

Statement for the Record
Federation of American Societies for Experimental Biology (FASEB)
House Subcommittee on Agriculture, Rural Development, FDA & Related Agencies
March, 2006

The Federation of American Societies for Experimental Biology (FASEB) is a coalition of 22 scientific societies who together represent more than 84,000 biomedical research scientists. The mission of FASEB is to enhance the ability of biomedical and life scientists to improve, through their research, the health, well-being and productivity of all people. We appreciate the opportunity to submit testimony on the critical research and scientific training being conducted at the United States Department of Agriculture (USDA), and will primarily focus our remarks on the National Research Initiative Competitive Grants Program (NRI), an extramural, peer-reviewed program, ensuring that funds are invested in the highest quality research projects at universities throughout the nation. However, we would also like to include brief comments on recent efforts to restrict USDA licensed Class B animal dealers from selling animals for use in research. FASEB is concerned such efforts may have unintended consequences that would be deleterious for biomedical and other life sciences research.

First and foremost, FASEB strongly supports funding the NRI in FY 2007 at the \$248 million dollar level recommended in the President's budget; this would be an important step forward in reaching its initial authorization level of \$500 million. The grants funded by the NRI lead to new discoveries, focus research in new and high priority areas, and contribute to the knowledge base that must be available for continued progress of applied and translational studies. NRI funds also provide essential training opportunities for graduate students and postdoctoral fellows (i.e., future agricultural scientists and innovators). We must maintain and magnify the breadth and competitive nature of the agricultural research portfolio, to ensure the United States' economic vitality and the well-being of all Americans.

Although we have shifted from our country's origins as an agrarian society, agriculture and the research which advances it remain of crucial importance to our economy and quality of life. Research supported by USDA allows us to prevent and respond to natural disasters; it protects human life and our food supply from pandemic disease and introduced pathogens; and it contributes to our understanding of the nutrition that underlies our health. Basic and applied research in agriculture establish the scientific foundation required to provide a safe, nutritious food supply in a manner that conserves natural resources, promotes sustainable yields, improves human health and enhances the competitive position of U.S. agriculture in the global marketplace. For specific examples of how USDA competitive research is having a positive impact, please visit: http://opa.faseb.org/pdf/funding_report_USDA.pdf

According to the 2000 U.S. Census, approximately 80 percent of our population lives in urban areas. While USDA is perhaps the only federal agency to specifically address the needs of rural communities through its research programs, the fundamental research funded through NRI also focuses on the unique needs of U.S. cities. Nutritional requirements and food costs are important concerns for the urban poor, especially for children. Basic research on increasing the health benefits of foods while minimizing cost, together with USDA outreach programs in school nutrition and high-risk communities, reduces the number of urban residents going hungry or suffering the ill-effects of vitamin deficiencies. As obesity and a sedentary lifestyle reach epidemic proportions in metropolitan areas, NRI research examines the underlying physiology, nutritional science and behavioral factors that play a role in this growing crisis. Meanwhile, populations are rapidly expanding and as urban land development encroaches on previously rural areas, USDA research focuses on the planning, environmental and community issues raised at the urban / rural interface. The USDA research portfolio improves the quality of life for all U.S. citizens, regardless of where they might live and work.

USDA is uniquely structured, allowing for rapid reprioritizing of research programs in response to the changing needs of our nation. Whether faced with an emerging disease, a natural disaster that impacts crops or human health, or the threat of bioterrorism, the research programs of USDA have the flexibility to quickly shift focus, ensuring the agency's research portfolio is addressing the most relevant and current problems we face. Moreover, USDA research is structured for efficiency by providing the infrastructure needed to underpin the competitive grants program of the NRI through the Agriculture Research Service (ARS). The ARS support allows maximization of the competitive funds offered through the NRI by providing essential research facilities via its research centers across the country. For example, without a comprehensive, validated food composition database, effective nutritional monitoring, surveillance, and intervention - all critical to improving human health and preserving our food supply - would not be possible. The on-going, innovative, and evidence-based development and maintenance of an accurate food composition database, reflecting the nutrients in our current food supply, is supported by singular, cardinal programs within ARS. Because of this existent system, NRI funds can be used optimally to analyze the most recent data, for the benefit of our nation, rather than being spent to reinvent a new database with every related project. These symbiotic programs undergird all of our nutritional education, public health, clinical practice, intervention and regulatory policies

Equally important is the truly interdisciplinary nature of the ARS supported research centers that enables scientists from such diverse disciplines as physical chemistry, microbiology, molecular biology, nutrition, plant biology and many others to conduct theoretically based and translational research that is needed. Such interdisciplinary programs are particularly evident at the ARS Human Nutrition Research

Centers (HNRC). Funds from ARS support the salaries of these scientists and the exigent infrastructure for the interdisciplinary research needed to solve the complex problems posed by agriculture and nutrition. Maintaining such an intricate infrastructure is not possible by the ‘for-profit’ agricultural sector whose research and development is generally driven by immediate marketability and is less interdisciplinary in nature.

Agricultural research enriches our lives today and provides for a better tomorrow. The United States has a proud history of overcoming major disasters and rebuilding our nation as a stronger, more vital society. The recent spate of natural disasters, from the Asian tsunami to Hurricanes Katrina and Rita, has highlighted the vital role of agricultural research. USDA funded research focuses not only on the mitigation of the after effects of natural disasters, including drought, hurricanes, fires, and flooding, but also on preparedness and prediction, so that we can be ready to face and defeat potential catastrophic events. NRI emphasis areas in Managed Ecosystems, Rural Development, Plant Environmental Adaptation, Animal Protection, and Watershed & Water Resources contribute to our ability to better detect and respond to destructive natural forces. Studying the impacts of weather events and climactic changes, creating alternative sources of energy, preparing our cities and farmers to deal with the misfortune wrought by nature, and safeguarding human health: USDA research gives us the tools to rise above natural disasters.

Zoonotic diseases, which can pass from animals to humans, pose a formidable public health risk, as we have seen from recent outbreaks of SARS, West Nile Virus, and Bovine Spongiform Encephalopathy (BSE, or “mad cow” disease), as well as from the increasing threat of antimicrobial resistance or an avian influenza pandemic. Furthermore, animal pathogens can devastate domestic animal populations and/or create severe economic losses through the costs of control and prevention, loss of markets and the interruption of the food supply chain. Exotic Newcastle Disease in Southern California and the ongoing BSE situation provide recent examples. Although federal agencies like the National Institutes of Health (NIH) and Centers for Disease Control and Prevention (CDC) are addressing human prophylaxis and treatment, it is critically important to monitor and halt these diseases at their source, the animal host. The NRI’s programs in Animal Protection, Animal Genomics, and Animal Biosecurity support research that can aid in the prevention, detection and containment of infectious, zoonotic pathogens, to the benefit of both animal and human health, the food system, and all of the economic importance of the animal agriculture sector. Recent funding of research on antibiotic resistance mechanisms and the innovative Coordinated Agricultural Project (CAP) awards to University consortia studying avian influenza and porcine reproductive and respiratory syndrome provide timely examples of the benefits of NRI competitive research programs.

Nutrition is the foundation upon which human and animal health is built, and whose mysteries fascinate the American people like no other aspect of science. Uncovering the optimal diet to maximize health or minimize risk of disease is the subject of daily news stories, and indeed nutrition has been shown to play a role in many health conditions, from cancer to heart disease to adult-onset diabetes. Clearly, the recent alarming increases in obesity and associated health risks are related to the foods we eat, and we are only just beginning to understand the complicated interactions between nutrition, genomics, behavior, and environment. The USDA has served as the premier federal sponsor of nutrition and food-related research since its conception by President Abraham Lincoln in 1862. With its singular perspective on the entire food system, from crop to livestock to food supply to human consumption, no other agency has the capacity to best understand the impact of nutrition on the health and well-being of the American people. Through its program areas in Human Nutrition, focusing on both optimal health and obesity, as well as the critically essential, related emphasis areas in Food Quality, Value, and Safety, and through the research conducted at the HNRC, the USDA is making the connection between what we eat and how we live.

Unfortunately, USDA research is withering from lack of funding. Initially authorized at \$500 million, the NRI has been chronically under-funded and continuation of this neglect will inevitably undermine the success of the USDA's research programs. The fundamental knowledge gleaned through NRI and other USDA-funded research is critical for advancements in agriculture. Basic research provides the seeds from which all scientific and technological advancement will grow, even though the benefits which we ultimately reap may be unknowable at the time of sowing. The requirements for a healthy yield include both the fertile soil provided through the infrastructure of the ARS and the highest quality seeds of discovery produced by NRI supported research grants. Thus it is imperative that the breadth and competitive nature of the NRI portfolio be maintained and expanded, to ensure our nation's excellence in agricultural research and the well-being of all Americans. **USDA research programs deserve to be supported at the highest level possible and FASEB respectfully urges the subcommittee to consider supporting the NRI at the \$248 million funding level proposed in President Bush's FY 2007 budget.**

In addition to its competitive research programs, the USDA is responsible for administering and enforcing the provisions of the Animal Welfare Act (AWA) through the Animal and Plant Health Inspection Service (APHIS). One of the duties of APHIS is to license and regulate animal dealers who supply animals for use in biomedical research and education. Recently, there has been a great deal of attention focused on Class B animal dealers, who acquire animals (primarily cats and dogs) from pounds and shelters, pet owners who wish to give up their ownership, and other legally permissible sources. Although the vast majority of animals used in biomedical research or education are purpose-bred, dogs

and other animals acquired from Class B dealers continue to serve a valuable purpose in medical and scientific research, particularly in studies where genetic diversity, specific physiological conditions, or a certain size or age is required. Moreover, some major suppliers of laboratory animals, whose primary business is breeding animals such as rodents specifically for use in research and education (Class A dealers), also have Class B licenses, as do some universities, because they are necessary for selling, trading, or transporting breeding or surplus stock.

The sources of all non-purpose bred dogs and cats needed for research are already strictly regulated under existing USDA animal welfare rules. Final rules published in the Federal Register (July 14, 2004) by APHIS add additional protections to insure that pets do not inadvertently end up in research facilities. Research facilities should not be prohibited from utilizing the remaining law-abiding Class B dealers to legally acquire stray and unwanted animals that may otherwise be put to death. Research facilities and animal dealers must keep detailed records verifying the original source of dogs and cats, certifying that mandatory holding periods were followed and documenting that providers were informed the animals may be used for research.

FASEB fully supports the enforcement of existing laws to protect pets and other animals, and to ensure that any licensed animal dealers comply with animal welfare standards. Furthermore, we believe that the USDA should have the resources necessary to ensure adequate enforcement of these laws. The use of animals in research and education is a privilege and imposes a major responsibility to provide for their proper care and humane treatment. Good animal care and good science go hand-in-hand. **However, we would like the subcommittee to be aware that prohibitions against Class B dealers or the research institutions that purchase from them could cause severe harm to biomedical and agricultural research and education.** The role of animals in research remains critical in understanding the fundamental processes of life, and in developing treatments for injury and disease. Imposing unnecessary statutory restrictions, rather than enforcing existing sound regulations, does little to protect animals and could have major negative implications for life sciences research and academic research institutions.

Thank you again for the opportunity to submit testimony on FY2007 agricultural appropriations. If there is any additional information FASEB may provide, please do not hesitate to contact us through our Office of Public Affairs at (301) 634-7650 or via our website: <http://opa.faseb.org>