



# William J. von Liebig Center for Entrepreneurism and Technology Advancement

University of California San Diego

Rosibel Ochoa, PhD  
rochoaf@ucsd.edu



# Our Mission



**William J. von Liebig**

1923-1999

Inventor, entrepreneur, philanthropist

Vascular grafts to treat heart disease

- Accelerate transfer of university discoveries to the private sector.
- Prepare students for the entrepreneurial workplace.
- Increase collaboration between university and industry.

Our approach: combine proof of concept with a sound commercialization plan increase value of technology and its probability for commercialization.

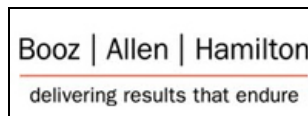
Proof of Concept:

Defining and demonstrating technical performance and market feasibility.

Proof of concept achieved through a combination of domain-expert business mentorship and grants that are disbursed based on milestone achievement.

Expert business mentoring together with milestone driven approach are Key of success of our program.

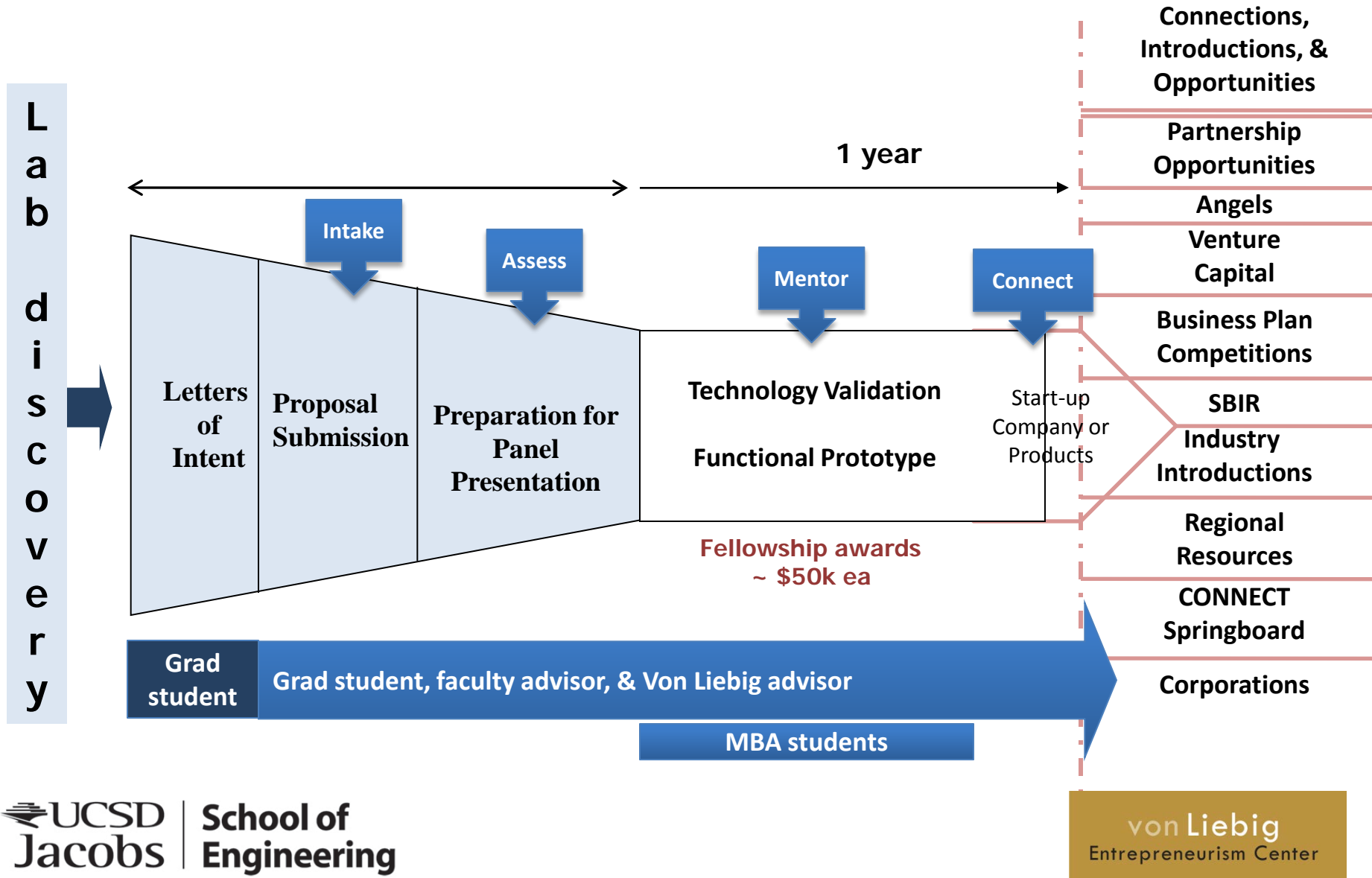
- **Hands-on mentoring to faculty and students by technology and business advisors**
- Pre-venture grants (~50k-\$100k) for proof of concept demonstration
- Graduate level education on technology commercialization and entrepreneurship for science and engineers
- Forum that brings together innovators, entrepreneurs, mentors and students.
- Platform that can serve multiple institutions in a geographical region



# Process for Technology Screening

1. Identify the need/problem to be solved in partnership with sponsor.
2. Issue broad solicitation, open to multiple researchers from Universities and Research Institutes in a region.
3. Assign business advisor as early as possible into the application process.
4. Conduct a phase screening process. Involve experts and sponsors.
5. Finalists present to external panel of experts (carefully chosen). Experts select recipients of POC services. Provide input to applicants.
6. Selection criteria clearly specified based on
  - a. Competitiveness and innovative, size of the market
  - b. Relevance of proposed product to needs.
  - c. impact of the grant.
  - d. Commitment of faculty/student to success
7. Advisor and PIs jointly develop a technology demonstration plan.  
MBA students conduct market research

# TAP (Technology Acceleration Program) Selection Process



# Technology acceleration programs

- Competitive challenges for researchers and graduate students from region's universities to receive proof of concept grants and business mentoring from vLC.
- vLC modified its application and selection process to allow maximum participation of researchers from universities in the region.
- Since 2008, Center has conducted six regional technology acceleration programs:
  - Clean technologies (2008, 2010)
  - Renewable energy (2011-2013)
  - Wireless health (2011-2012)
  - Low cost healthcare solutions (2011-2012)



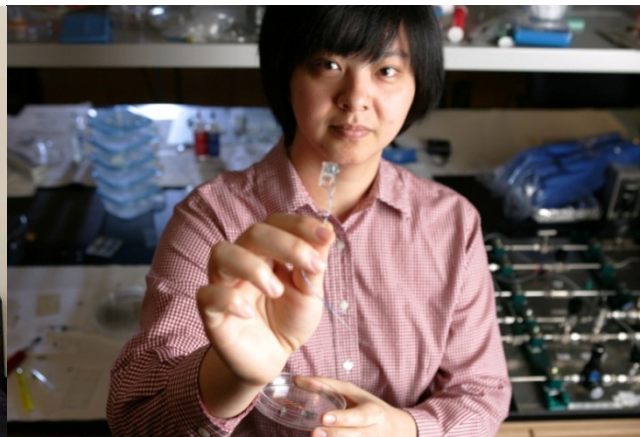


# Regional Technology Acceleration Programs

2011: 163 Applications from 13 Institutions, \$1M Proof of Concept Grants



## Clean Technology



## Wireless Healthcare Technology



## Low-Cost Healthcare Technology



CALIFORNIA  
HEALTHCARE  
FOUNDATION

Booz | Allen | Hamilton  
strategy and technology consultants





# Accelerating Commercialization of Cost-Saving Health Technologies

MAY 2012

Booz | Allen | Hamilton



<http://www.boozallen.com/media/file/Accelerating-Commercialization-Cost-Saving-Health-Technologies-Report.pdf>

# von Liebig Center Track Record

**1,000 students participate in entrepreneurship education**

**150+ faculty benefited from business mentoring**

**110+ innovation teams receive \$5 million in grants and mentoring**

**36 start-ups supported**

**\$150+ million raised by start-ups, 200+ jobs created**



Netsift, acq.by CISCO



TAAZ, CONNECT MIP, 2008



Mushroom Networks, CONNECT MIP 2008

# *InflammaGen™ Therapeutics to Commence Phase 2 Pilot Study of InflammaGen Shok-Pak* Posted: Mar 12, 2012



John Rodenrys & Prof. Geert-Schmid Schoenbein  
Co-Founders

Bio-tech company that licensed UCSD IP for a new treatment, assay and lavage to treat and diagnose multi-organ failure.

## Support

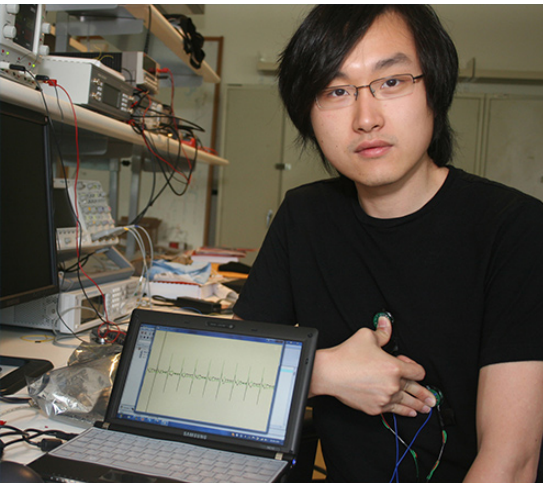
\$150,000 Gap Funding

Business mentoring

Assistance with University process

# Supporting Entrepreneurial Students

Biological Dynamics  
BIOLOGICS PLUSWICS




- Gap funding
- von Liebig Courses
- Commercialization mentoring from von Liebig advisors



Raj Krishnan, CEO

**Forbes**

 **Cognionics**

  
**mystartup**

# Recommendations to our inventors submitting SBIR applications:

**“ Even if you are at the stage of submitting a Phase I SBIR, you need to consider the full commercialization path for your technology beyond the Phase I award.”** This is a step that you need to give consideration if you are committed to commercialization of your technology.

- Have a clear idea of what makes your device or approach different and better than other approaches. Accordingly, conduct a literature search as well as a Patent Search and become knowledgeable of your product's position within the field of application.
- Assemble a team early on with the expertise to understand and develop the proposed solution. Make sure that you have a thorough understanding of the problem and how you intend to solve it. If you believe that there is insufficient know-how or expertise within your team, seek the services of a consultant. This will lend credibility to your proposal.



# Lessons learned and best practices

- Researchers have little visibility about the whole commercialization continuum and how the complexity of the health care market affect
- how technology is commercialized.
- Leverage resources, increase efficiencies and expertise by developing targeted programs that bring together stakeholder needs with
- Innovators.
- Lots of duplication, multiple solutions for the same problem. Create an actively referral network or a portal where solutions are properly listed
- And provide visibility to investors, industry and each other.
- Bring entrepreneurial education to the researchers before or as soon as they are given the grant.
- Integrate MBA students into the Innovator team.

# Lessons learned and best practices

- Researchers need business-oriented guidance toward technology validation.
- Well structured, market oriented process that selects best candidates is critical.
- Grant payments tied to achievement is critical to ensure proper use of funds and technology advancement
- .
- Do not expect faculty to start companies. Focus on grad students and post-docs.
- “Innovation without entrepreneurs goes nowhere”.
- Leverage the ecosystem around the university.