

**Objective 3: Develop and deliver educational materials about bovine genomics research to consumers and stakeholders.** Dissemination of language-friendly, impact-full educational materials that are readily accessible by the consuming public and stakeholders will be critical for future acceptance and application of results from the proposed Multistate Research Project. This is especially true given the potential for a virtual explosion in new bovine genomics technologies and information that will result from this Project. With an outreach component firmly in place, the proposed Multistate Research Project will help people with vested, professional, and (or) societal interests in bovine genomics research to learn, form opinions and policies, and develop novel strategies and tools that will improve the health, reproduction, production, and product quality of dairy and beef cattle. Under Objective 3, Project participants will work to develop multiple educational materials (web site, posters, oral presentations, extension publications) for delivery to a wide variety of target audiences. The following outreach activities will occur during the proposed 5-year Project.

Project participants from the MI Station who are also members of the NBFGC are developing a web site for use in public education about bovine functional genomics. This effort is being spearheaded by Dr. T. Ferris, a member of the NBFGC who holds a dairy genetics extension position at Michigan State University. Therefore, it is proposed that the MI Station be the hub for development of a NC XXX public education web site, with appropriate links to the developing NBFGC web site and EST database (<http://gowhite.ans.msu.edu>), as well as other bovine genome databases (<http://sol.marc.usda.gov/genome/cattle/cattle.html>; <http://spinal.tag.csiro.au/cgd.html>; <http://www.hgsc.bcm.tmc.edu/bovine>; <http://locus.jouy.inra.fr>), genome databases for other species, and other web sites of interest containing reliable genomics/proteomics information. The NC XXX web site will also provide a platform for integration of cattle extension web sites at participating NC XXX Stations. The main target audiences of the NC XXX web site will be producers, veterinarians, university students, K-12 educators, consumers, and policy makers. However, participants of the proposed project are also interested in providing valuable educational pieces and links for professionals such as extension faculty and personnel, genomics and non-genomics research and teaching faculty, university administrators, and industry and government representatives. In this way the NC XXX web site will provide not only education but also advertising of Project activities to strengthen participation from extension and research faculty other Stations and government/industry partners in the future. Dr. D. Bullock (KY station), who has recently joined the NC XXX project (E-1 form to be sent to the current NC 209 Project Administrator in Feb., 2002), will be invaluable in facilitating development of such outreach activities. Dr. Bullock holds a beef genetics extension appointment at the University of Kentucky and serves on two national beef cattle improvement programs (the National Cattle Evaluation Consortium and the Beef Improvement Federation). Therefore, Dr. Bullock's participation will well connect NC XXX with national extension efforts, especially as to the form and application of basic data and information that the Project will generate. Dr. Bullock will also communicate Project activities and results to these programs and, along with other Project participants, will extend invitations to the NC XXX annual meetings to these and other key industry groups (e.g., NCBA, NAAB, AI companies, breed associations, Monsanto, Cargill, etc.).

Another NC XXX outreach activity will be held in conjunction with the annual Plant, Animal, and Microbe Genomes (PAMG) meetings in January 2005. This activity will be in the form of a hands-on Quantitative Genomics/Proteomics Workshop offered to PAMG participants, including members of other National Research Support and Multistate Research Projects. Advertising for the workshop will be done during the 2004 PAMG meetings and through PAMG announcements for the 2005 meeting. An assessment survey will be distributed to attendees at the end of the workshop so improvements can be made for the next series of outreach activities in year 2006 (see below). NC XXX Project participants working under Objective 2 will be responsible for advertising, planning, and conducting this workshop (i.e., CA, IA, IL, MI, MN, PA Stations).

Another series of outreach activities will occur at the annual joint meeting of the American Dairy Science Association and the American Association of Animal Scientists in summer 2006. These activities will occur in two formats. One will be a Multistate Research Project NC XXX booth displaying extension-type bulletins (also to be available on CD) about the details and value of the cattle genomics research conducted under the NC XXX Project. Bulletins highlighting the research activities of each participating Station will be available (to be written by participants from each Station) along with other written materials that summarize research findings to date and describe ways in which these findings may be applied in the US cattle industry. The 2006 NC XXX Chair and Secretary will oversee drafting of these additional bulletins. At least two participants of the Project will man the booth to offer the reading materials displayed, answer questions about them, to help interested attendees locate and explore the Project's web site (on a lap top computer stationed at the booth), and to advertise an educational symposium on NC XXX bovine functional genomics/proteomics research. Participants from at least four Stations working under Objectives 1 and 2 will deliver a series of brief lay presentations in this educational symposium on bovine functional genomics/proteomics. The goal of these presentations will be to help interested university administrators, research-teaching-extension faculty, graduate students, undergraduate students, industry representatives, and government officials better understand functional genomics/proteomics research in the context of improved health, reproduction, production, and product quality in cattle. The symposium will also highlight technological developments, research results, and applications of the genomics/proteomics research accomplished under Objectives 1 and 2 of the proposed Project. An assessment survey will be distributed to attendees of the symposium so improvements can be made for the next series of outreach activities in year 2007 (see below). A working group of Project participants will be assembled during the 2004 annual NC XXX meeting and charged with advertising, planning, and conducting this series of outreach activities. Logical candidates for this outreach activity could include participants from the AZ, CA, KY, IA, IL, OH, MI, MN, PA, and VT Stations, and USDA-BARC. Advertisement about the booth and symposium will be done at the 2005 ADSA-AAAS and PAMG meetings and sent to other Multistate Research Project Administrators in 2005 to encourage contributions of similar educational materials from other species genome projects.

A final outreach activity will occur at the annual meeting of the Conference of Research Workers in Animal Diseases (CRWAD) in November 2007. The target audience for these presentations is professionals in veterinary fields: clinicians, research-teaching-extension faculty, graduate students, university administrators, animal health industry representatives, and government representatives. CRWAD does an exceptional job of encouraging attendance at poster presentations by having no other concurrent sessions running when posters are on display. More than 600 CRWAD attendees typically view posters at this meeting. At least two posters will be presented, one that highlights the interconnected research performed under Objectives 1 and 2 and the other that demonstrates how the NC XXX Project executed its outreach plan of Objective 3. A similar series of oral presentations (15-minutes each) will be delivered in the Immunology, Pathogenesis, Physiology, and Respiratory Diseases sections of the 2007 CRWAD program. A working group of Project participants will be assembled during the 2005 annual NC XXX meeting and charged with advertising, planning, and conducting this series of outreach activities. Logical candidates for this outreach activity could be participants from AZ, KY, MI, and VT.