**Specialist in AgroHealth**

**Position Title:** This specialist will advance human, animal, and environmental health research and outreach in the area of feed and food quality, water quality, animal health, and healthy work environments for those working in agriculture. This position will be a 1.0 FTE UCCE Specialist in Veterinary Medicine Extension within the Department of Molecular Biosciences, School of Veterinary Medicine (SVM), UC Davis.

**Position:** The successful candidate will have expertise or training in agricultural or veterinary sciences, environmental health, occupational health, public health, and/or toxicology. Desired experience includes assessment of risks from natural toxins and synthetic chemicals and a demonstrated ability or potential to develop integrated strategies that reduce the risk of toxic exposures to humans and animals, and to improve the health, safety and well-being of those working in agriculture in California. A particular expectation is effective communication with stakeholders in the agricultural safety and health community and the general public, including those participating in urban and backyard farming. Advanced degree (PhD, DVM or equivalent degree) is required. This position will interact closely with AES faculty, UCCE Specialists and Farm Advisors, I&R faculty, the Office of Environmental Health Hazard Assessment (OEHHA), the Department of Pesticide Regulation (CDPR), the California Department of Food and Agriculture (CDFA), and the California Environmental Protection Agency (CalEPA) divisions focused on water quality, food safety, feed safety, and risk communication.

**Justification:** The position will meet 4/5 UCANR strategic initiatives. We face many interrelated problems and challenges in our efforts to safeguard farmers, animals, and our food supply. Urban agriculture is growing as is backyard farming. These land-use changes also pose new risks through increased fire activities at the wildland-urban interface and release of chemicals into soil, water, and agricultural products. These operations require foundational knowledge in the safe use of medications and pesticides for prevention of disease in animals and plants, fate of agrochemicals with specific emphasis on water and food supplies for humans and animals, agricultural land uses at Superfund sites and subsequent to fires, hazards in the urban agriculture environment (such as lead), and a thorough understanding of the hazards to the community at large. Considering the public health and economic importance of safeguarding California’s agricultural workers, and livestock and crop commodities, we need a specialist who focuses on delivering ANR programs that keep farm workers, animals, the public and the environment healthy and safe. The proposed specialist position in AgroHealth is critical for delivering a wide range of extension services directed towards the animal/human wellbeing connection, product safety, the use and potential impact of agrochemicals in urban environments, the safe revitalization of contaminated lands, and the protection of watersheds. Moreover, this position will join a highly productive team of farm advisors, livestock and crop advisors and specialists, regulatory experts and veterinarians to enhance the agricultural and environmental quality and health in California. The proposed position is a logical extension of the Agricultural Safety and Health Engineering Specialist position with focus on the safety of field and postharvest activities.

**Extension:** This position will develop and deliver training, and educational and outreach materials, conduct applied research to extend science-based information on how to protect exposure to and minimize the introduction and transfer of hazardous chemicals among the environment, plants, food animals and humans. This position will collaborate with advisors and AES faculty on research and demonstration projects, assist with workshops, present at field days, develop interactive learning simulators, and produce lay and peer-reviewed publications. Additional expectations include defining opportunities for extension activities, identifying key clientele groups and the anticipated nature of these interactions. Key clientele include producers, ranchers, urban famers, backyard farmers and growers, allied professionals and agricultural organizations, regulatory agencies, UCCE Farm Advisors and AES faculty.

**Research**: The specialist will conduct research and intervention activities with focus on occupational exposure to potentially hazardous chemicals and the assessment of undesirable contaminants in feed and food commodities particularly in urban and residential agriculture. The impact of environmental changes such as drought and wildfire on contamination levels of soil and animal-and plant-derived food will be studied. Soil-specific information is needed to discern the relative importance of contaminated land (revitalization of superfund sites) or wildfire affected urban and agricultural lands in determining the potential for increased contaminant levels. Overland and subsurface transport of chemicals from sites of application or fires are of concern for protection of water quality. Specific research is also needed to evaluate the use of medications and pesticides (e.g. off-label use in backyard chickens or minor species) and develop effective training and educational material that focus on intervention and prevention strategies. The areas of emphasis will be based on a needs assessment of the California agriculture (industrial, urban and backyard) with many opportunities to expand and redirect efforts as new issues emerge. Publication outlets include California Agriculture, ANR peer-reviewed 8000 series, peer-reviewed agricultural journals, and lay grower, rancher, and producer publications. Funding opportunities include the US Department of Agriculture (USDA), the National Institute for Occupational Safety and Health (NIOSH), and other state, federal, and private funding agencies.

**ANR Network:** ANR is deeply vested in the health, economic well-being, and long-term sustainability of the California agricultural industry and environmental quality and health. There is an extensive network of livestock, natural resource, and watershed advisors, specialists, and AES and I&R faculty working on various aspects of California’s agricultural industry. This Specialist will collaborate with these and external stakeholders to provide leadership on critical issues facing our environment, animal and human health.

**Network External to ANR:** The person hired for this position will collaborate on research and extension projects with I&R faculty, state agencies such as the CDPR, CalEPA, OEHHA, the CDFA, the Western Center for Agricultural Health and Safety (WCAHS), Western Institute for Food Safety and Security (WIFSS), CDFW (CA Department of Fish and Wildlife), and federal agencies such as National Resource Conservation Service (NRCS), United States Fish and Wildlife Service (USFWS), USDA, and FDA that have regulatory oversight regarding food and water safety and appropriate drug use.

**Support:** Veterinary Medicine Extension in the School of Veterinary Medicine, UC Davis will provide administrative support for grants and contracts, office space, computing, and telephone support. Programmatic funds are provided annually to all specialists. The Department of Molecular Biosciences will provide laboratory space for applied research.

**Other support:** The Specialist can apply for intramural and extramural grants to support his/her program. Examples of the former include The Center for Food Animal Health (SVM-UCD), which provides seed grants ($20,000/yr) twice a year for projects related to food animal research, and the Russell L. Rustici Rangeland and Cattle Research Endowment (CAES-UCD), which provides 2-year grants for research and extension projects on beef cattle production and rangeland management. Extramural funding may be available from NIOSH, USDA, and state agencies. The Specialist will also have the opportunity to collaborate with scientists at the WIFSS and WCAHS and their state and federal agency partners on food safety, health and safety of farm workers and communities, water quality and related issues, and with Department of Molecular Biosciences Faculty who study food safety, environmental health, toxicology, and nutrition.

**Location:** This position will be located at UC Davis given the existing network of food safety experts, toxicologists, UCCE specialists, and agronomists at such entities as the SVM, and College of Agriculture and Environmental Sciences (CAES). Furthermore, location at UC Davis will allow the specialist to interact with WIFSS, WCAHS, the One Health Institute, the USGS Western Ecological Research Center and the Center for Aquatic Biology and Aquaculture.

**Developed and proposed by:** Initially drafted by Dr. Birgit Puschner, Chair of the Department of Molecular, UCD, with input and revisions provided by environmental and public health scientists, livestock and natural resource advisors, CE specialists, ANR program teams, OEHHA, CalEPA, SVM faculty, and Dr. Maurice Pitesky, Dr. Rob Atwill, and Dr. Art Craigmill.