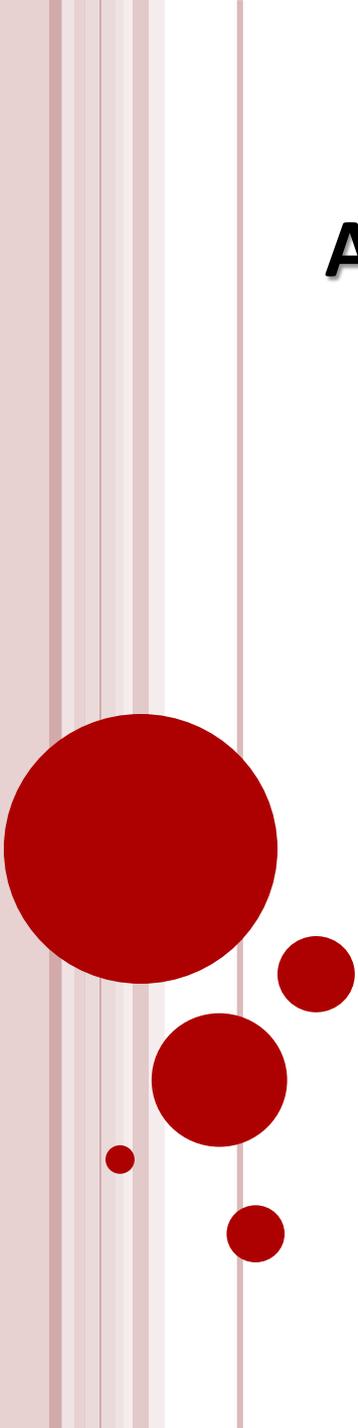


OK-INBRE Program Evaluation: Approaches, Challenges, and Outcomes



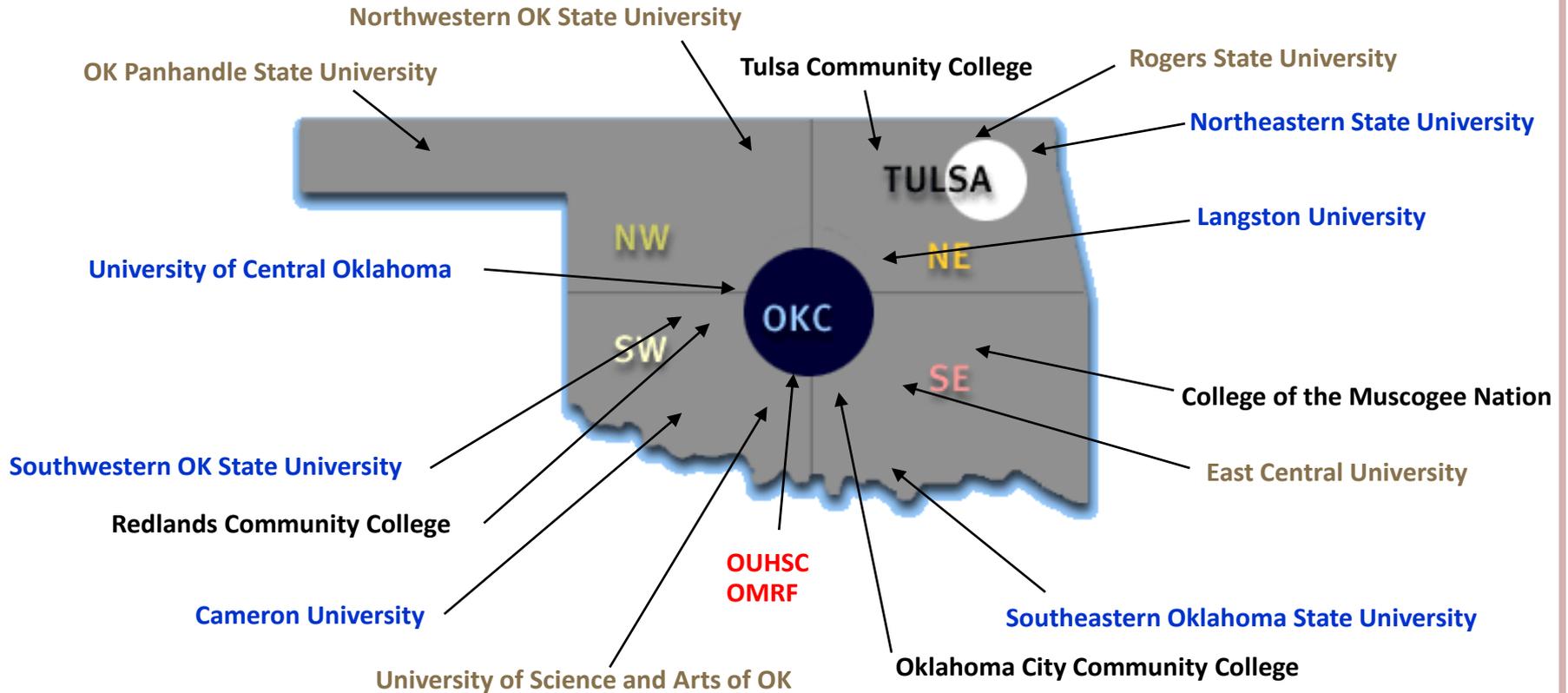
OK-INBRE

*~Advancing health-related research and workforce training
to improve the lives of all Oklahomans~*

Darrin Akins, Ph.D.
OK-INBRE Program Director

September 24, 2018

OK-INBRE NETWORK



- **Research Intensive**
- **PUIs**
- **CCs**
- **OSRHE-funded**



INBRE EVALUATION IS MULTIFACETED

- **Scientific and educational impacts**
- **Leveraged funding/core facilities**
- **Mentoring**
- **Transformation of the research culture**
- **Infrastructure improvements**
- **Student outcomes and tracking**

EVALUATION CHALLENGES

- **Measuring impact/outcomes may take many years to assess**
 - grants, job creation, intellectual property, student careers
- **Tracking INBRE contribution to subsequent funding, infrastructure, and student degrees/outcomes is difficult**
 - what is the correct control group for comparisons?
- **Determining contribution of INBRE support to outcomes**
 - would the outcome have been any different?

EXAMPLE: DR. WEI CHEN, UCO

The first R01 award in Oklahoma at a PUI!

- **OK-INBRE funding:** 2006-2009; 2011
- **R21** – 2013-2014
- **State/industry funding:** 2016-2019
 - OCAST
 - Immunophotonics, Inc.
- **R01** - 2017-2022
- **INBRE mentoring and support were crucial, but could this have been done without INBRE?**



INBRE SUPPORT IS THE KEY

From: Wei Chen [mailto:WChen@uco.edu]
Sent: Friday, September 14, 2018 12:01 PM
To: Akins, Darrin R. (HSC); Odparlik, Stephanie L. (HSC)
Subject: [EXTERNAL] RE: INBRE Funding

Thank you, Darrin.

INBRE support is the key to the progress of my research and my career. I am forever grateful.

Without INBRE's support, I would not have been able to secure grants from OCAST, NIH, and other external funding agencies.

Overall, I have been awarded more than \$6M funding (in addition to INBRE funding) for research and education. I hope that is a good return for INBRE's investment.
Wei



OUR APPROACH TO MENTORING

○ Scientific Theme Committees work as a group

- meetings are facilitated by the Theme Leader
- Theme Leaders have resources and conference space
- performance evaluations and progress reports provided to INBRE PI and EAC regularly (at least twice a year)

○ Mentoring survey for mentees

- provides INBRE leadership an assessment of mentors capabilities
- delivers real-time feedback to mentors
- allows INBRE to make changes as needed

○ OK-INBRE Deans' Council

- keeps Administrative leaders at all institutions updated on research activities
- allows Administrators to know who is applying and who is funded
- allows Administrators to discuss issues such as reassignment time and best practices
- allows us to align our strategic goals and prioritize equipment purchases



TRACKING EXTERNAL FUNDING

- **Searches performed through NIH RePORTER**
 - all past and present investigators every year
- **Biennial survey to all past INBRE awardees**
 - tracks state/industry/foundation awards
 - publications and trainee information
- **Annual RPPR questionnaire for current investigators**
 - grants awarded and submitted in past 3 years
- **INBRE research award program**
 - applicants must report all funding and all applications submitted in past 3 years

ASSESSING THE IMPACT OF INFRASTRUCTURE

- **Does equipment provided by INBRE contribute to the growth of the research and/or educational enterprise?**
- **Who is using the equipment and what is it used for?**
- **How do you prioritize equipment needs?**

OUR APPROACH TO ASSESSING IMPACT OF INBRE INFRASTRUCTURE

- **Annual survey sent to all equipment awardees**
 - what was it used for
 - who used it and how many (faculty, students, trainees...)
- **5-year survey to institution to assess how INBRE equipment has:**
 - impacted the institutional research environment
 - impacted faculty development
 - impacted students

CHALLENGES WITH STUDENT TRACKING AND ASSESSING IMPACT

- Do INBRE students stay in research/science related fields?



- Where do INBRE students go after graduation?

- Possibly most important, does the INBRE program play a role in future career decisions?

OUR APPROACH TO TRACKING STUDENT OUTCOMES

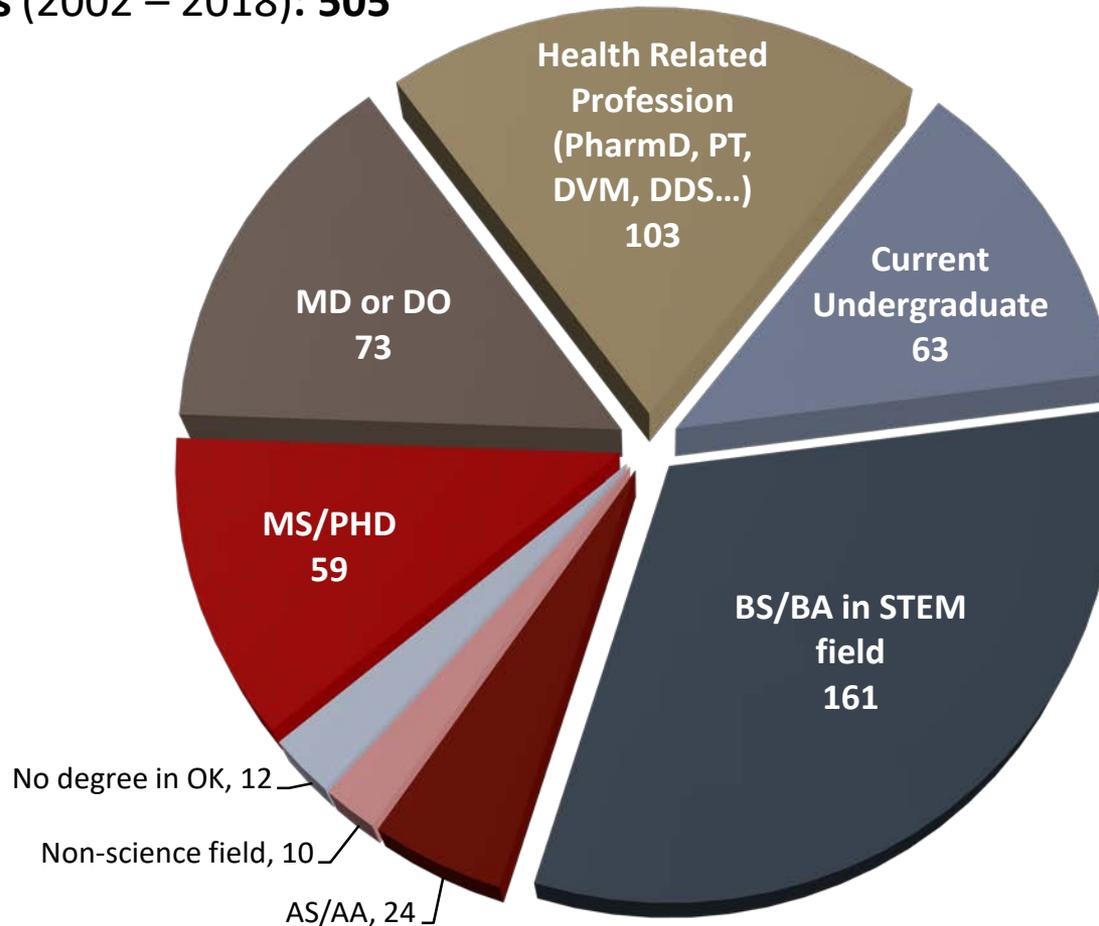
- Track INBRE students by SSN using a statewide higher education database:



- Summer mentors also help to track students

OK-INBRE STUDENT OUTCOMES

Total students (2002 – 2018): 505



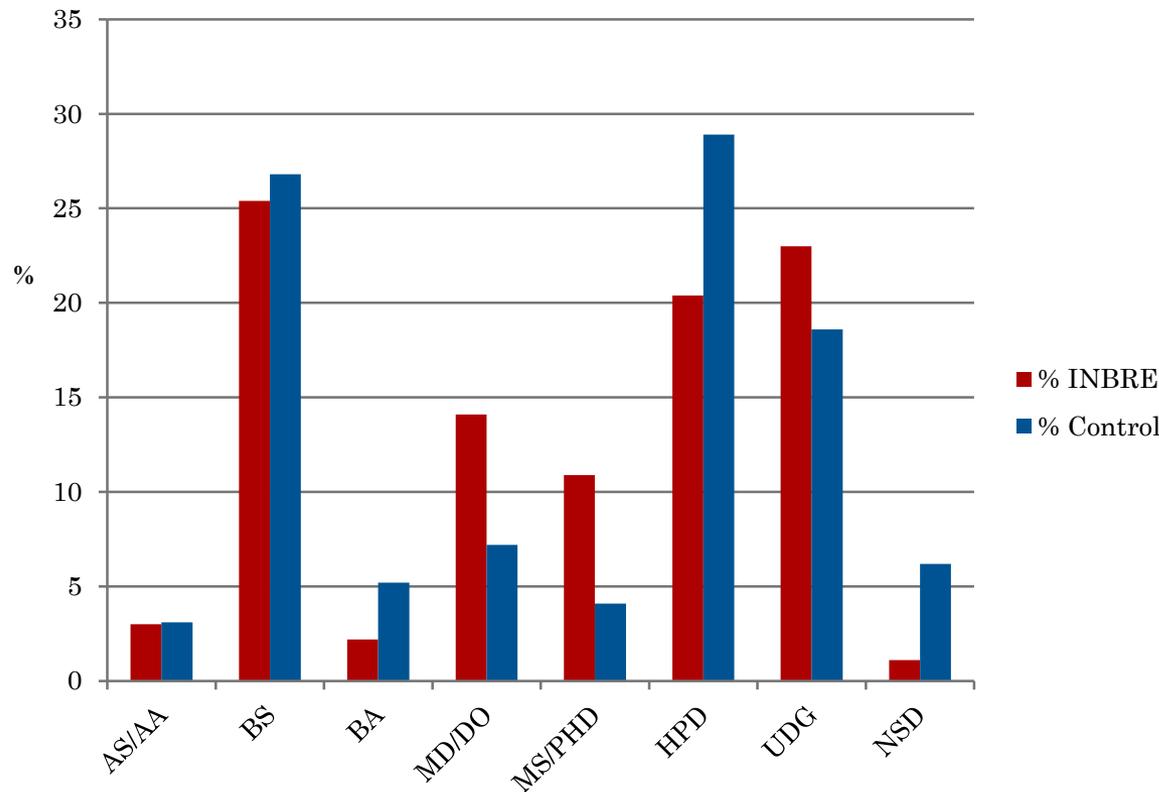
CHALLENGES WITH ASSESSING IMPACT ON STUDENT CAREER DECISIONS

- **Would INBRE students have selected their chosen career path whether or not they matriculated through the INBRE program**

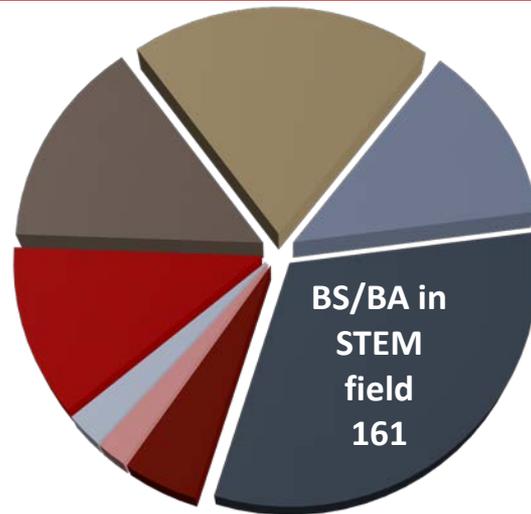
- **Solution: Compare INBRE students to a “control” group**
 - control group chosen from INBRE summer program applicants
 - tracked using OSRHE database and SSN (IRB approval needed)

INBRE VS. CONTROL: OUTCOMES

- **INBRE** group: MD/DO (100%) and MS/PHD (175%) increase
- Health Professional Degrees higher for **control** group



ASSESSING CAREER OUTCOMES OF STUDENTS WITH B.S./B.A. AS HIGHEST DEGREE



- **OSHRE links with OK Employment Security Commission**
- **North American Industry Classification System**
- **comparison of employment outcomes between INBRE and control group**

ACKNOWLEDGMENTS

- **Melville Vaughan, Ph.D.**, OK-INBRE Program Coordinator
- **Ann Chou, Ph.D.**, OK-INBRE Program Evaluator
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- **Dr. Krishan Arora**, Program Director - NIGMS
- **NIH/NIGMS –P20GM103447**