UW2020: WARF Discovery Initiative Awards

Research Proposals:

Anticipating Abrupt Ecological Change in the 21st Century

Principal Investigator: Monica G. Turner, Eugene P. Odum Professor of Ecology and Vilas Research Professor, Department of Zoology

Center for Advanced Manufacturing of Chemicals (CAMaC)

Principal Investigator: George W. Huber, Professor, Department of Chemical and Biological Engineering

Genomic Approaches to Identify Host Factors and Mechanisms that Modulate Pathogen Infections

Principal Investigator: Andrew Mehle, Assistant Professor, Department of Medical Microbiology and Immunology

Molecular Atlas of Alzheimer's Disease Stages

Principal Investigator: Sterling Johnson, Jean R. Finley Professor of Geriatrics and Dementia, Associate Director, Alzheimer's Disease Research Center, Department of Medicine

Novel Electrodes for Hydroxyl Radical Production to Enable Low-cost Water Treatment

Co-Principal Investigators: Joel A. Pedersen, Rothermel Bascom Professor, Departments of Soil Science, Chemistry, and Civil & Environmental Engineering

Robert J. Hamers, Steenbock Professor of Physical Science, Director, Center for Sustainable Nanotechnology, Department of Chemistry

Patient-specific Ventricular Cardiac Tissue Units for Sudden Cardiac Death Prevention

Principal Investigator: Timothy J. Kamp, Professor, Department of Medicine, Co-Director, Stem Cell and Regenerative Medicine Center, Cellular and Molecular Arrhythmia Research Program

Reserve Energy Co-Optimization with Real-time Data from Satellites

Principal Investigator: Michael C. Ferris, Professor, Wisconsin Institutes for Discovery and Computer Sciences Department

Silent Targeting, Dark Campaigns, and Ill-Informed Decisions? Microtargeting in Election Campaigns and Its Implications for Democracy *Principal Investigator:* Young Mie Kim, Associate Professor, School of Journalism and Mass Communication

Systematic Functional Annotation of Orphan Proteins by High Throughput Mass Spectrometry Profiling

Co-Principal Investigators: David J. Pagliarini, Investigator and Director of Metabolism, Morgridge Institute for Research, Associate Professor, Department of Biochemistry Joshua J. Coon, Professor, Departments of Biomolecular Chemistry and Chemistry

Wisconsin Study of Family Complexity and Public Policy

Co-Principal Investigators: Lawrence M. Berger, Director of the Institute for Research on Poverty and Professor of Social Work

Nora Cate Schaeffer, Faculty Director of the University of Wisconsin Survey Center and Sewell Bascom Professor of Department of Sociology

Infrastructure/Equipment Proposals:

Full-Range Imaging Spectrometer Enables an Innovative Linkage of Genetic, Plant Trait and Remote Sensing/Spectroscopy Data *Principal Investigator:* Phil Townsend, Professor, Department of Forest and Wildlife Ecology,

Human Exercise Research Core Facility to Serve the Broader Campus *Principal Investigator:* Gary Diffee, Virginia H. Marsh Professor of Kinesiology

Seeing the Hydroscape: Developing a New Approach for the Study of Inland Waters *Principal Investigator:* Emily H. Stanley, Professor, Department of Zoology, Center for Limnology

UW Human Stem Cell Gene Editing Service at the Waisman Center

Principal Investigator: Anita Bhattacharyya, Senior Scientist, Waisman Center