



**THE OHIO STATE UNIVERSITY**

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**Reach for Commercialization:  
Inspiring Female Entrepreneurship**  
*Office of Research, Gender Initiatives in STEMM*  
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Associate Vice President



- ***Gender Initiatives in STEMM (Science, Technology, Engineering, Mathematics, & Medicine)*** is the institutionalization of our ADVANCE grant from the National Science Foundation, Project CEOS (Comprehensive Equity at Ohio State).
- Project REACH is the signature program of Project CEOS



## Explaining the Entrepreneurial Gender Gap

- Women are more risk averse (Brindley 2005; Langowitz & Minniti 2007; Stephan & El Ganainy 2006)
- Women are not as comfortable with self-promotion (Stephan & El Ganainy 2006; Singh et al 2002)
- Women choose areas of research that are less amenable to commercialization (Stephan & El Ganainy 2006)
- Women have smaller networks (Forret & Dougherty 2004)



## Addressing the Entrepreneurial Gender Gap

- All of this contributes to women having less opportunity to learn about or pursue commercialization efforts.
- Project CEOS addresses this by:
  - Introducing numerous pathways to entrepreneurship
  - Providing a supportive network of female entrepreneurs
  - Connecting women with resources on campus and
  - Supporting industrial networking connections

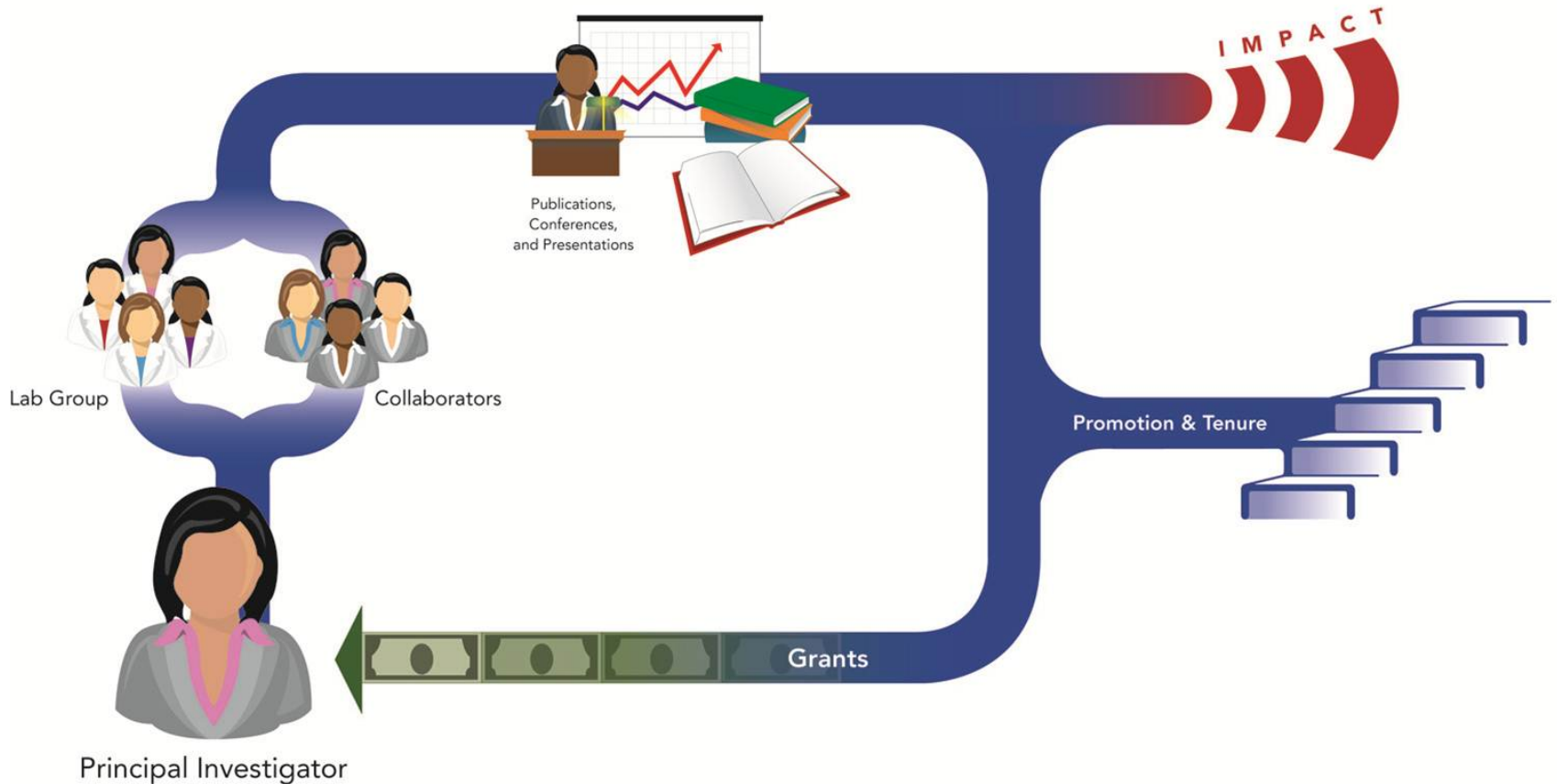


## Pathways to Entrepreneurship

- Discussions with women faculty revealed that they:
  - Lacked knowledge about the variety of options for commercializing research
  - Conducted their research with an eye toward broader social impact, which many felt would not be strengthened by entrepreneurial activity
- As a result, the first step in supporting female entrepreneurship was to demonstrate that *numerous pathways* can lead to social impact.

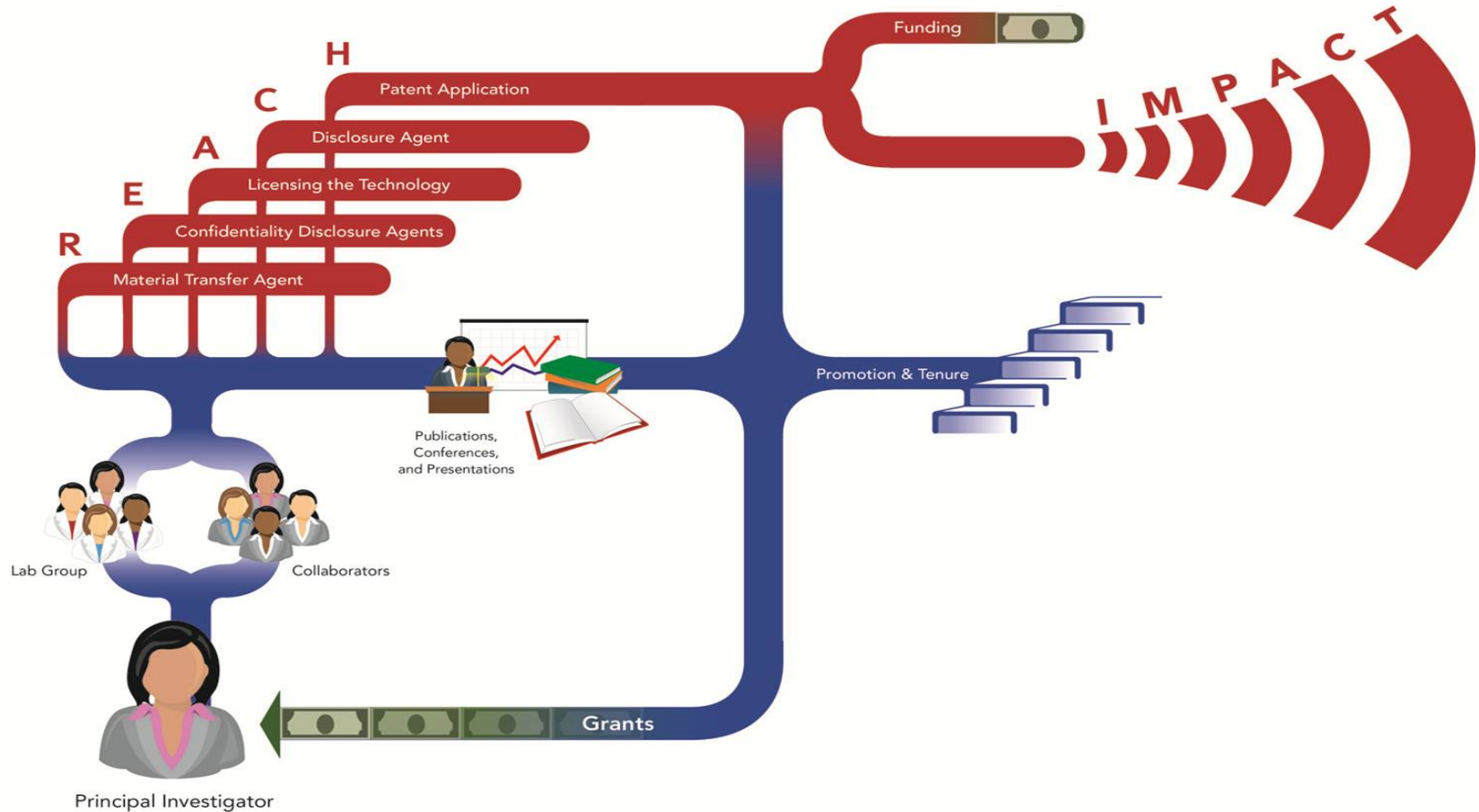


## Traditional Pathways to IP Dissemination





## Alternative Pathways to IP Dissemination





## Two Approaches

- Project CEOs adopted two approaches to create supportive networking opportunities that connected women to campus resources, industry liaisons, and each other:
  - Campus Cohort Approach
  - National Conference Approach







## Campus Cohort Approach

- Twelve women in each cohort (24 women total) participated in a series of workshops on:
  - Visioning Social Impact from Research
  - Building Awareness and Skills for Collaboration
  - Capitalizing on Ohio State's Tech Transfer process
  - Stepping Out and Building a Network for Impact



## National Conference Approach

- A diverse planning team
  - Technology Commercialization Office
  - Project CEOS
  - Center for Clinical and Translational Science (College of Medicine)
  - Fisher College of Business
- Generated an agenda focusing on three main topics:
  - Learning the Landscape
  - Building a Team
  - Finding Funding



## National Conference Approach

50 attendees from across the STEM disciplines and at all levels of the career ladder attended the two day program in September 2012





## National Conference Approach

- Speakers included national names, such as Lydia Villa-Komaroff and Scott Shane
- Industry speakers, university tech licensing officers, and academicians with entrepreneurial experience





## Outcomes

- Reactions to both formats were generally positive.
- Surprisingly, the campus cohorts attracted a number of women with previous commercialization experience, suggesting the need for concerted, ongoing support for these women.
- Conference participants were especially appreciative of the personalized feedback that was provided.





## Outcomes

- Pre- and post-testing demonstrated that both formats resulted in increased confidence that participants understood the tech transfer process.
- Immediate post-program testing demonstrated increased connections with industry contacts and increased industrial monetary support among the campus cohorts.





## Next Steps

- Follow-up with all program participants to determine if the benefits of the programs are long-lasting and what additional support may be necessary.
  - *e.g.*, one year post-program follow-up with the first campus cohort demonstrated that despite increased industry contact and industrial funding, women were less confident of their own abilities than they had been when leaving the program. A quarterly luncheon has been established to support participants in an ongoing fashion.




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Gender Initiatives in STEMM promotes the recruitment, retention, and advancement of women faculty in the STEMM (science, technology, engineering, mathematics, and medicine) disciplines at The Ohio State University

The office will implement an important aspect of the university's strategic vision and support the national goal to increase the number of women faculty in the STEMM disciplines.



- Gender Initiatives in STEMM (GI-STEMM) created by the President and Provost
- Established in October 2012 to institutionalize Project CEOS (Comprehensive Equity at Ohio State), our National Science Foundation ADVANCE grant 
- Mission aligns with national goals and Ohio State's land grant mission to fuel economic and workforce development for the state and the nation
- Intentionally housed in the Office of Research to support Discovery Theme hires (500 faculty!)





## Gender Initiatives in STEMM

- Facilitates the recruitment, retention, and **advancement** of women faculty from diverse populations in the STEMM disciplines
- Seeks to enhance the **culture** and work environments for women in STEMM consistent with the university's strategic plan, to create an optimal workplace climate
- In alignment with the Discovery Themes, works with STEMM deans to increase the number of full-time, tenure track appointments of women faculty with an eye toward developing **research leaders**
- Collaborates with the Office of Human Resources, The Women's Place, and the Office of Academic Affairs on policies and practices supportive of **partner hiring**
- Builds strong **national and international partnerships** and cultivates opportunities essential for the success of women, particularly those in STEMM
- Fosters development of international and graduate student **pipelines** for the recruitment of women faculty
- Serves as a **resource** to support a shared vision of an inclusive and supportive institution



Thank you!  
¡Muchas Gracias!  
感謝!  
Merci Bien!  
Asante Sana!  
спасибо!  
Vielen Dank!  
Grazie!  
谢谢!  
Tak!  
Obrigado!

\* \* \*

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