BIO
BIOTECHNOLOGY
INDUSTRY ORGANIZATION

June 7, 2010

U. S. Department of Agriculture, Office of the Secretary
Submitted to Federal eRulemaking Portal

Title: AFRI planning comments, NIFA-2010-0001
Re: Department of Agriculture, Office of the Secretary; Solicitation of Input From Stakeholders Regarding the Agriculture and Food Research Initiative (AFRI), National Institute of Food and Agriculture, U. S. Department of Agriculture; Notice of public comment period for written stakeholder input [Federal Register: May 7, 2010 (Volume 75, Number 88) Page 25199-25200].

Dear Sir:

The Biotechnology Industry Organization (BIO) appreciates the opportunity to provide input on the development of the Fiscal Year 2011 Agriculture and Food Research Initiative (AFRI) program solicitations at the Department of Agriculture (USDA). We understand that the process for development of the AFRI program is mandated by the Food, Conservation, and Energy Act of 2008, and will be used to set the priorities of the program through public meetings and comments. BIO is the world's largest biotechnology trade association representing more than 1,200 members in the United States and 31 nations. BIO members are involved in the research and development of innovative healthcare, agricultural, industrial, and environmental biotechnology. BIO members are at the forefront of the research, development, and commercialization of biotechnology-derived plants and animals.

Funding for research in agriculture is critical to continuing the innovations that provide abundant, healthy, nutritious food, sustainable fuel, and the basic research that is the foundation to future production systems. BIO supports increased funding for AFRI programs, and NIFA as a whole. Continuing to increase funding for AFRI grants should be an important objective for USDA. Overall, the increased enthusiasm and funding for NIFA are positive steps that should lead to more recognition of the science that is so vital to progress in agriculture.

BIO is supportive of the continuation of basic research as a foundation for future discoveries in agriculture. Many of BIO's members are attentive to discoveries that occur at the basic level of research. From these discoveries, improvements to methods of agricultural biotechnology can be implemented and can contribute to goals of increased production, lessened environmental impact, and sustainability of agricultural production. These improvements assist producers in healing, fueling, and feeding the world. Without the use of these discoveries that lead to new technology, progress in agriculture will not take place. BIO would like to emphasize our support for defined objectives in translational research as a part of the AFRI program, but this should not be at the expense of basic research that will be the foundation of knowledge for future translational work.

BIO is cautiously optimistic about the implementation of the forward-funding model for the grants in order to drive increases in funding of the AFRI program. BIO would like to have more information presented by NIFA as to how these programs will be administered in future years, but BIO does realize this has also been utilized successfully by other agencies in their grant funding

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programs. Contingency plans need to be developed for years in which funding remains flat from the previous year for the AFRI program. The ability to fund new grants while still having the resources for currently funded grants to continue is important, so that new research needs that come up can be addressed.

Concerns with the forward-funding model for grant implementation may also impact training of future scientists. These scientists will be the researchers and technical employees that will continue to drive the developments of the future, and, thus, training of them is critical to the scientific system. Graduate programs often rely on grants to fund graduate student assistantships, and, in turn, the research accomplished by these students. If institutions do not allow admittance of students unless their future mentors have guaranteed funding for the entirety of their program, the model of funding grants one year at a time can have detrimental effects on these programs. The uncertainty of future funding will continue to stymie recruitment of top investigators to conduct cutting-edge state-of-the-art science relevant to the agriculture sciences, which is necessary to train the next generation of scientists and industry leaders dedicated to research in agriculture.

BIO supports outcome-based research if it will increase the funding for the grant programs, but the impact on these researchers applying for these grants must be considered. Start-up support for beginning assistant professors by institutions has been declining recently, with many institutions relying on these professors to generate grant funds earlier in their careers than their predecessors. It may be difficult for new researchers to have the opportunity to participate in large, multi-institution grants as these collaborations are more likely to involve established researchers.

The traditional path to earning a grant may also be impacted if grant objectives rotate year to year. If an applicant is not awarded a grant the first time it is submitted (a fairly common occurrence), then he/she is able to improve the grant application from the comments received as a part of the review process. The rotation of grant objectives from year to year would not allow this process to take place and applications to be improved until the original the objective is again a part of the grant program some number of years in the future. For beginning researchers trying to obtain tenure and promotion, this cycle of rotation may be too long to allow them to obtain the necessary grants to fund their programs. The consideration of how these procedures will impact applicants and grantees is important for NIFA to communicate to the scientific community and would help the community better understand the impacts of the changes to the granting system.

BIO also believes that AFRI should consider components that could increase nutritional and health traits from agriculture for food, feed, and medicinal use as part of its food safety, nutrition and health challenge. Critical issues facing agriculture, that no USDA entity can address individually, include delivery of human health care, reduction in hunger, and increasing energy supply, all in a sustainable manner with minimal negative impact on the environment. These issues require science-based, cross-cutting and multi-disciplinary solutions. The United Nations (U.N.) predicts world population will exceed 9 billion by mid-century and has called for a 100 percent increase in world food production by 2050. According to the U.N., this doubled food requirement must come from virtually the same land area as today. The U.N. Food and Agriculture Organization (FAO) further states that 70 percent of this additional food must come from the use of new and existing agricultural technologies. Therefore, the need for innovation through new technologies is essential for the future of citizens, communities and natural resources. People worldwide do and will continue to benefit from biotechnology through enhanced quality of life and health, and through more affordable and sustainable supplies of food, feed, fiber, fuel and industrial products.

The USDA should identify new agricultural technologies as a priority research program area. USDA must abide by the Department's core mission to fund research that will lead to technological advances to make more healthful and safer food. Research and innovation in new agricultural technologies, including plant, animal, and microbial biotechnology, should be a primary platform within the USDA, given the dramatic future demands for food, health and energy. Agricultural (crop and animal) and forestry biotechnology is an important contributor to sustainability and is integral to meet world food, feed, bioenergy, and fiber demands, producer needs, and desirable land use patterns. Advances in biotechnology can help producers increase productivity to meet future nutritional, energy and fiber needs while decreasing environmental impacts. These advances may come in refinements to current technology, and as such, ethanol should not be excluded from consideration of energy crops, feedstocks, or "infrastructure-compatible fuels and biobased products" that meet the other criteria and priority areas for the AFRI Sustainable Bioenergy grants challenge. BIO supports efforts that strive to produce more using less per unit of production, decreasing pressure on the environment, preserving water, soil, habitat, air quality and decreasing per unit climate emissions and land use. Such efforts will also improve human health through access to safe, nutritious food and improve the social and economic well-being of rural communities. Agricultural and forestry biotechnology contributes to a rural economy that keeps jobs in the areas that need them. BIO supports and encourages public and private initiatives that recognize biotechnology's contributions to sustainable agriculture and forestry.

BIO supports increased funding for the Agriculture and Food Research Initiative (AFRI). The Food, Conservation, and Energy Act of 2008 established the AFRI, a new competitive grants program authorized at $700 million annually for research, education, and extension in support of our nation's food and agricultural systems within the Institute. Adequate funding is critical to implementing AFRI and realizing its potential. Without sufficient research funding, crucial research avenues will go unexplored and research efforts vital to our nation's continued agricultural leadership will be hampered. Current funding levels remain inadequate. BIO urges the Administration to embrace a funding action plan that increases funding for AFRI to its fully authorized level as soon as practicable, to provide scientists with the ability to conduct research and give America's farmers and ranchers the tools necessary to meet the challenges of modern agriculture and keep the country competitive.

BIO urges that the AFRI continue to make funding available for research on genetic engineering (GE) and cloning of livestock. Funding applications were denied by the Cooperative State Research, Education, and Extension Service National Research Initiative Competitive Grants Program (NRICGP) in FY 2008 and 2009. A key aspect of animal genomic research is using new technologies such as biotechnology for manipulation of gene expression in animals, including RNA interference and transgenesis (USDA, 2007. Blueprint for USDA Efforts in Agricultural Animal Genomics 2008-2017). The Blueprint states that "In the long-term, animal genomics efforts will lead to efficient and economical production of human pharmaceutical proteins in animals, and new technologies for manipulation of gene expression in animals (i.e., RNA interference, transgenesis, etc.)." Genetic engineering of animals offers a way to increase the genetic variability available for selection as compared to conventional breeding which is limited in selection to naturally-occurring genetic variation in the general population of animals. Genetic engineering of animals has the potential to provide compelling benefits to transform public health, including improved foods, advances for human health, enhanced animal welfare and a reduced environmental impact according to a recent report by Gottlieb and Wheeler (2008; http://www.bio.org/foodag/animals/ge_animal_benefits.pdf). BIO agrees that

biotechnology approaches for the genetic improvement of livestock have great potential and that the applications listed from the "Blueprint" have compelling benefits.

In summary BIO supports an AFRI program that emphasizes the need for research on new, science-based agricultural technologies, including plant and animal biotechnology, which provide the means to meet the vast challenges of human health, hunger and energy supply in a sustainable environment. BIO appreciates this opportunity to comment, and we look forward to working with you on this crucial issue.

Sincerely,

Sharon Bomer Lauritsen
Executive Vice President
Food and Agriculture