# Table of Contents

## Air and Water Quality
- Dr. Jay Harmon .................................................. 4
- Dr. Matt Helmers .................................................. 4
- Dr. Steve Hoff ..................................................... 4
- Dr. Jacek Koziel .................................................. 4
- Dr. Steve Mickelson ............................................. 5
- Dr. Ken Stalder .................................................. 11
- Dr. Michelle Soupir ............................................ 5
- Dr. Sunday Tim .................................................. 5

## Animal Health and Diseases
- Dr. Paulo Arruda ................................................. 12
- Dr. Rodney “Butch” Baker ..................................... 12
- Dr. Eric Burrough ............................................... 13
- Dr. Steve Ensley ............................................... 13
- Dr. Tim Frana ................................................... 13
- Dr. Phil Gauger .................................................. 13
- Dr. Pat Halbur ................................................... 13
- Dr. D.L. (Hank) Harris ......................................... 9
- Dr. Derald Holtkamp ............................................. 14
- Dr. Bruce Janke ................................................ 14
- Dr. John Johnson ................................................. 14
- Dr. Locke Karriker .............................................. 14
- Joann Kinyon .................................................... 15
- Dr. Darin Madson ............................................... 15
- Dr. Rodger Main ............................................... 15
- Dr. Suzanne Millman ........................................... 15
- Dr. Lisa Nolan .................................................. 16
- Dr. Annette O’Connor ......................................... 16
- Dr. Tanja Opriessnig ........................................... 16
- Dr. Alex Ramirez ............................................... 16
- Dr. Kent Schwartz ............................................. 16
- Dr. Glenn Songer ............................................... 17
- Dr. Greg Stevenson ............................................ 17
- Dr. John Thomson .............................................. 17
- Dr. Mike Yaeger ................................................ 17
- Dr. Kyoung-Jin Yoon .......................................... 17
- Dr. Jeff Zimmerman .......................................... 18

## Breeding and Genetics
- Dr. Tom Baas ................................................... 7
- Dr. Jack Dekkers ................................................ 8
- Dr. Dorian Garrick ............................................. 8
- Dr. John Mabry .................................................. 10
- Dr. Max Rothschild .......................................... 11
- Dr. Ken Stalder ................................................ 11
- Dr. Chris Tuggle ............................................... 12

## Composting
- Dr. Jay Harmon .................................................. 4

## Economics and Marketing
- Dr. Bruce Babcock ............................................. 5
- Shane Ellis ..................................................... 20
- Dr. Chad Hart .................................................. 6
- Dr. Dermot Hayes ............................................. 6
- Dr. David Hennessy .......................................... 6
- Dr. James Kliebenstein ....................................... 6
- Dr. John Lawrence ............................................ 6
- Dr. Lee Schulz .................................................. 7
<table>
<thead>
<tr>
<th>Topic</th>
<th>Contributors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities</td>
<td>Dr. Jay Harman</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Dr. Steve Hoff</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Dr. Mark Honeyman</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Dr. Hongwei Xin</td>
<td>5</td>
</tr>
<tr>
<td>Food Safety</td>
<td>Dr. Joe Cordray</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Dr. Ken Prusa</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Dr. Hank Harris</td>
<td>9</td>
</tr>
<tr>
<td>Manure and Nutrient Waste Management</td>
<td>Dr. Dan Anderson</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Dr. Antonio Mallarino</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Dr. John Sawyer</td>
<td>7</td>
</tr>
<tr>
<td>Meat Quality</td>
<td>Dr. Lance Baumgard</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Dr. Joe Cordray</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Dr. Elisabeth Huff-Lonergan</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Dr. Steven Lonergan</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Dr. John Mabry</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Dr. Ken Prusa</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Dr. Joe Sebranek</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Dr. Ken Stalder</td>
<td>11</td>
</tr>
<tr>
<td>Natural Resource and Ecology Management</td>
<td>Dr. Joe Colletti</td>
<td>12</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Dr. Nick Gabler</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Dr. Maynard Hogberg</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Dr. Mark Honeyman</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Dr. Brian Kerr</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Dr. John Patience</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Dr. Michael Spurlock</td>
<td>11</td>
</tr>
<tr>
<td>Production Management</td>
<td>Dr. Tom Baas</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Dr. Pat Halbur</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Dr. Jay Harmon</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Dr. Maynard Hogberg</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Dr. Mark Honeyman</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Dr. Locke Karriker</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Dr. John Mabry</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Dr. John Patience</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Dr. Jason Ross</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Dr. Ken Stalder</td>
<td>11</td>
</tr>
<tr>
<td>Reproduction</td>
<td>Dr. Tom Baas</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Dr. John Mabry</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Dr. Jason Ross</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Dr. Ken Stalder</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Dr. Jodi Sterle</td>
<td>11</td>
</tr>
<tr>
<td>Welfare</td>
<td>Dr. Tom Baas</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Dr. Anna Kerr Butters-Johnson</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Dr. Ken Stalder</td>
<td>11</td>
</tr>
<tr>
<td>Iowa Manure Management Action Group</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Iowa Pork Industry Center Staff</td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>ISU Extension Program Specialists</td>
<td></td>
<td>19</td>
</tr>
</tbody>
</table>
Dr. Dan Andersen  
Address: 3180 NSRIC  
Phone: 515-294-4210  
Email: dsa@iastate.edu  

Dr. Andersen’s areas of research are in manure and nutrient management, water quality, manure treatment and nutrient recovery, anaerobic digestion, and manure utilization.

Dr. Jay Harmon  
Address: 200 Davidson  
Phone: 515-294-0554  
Email: jharmon@iastate.edu  

Dr. Harmon’s areas of research are in livestock production systems, ventilation design and management, and odor dispersion and energy conservation.

Dr. Matt Helmers  
Address: 219B Davidson  
Phone: 515-294-6717  
Email: mhelmers@iastate.edu  

Dr. Helmers focuses his research on agricultural and water resources.

Dr. Steven Hoff  
Address: 212 Davidson  
Phone: 515-294-6180  
Email: hoffer@iastate.edu  

Dr. Hoff’s areas of research are in ventilation design, environmental climate control, and instrumentation. He also works in odor dispersion and management research.

Dr. Jacek Koziel  
Address: 3202 NSRIC  
Phone: 515-294-4206  
Email: koziel@iastate.edu  

Dr. Koziel’s research encompasses livestock odor and air quality engineering, including work on quantification and mitigation of emissions of odor, volatile organic compounds, ammonia, hydrogen sulfide, and particulate matter from livestock operations. He also works with non-destructive trace chemical analysis.
Dr. Xin’s research specializes in poultry and swine housing systems, environmental physiology, and measurement and mitigation of air emissions from animal feeding operations. He also is director of the Egg Industry Center at Iowa State University.

Dr. Michelle Soupir
Address: 3163 NSRIC
Phone: 515-294-2307
Email: msoupir@iastate.edu

Dr. Soupir’s research focuses on soil and water quality, nonpoint source pollution control, watershed management, and water quality monitoring. She uses both lab and field scale studies to examine the occurrence, fate and transport of pathogens, pathogen indicators and contaminants of emerging environmental concern (CoEECs) such as antibiotics and antibiotic-resistant bacteria to surface and groundwater systems.

Dr. Sunday Tim
Address: 213 Davidson
Phone: 515-294-4246
Email: tim@iastate.edu

Dr. Tim’s specialties are in water quality modeling, spatial decision support systems, environmental modeling, geographic information systems, virtual reality technology, environmental forensics, precision agriculture, and bioinformatics.

Dr. Steven Mickelson
Address: 104 Davidson
Phone: 515-294-1434
Email: estaben@iastate.edu

Dr. Mickelson is the chair of the Agricultural and Biosystems Engineering department. His research focuses on the evaluation of agricultural best management practices for determining their effectiveness in reducing chemical and soil losses to surface water bodies.

Dr. Hongwei Xin
Address: 3204 NSRIC
Phone: 515-294-4240
Email: hxin@iastate.edu

Dr. Xin’s research specializes in poultry and swine housing systems, environmental physiology, and measurement and mitigation of air emissions from animal feeding operations. He also is director of the Egg Industry Center at Iowa State University.

Dr. Bruce Babcock
Address: 468H Heady Hall
Phone: 515-294-5764
Email: babcock@iastate.edu

Dr. Babcock’s research interests include production economics, technological change, and agricultural policy. He also is director of the Center for Agricultural and Rural Development at Iowa State University.
Agricultural Economics

Dr. Chad Hart
Address: 468E Heady Hall
Phone: 515-294-9911
Email: chart@iastate.edu

Dr. Hart’s major interests are agricultural marketing, agricultural policy, and risk management.

Dr. Dermot Hayes
Address: 568C Heady Hall
Phone: 515-294-6185
Email: dhayes@iastate.edu

Dr. Hayes is the Pioneer Hi-Bred International Chair in agribusiness, and professor of economics and of finance at Iowa State University. In addition to his analysis of U.S. farm policy and international agricultural trade, his other research interests include food safety, livestock modeling, demand analysis, and commodity markets.

Dr. David Hennessy
Address: 578C Heady Hall
Phone: 515-294-6171
Email: hennessy@iastate.edu

Dr. Hennessy’s program of research emphasizes biosecurity as well as disease management policies and initiatives in controlling the extent and cost of animal disease. He is also interested in food quality and safety, the structure of animal production and processing, and how technology has shaped animal sector production.

Dr. James Kliebenstein
Address: 174C Heady Hall
Phone: 515-294-7111
Email: jklieben@iastate.edu

Dr. Kliebenstein’s interests include the areas of farm management, production economics, costs and benefits of integrated animal health management, costs and returns of agricultural production technologies, returns and cost of livestock production, and economic evaluation of risk management strategies.

Dr. John Lawrence
Address: 132 Curtiss Hall
Phone: 515-294-7801
Email: jdlaw@iastate.edu

Dr. Lawrence is Associate Dean for Extension and Outreach for the College of Agriculture and Life Sciences and the Director of ISU Extension to Agriculture and Natural Resources. His interests and research include livestock economics, hogs and pork, beef cattle, risk management and marketing.
Agricultural Economics

Dr. Lee Schulz
Address: 478D Headly Hall
Phone: 515-294-3356
Email: lschulz@iastate.edu

Dr. Schulz’s major interests include agricultural production, marketing, and risk management, with particular focus on the livestock and meat industry.

Agronomy

Dr. Antonio Mallarino
Address: 3216 Agronomy
Phone: 515-294-6200
Email: apmallar@iastate.edu

Dr. Mallarino’s research and extension programs emphasize cost-effective and environmentally sound management of fertilizer and manure phosphorus and potassium. Issues addressed include soil and plant-tissue testing, nutrient placement methods, precision agriculture technologies, and phosphorus impacts on water quality. He also supervises the ISU Soil and Plant Analysis Laboratory and helps develop nutrient management recommendations.

Dr. John Sawyer
Address: 3208 Agronomy
Phone: 515-294-7078
Email: jsawyer@iastate.edu

Dr. Sawyer coordinates and provides leadership for ISU Extension soil fertility and nutrient management programs to support production of agronomic crops in Iowa. He also conducts applied research related to efficient fertilizer use, and nutrient, manure, and limestone management.

Animal Science

Dr. Tom Baas
Address: 109 Kildee
Phone: 515-294-6728
Email: tbaas@iastate.edu

Dr. Baas focuses his research on swine breeding, and also works with enterprise management, recordkeeping systems, and educational swine production programs.

Dr. Lance Baumgard
Address: 313 Kildee
Phone: 515-294-3615
Email: baumgard@iastate.edu

Dr. Lance Baumgard is the Norman Jacobson Endowed Professor in animal science. His areas of research include environmental and nutritional physiology, post-absorptive carbohydrate and lipid metabolism, and bioenergetics.
Dr. Anna Kerr Butters-Johnson  
Address: 2356F Kildee  
Phone: 515-294-2098  
Email: johnsona@iastate.edu  
Dr. Johnson’s areas of research are in farm animal behavior and farm animal welfare.

Dr. Joseph Cordray  
Address: 194 Kildee  
Phone: 515-294-4266  
Email: jcordray@iastate.edu  
Dr. Cordray’s areas of research are processed meats, reduced fat and low-fat products, and fresh meats.

Dr. Jack Dekkers  
Address: 239D Kildee  
Phone: 515-294-7509  
Email: jdekkers@iastate.edu  
Dr. Dekkers’ research interests include quantitative genetics and animal breeding with application to swine genetics, including design and optimization of breeding strategies, use of molecular genetic information, QTL detection, and economic aspects of breeding programs.

Dr. Nick Gabler  
Address: 201E Kildee  
Phone: 515-294-7370  
Email: ngabler@iastate.edu  
Dr. Gabler’s research program focuses on identifying the molecular mechanisms by which nutrition alters intestinal transport of nutrients, mycotoxins and endotoxins, and immune system activation. This includes investigating physiological and molecular aspects of feed efficiency in pigs.

Dr. Dorian Garrick  
Address: 225D Kildee  
Phone: 515-294-2080  
Email: dorian@iastate.edu  
Dr. Garrick’s research focuses on animal breeding and the use of genetics to cost-effectively improve the performance of populations. The use of high-density genotypes (such as SNP chips) to enhance the accuracy of prediction at young ages is of particular current interest.
Dr. D.L. (Hank) Harris  
**Address:** 11 Kildee  
**Phone:** 515-294-1664  
**Email:** hharris@iastate.edu

Dr. Harris focuses his research on infectious diseases of swine, specifically vaccine development for swine influenza and porcine reproductive respiratory syndrome viruses.

Dr. Maynard Hogberg  
**Address:** 1221 Kildee  
**Phone:** 515-294-2160  
**Email:** hogberg@iastate.edu

Dr. Hogberg is chair of the Animal Science department. He has previous swine research work primarily in the nutrition area.

Dr. Mark Honeyman  
**Address:** 103 Curtiss  
**Phone:** 515-294-4621  
**Email:** honeyman@iastate.edu

Dr. Honeyman’s areas of research are alternative swine production systems, alternative swine feeds, sustainable agriculture, teaching methods, and swine management.

Dr. Elisabeth Huff-Lonergan  
**Address:** 215A Meat Lab  
**Phone:** 515-294-9125  
**Email:** elonerga@iastate.edu

Dr. Huff-Lonergan’s research focuses on postmortem conversion of meat and muscle biology.

Dr. Steven Lonergan  
**Address:** 215B Meat Lab  
**Phone:** 515-294-9126  
**Email:** slonerga@iastate.edu

Dr. Lonergan’s research is focused on molecular mechanisms impacting muscle growth.
Dr. Brian Kerr  
Address: 2165 NSRIC  
Phone: 515-294-0224  
Email: brian.kerr@ars.usda.gov

Dr. Kerr’s area of research is monogastric nutrition with particular interests in amino acids, fiber utilization, alternative feeds, nutrient balance, and environmental impact.

Dr. John Mabry  
Address: 109 Kildee  
Phone: 515-294-6325  
Email: jmarby@iastate.edu

Dr. Mabry’s areas of research focus on developing genetic systems to maximize profitability for swine production systems, development and implementation of across herd genetic evaluation programs in swine, and the usage of swine data management systems.

Dr. John Patience  
Address: 201H Kildee  
Phone: 515-294-5132  
Email: jfp@iastate.edu

Dr. Patience’s areas of research include energy metabolism, feed ingredient evaluation, and feeding management to optimize pork producer net income.

Dr. Ken Prusa  
Address: 1127 HNSB  
Phone: 515-294-4323  
Email: kprusa@iastate.edu  
or cfedler@iastate.edu

Dr. Prusa’s research focuses on factors that influence pork quality, sensory and instrumental analysis of meat and meat products, and new meat product development.

Dr. Jason Ross  
Address: 2356E Kildee  
Phone: 515-294-8647  
Email: jwross@iastate.edu

Dr. Ross’ areas of research include the investigation of molecular mechanisms that regulate oocyte quality, early embryonic development, and conceptus-uterine interactions leading to implantation in pigs.
Dr. Max Rothschild
Address: 2255 Kildee
Phone: 515-294-6202
Email: mfrothsc@iastate.edu

Dr. Rothschild’s areas of research are application of gene tests to improve reproduction, growth, disease resistance and meat quality in domesticated animals; and gene identification and mapping of swine, dogs, shrimp and sheep.

Dr. Joseph Sebranek
Address: 215F Meat Lab
Phone: 515-294-1091
Email: sebranek@iastate.edu

Dr. Sebranek’s areas of research include development of new products and processes to improve value of animal products, study of applications for meat processing ingredients, and investigation of new processing technology.

Dr. Michael Spurlock
Address: 201B Kildee
Phone: 515-294-1381
Email: mspurloc@iastate.edu

Dr. Spurlock’s research focuses on the mechanisms underlying inflammation in adipose tissue and insulin resistance in relation to obesity.

Dr. Ken Stalder
Address: 109 Kildee
Phone: 515-294-4683
Email: stalder@iastate.edu

Dr. Stalder has an active swine research program investigating a variety of genetic and management related topics including swine waste and nutrient management, management to improve reproductive efficiency of sows, management of grow-finish swine to improve profitability, and genetic and management effects on pork quality.

Dr. Jodi Sterle
Address: 119 Kildee
Phone: 515-294-7997
Email: jsterle@iastate.edu

Dr. Sterle works with introductory animal science classes, and has interests in youth work related to swine and pork production.
Animal Science

Dr. Christopher Tuggle
Address: 2255 Kildee
Phone: 515-294-4252
Email: cktuggle@iastate.edu

Dr. Tuggle’s research projects focus on understanding what makes a superior pig at the molecular and genetic level, so that gene or other biomarkers can be found and used by the industry. One major current research effort includes finding the differences in immune response to salmonella between pigs that shed high versus low levels of bacteria. Another project with a similar approach involves finding early blood biomarkers that predict feed efficiency later in the pig’s life.

Natural Resources and Ecology Management

Dr. Joe Colletti
Address: 138 Curtiss
Phone: 515-294-1823
Email: colletti@iastate.edu

Dr. Colletti is Senior Associate Dean of the College of Agriculture and Life Sciences and Associate Director of the Iowa Agriculture and Home Economics Experiment Station. His research has focused on the economics of short-rotation woody crops, the integration of forestry and agriculture via mathematical programming models, agroforestry systems, and optimizing private forest resource management.

Veterinary Diagnostic and Production Animal Medicine (VDPAM)
Veterinary Diagnostic Laboratory (VDL)
Veterinary Pathology

Dr. Paulo Arruda
Address: 1636 Vet Med
Phone: 515-294-3837
Email: paulohea@iastate.edu

Dr. Arruda’s expertise is in swine production medicine and food animal diagnostic pathology.

Dr. Rodney “Butch” Baker
Address: 109 Kildee
Phone: 515-294-8797
Email: rbbaker@iastate.edu

Dr. Baker is the interim director of the Iowa Pork Industry Center. His field research interests are related to food safety and the prevention and control of economically important microbial agents. These efforts include target agent eradication, biosecurity, and developing population-based disease preventive methods. Responsibilities include outreach to the swine industry through state, national, and international efforts.
Veterinary Diagnostic and Production Animal Medicine (VDPAM)
Veterinary Diagnostic Laboratory (VDL)
Veterinary Pathology

Dr. Eric Burrough
Address: 1655 Vet Med
Phone: 515-294-0190
Email: burrough@iastate.edu

Dr. Burrough is a diagnostic pathologist in VDL. His research interests include pathogenesis and control of infectious diseases of livestock and his current research projects focus on campylobacteriosis.

Dr. Steve Ensley
Address: 1650 Vet Med
Phone: 515-294-1950
Email: sensley@iastate.edu

Dr. Ensley’s areas of interests include toxicology, field investigation of toxicology tissues, and drinking water quality.

Dr. Tim Frana
Address: 1583 Vet Med
Phone: 515-294-3861
Email: tfrana@iastate.edu

Dr. Frana is associate professor in VDPAM. His area of interest is in bacteriology.

Dr. Phil Gauger
Address: 1653 Vet Med
Phone: 515-294-2437
Email: pcgauger@iastate.edu

Dr. Gauger is a pathologist in VDL. His research focus is on swine influenza virus and his areas of interest include disease diagnostics in domestic animals, swine production medicine and infectious diseases of livestock.

Dr. Pat Halbur
Address: 2203 Lloyd Vet Med Ctr
Phone: 515-294-6970
Email: pghalbur@iastate.edu

Dr. Halbur is the chair of the VDPAM department and is the executive director of the Veterinary Diagnostic Laboratory. His research focuses on the pathogenesis and control of infectious and zoonotic diseases of swine and is particularly interested in recently discovered viral pathogens including porcine circovirus and swine hepatitis E virus. He has ongoing projects on porcine reproductive and respiratory syndrome virus, *Erysipelas rhusiopathiae*, and *Streptococcus suis*.
Dr. Holtkamp’s research focus is on disease risk assessment. He directs the Livestock Disease Risk Assessment Program that focuses on the development, management, and promotion of disease risk assessment tools and databases of completed risk assessments held by the American Association of Swine Veterinarians.

Dr. Janke is a professor in VDL. His research areas of interest include swine influenza, enteric disease of pigs and pathology.

Dr. Johnson is a clinician with VDL and also is the serology section leader. His research is based on the development of serology tests and quality assurance.

Dr. Karriker’s research interests center on developing management practices to reduce the impact of disease in swine. Generally, this is broken down into three areas: biosecurity, understanding the physiology of disease, and modeling disease impacts on production systems.
Veterinary Diagnostic and Production Animal Medicine (VDPAM)
Veterinary Diagnostic Laboratory (VDL)
Veterinary Pathology

**Joann Kinyon**  
*Address:* 1567 Vet Med  
*Phone:* 515-294-9411  
*Email:* jkinyon@iastate.edu

Joann is a clinician in VDL and works primarily with clinical microbiology.

**Dr. Darin Madson**  
*Address:* 1644 Vet Med  
*Phone:* 515-294-9808  
*Email:* madson@iastate.edu

Dr. Madson’s primary research interest is in swine nursery/grow finish health.

**Dr. Rodger Main**  
*Address:* 2630E Vet Med  
*Phone:* 515-294-6945  
*Email:* rmain@iastate.edu

Dr. Main serves as the Director of Operations of the VDL. His professional research interests include swine production medicine, swine nutrition, and commercially applicable production system research.

**Dr. Suzanne Millman**  
*Address:* 2440 Lloyd Vet Med Ctr  
*Phone:* 515-294-2817  
*Email:* smillman@iastate.edu

Dr. Millman’s research interests involve livestock and poultry; and address animal welfare assessment, pain and sickness behavior with particular interests in the needs of compromised cattle and swine.
Dr. Lisa Nolan  
**Address:** 2508 Vet Med  
**Phone:** 515-294-9860  
**Email:** lknolan@iastate.edu

Dr. Nolan is dean of the College of Veterinary Medicine. Her research has focused on bacterial diseases of production animals, including their effects on animal health, human health and food safety, with the long-term goal of understanding the molecular pathogenesis of Extraintestinal Pathogenic *Escherichia coli* (ExPEC)-caused diseases. ExPEC are the causative agents of such diverse diseases as colibacillosis in poultry, and urinary tract infection, neonatal meningitis, and sepsis in production animals and human beings. Understanding ExPEC virulence, resistance, and host specificity should lead to more rational approaches for future disease control.

Dr. Annette O'Connor  
**Address:** VMRI Bldg 4  
**Phone:** 515-294-5012  
**Email:** oconnor@iastate.edu

Dr. O'Connor's scientific interests and experience are in the application of quantitative epidemiology to infectious diseases and food safety.

Dr. Tanja Opriessnig  
**Address:** VMRI Bldg 1  
**Phone:** 515-294-1137  
**Email:** tanjaopr@iastate.edu

Dr. Opriessnig’s interests include infectious diseases of livestock. Her primary expertise is in pathology, pathogenesis, and control of infectious and non-infectious diseases in swine. Her current research focuses on PCV, PRRSV, swine hepatitis E virus, porcine parvovirus, and *Erysipelothrix rhusiopathiae*.

Dr. Alex Ramirez  
**Address:** 2231 Lloyd Vet Med Ctr  
**Phone:** 515-294-7463  
**Email:** ramireza@iastate.edu

Dr. Ramirez’s work focuses on zoonotic diseases and public health, and swine production medicine research.

Dr. Kent Schwartz  
**Address:** 1655 Vet Med  
**Phone:** 515-294-1177  
**Email:** kschwart@iastate.edu

Dr. Schwartz is a clinician in VDL and head of the laboratory’s Pathology Section. His expertise areas include disease diagnostics in domestic animals and evidence-based veterinary medicine.
Veterinary Diagnostic and Production Animal Medicine (VDPAM)
Veterinary Diagnostic Laboratory (VDL)
Veterinary Pathology

Dr. Glenn Songer
Address: 2158 Vet Med
Phone: 515-294-2365
Email: jgsonger@iastate.edu

Dr. Songer’s area of research interest is clostridial enteric infections in food animals.

Dr. Greg Stevenson
Address: 1652 Vet Med
Phone: 515-294-1124
Email: stevengw@iastate.edu

Dr. Stevenson is professor of pathology in the VDL.

Dr. John Thomson
Address: 2446 Lloyd Vet Med Ctr
Phone: 515-294-1763
Email: thomson@iastate.edu

Dr. Thomson has previous swine research and vet practitioner background. His discipline interest is in production animal medicine and his research is on outcomes based medicine. He previously served as Dean of the College of Veterinary Medicine.

Dr. Mike Yaeger
Address: 2726 Vet Med
Phone: 515-294-1128
Email: myaeger@iastate.edu

Dr. Yaeger’s research interests include developing improved diagnostic methods and an understanding of disease frequency for the clostridial diseases of neonatal swine, including *C. difficile* and *C. perfringens* type A. The diagnosis of livestock reproductive disease is a historic strength. He is a faculty member in the Veterinary Pathology department.

Dr. Kyoung-Jin Yoon
Address: 209 VMRI Bldg 1
Phone: 515-294-1083
Email: kyoung@iastate.edu

Dr. Yoon specializes in viral infectious diseases of livestock and his expertise is animal virology and viral immunology. His primary areas of research are pathogenesis, immunobiology, diagnostics, molecular virology, and disease control including vaccine. Current research activities focus on PRRS virus, swine influenza virus, porcine circovirus, and viral agents involved in the safety of xenotransplantation or with zoonotic potential.
Veterinary Diagnostic and Production Animal Medicine (VDPAM)
Veterinary Diagnostic Laboratory (VDL)
Veterinary Pathology

Dr. Jeff Zimmerman
Address: VMRI Bldg 1
Phone: 515-294-1073
Email: jjzimm@iastate.edu

Dr. Zimmerman specializes in infectious diseases of livestock. His primary area of expertise is the epidemiology of infectious diseases of animals including transmission, prevention, and control. He also researches the economics of infectious disease.

Iowa Manure Management Action Group

Rachel Klein
Address: 2009 Agronomy
Phone: 515-294-6685
Email: raklein@iastate.edu

Rachel works with producers and industry personnel in the areas of environment and nutrient management.

Angie Rieck-Hinz
Address: 2104 Agronomy
Phone: 515-294-9590
Email: amrieck@iastate.edu

Angie is Program Coordinator for the Manure Applicator Certification (MAC) program delivered by ISU Extension. She coordinates statewide training programs and also is responsible for the Iowa Manure Management Action Group website. IMMAG website is a comprehensive site for manure management information in the state of Iowa.
Iowa Pork Industry Center Staff

**Sherry Hoyer**  
**Address:** 109 Kildee  
**Phone:** 515-294-4496  
**Email:** shoyer@iastate.edu  
As IPIC communication specialist, Sherry works with print, audio, video, and online methods of education and communication. This includes publishing news releases for broadcast and print media, creating and disseminating publications, coordinating finances and logistics for PorkBridge and SowBridge programs, maintaining and enhancing IPIC Web site, and serving as IPIC representative for various niche pork activities.

**Colin Johnson**  
**Phone:** 515-291-9287  
**Email:** colinj@iastate.edu  
As IPIC’s extension program specialist, Colin works to coordinate field specialist projects, Group Tracker and other software programs, and a variety of other research and demonstration projects. He also works with the Coalition to Support Iowa’s Farmers (CSIF) on planning and evaluating swine facility sites throughout Iowa.

**Heather Scott**  
**Address:** 109 Kildee  
**Phone:** 515-294-4103  
**Email:** hcscott@iastate.edu  
As IPIC administrative specialist, Heather handles staff and faculty accounts, coordinates various IPIC events, and provides support for the faculty, staff, and students affiliated with IPIC.

Iowa State University Extension and Outreach Program Specialists  
**Farm Management**

**Shane Ellis**  
**1205 W. US Hwy 30, Suite G**  
**Carroll, IA 51401**  
**Phone:** 712-792-2364  
**Email:** shanee@iastate.edu  
Shane’s interests include livestock economics, niche markets, and risk management.

**Kelvin Leibold**  
**524 Lawler Street**  
**Iowa Falls, IA 50126**  
**Phone:** 641-648-4850  
**Email:** kleibold@iastate.edu  
Kelvin works with farm management topics, farmland and building leasing, global agriculture, land values, farm machinery management, estate planning, intergenerational transfer, and beginning farmers.
Russ Euken  
327 W. 8th St.  
Garner, IA 50438  
Phone: 641-923-2856  
Email: reuken@iastate.edu

Russ works with production information related to health, nutrition, facilities, records, and budgeting for swine producers. He also helps producers with computer applications and improving the productivity of livestock operations.

Tom Miller  
2223 250th St.  
Washington, Iowa 52353  
Phone: 319-653-4811  
Email: tmiller@iastate.edu

Tom works with swine production programs including problem-solving, swine management, breeding and genetics, manure handling, record analysis, and financial analysis.

Terry Steinhart  
102 E. Washington  
Sigourney, IA 52591  
Phone: 641-622-2680  
Email: tsteinha@iastate.edu

Terry’s work includes swine production systems, breeding and genetics, reproduction, nutrition, herd health, management, housing, manure and waste management, marketing, and pork quality.

David Stender  
209 Centennial, Suite A  
Cherokee, IA 51012-2203  
Phone: 712-225-6196  
Email: dstender@iastate.edu

Dave’s areas of focus include management of swine operations, understanding and using records for management decisions, nutrition program analysis for cost and performance potential, genetic evaluation, value added marketing, business planning within the swine enterprise, and developing and using computer software for monitoring and making decisions.

Mark Storlie  
201 E. Clark, Suite 101  
Fayette, IA 52142  
Phone: 563-425-3331  
Email: mstorlie@iastate.edu

Mark’s work includes swine production management, initiating and utilizing production and financial records for management, alternative housing options, contracting considerations, development of communication with employees, and support of value-added production and marketing systems.

Dr. Matt Swantek  
1205 West US Hwy 30, Suite G  
Carroll, IA 51401  
Phone: 712-371-2856  
Email: mswantek@iastate.edu

Matt works with producers in areas such as production analysis, development of computer management tools, nutritional and management efficiencies of alternative feed ingredients and swine input benchmarking. He also works with producers to understand production monitors for intake, growth, and fat and lean deposition curves.
Iowa State University Extension and Outreach Program Specialists
Agriculture Engineering

Kapil Arora
220 H Ave. #118
Nevada, IA 50201
Phone: 515-382-6551
Email: pbtiger@iastate.edu
Kapil’s areas of expertise are water quality, soil conservation practices, soil erosion, composting, and environmental regulations.

Dr. Greg Brenneman
3109 Old Hwy 218 South
Iowa City, IA 52246
Phone: 319-337-2145
Email: gregb@iastate.edu
Greg’s areas of expertise involve livestock facilities including manure handling, ventilation and layout, farmstead layout, farm buildings, energy conservation, drainage, soil conservation practices, conservation tillage, no-till, ground water and surface water quality, water treatment, and private wastewater treatment systems.

Dan Huyser
3327 290th St
Nashua, IA 50658
Phone: 515-298-1731
Email: dehuyser@iastate.edu
Dan’s areas of expertise include livestock facilities, building materials and construction ventilation systems, manure management systems, soil erosion and crop residue management, soil and water conservation, ground water quality, well construction and maintenance, farm machinery, environmental regulations, energy conservation and farm safety.

Dr. Kris Kohl
Box 820
Storm Lake, IA 50588
Phone: 712-732-5056
Email: kkohl1@iastate.edu
Kris’s areas of expertise include livestock facilities, building materials and construction ventilation systems, manure management systems, soil erosion and crop residue management, soil and water conservation, and ground water quality.

Shawn Shouse
53020 Hitchcock Ave.
Lewis, IA 51544
Phone: 712-769-2600
Email: sshouse@iastate.edu
Shawn’s areas of expertise include well water quality, manure management, livestock facility design and ventilation, grain storage and drying, soil and water conservation, energy conservation, farm safety, and environmental water quality.