

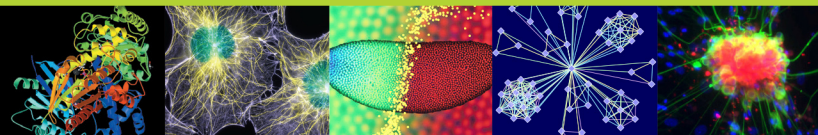
Institutional Development Award (IDeA) for Research Capacity Building

Ming Lei, Ph.D.

National Institute of General Medical Sciences, NIH

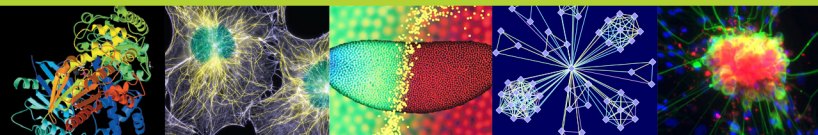
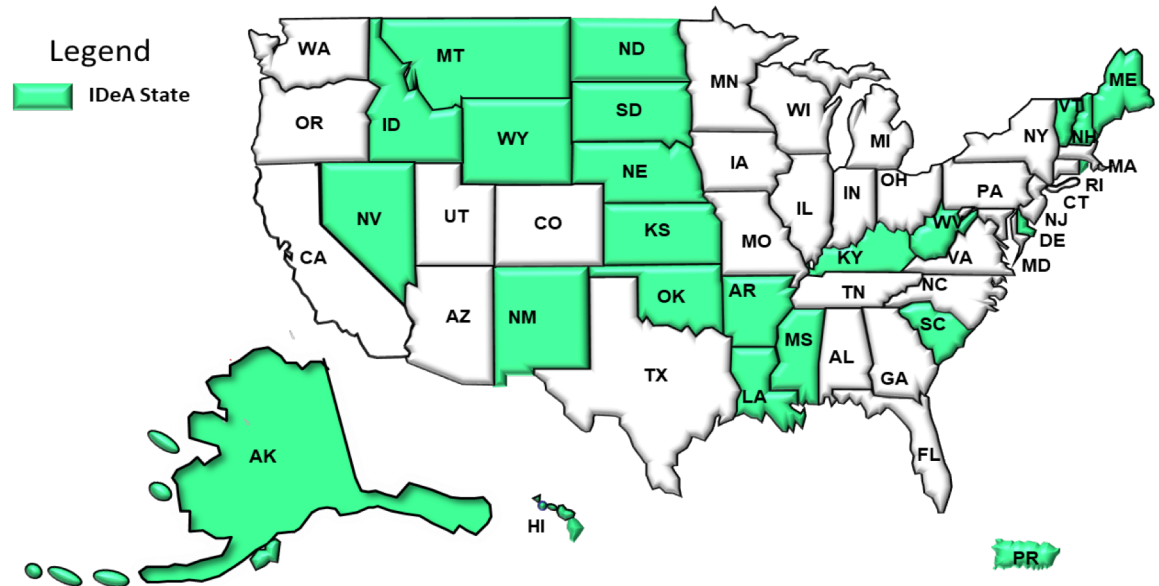
@ WV Research Capacity Building Workshop

September 20, 2018



Institutional Development Award (IDeA) Program

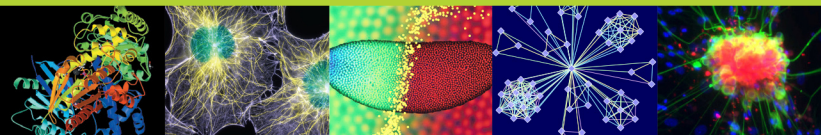
- **Establishment:** authorized by Congress in 1993 (NIH Revitalization Act).
- **Goal:** Enhance geographical distribution of NIH research funds and strengthen research capacity.
- **IDeA States:** 23 States and Puerto Rico
- **FY2018 IDeA budget:** \$350,575,000



IDeA Funding Initiatives

- Centers of Biomedical Research Excellence (**COBRE**)
- IDeA Networks of Biomedical Research Excellence (**INBRE**)
- IDeA Program Infrastructure for Clinical and Translational Research (**IDeA-CTR**)
- IDeA **Co-Funding**
- IDeA Regional Technology Transfer Accelerator Hubs (**STTR Hubs**)

- **An extensive research network across WV supported by the IDeA program**
- **Opportunities to further grow the research capacity**



Centers of Biomedical Research Excellence (COBRE)

Objective: To develop advanced research infrastructure and a critical mass of investigators around a thematic area in IDeA state institutions

Key components: Research Core Facilities; Research Projects led by junior investigators; Coordination and Mentoring

Duration/Budget:

Phase I (Development): 5 years, \$10-12M

Phase II (Enhancement): 5 years, \$10-12M

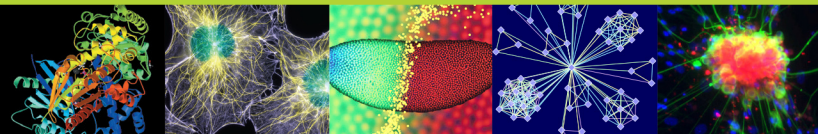
Phase III (Transition): 5 years, \$5-6M

Active COBREs in WV:

WV Stroke COBRE (PI: *Simpkins, James W., WVU*)

WV Tumor Microenvironment (TME) COBRE (PI: *Lockman, Paul R., WVU*)

Appalachian Center for Cellular Transport in Obesity Related Disorders (PI: *Sundaram, Uma, Marshall University*)



IDeA Networks of Biomedical Research Excellence (INBRE)

Objective: To build a statewide multi-disciplinary research network including the state's research-intensive institutions and primarily undergraduate institutions (PUIs), develop a pipeline of health science researchers, and enhance health literacy of the state's workforce

Key components: Research Core Facilities;
Research Pilot Project Program;
Curriculum Development;
Network coordination and Mentoring

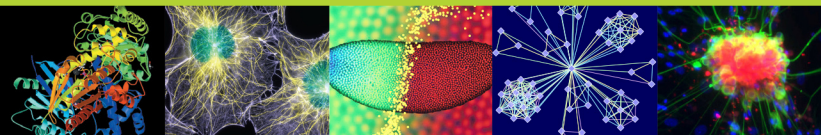
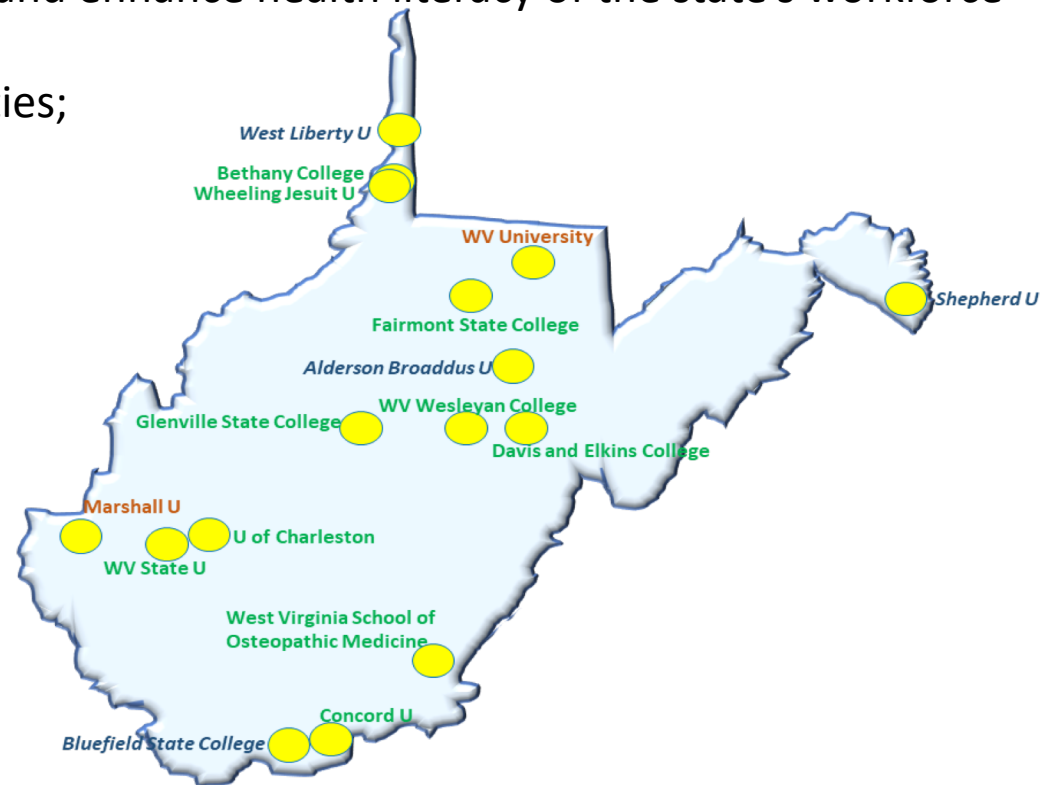
Duration/Budget:

5-year, \$15-20M, renewable

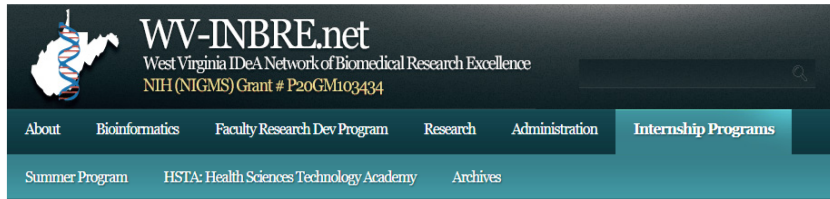
WV INBRE

PI: Rankin, Gary O. Marshall University

PC: Hileman, Stan, WVU



WV-INBRE/HSTA: Exemplary Partnership for Synergy



HSTA: Health Sciences & Technology Academy

General Information about HSTA

HSTA is a community based 9th -12th grade math and science program which encourages aspirations, opens doors, and empowers minority and under-represented students in rural communities. The goal of HSTA is to increase the number of African-American and other under-represented high school students that pursue post-secondary education in the health sciences and to increase the number of health practitioners in the medically under-served communities of West Virginia. Students are accepted according to the eligibility requirements prioritized as: African-American, Financially Disadvantaged (qualifies for or receives free or reduced lunch), First Generation College Student (parents never completed 4 year college), and Rural. Students are recruited in the last semester of the eighth grade and must have a GPA of at least 2.50. Students must be a United States citizen and a West Virginia resident.

Currently HSTA has a student population of 800 high school students in 26 WV counties.

The 2008-2009 student population is: 34% African-American, 39% Free or Reduced Lunch Eligible, 58% First Generation College, and 49% Rural. A GPA of 3.00 is required after the ninth grade. Attendance of 70% of all club meetings is required and clubs meet a total of 24 hours per semester. By high school graduation students must have attended at least two HSTA summer camps and have completed 75 hours of community service. Students complete and present a yearly science project at the annual state Science Symposium.

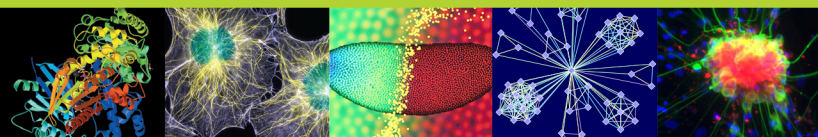
HSTA is in 26 counties and has 78 clubs in 49 high schools.

The WV-INBRE program hopes to recruit from this pool of high-achieving HSTA graduates once they enter college. By attending HSTA club meeting and other events, the WV-INBRE/HSTA coordinator hopes to plant the seed of interest in biomedical research and educate these students about the opportunities of the program should they attend one of the partner institutions within the WV-INBRE network. By having undergraduates who have participated in the INBRE program speak at some HSTA events, the HSTA students can ask questions about the research and the experience.

Research Internship for HSTA Scholars at West Virginia University & Marshall University

- WV-INBRE recruits SEPA-HSTA graduates into its research internship program.
- WV-INBRE participants speak at HSTA events, to further engage with HSTA students and share their experience.
- Additional information at: <http://www.wv-inbre.net/hsta/>.

2018 Presidential Awards for Excellence in Science, Mathematics and Engineering Mentoring



IDeA Program Infrastructure for Clinical and Translational Research (IDeA-CTR)

Objective: To support the development of infrastructure and human resources required to conduct clinical and translational research, and to address health conditions prevalent and/or affecting medically underserved populations in IDeA states

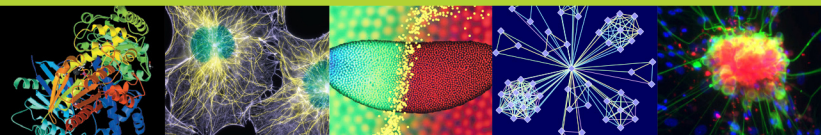
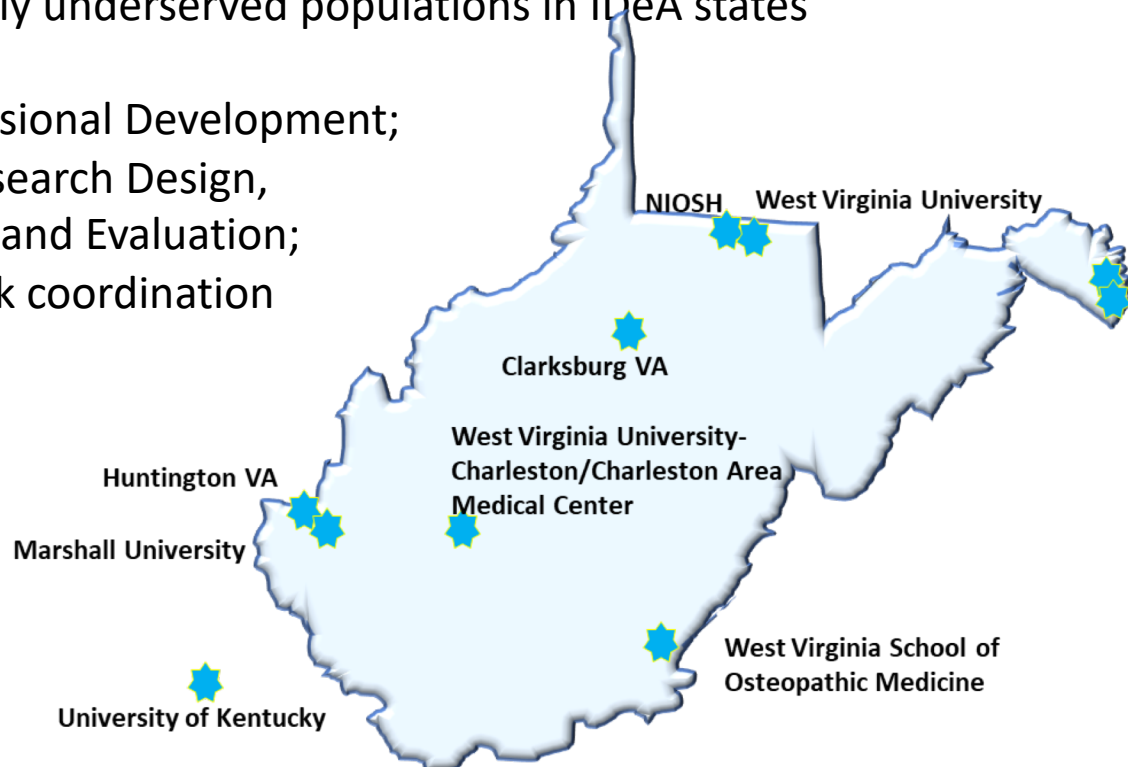
Key components: Cores for Professional Development; Biostatistics, Epidemiology and Research Design, Community Engagement, Tracking and Evaluation; Pilot Project Program; and Network coordination

Duration/Budget:

5-year award, \$20M, renewable

WV IDeA-CTR

PI: Hodder, Sally Lynn, WVU



IDeA Co-Funding

Objective: To support R01 or R15 grant applications from IDeA states to all NIH Institutes/Centers (ICs) that received excellent ratings but fell short of the ICs' pay lines.

Duration/Budget:

IDeA program provides up to \$320,000/year

- for each of the first two years of an R01
- For the first year of an R15

IDeA co-funded WV grants:

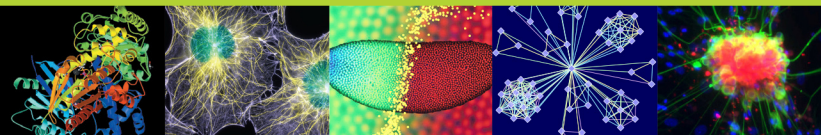
R01AR Decellularized Matrix and Cartilage Regeneration
(PI: Ming Pei, WVU)

R01CA The role of HEF1/NEDD9 Protein in Proliferation and
Invasion of Metastatic Breast Cancer
(PI: Elena Nikolaevna Pugacheva, WVU)

R15DK The Role of Oxidative Signaling through Na/K-ATPase in
Salt-Sensitive Hypertension (PI: Jiang Liu, Marshall University)

R15ES PM2.5 from Fracking Operations Induces Microvascular and Mitochondrial
Dysfunction (PI: Travis Lee Knuckles, WVU)

R15GM Nickel-Catalyzed Oxidative Decarboxylative Arylation Reactions for the Synthesis
of Heterobiaryl and Phenanthridone Compounds (PI: Jessica M. Hoover, WVU)



Regional Tech Transfer Accelerator Hubs for IDeA States (STTR Hubs)

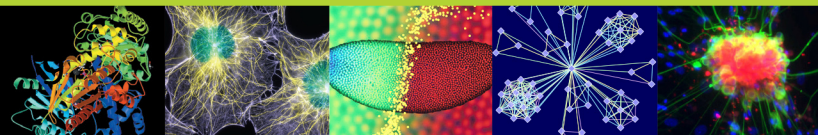
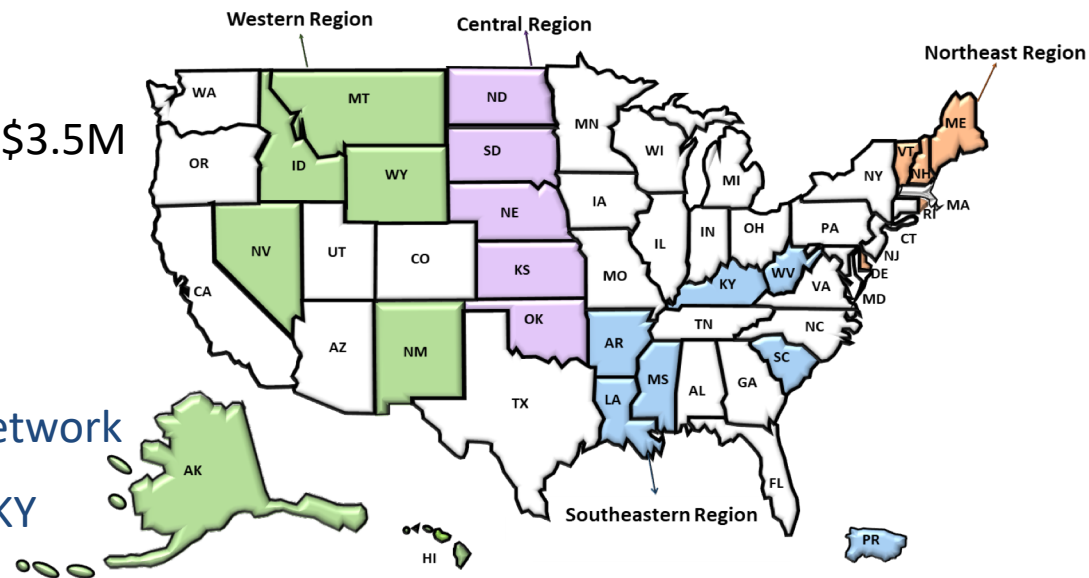
Objective: To support regional technology transfer accelerator hubs that help develop infrastructure and an entrepreneurial culture at the IDeA institutions

Key features: Small business concerns (SBCs) partner with academic institutions to develop and implement programs/tools that promoting entrepreneurship and technology transfer

Duration/Budget: Up to three years, \$3.5M

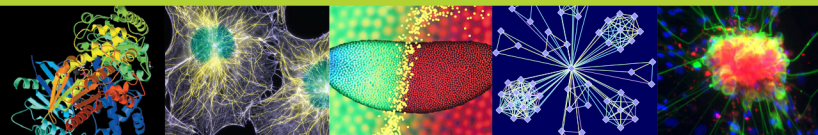
WVU/Mashall (Richard Giersch):

Partners of the Southeast Xlerator Network led by XLERATEHEALTH of Louisville, KY



Opportunities to further grow WV's research capacity

- **More COBREs**
 - Both WVU and Marshall University are eligible for additional COBREs
- **Compete for NIH Program Project (P01) grants and major Center Grants**
 - In COBRE-supported thematic areas
 - CTR expanding into a Clinical and Translational Science Award (CTSA) Hub
- **More R01 and R15 applications to all NIH-ICs**
- **More Training grants (T32) and Fellowship (F) and Career Development (K) Awards**
- **More SBIR and STTR applications**



Thank You

