

Ad Hoc Committee on Research

Melur K. (Ram) Ramasubramanian
Vice President for Research



Brief Biography

VP for Research, Professor of Mechanical Engineering



- **Program Director-Engineering Research Centers** Engineering Education and Centers (EEC), National Science Foundation (1 year)



- **D. W. Reynolds Distinguished Professor and Chair**, Mechanical Engineering, Clemson University (5 years)



- **Lead Program Director**, Integrative Graduate Education and Research Traineeship (IGERT) Program, Division of Graduate Education (DGE), National Science Foundation (3 years)



- **Professor, Dir., Mechatronics Program**, Mechanical and Aerospace Engineering, NC State University (18 years)



- **Research Associate** Exploratory Research, Corporate R&D, Georgia Pacific Corporation (7 years)



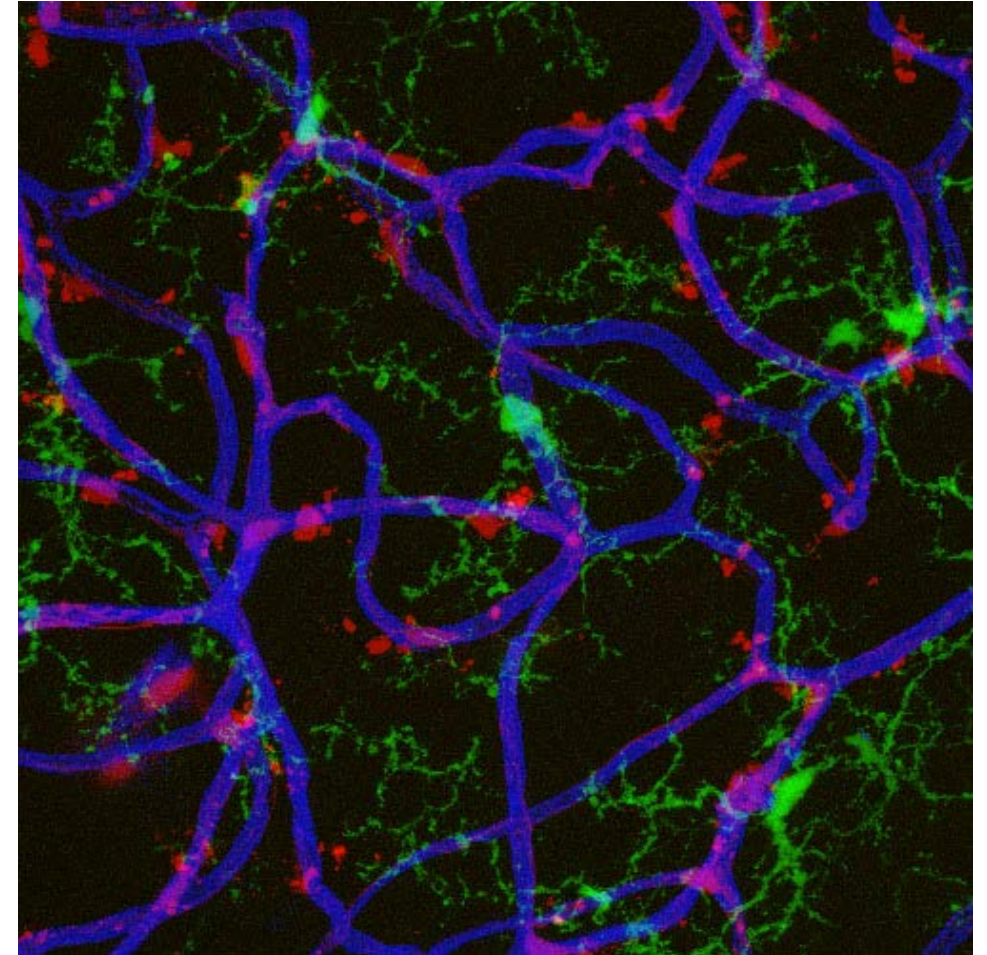
BoV Ad Hoc Committee-Research Workplan

- Strategic Seed Funding
- Faculty Development (Management)
 - Research Grants Academy
 - Financial planning & management tools
- Faculty Development (Leadership)
 - Administrative training for center directors and department chairs
- Faculty Administrative Burden (42%)

- Fundraising for Research
 - Foundations staffing
- Scalable & Secure Computing Infrastructure
- Collaborative Research Space
 - Renovations, new facilities & cores
- Research Review & Reporting
 - Dashboards & metrics

Sponsored Research Overview (\$372M FY17)

- Top 10% of funded researchers bring in 50% of external funding
- Significant portion of TTT faculty are research active
 - Most large-scale awards to full professors

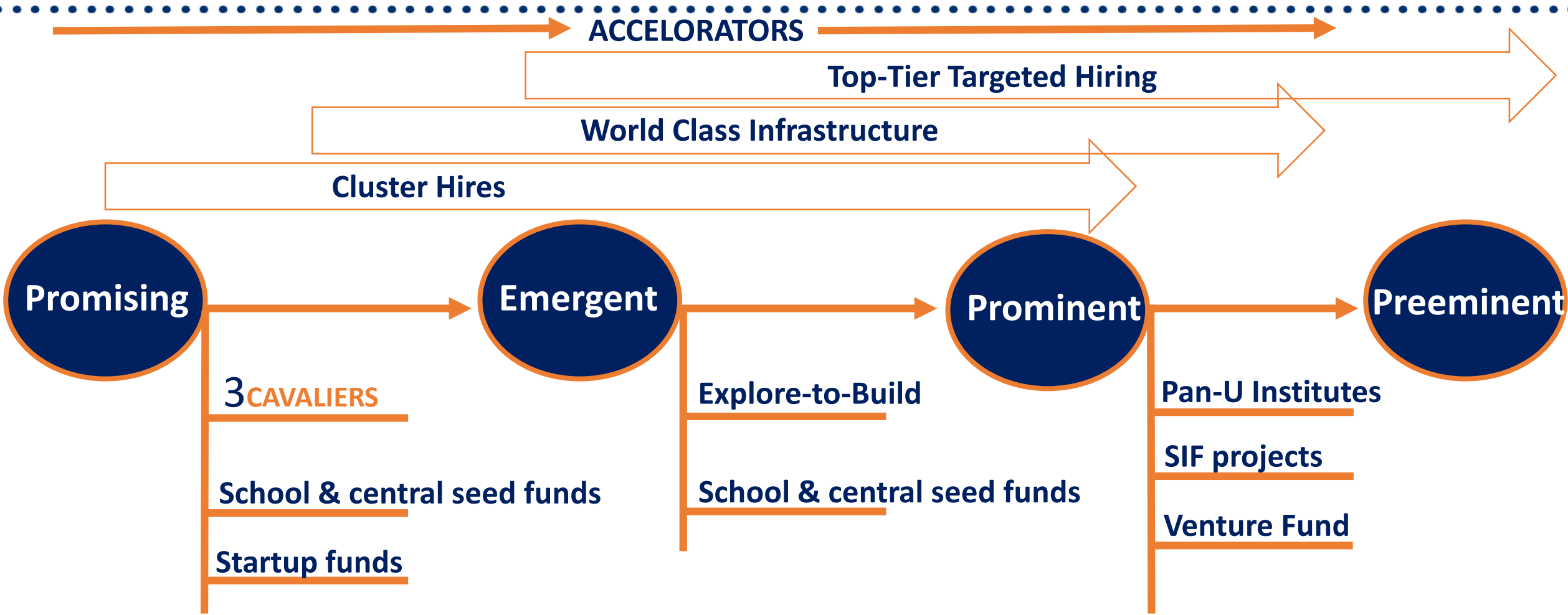


*Image: Human adipose-derived stem cells
Shayn Peirce-Cottler, Biomedical Engineering*

Growing Sponsored Research

- Seed Funding with a Strategy
- Preparing Faculty and Infrastructure for Large Center Competitions
- Marketing and Philanthropy
- Federal contracts (in addition to grants)
 - Grow DoD funding
- Activate and engage TTT
- Research faculty engagement
- Excellence in research across all disciplines
 - Faculty achieve "Gold Standard" in their field

Seed Funding with a Strategy





3C “Three Cavaliers” – Promising to Emergence

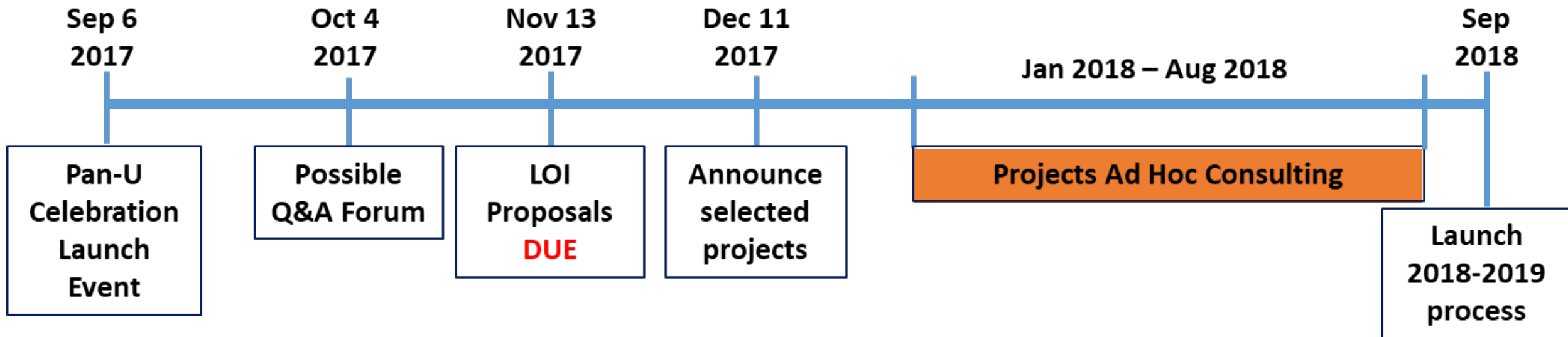
Creative. Collaborative. Consequential

- stimulates innovative research and scholarship by distributing real-time seed funding to multi-unit, faculty-led teams.
- faculty from at least two different units, representing disparate disciplines, form a collaborative trio, and request either \$60K or \$15K to advance their idea right away.
- Based on University of Michigan’s **M** cubed which has a 4:1 ROI

Emergent To Prominent Initiatives

Explore-to-Build

2017-2018



Pan-University Institutes

Large-Scale, Focused Seed Funding Mechanism:
Prominence to Preeminence



**Data Science
(2014)**



**BRAIN
(2016)**



**Environmental
Resilience
(2017)**



**Global
Infectious
Diseases
(2017)**

→ Post-award mentoring

→ Measures of success: Impact (measured in multiple ways: Research funding, Scholarship, Creative Arts, Innovation)– focus on “Gold Standard”

→ Post-SIF support strategy: External funding and philanthropy



Final Thoughts