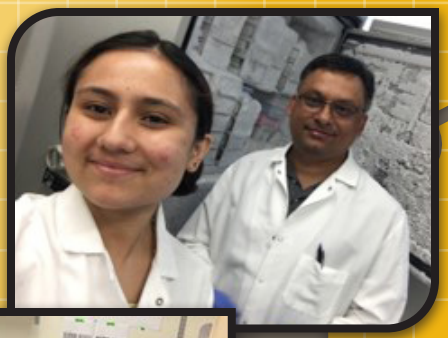
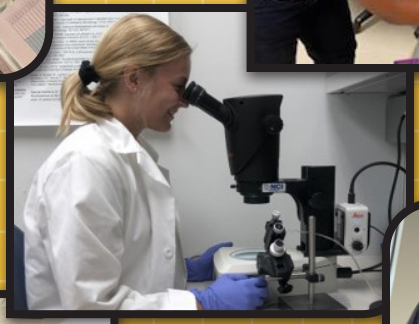
13th Annual FUTURE in Biomedicine℠

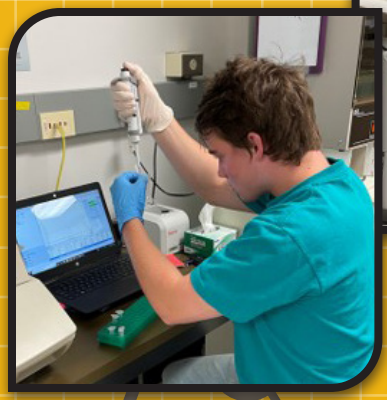
SYMPOSIUM

FRIDAY, JULY 30, 2021 | 1-4PM

1117 Medical Education Research Facility







Fostering Undergraduate Talent – Uniting Research and Education in Biomedicine

www.medicine.uiowa.edu/future

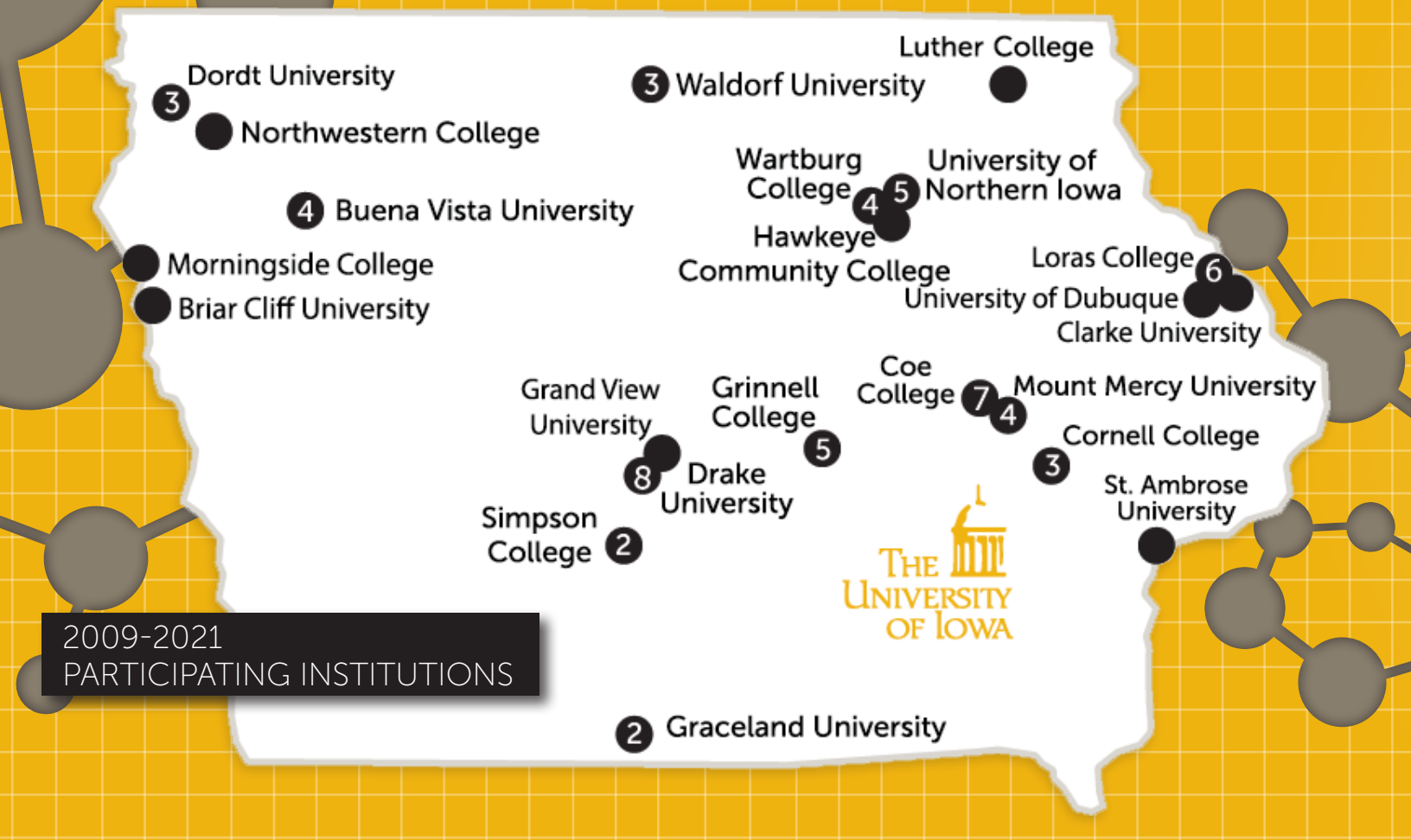
SCHEDULE OF EVENTS

1:00PM	**Posters and Presentations *by Student Researchers***	***presentation only**
	Jade Hays Buena Vista University, Storm Lake Brittney Dinkel, PhD, 2021 Senior Fellow *David Weiss, PhD, Microbiology & Immunology*	*Using Whole Genome Sequencing to Identify Mutations in E. coli Leading to Cefsulodin Resistance*
	Delaney Throckmorton Coe College, Cedar Rapids Daniel Hughes, PhD, 2021 Fellow *Robert Cornell, PhD, Anatomy and Cell Biology*	*The Genomic Basis of Evolutionary Novelty: How was TFAP2 Expression Recruited to the Neural Plate Border?*
	Nolan Zeger* Cornell College, Mount Vernon Barbara Christie-Pope, PhD, 2021 Senior Fellow *Robert Cornell, PhD, Anatomy and Cell Biology*	*Using CRISPR/Cas9 to Investigate grhl3 in Zebrafish*
	Gretchen Stennett, Tabitha Verhage, Ivana Harsono Dordt University, Sioux Center Manuela A.A. Ayee, PhD, 2021 Senior Fellow *Robert Piper, PhD, Molecular Physiology and Biophysics*	*Molecular Insights into an Inherited Neurological Disorder*
	Shiva Bucklin, Koffi Amegble Grinnell College, Grinnell Charvann Bailey, PhD, 2021 Senior Fellow *Doug Spitz, PhD, Radiation Oncology*	*Pharmacological inhibition of SIRT1 and SIRT2 with Sirtinol induces Oxidative Stress and Sensitizes NSCLC Cells to Cell Death with Pharmacological Ascorbate*
	Bailey McElligott Grinnell College, Grinnell Keisuke Hasegawa, PhD, 2021 Senior Fellow *Maria Spies, PhD, Biochemistry*	*Biochemical and Single-Molecule Investigation of the GFP-tagged RAD51 Recombinase*
	Brianna Arreguin* Loras College, Dubuque Andrew Kehr, PhD, 2021 Senior Fellow *Sheila Baker, PhD, Biochemistry*	*Stoichiometry of Potassium Channels in T1 Domains*
	Rakshya Thapa Waldorf University, Forest City Bharat Raj Bhattarai, PhD, 2021 Fellow *Brandon Davies, PhD, Biochemistry*	*Dissecting the Lipase Inhibitory Functions of ANGPTL3 by Site-Directed Mutagenesis*

1:30PM	**Introductory Remarks** - *Madeline A. Shea, PhD, Director*	
1:35PM	**Keisuke Hasegawa, PhD** Grinnell College, Grinnell *UI Faculty Collaborator: Maria Spies, PhD, Biochemistry*	*Biochemical and Single-Molecule Investigation of the GFP-tagged RAD51 Recombinase*
1:50PM	**Brittney Dinkel, PhD** Buena Vista University, Storm Lake *UI Faculty Collaborator: David Weiss, PhD, Microbiology and Immunology*	*Characterization of Cefsulodin-Resistant Mutants Identified by Whole Genome Sequencing*
2:05PM	**Bharat Raj Bhattarai, PhD** Waldorf University, Forest City *UI Faculty Collaborator: Brandon Davies, PhD, Biochemistry*	*Study of Inhibition of Lipase Activity by ANGPTL3 Mutants*
2:20PM	**Manuela A.A. Ayee, PhD** Dordt University, Sioux Center *UI Faculty Collaborator: Robert Piper, PhD, Molecular Physiology and Biophysics*	*Molecular Investigation of Myelin Protein Zero Interactions*
2:35PM	**BREAK.** *Refreshments will be served.*	
2:45PM	**Gary Coombs, PhD** Waldorf University, Forest City *UI Faculty Collaborator: Lori Wallrath, PhD, Biochemistry*	*Analysis of Lamin C mutation specific phenotypes in Drosophila melanogaster by 3D microscopy*
3:00PM	**Charvann Bailey, PhD** Grinnell College, Grinnell *UI Faculty Collaborator: Doug Spitz, PhD, Radiation Oncology*	*Pharmacological Ascorbate and Sirtinol Induce Cell Death in Non-Small Cell Lung Cancer via Oxidative Stress*
3:15PM	**Daniel Hughes, PhD** Coe College, Cedar Falls *UI Faculty Collaborator: Robert Cornell, PhD, Anatomy and Cell Biology*	*The Genomic Basis of Evolutionary Novelty: How was TFAP2 Expression Recruited to the Neural Plate Border?*
3:30PM	**Barbara Christie-Pope, PhD** Cornell College, Mount Vernon *UI Faculty Collaborator: Robert Cornell, PhD, Anatomy and Cell Biology*	*Manipulating Genes and Other Stories*
3:45PM	**Andrew Kehr, PhD** Loras College, Dubuque *UI Faculty Collaborator: Sheila Baker, PhD, Biochemistry*	*Opa1, a Mechanistic View of Mitochondrial Fusion*
4:00PM	**Closing Remarks** - *Madeline A. Shea, PhD, Director*	

CLASS OF 2021

The FUTURE in Biomedicine℠ Program Class of 2021 is comprised of 9 Faculty Fellows and 11 student researchers.



2009-2021
PARTICIPATING INSTITUTIONS

The FUTURE in Biomedicine℠ Program is supported primarily by the University of Iowa Carver College of Medicine and participating institutions.

For more information on the FUTURE in Biomedicine℠ Program, visit www.medicine.uiowa.edu/future.

FUTURE IN BIOMEDICINE℠ PROGRAM
Fostering Undergraduate Talent - Uniting Research and Education

UNIVERSITY OF IOWA CARVER COLLEGE OF MEDICINE
University of Iowa Health Care