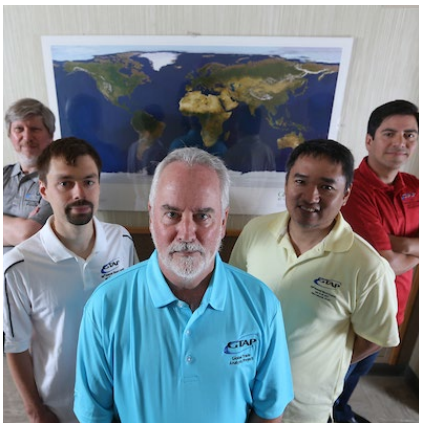
DEPARTMENT OF

AGRICULTURAL ECONOMICS



Research Overview

The mission of the Department of Agricultural Economics is to acquire and transmit new economic knowledge to the citizens of Indiana, the nation, and the world to support more informed decisions.

Research Areas

- AGRIBUSINESS
- PRICES AND MARKETS
- PRODUCTION/FARM MANAGEMENT
- AGRICULTURE POLICY
- ENVIRONMENTAL/ENERGY/RESOURCES
- INTERNATIONAL TRADE AND DEVELOPMENT
- REGIONAL AND SPATIAL ECONOMICS
- SMALL BUSINESS/COMMUNITY DEVELOPMENT

"The Global Trade Analysis Project's (GTAP) network connects the department with over 12,500 policy analysts and researchers worldwide."

Research Centers

- CENTER FOR COMMERCIAL AGRICULTURE
- CENTER FOR FOOD & AGRICULTURAL BUSINESS
- CENTER FOR FOOD DEMAND ANALYSIS & SUSTAINABILITY
- CENTER FOR GLOBAL TRADE ANALYSIS (GTAP)
- CENTER FOR RURAL DEVELOPMENT
- DIGITAL INNOVATION IN AGRI-FOOD SYSTEMS LABORATORY
- INDIANA COUNCIL FOR ECONOMIC EDUCATION
- NORTH CENTRAL REGIONAL CENTER FOR RURAL DEVELOPMENT
- PURDUE INSTITUTE FOR FAMILY BUSINESS
- STATE UTILITY FORECASTING GROUP

Pictured at left from top: Dr. Mindy Mallory, Dr. Maria Marshall, Dr. Dominique van der Mensbrugghe with GTAP staff, Dr. Farzad Taheripour and Dr. Nicole Olynk-Widmar

NICOLE OLYNK WIDMAR
INTERIM DEPARTMENT HEAD

nwidmar@purdue.edu | 765.494.4191

403 Mitch Daniels Blvd., West Lafayette, IN 47907-2056
Purdue University College of Agriculture

Faculty by Research Area

AGRIBUSINESS

Brady Brewer	bebrewer@purdue.edu
Diego Cardoso	cardosod@purdue.edu
Scott Downey	downeyws@purdue.edu
Brenna Ellison	bdelliso@purdue.edu
Chad Fiechter	cfiechter@purdue.edu
Ken Foster	kfoster@purdue.edu
Allan Gray	gray@purdue.edu
Bhagyashree Katare	bkatare@purdue.edu
Valerie Kilders	vkilders@purdue.edu
Maria Marshall	mimarsha@purdue.edu
Kwamena Quagrainie	kquagrai@purdue.edu
Ariana Torres	torres2@purdue.edu
Holly Wang	wanghong@purdue.edu
Nicole Olynk Widmar	nwidmar@purdue.edu
Steven Wu	sywu@purdue.edu

MARKETS & PRICE ANALYSIS

Joseph Balagtas	balagtas@purdue.edu
Bernhard Dalheimer	bdalheim@purdue.edu
Ken Foster	kfoster@purdue.edu
Russell Hillberry	rhillber@purdue.edu
James Mintert	jmintert@purdue.edu
Jacob Ricker-Gilbert	jrickerg@purdue.edu
Holly Wang	wanghong@purdue.edu
Nicole Olynk Widmar	nwidmar@purdue.edu
Steven Wu	sywu@purdue.edu

FARM MANAGEMENT

Chad Fiechter	cfiechter@purdue.edu
Michael Langemeier	mlangeme@purdue.edu
James Mintert	jmintert@purdue.edu
Nathanael Thompson	thomp530@purdue.edu
Nicole Olynk Widmar	nwidmar@purdue.edu

INDUSTRIAL, FOOD & AGRICULTURAL POLICY

Joseph Balagtas	balagtas@purdue.edu
Diego Cardoso	cardosod@purdue.edu
Bernhard Dalheimer	bdalheim@purdue.edu
Brenna Ellison	bdelliso@purdue.edu
Chad Fiechter	cfiechter@purdue.edu
Ken Foster	kfoster@purdue.edu
Allan Gray	gray@purdue.edu
Roman Keeney	rkeeney@purdue.edu
Valerie Kilders	vkilders@purdue.edu
Todd Kuethe	tkuethe@purdue.edu
Meilin Ma	mameilin@purdue.edu
Jacob Ricker-Gilbert	jrickerg@purdue.edu
Tor Tolhurst	ttolhurs@purdue.edu
Dominique van der Mensbrugghe	vandermd@purdue.edu
Nicole Olynk Widmar	nwidmar@purdue.edu
Steven Wu	sywu@purdue.edu

ENVIRONMENTAL/ENERGY/RESOURCES

Diego Cardoso	cardosod@purdue.edu
Bernhard Dalheimer	bdalheim@purdue.edu
Michael Delgado	delgado2@purdue.edu
Thomas Hertel	hertel@purdue.edu
John Lee	jlee1@purdue.edu
Carson Reeling	creeling@purdue.edu
Juan Sesmero	jsesmero@purdue.edu
Gerald Shively	shivelyg@purdue.edu
Farzad Taheripour	tfarzad@purdue.edu
Dominique van der Mensbrugghe	vandermd@purdue.edu

INTERNATIONAL TRADE AND DEVELOPMENT

Uris Baldos	ubaldos@purdue.edu
Bernhard Dalheimer	bdalheim@purdue.edu
Ken Foster	kfoster@purdue.edu
Kajal Gulati	gulati28@purdue.edu
Thomas Hertel	hertel@purdue.edu
Russell Hillberry	rhillber@purdue.edu
Meilin Ma	mameilin@purdue.edu
Maria Marshall	mimarsha@purdue.edu
Jacob Ricker-Gilbert	jrickerg@purdue.edu
Gerald Shively	shivelyg@purdue.edu
Farzad Taheripour	tfarzad@purdue.edu
Dominique van der Mensbrugghe	vandermd@purdue.edu
Holly Wang	wanghong@purdue.edu

SMALL BUSINESS/COMMUNITY DEVELOPMENT

Kajal Gulati	gulati28@purdue.edu
Roberto Gallardo	robertog@purdue.edu
Maria Marshall	mimarsha@purdue.edu
Kwamena Quagrainie	kquagrai@purdue.edu
Jacob Ricker-Gilbert	jrickerg@purdue.edu
Ariana Torres	torres2@purdue.edu

SPATIAL ECONOMICS

Michael Delgado	delgado2@purdue.edu
Russell Hillberry	rhillber@purdue.edu
Guy Tchuente	gtchuent@purdue.edu

DEPARTMENT OF

AGRICULTURAL SCIENCES EDUCATION AND COMMUNICATION

Research Overview

ASEC faculty are experts in learning, communication, and public engagement. Faculty conduct research to enhance the effectiveness of formal and informal education and communication programs. A major goal is building capacity to effectively teach lifelong learners across all socioeconomic contexts, improving the quality of life for youth and adults in Indiana and throughout the world. ASEC faculty have expertise in specialized fields such as science communication, career development, experiential learning, STEM integration, and engagement of underserved populations. Our disciplinary bases span animal and plant science, education, educational psychology, communication, and sociology.

Research Areas

- PUBLIC ENGAGEMENT AND SCIENCE COMMUNICATION
- DECISION-MAKING AND RISK COMMUNICATION
- AGRICULTURAL EDUCATION
- EXTENSION EDUCATION
- PK-12 ENGAGEMENT
- TECHNOLOGY-MEDIATED TEACHING OF LIFE SCIENCE TOPICS
- EDUCATIONAL ACCESS AND EQUITY
- STEM CAREER DEVELOPMENT
- INTENTIONAL AND INCLUSIVE MENTORING
- TEACHING INTEGRATED STEM WITH FOOD AND AGRICULTURE AS A CONTEXT
- INTERNATIONAL ENGAGEMENT
- PROGRAM DEVELOPMENT AND EVALUATION

Hui-Hui Wang's research revolves around integrated STEM concepts and practices in K-12 formal and non-formal education programs using agriculture, food and natural resources as both content and context.

Pictured at left from top: Dr. Sarah LaRose, Dr. Rama Radhakrishna, Dr. Mark Tucker, Dr. Neil Knobloch, and Dr. Mark Russell

RAMA RADHAKRISHNA
DEPARTMENT HEAD

rbradhak@purdue.edu | 765.494.8423

Lilly Hall of Life Sciences
915 Mitch Daniels Blvd, West Lafayette, IN 47907
College of Agriculture, Purdue University

Faculty Members and Area of Expertise

Julia Bello-Bravo, *Assistant Professor*
mbellobr@purdue.edu
Effective communication and education using a systems approach towards understanding and solving the "last mile" problem of delivering science education across cultures, languages, literacy levels, technologies, and institutional networks.

Colleen Brady, *Professor - Extension Education*
bradyc@purdue.edu
Informal science education; assessment of educational needs; development and implementation of effective electronic-based methods.

Natalie Carroll, *Professor - Extension Education; ABE*
ncarroll@purdue.edu
Informal learning and curriculum development for youth; experiential learning in environmental and natural resource topic areas.

Neil Knobloch, *Professor - Ag+STEM Education*
nknobloc@purdue.edu
Culturally relevant learner-centered teaching and mentoring strategies; experiential learning; integrated STEM education; food systems thinking; teacher and student motivation; K-20 engagement and career development of underrepresented minorities in agricultural STEM disciplines; assessment of outcomes and impact in K-12 and higher education.

Sarah LaRose, *Assistant Professor - Agricultural Education; C&I*
slarose@purdue.edu
Strategies that agricultural educators and universities can implement to increase outcomes of skilled agricultural workers, innovators, and agriculturally literate citizens capable of engaging the public in conversations about controversial issues.

Pamala Morris, *Professor/Associate Dean - Diversity Programs; OMP*
pmorris@purdue.edu
Multicultural education; diversity awareness; intercultural effectiveness and communication; service learning methods.

Casey Mull, *Clinical Associate Professor/4-H Program Director*
mullc@purdue.edu
Boundary spanning; higher education community partnerships; community engagement; engaged scholarship; positive youth development; program development; military youth and vulnerable populations, quantitative and survey design.

Linda Pfeiffer, *Associate Professor - Science Communication*
lpfeiff@purdue.edu
Science Communication (communicating science to non-scientists); Specializing in psychological factors that influence message perception/reception, risk perception, and utilizing messaging to engage the public in science.

Rama Radhakrishna, *Professor/Department Head*
rbradhak@purdue.edu
Program development and evaluation: Quantitative research methods and data analysis; international agriculture development specializing in outcome and impact evaluations of programs in formal and non-formal settings.

Mark Russell, *Professor – Engagement and Intercultural Leadership*
mrussell@purdue.edu
Engagement strategies to apply agricultural sciences; leadership development and intercultural effectiveness outcomes; experiential and service-learning methods.

B. Allen Talbert, *Professor - Agricultural Education; C&I*
btalbert@purdue.edu
Agricultural teacher education; Underrepresented populations in agriculture and agricultural education; qualitative and mixed methods studies.

Roger Tormoehlen, *Professor - Extension Education; ABE*
torm@purdue.edu
Digital-based learning; engineering literacy; inquiry/challenge-based learning; agricultural health and safety; engineering education; international development; integrated STEM education.

Mark Tucker, *Professor - Agricultural Communication*
matucker@purdue.edu
Public acceptance of emergent science and technology; agricultural and risk communication; audience analysis; Indiana communities and rural life.

Hui-Hui Wang, *Associate Professor - Extension Education; C&I*
huiwang@purdue.edu
Integrated STEM concepts and practices in K-12 formal and non-formal education programs using agriculture, food and natural resources as both content and contexts; research-based integrated STEM through AFNR teacher education, and curriculum and instruction design to engage K-12 students' scientific reasoning and knowledge application.

DEPARTMENT OF

AGRONOMY

Research Overview

The mission of the Department of Agronomy is use science and technology to improve plants, soils, and our predictive ability to anticipate the impact of the environment on production. The department is fully integrated across the teaching, Extension and research which allows us to address agriculture's most pressing problems. Our students become agronomist who understand crop production, plant genetics, soil health, digital/precision agriculture, or landscape hydrology. They all have a goal of achieving efficient and sustainable agricultural production.

Research Areas

CROPS AND THE CHANGING ENVIRONMENT

Helping Feed the World Population. Gebisa Ejeta, Distinguished Professor of Agronomy, received the World Food Prize for developing drought- and parasitic weed- resistant sorghum varieties.

Enhancing Nutritional Quality. Hold promise to combat nutritional deficiency in developing countries and macular degeneration in the elderly. Agronomy plant scientists have helped to find a way to change nutritionally weak corn into corn that's rich in provitamin A carotenoids which the body converts into vitamin A.

SOIL AND LAND USE

Helping Farmers Improve Soil Health. Help famers improve soil health and resilience by integrating cover crops and no-till into their production systems. Such systems contribute to long-term sustainability.

Creating Tools that Improve Land Use & Ecosystem Services. Develop mapping, assessment and prediction tools to improve land use and increase crop yields, biomass productions, and community planning.

WATER, AIR AND CLIMATE

Helping to Improve Water Quality. Conduct water-quality monitoring studies to assess contaminant sources and design best management and remediation tools.

Saving Lives with Improved Weather Forecasting Technology. The Indiana Climate Office is the state archive of official daily and hourly weather observations recorded throughout Indiana and works in a predictive manor by using historical data to create predictive tools for the future.

Pictured at left from top: Dr. Dan Quinn, Dr. Laura Bowling, Dr. Eileen Kladivko, Dr. Gebisa Ejeta, and Dr. Ron Turco

RONALD TURCO
DEPARTMENT HEAD

rturco@purdue.edu | 765.494.4773

915 Mitch Daniels Blvd, West Lafayette, IN 47907
College of Agriculture, Purdue University

Faculty by Research Area

CROPS & THE CHANGING ENVIRONMENT

Joseph Anderson	janderson@purdue.edu
Shaun Casteel	scasteel@purdue.edu
Gebisa Ejeta	gejeta@purdue.edu
Bruce Erickson	berickso@purdue.edu
Corey Gerber	cgerber@purdue.edu
Yiwei Jiang	yjiang@purdue.edu
Keith Johnson	johnsonk@purdue.edu
Jianxin Ma	maj@purdue.edu
Mohsen Mohammadi	mohamm20@purdue.edu
Daniel Quinn	djquinn@purdue.edu
Katy Martin Rainey	krainey@purdue.edu
Torbert Rocheford	torbert@purdue.edu
Lee Schweitzer	lschweit@purdue.edu
Daniel Szymanski	dszyman@purdue.edu
Mitch Tuinstra	drmitch@purdue.edu
Jeffrey Volenec	jvolenec@purdue.edu
Tony Vyn	tvyn@purdue.edu
Diane Wang	drwang@purdue.edu
Roland Wilhelm	rcwilhelm@purdue.edu
Cankui Zhang	ckzhang@purdue.ed

Dr. Jianxin Ma

Unmanned aerial vehicle

SOIL & LAND USE

Shalamar Armstrong	sarmstro@purdue.edu
Sylvie Brouder	sbrouder@purdue.edu
James Camberato	jcambera@purdue.edu
Melba Crawford	melbac@purdue.edu
Cliff Johnston	clays@purdue.edu
Eileen Kladivko	kladivko@purdue.edu
Cindy Nakatsu	cnakatsu@purdue.edu
Siddhartho Paul	sspaul@purdue.edu
Yichao Rui	ruiy@purdue.edu
Darrell Schulze	dschulze@purdue.edu
Gary Steinhardt	gsteinha@purdue.edu

WATER, AIR & CLIMATE

Laura Bowling	bowling@purdue.edu
Richard Grant	rgrant@purdue.edu
Beth Hall	hall556@purdue.edu
Linda Lee	lslee@purdue.edu
Pratishtha Poudel	ppoudel@purdue.edu
Ronald Turco	rturco@purdue.edu
Quinlai Zhuang	qzhuang@purdue.edu

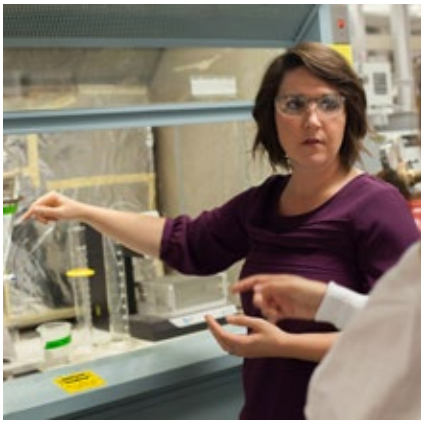
PURDUE UNIVERSITY®
Agricultural Research and Graduate Education

ag.purdue.edu/agry
ag.purdue.edu/arge

06.2023 EA/EO

DEPARTMENT OF

AGRICULTURAL AND BIOLOGICAL ENGINEERING



Research Overview

The Department of Agricultural and Biological Engineering (ABE) research focuses on the application of engineering principles to biological systems, resulting the creation of new products and practices that improve the quality of human life. Across the world, we need increased food production, new energy sources, healthcare solutions, environmentally friendly technologies. ABE reserarch is advancing solutions to Grand Challenges such as food, energy, water, environment, and health.

Research Areas

- AGRICULTURAL SYSTEMS, SAFETY, AND HEALTH
- BIOLOGICAL ENGINEERING
- DATA SCIENCE AND DIGITAL AGRICULTURE
- ENVIRONMENTAL AND NATURAL RESOURCES ENGINEERING
- FOOD, PHARMACEUTICAL, AND BIOLOGICAL PROCESS ENGINEERING
- MACHINE SYSTEMS ENGINEERING

Research Centers

- LORRE - INTEGRATIVE CENTER FOR BIOTECHNOLOGY & ENGINEERING
- MAHA RESEARCH CENTER - THE MAHA FLUID POWER RESEARCH CENTER

Pictured at left from top: Dr. Keith Cherkauer, Dr. Jian Jin, Dr. Abigail Engelberth, Dr. Mohit Verma and Dr. Andrea Vacca

NATHAN MOSIER
DEPARTMENT HEAD

mosiern@purdue.edu | 765.494.1162

225 South University Street, West Lafayette, IN 47907
Purdue University College of Agriculture

Faculty by Research Area

AGRICULTURAL SYSTEMS, SAFETY, AND HEALTH

Kingsly Ambrose	rambrose@purdue.edu
Vincent Duffy	duffy@purdue.edu
Shawn Ehlers	sehlers@purdue.edu
William Field	field@purdue.edu
Roger Tormoehlen	torm@purdue.edu

BIOLOGICAL ENGINEERING

Somali Chaterji	schaterji@purdue.edu
Kari Clase	klclase@purdue.edu
Meng Deng	deng65@purdue.edu
Abigail Engelberth	aengelbe@purdue.edu
Michael Ladisch	ladisch@purdue.edu
Martin Okos	okos@purdue.edu
D. Marshall Porterfield	porterf@purdue.edu
Caitlin Proctor	caitlin-proctor@purdue.edu
Jenna Rickus	rickus@purdue.edu
Kurt Ristroph	ristroph@purdue.edu
Halis Simsek	simsek@purdue.edu
Mohit Verma	msverma@purdue.edu

DATA SCIENCE AND DIGITAL AGRICULTURE

Dennis Buckmaster	dbuckmas@purdue.edu
Somali Chaterji	schaterji@purdue.edu
Keith Cherkauer	cherkaue@purdue.edu
Bernard Engel	engelb@purdue.edu
Margaret Gitau	mgitau@purdue.edu
Klein Ileleji	ileleji@purdue.edu
Jian Jin	jinjian@purdue.edu
Ankita Raturi	ankita@purdue.edu
Dharmendra Saraswat	saraswat@purdue.edu
Robert Stwalley	rms3@purdue.edu
Mohit Verma	msverma@purdue.edu

ENVIRONMENTAL AND NATURAL RESOURCES ENGINEERING

Natalie Carroll	ncarroll@purdue.edu
Teresa Carvajal	tcarvaja@purdue.edu
Keith Cherkauer	cherkaue@purdue.edu
Bernard Engel	engelb@purdue.edu
Dennis Flanagan	flanagan@purdue.edu
Jane Frankenberger	frankenb@purdue.edu
Margaret Gitau	mgitau@purdue.edu
Jiqin Ni	jiqin@purdue.edu
Caitlin Proctor	caitlin-proctor@purdue.edu
Dharmendra Saraswat	saraswat@purdue.edu
Halis Simsek	simsek@purdue.edu
Shweta Singh	singh294@purdue.edu

FOOD, PHARMACEUTICAL, AND BIOLOGICAL PROCESS ENGINEERING

Kingsly Ambrose	rambrose@purdue.edu
Teresa Carvajal	tcarvaja@purdue.edu
Kari Clase	klclase@purdue.edu
Meng Deng	deng65@purdue.edu
Abigail Engelberth	aengelbe@purdue.edu
Klein Ileleji	ileleji@purdue.edu
Michael Ladisch	ladisch@purdue.edu
Nathan Mosier	mosiern@purdue.edu
Ganesan Narsimhan	narsimha@purdue.edu
Martin Okos	okos@purdue.edu
Kurt Ristroph	ristroph@purdue.edu
Shweta Singh	singh294@purdue.edu

MACHINE SYSTEMS ENGINEERING

Dennis Buckmaster	dbuckmas@purdue.edu
Sadegh Dabiri	dabiri@purdue.edu
John Evans	jevansiv@purdue.edu
Jian Jin	jinjian@purdue.edu
John Lumkes	lumkes@purdue.edu
Lizhi Shang	shangl@purdue.edu
Robert Stwalley	rms3@purdue.edu
Andrea Vacca	avacca@purdue.edu

PURDUE UNIVERSITY®
Agricultural Research and Graduate Education

engineering.purdue.edu/abe
ag.purdue.edu/arge

06.2023 EA/EO

DEPARTMENT OF

BIOCHEMISTRY

Research Overview

The Department of Biochemistry is committed to basic research and training undergraduate and graduate students for careers in biochemistry, molecular biology, medicine, health sciences, and related life sciences. Our faculty, graduate students, and staff are located in the Biochemistry Building with additional offices and laboratories in the Hansen Life Science Research Building, Whistler Agricultural Research Building and Hockmeyer Hall of Structural Biology.

The research programs of the department include both agricultural and biomedical biochemistry.

Research Areas

- METABOLIC AND NATURAL PRODUCT BIOCHEMISTRY
- OMICS: GENOMICS, PROTEOMICS AND METABOLOMICS
- CANCER BIOCHEMISTRY
- EPIGENETICS AND GENE EXPRESSION
- STRUCTURE, DYNAMICS AND FUNCTION OF BIOLOGICAL MACROMOLECULES
- BIOINFORMATICS AND COMPUTATIONAL GENOMICS

Affiliated Units

- PURDUE CENTER FOR CANCER RESEARCH
- INSTITUTE OF DRUG DISCOVERY
- CENTER FOR PLANT BIOLOGY
- INSTITUTE FOR INTEGRATIVE NEUROSCIENCE
- BINDLEY BIOSCIENCES CENTER
- INSTITUTE FOR INFLAMMATION, IMMUNOLOGY AND INFECTIOUS DISEASE

Pictured at left from top: graduate student Mackenzie Chapman, postdoc Pan Liao, Dr. Joe Ogas with students, postdoc Mohd Saleem Dar, and Dr. Mark Hall's lab group

JOE OGAS
DEPARTMENT HEAD

ogas@purdue.edu | 765.494.1600

175 South University Street, West Lafayette, IN 47907
Purdue University College of Agriculture

Faculty and Research Areas

Scott Briggs sdbriggs@purdue.edu
Role of histone methylation in gene expression and oncogenesis

Clint Chapple chapple@purdue.edu
Biochemistry and molecular biology of plant secondary metabolism

Kyle Cottrell cottrellka@purdue.edu
RNA editing, post-transcriptional regulation, and cancer

Brian Dilkes bdilkes@purdue.edu
Plant Genetics

Natalia Dudareva dudareva@purdue.edu
Plant biochemistry and molecular biology

James Forney forney@purdue.edu
Regulation of differentiation in protozoa

Barbara Golden barbgolden@purdue.edu
Structural basis for RNA function

Humaira Gowher hgowher@purdue.edu
Regulation of DNA methylation in development and disease

Mark Hall mchall@purdue.edu
Regulation of the cell cycle by ubiquitin-dependent proteolysis; protein mass spectrometry

Majid Kazemian kazemian@purdue.edu
Research area: Studying gene regulation in viral associated cancers, autoimmune disorders, and infectious diseases

Ann Kirchmaier kirchmaier@purdue.edu
Epigenetic processes that mediate heritable modifications to chromatin

Xing Liu xingliu@purdue.edu
Roles and regulations of ubiquitin-proteasome dependent protein degradation

Andrew Mesecar amesecar@purdue.edu
Gene-to Lead Drug Discovery

Joe Ogas ogas@purdue.edu
Regulation of cell identity, signal transduction, chromatin remodeling

Sujith Puthiyaveetil spveetil@purdue.edu
Genetic and molecular control of photosynthetic light utilization

W. Andy Tao watao@purdue.edu
Proteomics and biological mass spectrometry

Elizabeth Tran ejtran@purdue.edu
RNA helicases and Post-transcriptional gene regulation

Vikki Weake vweake@purdue.edu
Chromatin modifying complexes in Drosophila development as a model for neurodegenerative disease and cancer

Jen Wisecaver jwisecav@purdue.edu
The evolution of eukaryotic chemodiversity using genomics and phylogenetics

CLINICAL TEACHING FACULTY

Orla Hart ohart@purdue.edu
Clinical Teaching Assistant Professor

RESEARCH FACULTY

Hana Hall hallh@purdue.edu
Research Assistant Professor

JOINT/COURTESY APPOINTMENT FACULTY

Seema Mattoo smattoo@purdue.edu
(Biochemistry, Signal Transduction, and Microbiology) Investigation of Fic domain containing proteins in Cellular Signaling. Post-translational modification of proteins is a common theme in signal transduction.

John Morgan jamorgan@purdue.edu
Metabolic engineering of photosynthetic microbes and mathematical modeling of metabolism and transport of plant volatiles

Pete Pascuzzi ppascuzz@purdue.edu
Bioinformatics; research data management; chromatin organization; DNA replication

DEPARTMENT OF

BOTANY AND PLANT PATHOLOGY

Research Overview

The Department of Botany and Plant Pathology includes the disciplines of plant biology, plant pathology and weed science. Research in this department addresses both fundamental questions about the biology of plants and their pathogens as well as more applied problems focused on the management and control of weeds and plant diseases.

Research Programs

- CELL AND DEVELOPMENTAL BIOLOGY
- CROP PROTECTION
- DISEASE MANAGEMENT AND EPIDEMIOLOGY
- MYCOLOGY
- PLANT AND FUNGAL BIOCHEMISTRY
- PLANT ECOLOGY AND EVOLUTION
- PLANT GENETICS AND GENOMICS
- PLANT NEMATOLOGY
- PLANT PHYSIOLOGY
- PLANT-PATHOGEN INTERACTIONS
- WEED BIOLOGY
- WEED MANAGEMENT

Pictured at left from top: Dr. Daniel Szymanski, Dr. William Johnson, Dr. Jin-Rong Xu, Dr. M. Catherine Aime and Dr. Tesfaye Mengiste

TESFAYE MENGISTE
DEPARTMENT HEAD

mengiste@purdue.edu

915 Mitch Daniels Blvd, West Lafayette, IN 47907
College of Agriculture, Purdue University

Faculty by Research Area

PLANT BIOLOGY

Leonor Boavida	lboavida@purdue.edu
Zhixiang Chen	zhixiang@purdue.edu
Jeneen Fields	jeneenfields@purdue.edu
Morgan Furze	mfurze@purdue.edu
Anjali Iyer-Pascuzzi	asi2@purdue.edu
Gurmukh Johal	gjohal@purdue.edu
Sharon Kessler	kessles@purdue.edu
Damon Lisch	dlisch@purdue.edu
Scott McAdam	smcadam@purude.edu
Gordon McNickle	gmcnickl@purdue.edu
Michael Mickelbart	mickelbart@purdue.edu
Christopher Oakley	oakley@purdue.edu
Robert Pruitt	pruittr@purdue.edu
Christopher Staiger	staiger@purdue.edu
Daniel Szymanski	dszyman@purdue.edu
Gyeong Mee Yoon	young@purdue.edu
Yun Zhou	zhou750@purdue.edu

Anjali Iyer-Pascuzzi is one of the first to examine the molecular processes that underlie infection by soil microbes.

Chris Oakley's research is driven by understanding the mechanisms of how natural plant populations adapt to local conditions.

PLANT PATHOLOGY

M. Catherine Aime	maime@purdue.edu
Janna Beckerman	jbeckerm@purdue.edu
Guohong Cai	cai192@purdue.edu
Zhixiang Chen	zhixiang@purdue.edu
Christian Cruz	cruz113@purdue.edu
Stephen Goodwin	sgoodwin@purdue.edu
Anjali Iyer-Pascuzzi	asi2@purdue.edu
Gurmukh Johal	gjohal@purdue.edu
L. Sue Loesch-Fries	loeschfr@purdue.edu
Tesfaye Mengiste	mengiste@purdue.edu
Gerald Leo Miller Jr.	turfpath@purdue.edu
Christopher Staiger	staiger@purdue.edu
Darcy Telenko	dtelenko@purdue.edu
Jin-Rong Xu	jinrong@purdue.edu
Lei Zhang	leizhang@purdue.edu

WEED SCIENCE

Kevin Gibson	kgibson@purdue.edu
William Johnson	wgj@purdue.edu
Bryan Young	bryanyoung@purdue.edu

DEPARTMENT OF

ENTOMOLOGY

Research Overview

The Department of Entomology's research portfolio consists of basic science that builds on strengths in insect – insect biodiversity, plant interactions, and applied pest management research focused on stakeholder needs and priorities. We work on a range of insect problems using diverse tool-sets and varied disciplinary approaches.

Research Areas

- HOST PLANT-INSECT INTERACTIONS
- ARTHROPOD MOLECULAR BIOLOGY & GENOMICS
- INTERNATIONAL COOPERATION & DEVELOPMENT
- ENVIRONMENTAL & EVOLUTIONARY ENTOMOLOGY
- INSECT SCIENCE EDUCATION
- INTEGRATED PEST MANAGEMENT
- FORENSICS

Research Centers

- CENTER FOR ENVIRONMENTAL AND REGULATORY INFORMATION SYSTEMS (CERIS)
- CENTER FOR URBAN AND INDUSTRIAL PEST MANAGEMENT (CUIPM)
- NATIONAL AGRICULTURAL PEST INFORMATION SYSTEM (NAPIS)
- NATIONAL PESTICIDE INFORMATION RETRIEVAL SYSTEM (NPIRS)
- NATIONAL PLANT DIAGNOSTIC NETWORK (NPDN)
- PURDUE ENTOMOLOGICAL RESEARCH COLLECTION(PERC)

Pictured at left from top: a Varroa mite on a bee, Dr. Laura Ingwell, Dr. Catherine Hill, Dr. Linda Mason and Dr. Christian Krupke

CATHERINE HILL
DEPARTMENT HEAD

hillca@purdue.edu | 765.494.4554

901 Mitch Daniels Blvd, West Lafayette, IN 47907-2089
Purdue University College of Agriculture

Signature Research Areas

I	Host Plant-Insect Interactions
II	Arthropod Molecular Biology & Genomics
III	International Cooperation & Development
IV	Environmental & Evolutionary Entomology
V	Insect Science Education
VI	Integrated Pest Management
VII	Forensics

Baributsa, Dieudonné - III, VI dbaribut@purdue.edu
International IPM, Postharvest Entomology

Bledsoe, Larry - IV, VI lbledsoe@purdue.edu
Indiana State Survey Coordinator, Cooperative Ag Pest Survey (CAPS)

Buczkowski, Grzegorz - II, VI gbuczkow@purdue.edu
Ecology and Evolution of Urban and Invasive Arthropods

Cameron, Stephen - II, IV cameros@purdue.edu
Insect Evolutionary Biology

Couture, John - I, IV couture@purdue.edu
Plant-Insect Chemical Ecology

Creighton, Curtis - I, IV, V creighto@purdue.edu
Evolutionary Ecology and Ecoimmunology

Enders, Laramy - I, II, IV lenders@purdue.edu
Plant-Insect-Microbe Interactions, Microbiomes

Ginzel, Matthew - I, IV mginzel@purdue.edu
Forest Entomology and Chemical Ecology

Gondhalekar, Ameya - II, VI a meyag@purdue.edu
Urban Pest Management and Insect Toxicology

Hans, Krystal - IV, V, VII hans3@purdue.edu
Forensic Sciences

Harpur, Brock - II, IV bharpur@purdue.edu
Evolutionary Biology

Hill, Catherine - II, VI hillca@purdue.edu
Biology and Control of Arthropod Disease Vectors

Hill, Mike - VI mikehill@purdue.edu
Director, Center for Environmental and Regulatory Information Systems

Holland, Jeffrey - IV jdhollan@purdue.edu
Landscape Ecology and Insect Biodiversity

Ingwell, Laura - I, VI lingwell@purdue.edu
Protected Production Entomlogy

Kaplan, Ian - I, IV, VI ikaplan@purdue.edu
Ecology of Herbivores and Batural Enemies

Krupke, Christian - I, IV, VI ckrupke@purdue.edu
Field Crop Pest Management

Long, Elizabeth- I, IV, VI long132@purdue.edu
Horticultural Entomology

Mason, Linda - V, VI lmason@purdue.edu
Behavior, Food Pest IPM

Obermeyer, John - VI obe@purdue.edu
Integrated Pest Management Specialist

Pittendrigh, Barry - I, II, III, IV, VI pittendr@purdue.edu
Insect Genomics/Toxicology/International Development

Richmond, Douglas - I, III, IV, VI drichmond@purdue.edu
Soil Insect Ecology, Turfgrass IPM

Sadof, Clifford - I, III, IV, VI csadof@purdue.edu
Ornamental Pest Management

Schemerhorn, Brandi - I, II bschemer@purdue.edu
Population Genetics

Smith, Aaron - II, IV smit3866@purdue.edu
Insect Systematics

Subramanyam, Shubha - I, II shubha@purdue.edu
Plant-Insect Interactions

Yaninek, Steve - III, IV, VI yaninek@purdue.edu
Invasion Biology

Zhang, Lei - I, VI leizhang@purdue.edu
Plant-Nematode Interactions

DEPARTMENT OF

FORESTRY AND NATURAL RESOURCES

Research Overview

Research in Forestry and Natural Resources is focused on discovering new knowledge that advances the science, management, and sustainable use of natural resources. Strong interdisciplinary research addresses current issues in forest, wildlife, and fisheries management, as well as the ecology of natural systems, digital tools for assessing natural resources, genetics, hardwood products innovations, and social science in natural resource decisions. Research groups focus on:

FOREST SCIENCE

Advancing basic knowledge about forest ecosystems, as well as the physiology, genetics, and growth of hardwood trees, with the goal of providing healthy and sustainable forests in the Central Hardwood Region, including both in rural and urban settings.

WILDLIFE SCIENCE

Increasing and disseminating knowledge about key wildlife species, populations, and communities, and understanding how they relate to ecosystem structure and functioning as well as to environmental changes.

FISHERIES & AQUATIC SCIENCE

Developing and disseminating knowledge about aquatic animals and their habitats, including aquaculture, interactions between aquatic and terrestrial ecosystems, and the fates and effects of pollutants, as well as appropriate management practices for the protection and use of aquatic ecosystems.

ECOLOGY OF NATURAL SYSTEMS

Developing knowledge of factors influencing complex interactions in ecological systems at multiple scales of biological organization, ranging from physiological to community and eco-region units, with an emphasis on effects of human-related drivers such as climate and land-use change, as well as tactics for restoring and conserving ecological processes.

GENETICS

Applying advanced molecular and analytical methods to a variety of genetic questions (e.g., genetic diversity, relatedness, heritability) in populations of important wildlife and tree species.

DIGITAL NATURAL RESOURCES

Developing integrated systems of quantitative techniques for assessing and analyzing forest and associated ecosystems. Efforts focus on advancing quantitative methods related to statistical, simulation, and analytical modeling of natural systems at varying spatial and temporal scales.

NATURAL RESOURCE SOCIAL SCIENCE

Studying the social, political, and economic implications of alternative public policies with regard to the protection, management, and use of natural resources. The awareness, attitudes and behaviors of individuals and groups as these relate to natural resource management are also explored.

HARDWOOD PRODUCTS INNOVATIONS

Assisting hardwood products industry in developing new knowledge for reducing raw material costs, improving processing technologies, and encouraging innovation in product development through science and engineering.

Pictured at left from top: Dr. Jingjing Liang, Dr. Liz Flaherty, Dr. Reuben Goforth, and Dr. Eva Haviarova

JESSICA GUREVITCH
DEPARTMENT HEAD

jpgurevi@purdue.edu | 765.494.3590

715 Mitch Daniels Blvd, West Lafayette, IN 47907-2061
College of Agriculture, Purdue University

Associate Research Centers

- CENTER FOR GLOBAL SOUNDSCAPES
- HARDWOOD TREE IMPROVEMENT AND REGENERATION CENTER (HTIRC)
- ILLINOIS-INDIANA SEA GRANT PROGRAM (IISG)
- TROPICAL HARDWOOD TREE IMPROVEMENT AND REGENERATION CENTER (TROPHTIRC)

Songlin Fei, a forest ecologist, has been a pioneer in the use of remote sensing in digital forestry efforts.

Faculty and Research Areas

Brown, Paul	Fisheries and Aquatic Sciences	pb@purdue.edu
Carlton, J. Stuart	Aquaculture Economics	carltons@purdue.edu
Christie, Mark	Conservation Genetics	markchristie@purdue.edu
Collingsworth, Paris	Great Lakes Ecosystem Science	pcolling@purdue.edu
Couture, John	Plant and Insect Chemical Ecology	couture@purdue.edu
DeWoody, J. Andrew	Genetics, Wildlife Biology	dewoody@purdue.edu
Dunning, Jr., John B.	Wildlife Ecology	jdunning@purdue.edu
Fei, Songlin	Quantitative Analysis of Natural Resources	sfei@purdue.edu
Flaherty, Elizabeth	Wildlife Ecology and Habitat Management	eflaher@purdue.edu
Furze, Morgan	Ecology	mfurze@purdue.edu
Gazo, Rado	Wood Processing	gazo@purdue.edu
Ginzel, Matthew	Forest Entomology, Chemical Ecology	mginzel@purdue.edu
Goforth, Reuben	Aquatic Ecosystems	rgoforth@purdue.edu
Hardiman, Brady	Urban Forest Ecosytems	hardimanb@purdue.edu
Haviarova, Eva	Wood Products	ehaviar@purdue.edu
Höök, Tomas	Fisheries and Aquatic Sciences	thook@purdue.edu
Hosen, Jacob	Internet of Things and Ecological Analytics	jhosen@purdue.edu
Hoverman, Jason	Vertebrate Ecology, Disease Ecology	jhoverm@purdue.edu
Jacobs, Douglass	Forest Regeneration and Restoration	djacobs@purdue.edu
Jacobs, Elin	Ecohydrology	ekarlsso@purdue.edu
Jenkins, Michael	Forest Ecology	jenkinma@purdue.edu
Liang, Jingjing	Biodiversity and Ecosystem Processes	jjliang@purdue.edu
Ma, Zhao	Natural Resource Social Science	zhaoma@purdue.edu
Pijanowski, Bryan	Spatial Modeling, Land-Use Change, Soundscapes	bpijanow@purdue.edu
Prokopy, Linda	Natural Resource Social Science	lprokopy@purdue.edu
Quagrainie, Kwamena	Aquaculture Marketing	kquagrai@purdue.edu
Quesada, Henry	Hardwood Products	quesada@purdue.edu
Saunders, Michael	Silviculture	saunder@purdue.edu
Sepúlveda, Maria	Ecotoxicology	mssepulv@purdue.edu
Shao, Guofan	Forestry, Remote-Sensing, GIS	shao@purdue.edu
Swihart, Robert	Wildlife Ecology	rswihart@purdue.edu
Wagner, Robert	Silviculture and Forest Ecology	rgwagner@purdue.edu
Wainwright, Dylan	Fisheries	dkwainwr@purdue.edu
Williams, Rod	Wildlife Science, Genetics	rodw@purdue.edu
Zhou, Mo	Optimal Decision Making in Forest Management	mozhou@purdue.edu
Zollner, Patrick	Wildlife Science	pzollner@purdue.edu

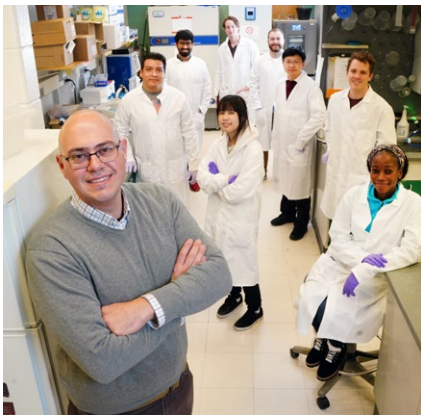
PURDUE UNIVERSITY
Agricultural Research and Graduate Education

ag.purdue.edu/fnr
ag.purdue.edu/arge

06.2023 EA/EO

DEPARTMENT OF

FOOD SCIENCE



Research Overview

The Department of Food Science is committed to impacting the world food system and quality of life by educating and training students for careers in industry, government, and academia. Our mission is to engage in discovery-driven activities leading to innovative learning and outreach that: enhances health, safety, quality, and sustainability of foods; prepares the next generation of leaders in food science; and addresses stakeholder needs. The Department of Food Science has developed four key areas of expertise, each with several major thrusts.

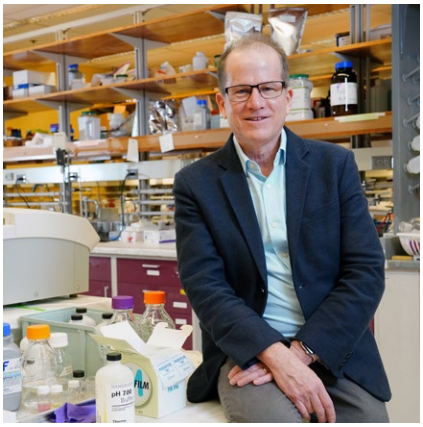
Research Areas

FOOD CHEMISTRY, STRUCTURE, AND FUNCTION

Identifies and creates new aspects of composition, structure, and other functional properties of whole foods and food constituents using chemistry, biochemistry, and material sciences to improve the quality, nutrition, affordability, stability, and sustainability of food and food-related products

FOODS FOR HEALTH

Applies food and biological science principles to the study of whole foods, macro- and micro-nutrients, and bioactive components as a means to improve consumer health and identifies mechanisms by which these effects arise (such as the molecular interactions of food components in biological systems and the role of the gut microbiome)



FOOD PROCESSING & TECHNOLOGY DEVELOPMENT

Integrates engineering, chemistry, nanotechnology, environmental sciences, and microbiology through food processing operations to produce safe, nutritious, sustainable, and value-added products

FOOD SAFETY AND MICROBIOLOGY

Studies pathogenic, beneficial (probiotic and fermentative), and spoilage microbes and their interaction with food and the host, and develops novel inactivation and detection methods for pathogens

Pictured at left from top: Dr. Lavanya Reddivari, Dr. Stephen Lindemann, Dr. Haley F. Oliver, Dr. Bruce R. Hamaker and Dr. Eun Joong Oh

SENAY SIMSEK
DEPARTMENT HEAD

ssimsek@purdue.edu | 765.494.8256

745 Agriculture Mall Drive, West Lafayette, IN 47907
Purdue University, College of Agriculture

Faculty by Research Area

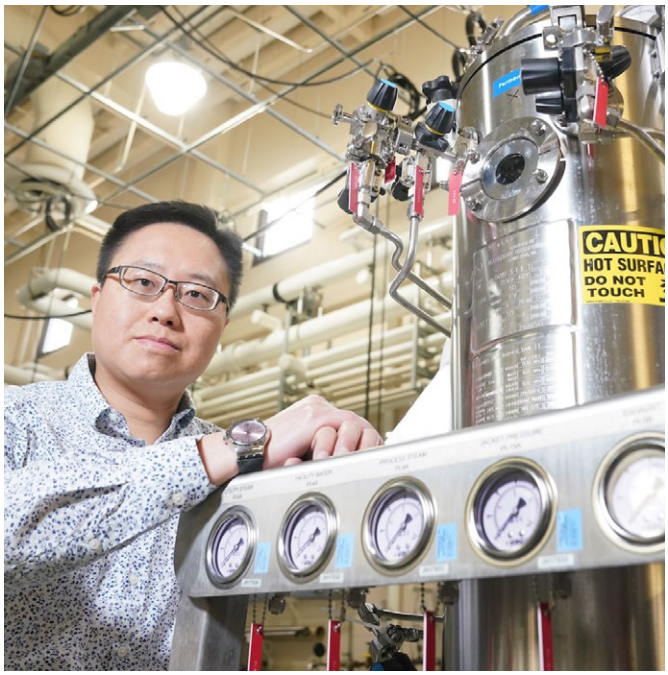
FOOD CHEMISTRY, STRUCTURE, AND FUNCTION

Thaisa Cantu-Jungles	tcantuju@purdue.edu
Da Chen	chen3370@purdue.edu
Bruce R. Hamaker	hamkerb@purdue.edu
Owen Jones	joneso@purdue.edu
Jozef Kokini	jkokini@purdue.edu
Andrea Liceaga	aliceaga@purdue.edu
Lisa J. Mauer	mauerl@purdue.edu
Lavanya Reddivari	lreddiva@purdue.edu
Brad Reuhs	breuhs@purdue.edu
Senay Simsek	ssimsek@purdue.edu
Weicang Wang	wang6205@purdue.edu
Yuan Yao	yao1@purdue.edu

FOODS FOR HEALTH

Arun K. Bhunia	bhunia@purdue.edu
Thaisa Cantu-Jungles	tcantuju@purdue.edu
Yaohua "Betty" Feng	yfengchi@purdue.edu
Bruce R. Hamaker	hamakerb@purdue.edu
Kee-Hong Kim	kim618@purdue.edu
Andrea Liceaga	aliceaga@purdue.edu
Stephen Lindemann	lindemann@purdue.edu
Lisa J. Mauer	mauerl@purdue.edu
Eun Joong Oh	oh263@purdue.edu
Lavanya Reddivari	lreddiva@purdue.edu
Fernanda San Martin	fsanmartin@purdue.edu
Senay Simsek	ssimsek@purdue.edu
Weicang Wang	wang6205@purdue.edu

Dr. Lisa Mauer's research is aimed at improving the delivery of thiamin in food products. Their goals are to identify all factors that impact the stability of thiamin in food products (including those containing whole and refined wheat, rice, and corn) from production to storage, and to determine if new, more stable, salt forms of thiamin can be produced.



Dr. Jen-Yi Huang, Associate Professor of Food Science

FOOD PROCESSING & TECHNOLOGY DEVELOPMENT

Bruce M. Applegate	applegab@purdue.edu
Christian E. Butzke	cbutzke@purdue.edu
Da Chen	chen3370@purdue.edu
Carlos M. Corvalan	corvalac@purdue.edu
Jen-Yi Huang	huang874@purdue.edu
Jozef Kokini	jkokini@purdue.edu
Dharmendra Mishra	mishradh@purdue.edu
Haley F. Oliver	hfoliver@purdue.edu
Brad Reuhs	breuhs@purdue.edu
Fernanda San Martin	fsanmartin@purdue.edu
Deandrae Smith	smit4870@purdue.edu
Yuan Yao	yao1@purdue.edu

FOOD SAFETY AND MICROBIOLOGY

Bruce M. Applegate	applegab@purdue.edu
Arun K. Bhunia	bhunia@purdue.edu
Amanda Deering	adeering@purdue.edu
Yaohua "Betty" Feng	yfengchi@purdue.edu
Stephen Lindemann	lindemann@purdue.edu
Dharmendra Mishra	mishradh@purdue.edu
Eun Joong Oh	oh263@purdue.edu
Haley F. Oliver	hfoliver@purdue.edu
Deandrae Smith	smit4870@purdue.edu

PURDUE UNIVERSITY
Agricultural Research and Graduate Education

ag.purdue.edu/foodsci
ag.purdue.edu/arge

08.2023 EA/EO

DEPARTMENT OF

HORTICULTURE & LANDSCAPE ARCHITECTURE

Research Overview

Horticulture applies knowledge from fields of science and biology to improve production and develop sustainable practices for high value, intensively cultivated crops including those used for food, landscapes, ornamentals and medicine. In Landscape Architecture, we analyze, plan, and design the natural and built environment using science, art, and technology.

Combining knowledge from biochemistry, physiology, molecular biology, genetics and ecology with aspects of design, function, and beauty, horticulture and landscape architecture includes people with a broad range of interests.

Research Areas

- Sustainable practices for horticultural crop production
- Alternative crops and cultivars adapted to low-input and organic production systems
- Improvement of postharvest fruit quality
- Controlled environment agriculture
- Herbicide physiology, weed ecology, and mechanisms of herbicide resistance
- Plant interactions with soil microbial communities
- Plant growth and development
- Plant responses to the environment and abiotic stress
- Adapting crops to climate change
- Epigenetic regulation
- Genome editing
- Systems biology
- Plant metabolic biochemistry
- Plant natural product discovery
- Landscape systems and design; land use and planning; landscape ecology
- Plant Nutrition
- Drought Tolerance and Water Management
- Horticultural marketing
- Horticultural education

Pictured at left from top: Dr. Lori Hoagland, Dr. Paul Siciliano Jr, Dr. Aaron Patton, Dr. Ariana Torres and a Horticulture greenhouse at night

LINDA PROKOPY
DEPARTMENT HEAD

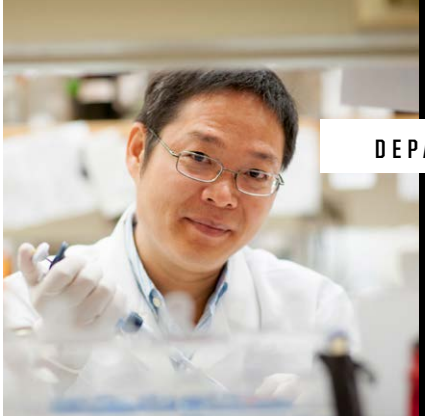
lprokopy@purdue.edu | 765.494.1300

625 Agriculture Mall Drive, West Lafayette, IN 47907-2010
Purdue University College of Agriculture

Josh Widhalm studies sea slugs to understand how some of the creatures are able to steal the organelles necessary for photosynthesis from the algae they eat.

Faculty Research Areas

Barbarash, David M.	Digital Landscape Representation	dbarbara@purdue.edu
Bigelow, Cale A.	Turfgrass Science; Soil Properties and Turfgrass Nutrition	cbigelow@purdue.edu
Bilenky, Moriah	Sustainable Horticulture	mbilenky@purdue.edu
Bressan, Ray	Stress Physiology	bressan@purdue.edu
Dana, Mike	Native Species for the Landscape	dana@purdue.edu
Dudareva, Natalia	Plant Biochemistry and Molecular Biology	dudareva@purdue.edu
Gómez, Celina	Controlled Environment Agriculture, Hydroponics, Plant Propagation	cgomezva@purdue.edu
Guan, Wenjing	Vegetable and Melon Crop Production	guan40@purdue.edu
Hallett, Steve	Sustainable Agriculture	halletts@purdue.edu
Handa, Avtar	Post Harvest and Molecular Biology	ahanda@purdue.edu
Hirst, Peter	Pomology	hirst@purdue.edu
Hoagland, Lori	Speciality Crop Production Systems	lhoaglan@purdue.edu
Huang, Yiwei	Landscape Performance and Landscape Ecology	huan1655@purdue.edu
Li, Ying	Functional Genomics; Plant Responses to the Environment	li2627@purdue.edu
Maynard, Elizabeth	Sustainable Vegetable Production	emaynard@purdue.edu
Meyers, Stephen	Specialty Crop Weed Science	slmeyers@purdue.edu
Mickelbart, Mike	Horticulture/Plant Physiology	mmickelb@purdue.edu
Mitchell, Cary	Controlled Environment Agriculture	cmitchel@purdue.edu
Nemali, Krishna	Controlled Environment Agriculture; Hydroponics, Indoor Farming, Floriculture	knemali@purdue.edu
Orvis, Kathryn	Horticulture/Youth Education	orvis@purdue.edu
Patton, Aaron	Turfgrass Management Systems, Turf Weed Science	ajpatton@purdue.edu
Porterfield, D. Marshall	Controlled Environment Agriculture	porterf@purdue.edu
Prokopy, Linda	Horticultural Social Science	lprokopy@purdue.edu
Raghothama, K.G.	Molecular Biology of Plant Nutrition	kgraghoth@purdue.edu
Rotar, Sean Michael	American Landscape History, Design Pedagogy	srotar@purdue.edu
Siciliano, Paul C Jr	History and Theory of Landscape Architecture, Purdue Arboretum	sicilian@purdue.edu
Thompson, Aaron	Human, Ecological, and Spatial Dimensions of Land Use Planning	awthomps@purdue.e
Torres, Ariana	Marketing of Specialty Crops	torres2@purdue.edu
Varala, Kranthi	Plant Abiotic Stress; Systems Biology	kvarala@purdue.edu
Widhalm, Joshua	Plant Natural Product Metabolism	jwidhalm@purdue.edu



DEPARTMENT OF

ANIMAL SCIENCES

Research Overview

Animal Sciences focuses on research and technology transfer for efficient and sustainable production of high quality animal products optimizing animal well-being, enhancement of the human diet, and advancement of sound environmental practices.

Our faculty has expertise in the disciplines of growth and development, nutrition, breeding and genetics, physiology, management, and animal well-being and behavior.

Research Areas

ANIMAL PRODUCTION & MANAGEMENT SYSTEMS

- Nutrient Utilization
- Environmental Stewardship
- Efficiency Production
- Food Animal Product Development
- Animal Health and Well-Being
- Improvement in Reproduction
- Genomic Selection
- Physiology
- Facility Design

GENE REGULATION, STEM CELL & DEVELOPMENTAL BIOLOGY

- Quantitaive Genetics
- Genomics
- Transgenic Biology
- Comparative Animal Health & Disease

MOLECULAR ANIMAL PHYSIOLOGY & METABOLISM

- Nutrient Utilization & Partitioning
- Digestive Physiology & Absorption
- Obesity/Diabetes
- Tissue Growth Regulation
- Physiology of Reproduction & Lactation
- Meat Science and Muscle Biology

FOOD QUALITY & FOOD SAFETY

- Pre-harvest Intervention Strategies
- Microbime Systems
- Stress and Immunology
- Enhanced Nutrient Profiling

Pictured at left from top: Dr. Shihuan Kuang, Dr. Luiz Brito, Dr. Kola Ajuwon, Dr. Marisa Erasmus and Dr. Paul Ebner.

PAUL EBNER
INTERIM DEPARTMENT HEAD

pebner@purdue.edu | 765.494.4806

270 S. Russell Street, West Lafayette, IN 47907
Purdue University College of Agriculture

Faculty by Research Area

Adeola, Olayiwola
ladeola@purdue.edu
Nutrition (non-ruminant)

Ajuwon, Kolapo
kajuwon@purdue.edu
Adipose Biology/
Nutritional Physiology

Allrich, Rodney D
rallrich@purdue.edu
Reproduction Physiology

Boerman, Jacquelyn
jboerma@purdue.edu
Dairy Nutrition and Management

Brito, Luiz F
britol@purdue.edu
Quantitative Genetics and Genomics

Cabot, Ryan A
rcabot@purdue.edu
Molecular Biology and Reproductive Physiology

Casey, Theresa M
theresa-casey@purdue.edu
Mammary Development and Neoplasia, Regulation of Lactation

Cheng, Heng-wei
Heng-Wei.Cheng@usda.gov
Animal Behavior and Well-Being

Croney, Candace C
ccroney@purdue.edu
Animal Behavior and Well-Being

Ebner, Paul D
pebner@purdue.edu
Microbiology, Microbiology, Pre-harvest Food Safety

Erasmus, Marisa A
merasmus@purdue.edu
Animal Behavior and Well-Being

Fernandez, Marcos
mfernandez@purdue.edu
Small Ruminant Nutrition and Management

Forsyth, Dale M
dforsyth@purdue.edu
Nutrition (non-ruminant)

Fraley, Greg
gfraley@purdue.edu
Poultry Neuroendocrinology and Welfare

Johnson, Jay S
jay.johnson2@usda.gov
Stress and Nutritional Physiology

Johnson, Timothy
john2185@purdue.edu
Food Animal Microbiome, Microbial Ecology

Karcher, Darrin M
dkarcher@purdue.edu
Poultry Management

Karcher, Elizabeth L
ekarcher@purdue.edu
Undergraduate Coordinator, Immunobiology and Nutrition Science (dairy)

Kim, Yuan "Brad"
bradkim@purdue.edu
Muscle Biology and Meat Science

Kuang, Shihuan
skuang@purdue.edu
Developmental Biology

Lemenager, Ronald P
rpl@purdue.edu
Ruminant Nutrition and Management, Beef

Machaty, Zoltan
zmachaty@purdue.edu
Graduate Coordinator
Reproductive Physiology and Developmental Biology

Markworth, James
jmarkwor@purdue.edu.
Muscle Biology

Minton, Nicholas
nminton@purdue.edu
Beef Cattle Systems and Beef Evaluation

Neary, Mike
mneary@purdue.edu
Ruminant Nutrition, Sheep

Pempek, Jessica
jessica.pempek@usda.gov
Animal Behavior and Well-Being

Pasternak, Alex
jpastern@purdue.edu
Reproductive Biology

Plaut, Karen I
kplaut@purdue.edu
Endrocrinology, Cell and Molecular Biology

Richert, Brian T
brichert@purdue.edu
Swine Nutrition and Management

Rojas, Hinayah
hrojasde@purdue.edu
Genomics & Animal Breeding

Schinckel, Allan P
aschinck@purdue.edu
Breeding and Genetics (swine)

Schoonmaker, Jon P
jschoonm@purdue.edu
Beef Cattle Nutrition