

ATTACHMENT - E

AES Faculty and Expertise by Department

Animal Science

Carew, Lyn

In research, Dr. Carew uses the chicken as an animal model. He does basic research on nutrition and physiology as well as applied research on poultry nutrition such as protein and mineral requirements. He has a deep interest in the problems of human and animal nutrition in Latin America, and has worked with researchers in Honduras, Colombia and Ecuador on developing new feed ingredients for chickens as well as promoting the development of chicken meat and eggs for human consumption. He has taught courses in Spanish and given lectures on human and animal nutrition in these three countries.

Betsy Greene

Extension Assistant Professor. Equine Specialist. Primary work focuses on equine related care and maintenance. This includes topics such as preventative health care, proper nutrition, safe housing, proper handling techniques, and pasture care and management. Contact Information: Work: 656-2108, Fax: 656-8196, Email: egreene@zoo.uvm.edu

Hovey, Russell

Dr. Hovey's research at the University of Vermont will use a transgenic mouse model to study the role of prolactin and its receptor in mammary development and milk production. Prolactin is an essential hormone that is important for mammary development and milk production in all mammals.

Kerr, David

Dr. Kerr's research is aimed at using gene transfer to deliver new genes to the mammary gland that will modify milk composition in desired ways or enhance mastitis resistance. Mastitis is an infection of the mammary gland and is one of the most persistent and costly diseases in dairy cows. It causes discomfort of the dairy cow and results in lost milk production and a reduction in milk quality. As with other secretions such as tears and saliva, milk contains a number of anti-bacterial proteins but these are not sufficient to prevent mastitis. His goal is to transfer additional mastitis resistance genes into animals.

Knapp, Joanne

The research in Dr. Knapp's laboratory focuses on nutrient digestion, absorption and utilization in ruminant animals. They are studying the effects of genetic selection on regulation of enzymes and hormones in dairy cattle, nutrient transport in intestinal epithelium, and nutritional manipulations on milk yield and composition. They utilize knowledge and techniques from multiple

areas of biology, including molecular and cell biology, immunology, endocrinology, biochemistry, and nutrition. These studies are directed towards elucidating basic biological mechanisms and applying the knowledge gained to animal agriculture.

McFadden, Thomas Dr. McFadden's research interests focus on understanding mammary gland biology with the intent of developing new ways to harness the potential of the mammary gland to contribute to mankind. One area of research is identifying the genetic and physiological factors that regulate mammary development. This work is primarily aimed at optimizing mammary development in dairy heifers and cows to increase their potential for milk production. Because it involves understanding the basic mechanisms that control mammary cell growth, it also applies to breast cancer. Another area of research focuses on regulation of milk composition. The idea behind this work is to develop methods to improve milk composition to better meet human nutritional requirements or to lead to new, higher value dairy products.

Plaut, Karen Dr. Plaut's research interest focuses on how a growth factor named transforming growth factor-beta, which is produced by the mammary gland, inhibits growth of the mammary gland. TGF-beta may be very important in controlling mammary growth in young animals and may also be involved in control of the dry period in lactating cows. TGF-beta may additionally be important in breast cancer. It is believed that the mammary gland may not be able to respond to TGF-beta and then continues to grow, causing a tumor.

Smith, Julia Extension Dairy Specialist
Dr. Smith's research will focus on applied dairy cattle management. She will spend the majority of her time leading the dairy extension activities.

Zhao, Feng-Qi Dr. Zhao's research at the University of Vermont will focus on glucose metabolism in the mammary gland. This is particularly important for dairy cows because it is an underlying mechanism involved in controlling milk production.

Botany and Agricultural Biochemistry

Barrington, David For some years Dr. Barrington has been interested in the fern genus *Polystichum*, which includes well-known ferns such as the sword fern of the American northwestern forests and Christmas fern, widely distributed in the eastern United States. The European holly fern *Polystichum aculeatum* is a well-known species, and the African and Eastern Asian *Polystichum luctuosum*, widely known

as *P. tsus-tsimense*, is a commonly cultivated houseplant. Mere interest in a perversely difficult group originally attracted him to the genus, but as he has worked with the group, its appeal to him as a system for understanding problems in speciation, hybridization, and phylogeny has steadily grown.

Currier, William

Research in Dr. Currier's lab centers on biorecognition, the way one cell communicates with the next at a biochemical level. It is essential for normal plant function that adjacent cells are constantly communicating their condition to their neighbors. This communication takes the form of chemical messages sent from one cell to the next. This communication is particularly important in plant disease.

Hoffman, James

Dr. Hoffman's area of expertise concerns the physiological and population ecology of micro and macroalgae, with an emphasis on the influence of physicochemical factors, and their interactions, on growth and reproduction.

Hughes, Jeffrey

Two of Dr. Hughes's research interests predominate in the ecosystem responses to events that upset the ecological status quo, and dynamics of ecotones, especially stream corridors and roads.

Molofsky, Jane

Dr. Molofsky's research focuses on the role of spatial relationships in species coexistence and pattern formation in plant communities, plant population dynamics, and traits leading to a species invasiveness.

Perkins, Timothy

Dr. Perkins' research focuses on the physiological ecology of managed and unmanaged sugar maple forests. He is interested in how changes in stand nutrition induced by anthropogenic deposition and land-use practices affect forest growth and health as well as sap yields.

Tierney, Mary

Dr. Tierney's research group is interested in understanding the regulation and function of the structural components of the cell wall, both in determining aspects of cell form and function during plant development and in providing a defense strategy for plants in response to physical damage and pathogen infection.

Vogelmann, Thomas

Dr. Vogelmann's research focuses on leaf optics and photosynthesis, and photosynthesis under extreme environmental conditions.

Community Development and Applied Economics

- Kolodinsky, Jane Dr. Kolodinsky focuses on consumer information, most recently in the area of biotechnology, consumer satisfaction, most recently in the areas of electronic banking and health care, and evaluation of non-profit program impact on the economic status of consumers, most recently in the areas of community development financial institutions and small business.
- Liang, Chyi-Lyi Dr. Liang has been involved in Tourism Economics Impact Analysis, Youth and Rural Entrepreneurship Programs, Forestry Management and Marketing Analysis, and is developing programs for Service-Learning relating to youth and rural entrepreneurs in Vermont.
- Parsons, Robert Dr. Parsons' focus is on farm profitability, financial impacts of production technologies, and the financial impacts of nutrient management policies. New production technologies and nutrient management have significant financial consequences for farms in their ability to compete in an expanding national agricultural economy.
- Schmidt, Fred Dr. Schmidt's research is at the community level of analysis. His research focuses upon the ways, in which people mobilize in social, political and economic activity, make decisions and how those decisions affect the quality of life in place based communities. (Emphasis is upon place based communities e.g. locality based legal entities, as opposed to communities of interest such as unions, political parties, environmental groups) because of a concern or both the limits and potentials created by the local natural environment. This context for his work has led to experience in understanding local civic structure and political processes, demography, human ecology, agricultural policy, and community planning and development.
- Wang, Qingbin Dr. Wang's major research interest is to provide economic and market information to policy makers, farmers, consumers, communities and small businesses through applied economic research. His recent research projects include U.S. agricultural trade with China, consumer demand for organic food, market analysis of industrial hemp, rBST labeling, impact of the Northeast dairy compact, etc.

Nutrition and Food Sciences

- Donnelly, Catherine Scholarly interest includes the food borne role of listeria monocytogenes and other emerging food borne pathogenic bacteria.
- Guo, Ming Scholarly interests include milk chemistry, food microstructure, and component interactions of foods, fermented dairy products, functional foods, chemistry and technology of infant formula and nutritional foods.
- Harvey-Berino, Jean Scholarly interests include the development, testing and implementation of behavior modification programs aimed at changing individual food preferences and eating behaviors and improving nutritional status, health and fitness of a rural, agriculturally based community.
- Kindstedt, Paul Scholarly interests include milk chemistry and biochemistry; dairy fermentation's and cheese technology; chemistry and processing of infant formula
- Pintauro, Stephen Scholarly interests focus on examining the effectiveness of information technology in teaching and research applications related to the fields of food science and nutrition.
- Ross, Jane Scholarly interests include studying the relationship between dietary fiber, cholesterol metabolism and atherosclerosis, plus restrained eating in weight cycles.
- Tyzbir, Robert Dr. Tyzbir's focus is in weight control and fitness, sports nutrition, and nutritional biochemistry.

Plant and Soil Sciences

- Aleong, John Dr. Aleong's research interests include the design and analysis of experiments and surveys. Current and past research involves quality control, design and analysis of special experiments, fitting dose-response curves, and multiple comparisons.
- Berkett, Lorraine Dr. Berkett's research areas include developing new integrated pest management techniques to manage diseases, insects and mites.
- Bosworth, Sidney Dr. Bosworth's primary areas of focus include field and forage crop management and utilization, forage quality, pasture and grazing management, and pest/weed management.

Brownbridge, Michael

Dr. Brownbridge is researching the use of insect pathogens for the biological control of greenhouse and forest pest species. With increasing concerns over environmental quality, an increased incidence of insecticide resistance in pest species, and the escalating costs associated with the development, registration and use of chemical insecticides, novel environmentally friendly and sustainable approaches to insect pest management are required. Biological methods of pest control are very attractive, providing safe, often self-perpetuating short- and long-term control.

Garcia, Maria

Dr. Garcia's primary areas of research include cultivar and rootstock evaluation for their adaptability to Vermont's climate.

Jokela, William

Dr. Jokela's general research interest is nutrient and soil management for corn and forage production to improve efficiency of nutrient use and to minimize adverse impact on surface and ground water.

Magdoff, Fred

Dr. Magdoff's research interests include soil fertility, soil chemical and physical problems associated with waste disposal and bioremodification. Current or recent past research involves evaluating environmentally sound management of nitrogen and phosphorus, nutrient cycling on dairy farms, chemistry of soil acidity, and soil organic matter as it relates to soil quality.

Murphy, William

Dr. Murphy's research is to find ways to help farmers cut production costs. This currently involves various studies in pasture production and management. One study is General use and refining of Voisin management grazing intensive to improve botanical composition, forage feeding value and yield, and livestock carrying capacity. The other one is White clover and grass dynamics in a complex sward grazed by cattle, to increase and maintain a high level of white clover in the sward.

Parker, Bruce

The vision of the scientific team at the [University of Vermont's Entomology Research Laboratory](#) is to enhance agricultural productivity throughout the United States by addressing issues of insect pest management of national significance. Through their work they attempt to develop management options that are environmentally sound and

economically viable, and encourage their implementation through communication and education. Research on fungal pathogens for IPM of greenhouse and forest pests has been their major thrust for several years.

Perry, Leonard

In Research, Dr. Perry's focus is "herbaceous perennial production systems." In this work he compares various methods of greenhouse production and forcing of perennials; all aspects of container with field production, including media, fertility and planting times; hardiness and over wintering practices for a range of species; disease resistance of several genera.

Ross, Don

Dr. Ross's research interests include the chemistry of soils in terrestrial ecosystems. Current projects investigate the chemical forms of aluminum in forest soils and acidity relations in the forest floor. Research into analytical procedures and techniques is also an area of concern.

Skinner, Margaret

Dr. Skinner's research interests include insect pest management in forest and greenhouse environments, currently focusing on biological control using fungi.

Starrett, Mark

Dr. Starrett's research interests include all methods of ornamental woody plant propagation (asexual and sexual).

Tignor, Milton

Dr. Tignor's primary research focus is on improving irrigation scheduling for Vermont vegetable growers with small acreage farms and limited access to irrigation water.

Extension Faculty and Expertise in alpha order

Pamela Ainsworth

Extension Professor. Natural Resource Leadership & Communication Specialist. Pamela's expertise is in the field of communications, conflict management, dealing with difficult people, team building, organizational change, stress management and youth development. Pamela's trademark is her use of humor and active group participation in her teaching and presentations. Contact Information: Work: 296-7630x15, Fax: 296-7631, Email: pamela.ainsworth@uvm.edu

Meg Ashman

Extension Professor. Publications editor with particular interests in legibility and readability as well as grammar training. Spent a year in Kenya establishing an educational materials center at Egerton University and a year in Malaysia teaching English to speakers of

other languages. Contact information: Work: 656-0300, Fax: 656-5878; Email: meg.ashman@uvm.edu.

Monika Baege

Extension Assistant Professor. 1) Leadership education, 2) youth development, 3) youth gardening education and its links with nutrition, food security, natural resources, agriculture, youth, family and community development, 4) youth summer camping, 5) non-profit board development, and 6) applications of Bowen natural systems theory. Contact Information: Work: 223-2389x21, Fax: 223-6500, Email: monika.baege@uvm.edu

Linda Berlin

Extension Instructor. My broad areas of interest include: food security, food systems that are currently focusing on consumers' perceptions and attitudes related to organic foods, and nutrition education methods. Contact Information: Work: 656-0669, Fax: 656-0407, Email: lberlin@zoo.uvm.edu

Judy Branch

Extension Assistant Professor. My areas of interest include: Parenting information, public policy as it relates to families and parenting, leadership and organizational change, community development, diversity issues and conflict resolution and negotiation. Contact Information: Work: 223-2389 x 17, Fax: 223-6500, Email: judy.branch@uvm.edu

Jeff Carter

Extension Assistant Professor. Dairy farm and community issues, Forage and field crop production, Land management, Animal waste management planning, database field crop records, nutrient management planner certification. Livestock operations need to document compliance with Federal Clean Water Act regulations through development of individual farm-specific comprehensive nutrient management plans. Nutrient planning is done in cooperation with Vermont Department of Agriculture, Farm Service Agency, Natural Resource Conservation Service and local conservation districts. Contact Information: Work: 388.4969, Fax: 802-388-0511, Email: jeff.carter@uvm.edu

Sam Comstock

Extension Assistant Professor. Interests: Livestock production, management, and marketing, expertise in beef cattle breeding and genetics. Contact Information: Work: 257-7967 ext 14, Fax 257-0112, Email: sam.comstock@uvm.edu

George Cook

Extension Associate Professor. My responsibilities include designing and implementing educational programs in the fields of Farm Safety and Maple. I deliver Farm Safety programs statewide and most Maple programs on a regional basis, though I have many statewide maple responsibilities to the Vermont maple

producers. Contact Information: phone: 888-4972, FAX: 888-2432, email: george.cook@uvm.edu

Vern Grubinger

Extension Associate Professor. Director of the UVM Center for Sustainable Agriculture, and Extension Vegetable and Berry Specialist. His outreach and research interests focus on sustainable and organic horticulture, including: bio-rational pesticides, cover crops, direct marketing, enterprise budgets, mechanical weed control and soil stewardship. Contact Information: Work: 257-7967x13, Fax: 257-0112, Email: vernon.grubinger@uvm.edu

Dennis Kauppila

Associate Extension Professor. Farm Business Management specialist on the east side of the state. Working on farm business planning, transfer, balance sheets, budgets, estate planning, expansion, buying or selling a farm. Primarily dairy but have worked with many other commodities as well. Have studied in Ireland on two sabbatical leaves, participated in a Project Harmony exchange in Republic of Georgia. Contact Information: Work: 748-8177x24, Fax: 748-1955, Email: dennis.kauppila@uvm.edu

Dianne Lamb

Extension Associate Professor. Primary interests are nutrition for seniors, nutrition and food preparation concerns for working families, obesity, weight control, and physical fitness. Contact information: Work: 802-447-7582 x11, Fax: 802-447-8-76, Email: dianne.lamb@uvm.edu

Rick LeVitre

Extension Associate Professor. Work for past years has focused on farm labor issues-HRMgt skills, reg's, housing, labor pool, etc. Instrumental in starting the Vermont Farm Labor Service Cooperative and, with various grants and legislative monies, organizing a pilot temp agricultural labor service. Am also interested in expanding farmer discussion groups and in dairy systems analysis. Have traveled to Ireland, Karelia and Republic of Georgia on agricultural exchanges/study trips. Contact Information: Phone 773-3349, Email: richard.levitre@uvm.edu

Thom J. McEvoy

Extension Associate Professor. Interests: Forest ecology, Managing and using forest ecosystems, Logger education, Working with NIPF owners, Legal Aspects of private forests, Mineral nutrition in conifers, Economics of growing timber, Stumpage price trends, Managing woodlands for wildlife and Volunteerism in natural resources education programs. Contact Information: Work: 656-2913, Fax: 656-8683, Email: tmcevoy@together.net

- William McMaster Extension Assistant Professor. Community Resource Development Specialist. Working in the Northeast Region. Current projects include development of a Buy-Local Campaign for local Agricultural producers, The Northeast Kingdom Collaboration, an area wide group interested in the economic well being of the Northeast Kingdom, Keepers of the Kingdom, a group interested in the economic, social and natural resources of the Nullhegan Basin, Town of Island Pond, interested in development of an employee owned, natural resource based manufacturing plant. Contact Information: Work: 334-7325 ext. 16, Fax: 334-5208, Email: bill.mcmaster@uvm.edu
- Diane Mincher Extension Assistant Professor. A nutrition and food specialist with interest and expertise in the nutrition for young children, exploring cultures and the diversity of populations through nutrition and literacy, obesity, nutrition for seniors and use of soy foods in diets. Contact Information: Work: 388-4969, Fax: 388-0511, Email: diane.mincher@uvm.edu
- Anne O'Brien Extension Instructor. I am a healthcare curriculum developer for continuing education. I am interested in healthcare systems and continuous improvement. I have expertise in the Baldrige Criteria and am interested in workforce development in Vermont. I can be reached at 656-5818 or aobrien@ced.uvm.edu.
- Kim Parker Extension Associate Professor. Broad areas of interest include information technology and organizational leadership. Special interest in issues in technology and leadership related to gender. Contact Information: Phone: 656-0385; Fax: 656-5878; Email: kim.parker@uvm.edu.
- Mary Peabody Extension Assistant Professor. My general areas of interest include economic and community development with particular emphasis on entrepreneurship, leadership & capacity building at the community level. Contact Information: Phone: 802-223-2389 Fax: 802-223-6500 Email: Mary.Peabody@uvm.edu
- Glenn Rogers Extension Associate Professor. Farm Business Management Specialist. Principal Investigator-Rural and Farm Family Vocational Rehabilitation Program. Specialties: Agricultural Business Plans, Agricultural transfers, Estate Planning, agricultural tax issues, Dairy Financial management, Selling/buying farms, Sale of Development rights, Working, coping with a disability, understanding a disability, resources for the disabled. Agricultural and community public policy work. Contact Information: Work: 524-6501, Fax 524-6062, Email: glenn.rogers@uvm.edu.

Karen Schneider

Extension Associate Professor. Main focus of work is food safety 'from farm to table', working with variety of audiences. Interested in public policy issues related to food safety and security issues, particularly in the area of risk management, and emerging nutrition issues. Additionally, have interest and experience in facilitation and conflict management. Contact Information: Work--773-3349 x30; Fax--775-4840; Email: karen.schneider@uvm.edu.