

Bioscience Innovation at Marshall University

Marshall University

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April 22, 2015



Marshall's Bioscience Research is Diverse

- Advanced Computing and Visualization
- Biotechnology
- Biomedicine
- Forensics
- Water Resources

Byrd Biotechnology Science Center



Opening Fall 2015



Exterior Perspective View B - Option 7
New Engineering Building



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March 6, 2012



Translating Research Into Innovation

- Careful attention to IP development
- Engagement of the local business community
 - Bioscience Alliance
 - HADCO
 - HMDA
- Building the entrepreneurial venture---or---
- Licensing the innovation to an established enterprise

Translating Research Into Innovation

- Building the entrepreneurial venture
 - Market analysis
 - Building the angel round investment
 - Managerial talent
 - Licensing event
- Licensing the innovation to an established enterprise
 - Contact market participants
 - Existing relationships
 - Unsolicited contact

Enhancing the Innovation Platform

- Academic
 - Joan C. Edwards School of Medicine
 - School of Pharmacy
 - College of Science
 - College of Information Technology and Engineering
- Research-focused
 - Marshall Institute for Interdisciplinary Research
 - Rahall Transportation Institute



- Wholly-owned 501(c)3 in the Marshall University Research Corporation
- Catalyst to create an earning and entrepreneurial culture. Intensify and accelerate the rate at which research done at Marshall University reaches the marketplace
- Nurture research scientists appointed exclusively through performance-based contracts within the institute and not in traditional academic departments

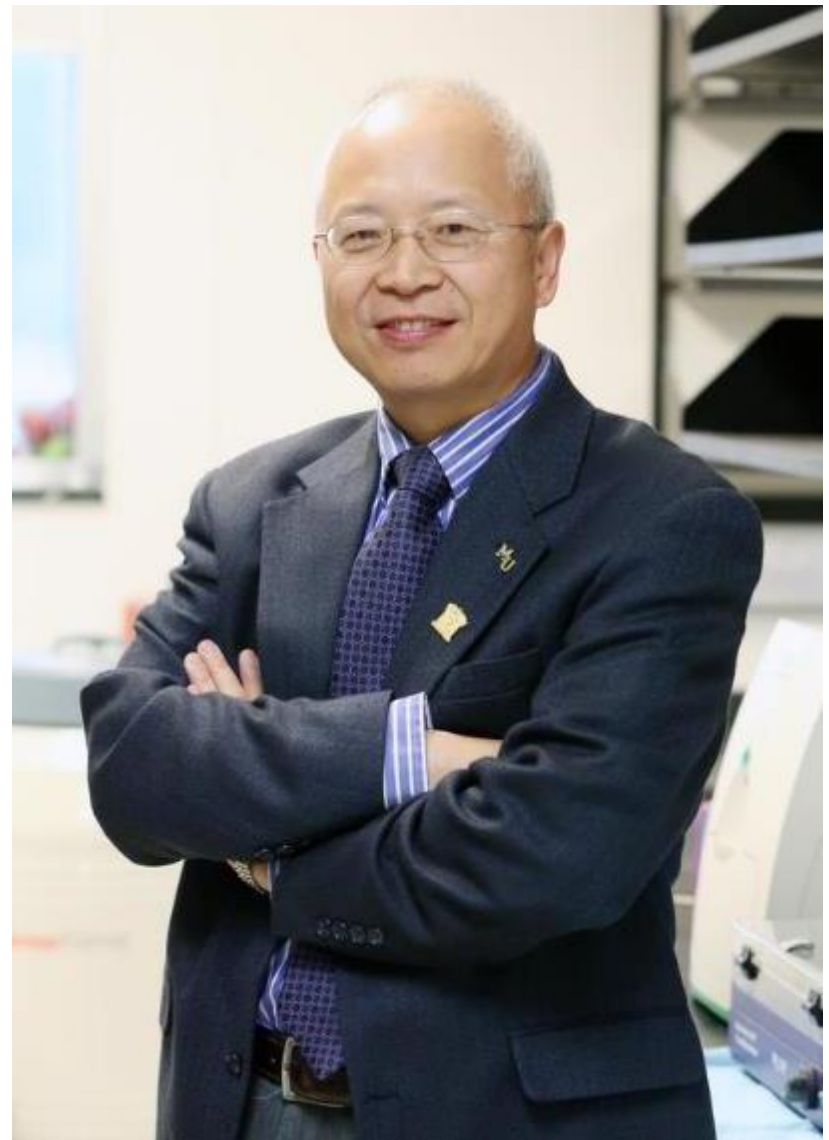




- Flexible structure designed to serve as a bridge between academic science and industry
- Enable commercially relevant bioscience activity by affording companies the opportunity to develop and mature promising new technologies and products in the university environment

Zijian Xie, Ph.D.

- “Sodium-Potassium Pump”
- Single key to many disease targets
 - Cancer
 - Heart disease
 - Kidney disease



Leveraging With Bucks for Brains

- University has attracted \$15MM in private donations which have been matched by \$15MM in state funds to endow research
- e.g. the Cline Endowment for Translational Sports Medicine Research
- With State Match, \$10 MM endowment has been created to support development of a robust, interdisciplinary research program is envisioned in areas such as:
 - **Musculoskeletal and Ligament Health and Injury** - research studies that evaluate predictors of joint and muscle injury, innovative techniques for injury intervention and prevention and the efficacy of conventional and novel treatment practices.
 - **Biomechanics** - research studies that identify and ameliorate biomechanical risk and factors that predispose individuals to musculoskeletal injury.
 - **Muscle Injury and Genomics** - research studies that identify mechanisms of skeletal muscle injury, preventative therapies and underlying genomic factors that predispose humans to injury or limit human performance capabilities.
- MIIR has its own endowment to support its mission of entrepreneurial research

