

Kevin Healy, PhD (UC Berkeley)

Michael Jamieson, DRSc (Core Director)

Ophir Klein, MD, PhD (UCSF)

Nancy Lane, MD (UC Davis)

Michael Longaker, MD, MBA (Stanford)

Mark Urata, MD, DDS (USC)

Benjamin Wu, DDS, PhD (UCLA)

David Kohn, PhD (UMichigan)

William Giannobile, DDS, DMSc (Harvard)

David Mooney, PhD (Wyss Institute)

Charles Sfeir, DDS, PhD (UPitt)

William Wagner, PhD (UPitt)

## DOCTRC External Advisory Board

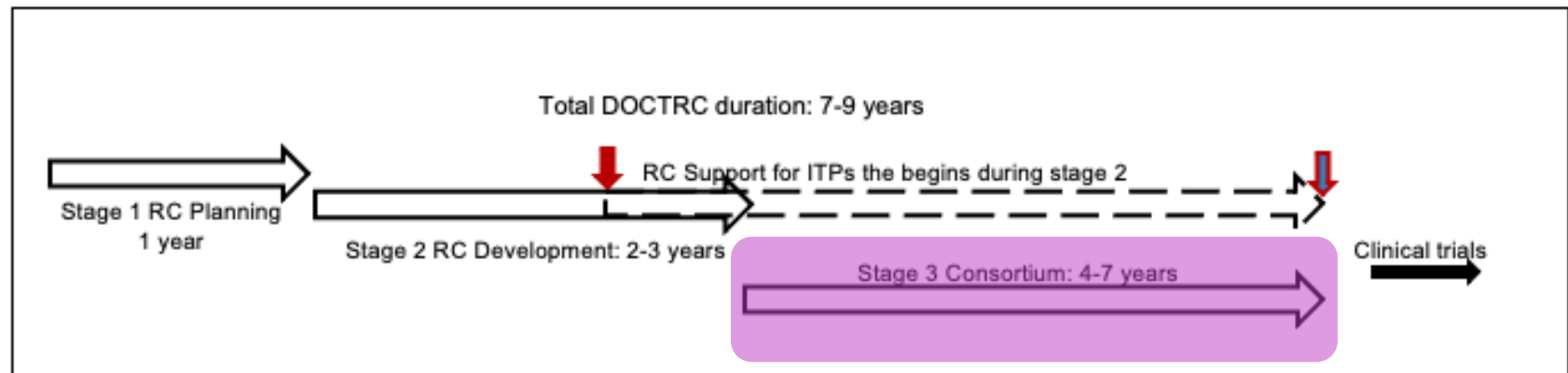
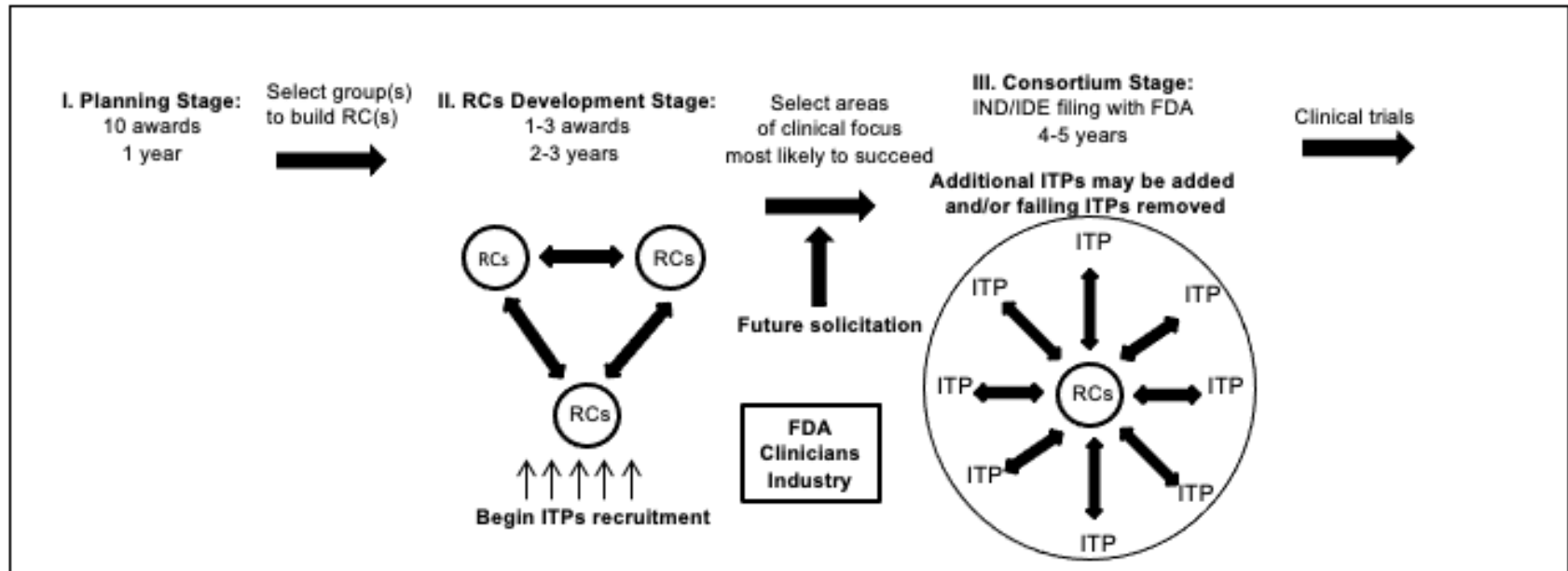
Marie Csete, MD, PhD

Erika de Boever, DDS, PhD

Patricia Olson, PhD

Brendan Lee, MD, PhD

# DOCTR-C Structure and Timeline



# 1 CONSORTIUM, 2 RESOURCE CENTERS

**DOCTRC**

DENTAL, ORAL, & CRANIOFACIAL TISSUE  
REGENERATION CONSORTIUM



Michigan • Pittsburgh • Wyss  
Regenerative Medicine Resource Center



Reciprocal board membership by PIs Chai & Kohn

New website launched! <http://www.doctrc.org/>

Joint External Advisory Board

Harmonizing processes:

joint ITP progress review

sharing of resources and expertise

cross-RC training opportunities

leveraging institutional support/  
infrastructure (CTSA, etc.)

**DOCTRC**

Annual Retreat 2020 | December 8, 2020

DENTAL, ORAL, & CRANIOFACIAL TISSUE  
REGENERATION CONSORTIUM

# 1 CONSORTIUM, 2 RESOURCE CENTERS

4

Resource Centers are almost 4 years old!  
Established in 2017



>130 members strong and counting



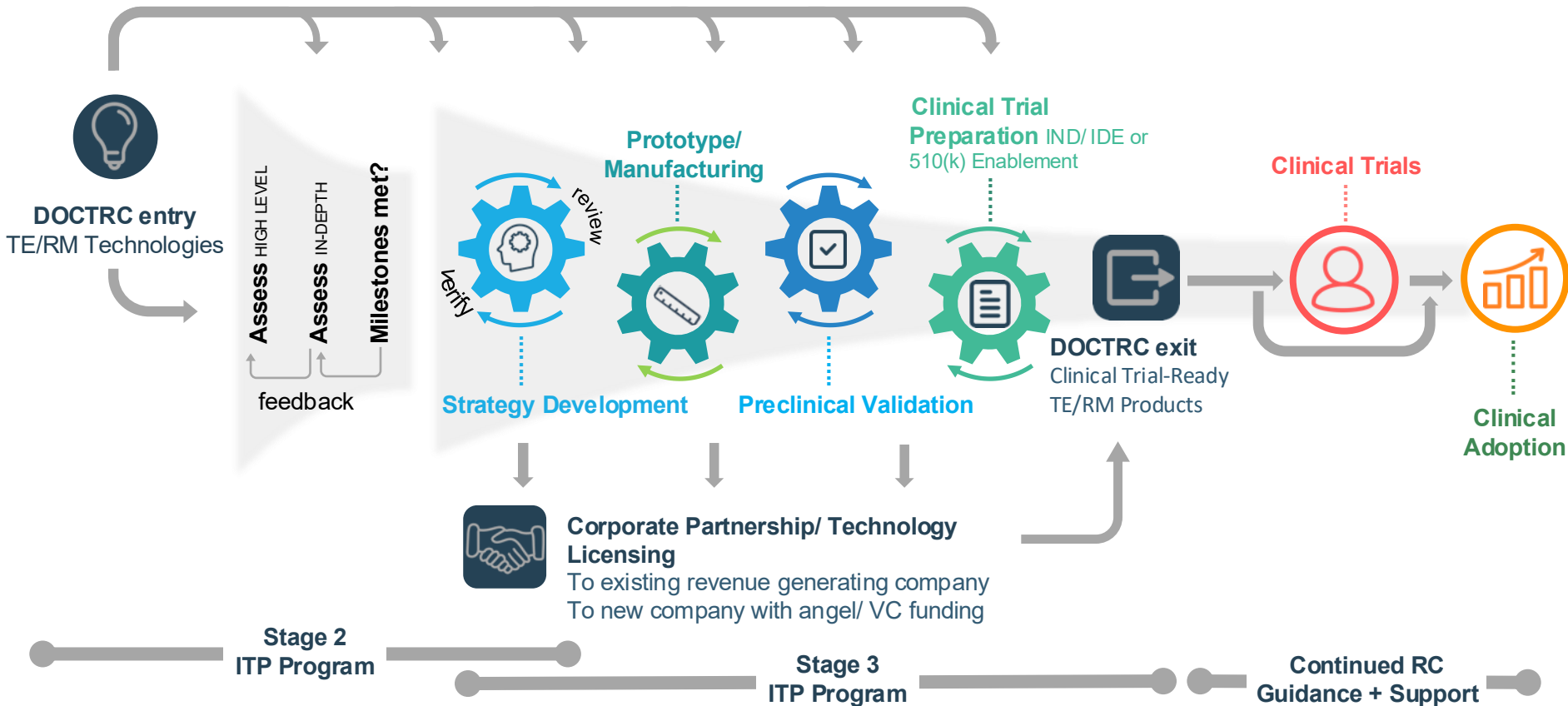
170 projects reviewed → 36 ITPs awarded  
42% of awarded ITPs have female PI/co-PI

# INTERACTIONS WITH CTSA

- ITP advisory team approach modeled after CTSA's Research Development Core – interdisciplinary group of advisors for each ITP
- Regulatory: guidance and advisory, FDA submissions (for respective institutions)
- Biostatistics: guidance from CTSA Cores
- Clinical trial planning
- CTSA leaders on our campuses including UC BRAID (University of California 5 CTSAs' joint forces) continue to engage and share best practices

# SHEPHERDING ITPs

Driving Projects with an End in Mind

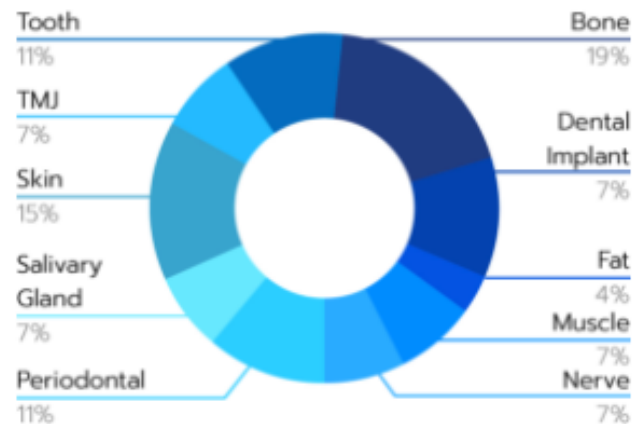


# OUR CURRENT ITP PORTFOLIO

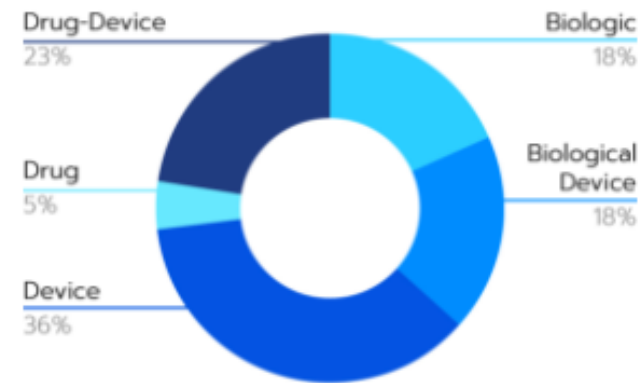
## INSTITUTION



## TISSUE ADDRESSED



## TECHNOLOGY TYPE



# MPWRM HIGHLIGHTS



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Regenerative Medicine Resource Center

## Achievement Over the 3 Years



### 2017

- March** The Michigan-Pittsburgh-Wyss Regenerative Medicine Resource Center (MPWRM RC) is founded with the award of the U24 grant (U24DE026915) (<https://www.nidcr.nih.gov/news-events/nidcr-news/2017/nidcr-funds-consortium>).
- May** First Request for Applications of the ITP program is released.
- June** Multi-site (online) MPWRM RC launch meeting is held. Charges for the Operating Committee, Advisory Groups, Assessment Teams, and Cores are established.
- November** First Semi-Annual meeting is held in Ann Arbor, Michigan. Evaluation results for the first group of ITP proposals are reviewed, and funding selections are made for first cycle of ITPs (ITP01). Concurrently, strategic planning session is held to outline future initiatives for the MPWRM Resource Center.  
Second Request for Applications of the ITP program is released.

### 2018

- January** First Cycle of ITPs/ITP01 is launched.
- March** MPWRM RC and C-DOCTOR host a symposium at the American Association of Dental Research annual meeting in Fort Lauderdale, FL.  
**An editorial authored by the MPWRM RC and C-DOCTOR principal investigators is published in Journal of Dental Research (J Dent Res 2018, 97(4)361-3).**
- May** Third Request for Applications of the ITP program is released.
- July** First Annual Stakeholder's Summit is held in Pittsburgh, PA. Program included 3 practicum sessions, presentations by ITP01 teams, and online pitches by Cycle 2 applicants. Funding selections are made for second cycle of ITPs (ITP02). Meeting was open to all Resource Center members, and was sponsored by 4 corporate partners.
- September** Second Cycle of ITPs/ITP02 is launched.
- October** Request for Applications for ITP01 renewal project is released.  
AxoMax™ is registered.
- November** MPWRM RC is featured on the programming of Materials Research Society TV for the 2018 MRS Fall Meeting in Boston, MA.  
**GreenMark Biomedical wins funding at Accelerate Michigan.**

### 2019

- January** Second Semi-Annual Meeting and Operating Committee Strategic Meeting are held in Ann Arbor, MI. Meeting was open to all Resource Center membership and corporate partners, with >70 attendees. In addition to the 3 practicum sessions, meeting included presentations by ITP02 teams, in-person pitches by Cycle 3 applicants, and 23 partnering forums for funded ITP teams to discuss their project in depth with Resource Center marketing and regulatory experts. Funding selections are made for third cycle of ITPs (ITP03).  
**Emergence Dental is founded.**
- February** LaunchPad Medical raises \$9.5M in equity financing.
- March** Third Cycle of ITPs/ITP03 is launched.  
**GreenMark Biomedical completes \$1.2M series seed preferred stock round.**
- June** DOCTRC Stage 3 proposal is submitted in response to RFA-DE-19-010.  
**MPWRM RC and C-DOCTOR host a symposium at the International Association of Dental Research meeting in Vancouver, BC. Two teams from each of the Resource Centers presented their ITP.**
- July** Request for Applications for all ITP renewal projects is released.
- September** Second Annual Stakeholder's Summit is held in Pittsburgh, PA. Meeting was open to all Resource Center membership and corporate partners (>70 attendees), and included a day-long regulatory training session for the ITP teams and Resource Center members, and presentation by the FDA. All ITP teams provided a presentation to open session attendees, and concluded 25 partnering sessions with the Resource Center experts.
- October** **LaunchPad Medical initiates clinical trial of Tetranite® for dental implant stabilization.**  
GreenMark Biomedical secures Phase II SBIR.
- November** Ostio closes \$520k in Series A equity round.  
LaunchPad Medical wins NIH HEAL grant.
- December** Operating Committee meeting is held to review evaluation results of the ITP renewal projects to prioritize any future funding decisions.

### 2020

- May** DOCTRC Stage 3 awarded + virtual kickoff meeting

From: MPWRM Resource Center 2019 Annual Report

# DOCTRC

Annual Retreat 2020 | December 8, 2020

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REGENERATION CONSORTIUM

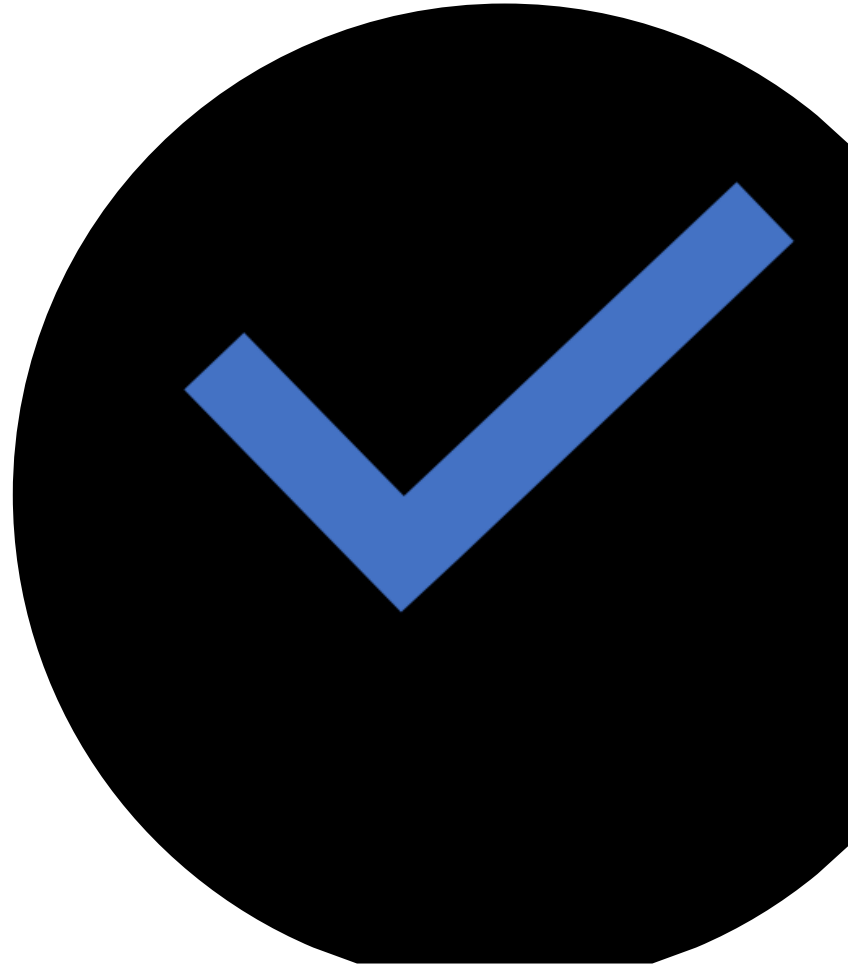


# HOW DO WE MEASURE SUCCESS?

Ultimately, the success of the DOCTRC program depends crucially on the success of ITPs in activities leading to IND/IDE submission. In Stage 3 successful teams will:

- Meet their project-specific milestones and pass go/no-go gates
- Hold pre-IND/IDE meetings and preparing subsequent regulatory submissions
- Advance to clinical trials, either investigator-led or commercially funded
- Attract external funding to support further development and commercialization activities

Additionally, a successful Consortium will develop a sustainable pipeline of resources that can accelerate progress for other TE/RM products in the future.



# BUILDING A SUSTAINABLE FUTURE

- DOCTRC is a pioneering program that has developed best practices, guidance documents, nationwide collaborative infrastructure, a vast clinician network, and scalable pipelines that can be emulated for other areas of regenerative medicine
- Mission statement of DOCTRC External Advisory Board directly addresses the goal of ensuring the consortium's sustainability
- Outreach activities and training opportunities to grow the program and train future leaders who adopt a truly translational mindset to advance regenerative medicine & dentistry

# EXPANDING DOCTRC IMPACT

## *Creating Outreach Programs*

- Campus-wide RM initiative @ U-M: Biosciences Initiative and USC Translational Medicine Research
- Translational Research Consult Program to be launched soon

## *Elevating Proficiency in RM Technology Translation*

- Standardization and quality control
- Functional assays and animal model
- Translational research process

## *Supporting Communications to Increase Impact of the DOCTRC Consortium*

- Inform, educate, and engage stakeholders
- *JDR* whitepaper published and another in preparation
- Joint website + e-newsletters; **doctrc.org** launched ahead of this retreat
- Enlist partnerships with the industrial community, patient advocacy groups, and non-profit and governmental organizations, and increase presence at non-DOC events; discussions initiated with American Association of Endodontists
- Sustainability beyond DOCTRC program: building research pipeline, recruitment
  - Closed door session today

# Agenda: <https://bit.ly/2020DOCTRCAgenda>

## Posters: <https://bit.ly/2020DOCTRCPosters>

December 8, 2020 (Tu)

12:00 pm (EST)/ 9:00 am (PST): Welcome remarks

12:30 pm (EST)/ 9:30 am (PST): ITP Poster Sessions

2:15 pm (EST)/ 11:15 am (PST): Breakout session: How can we increase the number of female-led projects in the ITP pipeline?

3:10 pm (EST)/ 12:10 pm (PST): Report out from the breakout sessions

Desired outcome: higher number of female-led ITPs; each breakout group to provide a list of recommendations

Closing words

4:00 pm (EST)/ 1:00 pm (PST): ITP teams and Consortium members adjourn

# A BIG THANKS...



National Institute of Dental  
and Craniofacial Research

## ADVISORS AND PARTNERS



Michigan • Pittsburgh • Wyss  
Regenerative Medicine Resource Center

### Operations Team

Sally Anderson (USC)

Daniel Davis (UCSF)

Jamelle Price (Pitt)

Patrick Cantini (Pitt)

Linda Hattemer (USC)

Bridget Samuels (USC)

Chandrima Chatterjee (USC)

Zoe Johnson (USC)

Katy Wharton (Pitt)

Dezba Coughlin (UCSF)

Pui Yee Law (UCSF)

Mutsumi Yoshida (UM)

Ben Creighton (USC)

[www.doctrc.org](http://www.doctrc.org)

**DOCTRC**

Annual Retreat 2020 | December 8, 2020

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