

# Faculty-Student Collaborations Across the UI System



University Senates Conference 2016-17

# Impact of Zoning Code Reforms on the Built Environment and Physical Activity Behaviors

PI: Jamie Chriqui, Professor, School of Public Health, University of Illinois at Chicago

- Evaluated the active-living orientation of zoning codes for over 4000+ jurisdictions across the U.S.
- Examined zoning code association with adult leisure time activity, inactivity, and active travel to work.
- Cross-disciplinary team worked together to understand the impact that the built environment has on physical activity.



Project funded with ~\$1.5 million by the National Cancer Institute of the National Institutes of Health



# It Took a “Village” of students to complete this project

- UIC College of Urban Planning and Policy PhD students:
  - April Jackson, PhD
  - Haytham Abu Zayd, MUPP
- UIC College of Urban Planning and Policy Master’s students:
  - Sunny Bhatt, MUPP
  - Anthony Pelikan, MUPP
  - Erika Strauss, MUPP
  - Carmen Aiken, MUPP
  - Jennifer Nalbantyan, MUPP
- UIC College of Urban Planning Public Policy undergraduate students:
  - Nija Fountano



PI: Jamie Chriqui  
University of Illinois at Chicago



# Key Findings and Study Translation

- Key Findings:
  - Communities with more pedestrian- or activity-friendly zoning policies have higher rates of adult and older adult recreational physical activity, and higher rates of engaging in “active travel” to work
- Translating the findings
  - Currently under subcontract with the U.S. Centers for Disease Control and Prevention to develop a series of practitioner briefs for planning officials and advocates
  - Numerous webinars with national organizations seeking to understand how zoning can be a population-level strategy for making communities more walkable and activity friendly
  - Directly relevant for U.S. Surgeon General’s Everybody Walks! Initiative



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# STRONG Kids 2: A Cells-to-Society Approach



Barbara Fiese, PhD  
Director, Family Resiliency Center  
Professor, HDFS



Sharon Donovan, PhD, RD  
Interim Director, I-TOPP  
Professor, Nutrition and Health



# HDFS 494: STRONG Kids 2 Research Assistants



- Students conduct home visits to collect: biological samples, home food inventory, and H/W measurements
- Has included students from 20+ majors
- Course developed through a USDA Higher Education Challenge Grant



FRC

FAMILY  
RESILIENCY  
CENTER  
AT ILLINOIS



# UIS Biology/Art Collaboration: Focus Stacking Microscopic Images



*Focus stacking* is a digital photography technique, assisted by computer software, to combine multiple images taken at different focal distances to create a pin-sharp image.

Michael Lemke, Prof. of Biology, UIS  
Mike Miller, Assoc. Prof. of Art, UIS

# UIS Biology & Art



- Focus stacked images: pin-sharp depth of field, detail
- Research collaboration stimulates imagination in the classroom and in local communities...



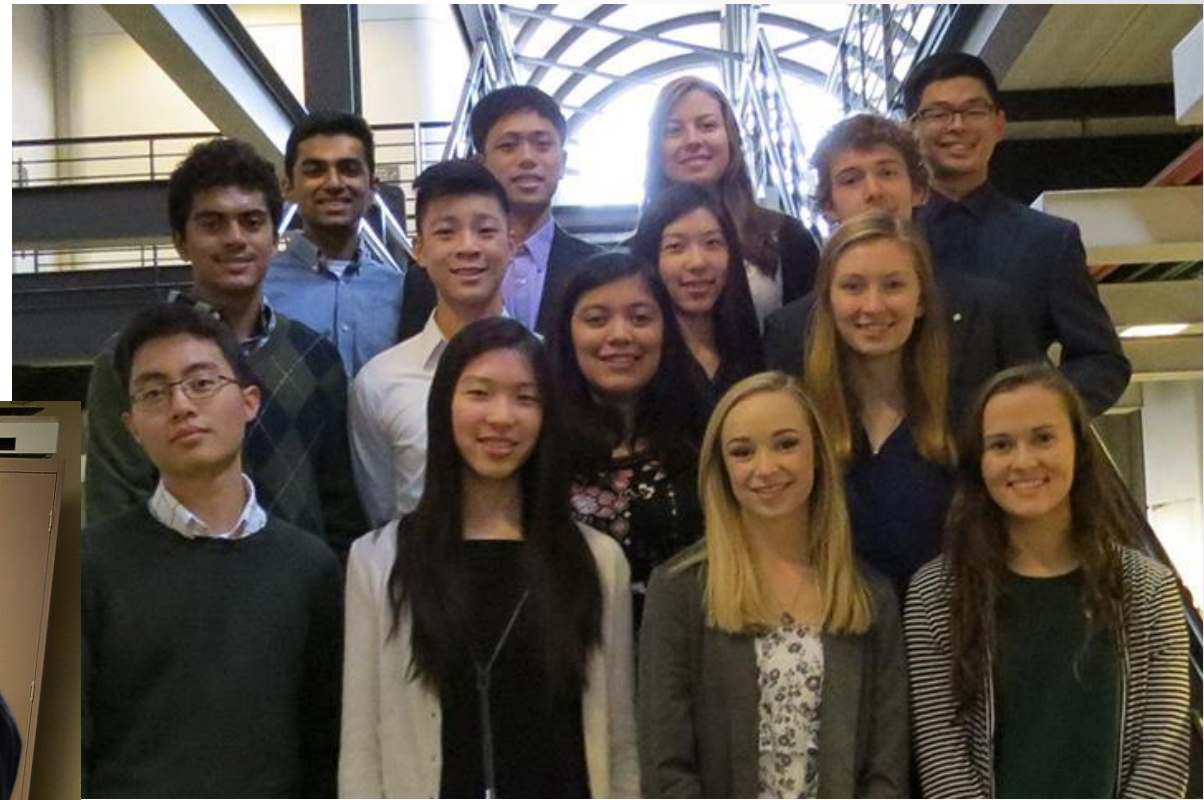


# UIS Biology/Art Collaboration: Outreach



Biology student, Jack Zinnen, shows young spectators at the Saint Louis Science Center what microorganisms look like to the naked eye, before showing them enlarged focus stacked images.

# Illinois Cancer Scholars at UIUC Research & Education

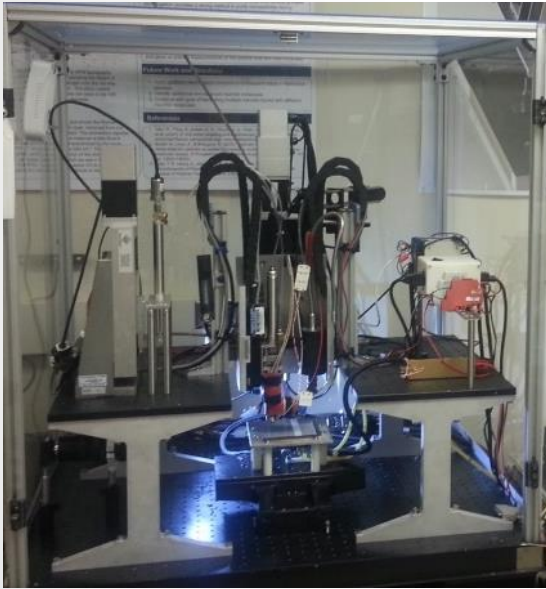


**Illinois Cancer Scholars**  
Inspiration • Opportunity • Impact

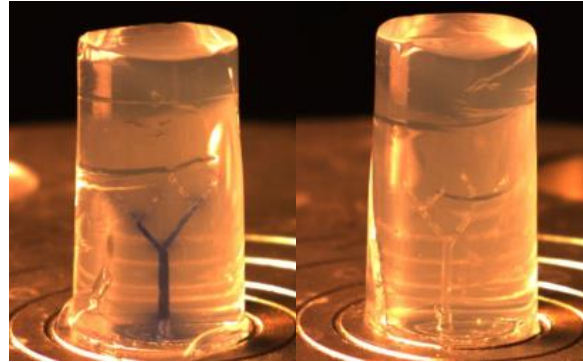
- Unique undergraduate curriculum, training, and research program: “Flipping the Curriculum”
- Students train around the Grand Challenge of diagnosing and treating cancer with technology
- Students study BioEngineering, Electrical and Computer Engineering, Computer Science, or Mechanical Engineering



# Illinois Cancer Scholars: cutting edge research

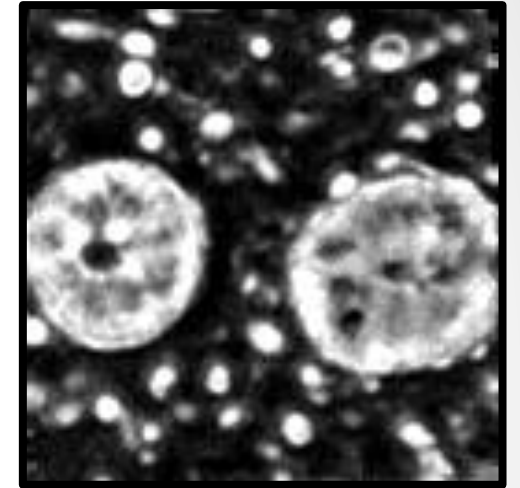
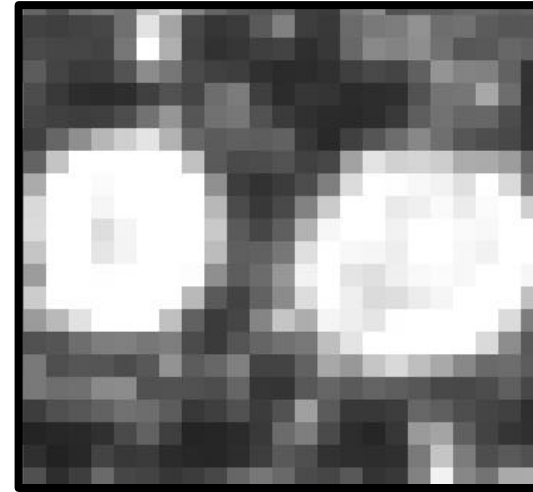


**3D Printing: Bioengineering**  
Printer, breast cancer  
models, coronary stents



**Better imaging technology to see cancers more clearly**

New technology invented at Illinois (right) provides better images than state of the art



- Students participate in research as early as freshman year
- Research is integrated into curriculum and motivates the students!

**Illinois Cancer Scholars**

Inspiration • Opportunity • Impact



# Illinois Cancer Scholars: motivating students, impacting people



“Students learn something in class one day, and are making an instrument for the human body the next day!”

“I could start class 10 minutes early, and I’d have 100% attendance!” – *Prof. Rohit Bhargava, Director*

**Illinois Cancer Scholars**  
Inspiration • Opportunity • Impact



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*Special thanks to:*

ALL the investigators, students and staff on these research projects, plus

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UIC News Center

UIS Campus Relations - Blake Wood