Abstracts for Awarded Grants FY12

ALLEN, Lorraine: SBDC State 2012 (Trenton SBDC) - State of New Jersey: SBDC - 7/1/2011 - 6/30/2012 – S1241 - Awarded $16,500:

The Small Business Development Center at the College of New Jersey provides assistance to small businesses in all industries to maneuver around the obstacles to success. The SBDC offers group as well as confidential one-on-one counseling at no charge, in addition to a variety of workshops, seminars, and a small business certificate program.

ALLEN, Lorraine: SBDC Federal 2012 (Trenton SBDC) - State of New Jersey: SBDC - 1/1/2012 - 12/31/2012 – F1241 - Awarded $172,982:

The Small Business Development Center at the College of New Jersey provides assistance to small businesses in all industries to maneuver around the obstacles to success. The SBDC offers group as well as confidential one-on-one counseling at no charge, in addition to a variety of workshops, seminars, and a small business certificate program.


Herein, the multi-domain protein human serum albumin (HSA) will be studied as HSA is known to be dynamic in nature, spanning a wide range of conformational transitions. HSA is known to bind a variety of ligands and thus has become a model protein in the study of drug-protein interactions. Hence, the proposed research will also allow for deeper insight into the overall independent segmental/domain motions of HSA which render the protein its characteristic flexibility and transport properties.

CASTALDO, John: NCAA Division 3 Strategic Alliance – NCAA – 8/1/2011 – 7/31/2012 – N1160 – Awarded $63,318

We will be able to immediately demonstrate our commitment to supporting the development of aspiring female athletes. Further, if a minority female candidate is selected, the individual’s minority status will further help to diversify the current staffing of the department.
CROLL, Emily: TCNJ Art Gallery Exhibitions FY12 - MCCHC – 1/1/2012 – 12/31/2012 – S1380 – Awarded $4,150

This MCC&HC grant will help support The College Art Gallery at The College of New Jersey’s public programs including exhibition and arts lectures. The College Art Gallery presents six exhibitions and several lectures annually. All gallery events are free and open to the public. Funding defrays costs related to printing, professional fees and exhibition costs.


The integrated electric power system test bed will support multiple senior keystone projects per year as well as play significant role in the investigator’s “Power Systems and Renewability” course. Additionally, it will be utilized for student outreach programs in conjunction with the College’s Center for Excellence in Science, Technology, Engineering, and Mathematics – benefiting local lower and middle class youth.

DELL, Amy: Central NJ Regional Assistive Technology Programs for Individuals who are blind or Visually Impaired - NJ Commission for Blind & Visually Impaired – 7/1/2011 – 6/30/2012 - S1267 - Awarded $400,000:

While the Adaptive Tech Center focuses on college students with disabilities, CATIES also provides assistive technology services to the school-aged population. Assistive technology specialists conduct personalized evaluations to determine which technology tools will help a child access the curriculum and participate more independently in school. CATIES staff also provides follow-up training to both children and teaching staff and provide technical assistance on using the recommended assistive technology to enhance learning, productivity, and independence.

DELL, Amy: Joseph Kohn Rehab Center – NJ Commission for the Blind & Visually Impaired – 2/15/2012 - 12-31-2012 - S1263 – Awarded $328,119.00:

The Joseph Kohn Rehabilitation Center (JKRC) offers people who are blind and visually impaired an opportunity to learn skills that enable independence. Students gain skills to attend college, to seek employment or become independent homemakers. After completing the program students have received the training necessary to combine using sensory cues and any remaining vision to their best possible advantage.

TCNJ Bonner Center will engage in identifying, collecting and synthesizing previously-performed assessments of the community’s prevention needs and prevention efforts and working with the local planning entity and key community actors to identify the most appropriate, reliable, and valid sources of previously-performed assessments.

DONOHUE, Pat: Trenton High School: Hedgepath Williams Ed Grant – Wells Fargo Foundation – 9/1/2012 – 8/31/2012 – P1255 – Awarded $20,000

N/A


N/A

DREWES, Donna: Sustainable Jersey 2011 – GR Dodge Foundation – 7/1/2011 – 6/30/2012 - N1227 - Awarded $300,000:

The Sustainable Jersey program has effectively developed and implemented a sustainability certification for municipalities. Specific projects have included planting community gardens, addressing “green” building issues, and organizing local recycling programs. The Sustainability Institute collaborates with other organizations to assist various municipalities with planning for and obtaining Sustainable Jersey certification.

DREWES, Donna: Sustainable Development Assessment and Implementation Assistance - Surdna Foundation – 2/1/2012 – 1/31/2014 – N1225 - Awarded $450,000:

Sustainable Jersey is a certification program for municipalities in New Jersey that want to take steps to sustain their quality of life over the long-term. Municipalities have power and authority over many sustainability issues, but little capacity to weigh options and initiate change. Sustainable Jersey uses an expert and stakeholder participatory process to identify best practices that municipalities can implement to become “certified,” and provides a comprehensive program of recognition, financial incentives, training, and support. To be truly sustainable, the program needs to define sustainability outcomes in the various program areas and evaluate community progress based on performance.

DREWES, Donna: NJBPU Sustainable Jersey FY2012 - NJ Board of Public Utilities – 1/2/2012 – 12/31/2012 – S1230 – Awarded $500,000:
We believe that there is no reason that every single municipality in New Jersey cannot initiate and complete a wide range of energy and cost saving activities in a short period of time. The laws and regulations, financial instruments, technical knowledge, and program capacity already exist. Utilizing the assets and reputation of the Sustainable Jersey program, we believe we can expand our partnership with the Board of Public Utilities to build on the existing base of programs to implement a new slate of activities that are efficient and effective, leverage the private sector and volunteers, and will lock in long-term savings for communities, residents, and businesses, throughout New Jersey.


The Sustainable Jersey program has effectively developed and implemented a sustainability certification for municipalities. Specific projects have included planting community gardens, addressing “green” building issues, and organizing local recycling programs.

ERICKSON, Jeffrey: Nicotine, serotonin, and postnatal development of cardiorespiratory control – CJ Foundation for SIDS - The Sudden Unexplained Death in Childhood Program – 03/01/2011– 3/01/2012 - N1237 - Awarded $15,000:

The main goal of this project for 2011 will be to generate preliminary data for a larger and more comprehensive NIH AREA grant to be prepared and submitted in late 2011 or in 2012 (see Future funding plans below). I anticipate significant progress on all three specific aims during the time frame for this funding opportunity. In fact, two of the three sub-projects are at a stage that will allow generating data immediately, as described below.


For this grant, we plan to use toad landing as a model system to understand how motor control strategies stabilize the whole body by controlling movements of forelimb joints and actions of the underlying muscles acting at those joints. We will also examine how sensory information is used to modulate motor patterns to tune landing mechanics to the timing and magnitude of impact. The proposed studies provide an exciting opportunity to integrate biomechanics, muscle physiology and sensory biology to better understand the fundamental principles governing a complex locomotor behavior, controlled deceleration during landing. Understanding toad landing in detail should also provide a mechanistic framework for future comparative studies addressing the evolution of landing behavior in anurans more broadly. The objectives are to is to quantify whole body kinetics during landing to determine how control of posture at impact stabilizes the toad’s body by minimizing torques about the center of mass, to use electromyography to determine if modulation of forelimb muscle motor patterns results in stereotyped joint kinematics despite changes in hop distance and landing forces, to use in vivo and in vitro measurements of select forelimb muscle lengths to determine whether motor control strategies protect muscles from over-stretching during energy absorbing eccentric contractions, and to use sensory perturbations to determine how visual and non-visual feedback shape the motor control strategies of landing during the aerial and impact phases.
The primary aim of this study is to assess the reliability of the Y Balance Test in school-age youth. A secondary aim is to compare dynamic balance performance using the Y-balance kit with a less-expensive testing device made from PVC tubing, yardsticks or athletic tape on the floor.

For the past eleven years, the New Jersey AmeriCorps Bonner Leader Program has sought to address critical community needs such emergency food assistance and mentors for youth throughout Mercer and Middlesex counties in New Jersey. Receiving additional MSY will allow us to increase the number of AmeriCorps members engaging in service activities related to Economic Opportunity. Members will provide emergency food assistance to individuals and families in need, housing services to the homeless and those at-risk for homelessness, and adult education classes to members of the community.

FOELL, Christen: NJ AmeriCorps Formula FY12 - NJ Department of State – 9/1/2011 – 8/31/2012 – S1255 - Awarded $99,672:
Given the breadth of community needs within the targeted geographic areas, Bonner AmeriCorps members will serve with a wide range of organizations addressing needs related to education, poverty, economic opportunity, environmental issues, services for persons living with disabilities and other human needs. However, Bonner AmeriCorps members will be primarily involved in service related to the educational, economic and health related needs of disadvantaged persons.

FOELL, Christen: FY 12 AmeriCorps Policy Options - Bonner Foundation – 9/1/2011 – 8/31/2012 – N1255 – Awarded $13,467:
N/A

FOELL, Christen: NJ AmeriCorp FY 2012 – Bonner Foundation – 9/1/2012 – 12/31/2012 – N1250 – Awarded $44,920:
N/A

GOEKE, Alison: CTEP Federal FY 12 - NJ Department of Education – 9/1/2011 – 8/31/2012 - F1228 – Awarded $175,000:

This team of college faculty members, representatives from business and industry, secondary and postsecondary teachers, administrators and counselors has worked collaboratively toward developing a vision of statewide, standards-based, quality, secondary and postsecondary STEM education. The goals of this project are to implement the model program of study in Socially Responsible Engineering & Technology developed through the Career & Technical Education Partnership (CTEP) at The College of New Jersey. This grant will also assess the Socially Responsible curricula by providing feedback to CTEP and supplementing it with materials developed by the pilot districts. The last goal of the grant will be to participate in technical assistance and professional development opportunities that support implementation of the Socially Responsible program of study.

GOEKE, Alison: CTEP State FY12 - NJ Department of Education – 9/1/2011 – 8/31/2012 - S1227 – Awarded $140,000:

The Collegiate Organization TES (Technology Education Society) will provide support to Technology Student Association in preparing the site and in conducting the NJ Competitive Events Spring Conference and Fall leadership Conference.


Our mission is to foster excellence in the teaching and learning of STEM through novel and integrative inquiry and design-based methods. Our mission includes education research, professional development for educators and education administrators, curriculum development, and community outreach.

HADGE, Joe: Lollanobooza Year 11/12 - NJ Dept of Law & Public Safety - 6/1/2011 – 5/31/2012 – F1259 - Awarded $5,000:

The specific goals of this event are to provide a non-alcoholic outlet to students, to prevent underage drinking and to promote responsible decision making and interaction with all members of the community. The event will be planned to take place on a known “drinking” night.


Through grant monies in the past, we have been able to hold state-wide events such as the Peer Institute as a way to share ideas, methods, strategies, etc. to create substance-free events on
college campuses. Presenters who have attended this event, as well as TCNJ’s Welcome Week for incoming freshman, have discussed the concept of making healthy choices. These events are always great successes.

**KATZ/SHENODA, Allen/Michael: Segment/Judgment Box Database – NJDOT – 1/1/2012 – 12/31/2012 – S1240 – Awarded $74,987**

The overall objective of this project is to start the development of a Computerized Database of All ITS Facilities, including conduits, Junction Boxes, Cameras, Connections, etc., with an initial focus on the junction box facilities currently missing from the current inventory system. The current system consists of a computerized table of conduit sections, with various lengths, sometimes changing materials and unknown intermediate numbers, types, and locations of junction boxes. It is clear that the accurate location of conduits in the medium and long-term can be best undertaken with a cross-referenced segment and junction box inventory.

**Kress, Tracy: Investigating the regulation of gene expression through the coordination of RNA splicing with transcription: Research Corporation for Science Advancement- 7/1/2011- 6/30/2012 – N1233 - Awarded $35,000.00**

Here I propose experiments to investigate the hypothesis that chromatin modification and RNA splicing are coordinated to regulate gene expression, and I anticipate that my findings will make significant contributions not only to the fields of chemistry and biology but also human health.


Research to date on nonlinear optical polymers has largely been confined to homopolymer hosts, which offer limited options for tuning the chromophore micronenvironment. A promising alternate approach to achieving stable dipolar ordering is to selectively encapsulate the chromophore in one domain of a block copolymer.

**PETROFF, Jerry: Project for Children and Young Adults who are Deafblind- US Department of Education 99049 – F9049 – 10/1/2011- 9/30/2012- Awarded- $268,086.00**

This project centers on the facilitation of support, instruction, and resources for the development of students who are deafblind. Specifically, it will strive to provide effective methods to teachers and parents, the goals of which are positive outcomes for these students. In order to do so, the New Jersey Consortium on Deafblindness (NJCD) will utilize a number of diverse experts serving as consultants or employees to the project.

The goal of the SSP-NJ is to promote greater community integration for adults who are deaf-blind that meet the project criteria through the development and implementation of a statewide network of Support Service Providers (SSP).


The Municipal Land Use Center will form a team to deliver to the Growth Partnership elements needed for a data-driven strategy to define the region’s economic story, reveal issues and opportunities for business retention and growth, and enable informed discussions with companies.


The overall objective of the proposed research is to identify and assess examples of local government and public transportation agency partnerships and the funding mechanisms used to improve or expand public transportation. In addition, the research will seek to identify what needs to be done to ensure successful partnerships can be pursued on a continuous programmatic basis.


This project will update official PSE training materials with films on Pedestrian Safety Enforcement training techniques, which will include an overview training film and roll call video, and distribute materials to key stakeholders, within one year. It will also identify opportunities to improve the PSE program by convening key stakeholders in the safety and enforcement arena at a roundtable meeting to share local knowledge and identify partnering opportunities within one year. Finally, it will conduct three regional training workshops in the northern, central and southern regions of the state. Specific locations will be determined through consultation with DHTS.


TCNJ will assist the Somerset County Business Partnership (SCBP) as the CEDS Project Manager, in conducting inclusive and participatory public outreach that will result in their ability to compile a Vision and other CEDS elements. A public outreach process will be conducted to receive input from members of the public and special interest organizations not represented on
the CEDS Committee to include three interactive, outcome-oriented public outreach visioning workshops in the north, central, and southern portions of Somerset County.


The Robert Wood Johnson Foundation’s (RWJF) New Jersey Nursing Initiative is a comprehensive five year program that will address the states faculty shortage by developing, implementing, and evaluating a statewide model for the recruitment and retention of nurse faculty. Innovations in nursing curricula, the development of new and creative teaching and learning models, and more attention to faculty preparation and development are critical to the recruitment and retention of nurse faculty in New Jersey and in the U.S.

SEN, Stephanie: MRI: Acquisition of a 400 MHz NMR Spectrometer for Undergraduate Research - National Science Foundation – 8/15/2011 – 7/31/2014 – F1222 - Awarded $261,086:

The Department of Chemistry at The College of New Jersey (TCNJ) was awarded this grant to acquire a medium field (400 MHz) spectrometer to perform liquid phase structural characterization of organic, inorganic and biological materials, supporting the scientific studies of six faculty and their undergraduate cohorts with interests in inorganic, organic, materials, and biological chemistry. The requested instrumentation will enable continued research activities and student training, will provide new capabilities that will enhance future scholarly endeavors, and will provide curricular development opportunities for TCNJ faculty and staff.

SEPAHPOUR, Bijan: NJSGC - Undergrad Summer Fellowships (to support MUSE) - Rutgers – NJSGC – 7/1/2011 – 10/1/2011 – F1221 - Awarded $15,000:

This proposal requests to support the activities of TCNJ Mentored Undergraduate Summer Experience (MUSE) Program. In this experience, the faculty invites eligible students to participate in their research activities throughout the summer period. The program requires the qualifying student researchers to remain at the TCNJ Campus, and is not allowed to take summer courses. Care has been taken to qualify projects that their nature of activity and “end results” better map into the overall mission of NASA.

SOLOMON, Randall: Rutgers NJ Sustainable Communities – Rutgers – 1/15/2012 – 1/15/2015 – F1220 – Awarded $200,000:

This award is to develop a Regional Plan for Sustainable Development (RPSD) in the 13-county North Jersey Transportation Planning Authority region of New Jersey. It will be both “place-based” and “issue-based” and will use sustainability, transit system connectivity and Transit-Oriented Development (TOD) as the central framework for integrating plans, regulations, investments, and incentive programs at all levels of government to improve economic and
environmental conditions, while promoting regional equity and resource efficiency. The outcome of plan implementation will be a more sustainable future for the region that invests in existing communities where housing, jobs, educational, cultural, and recreational opportunities are made more easily accessible to most residents of the region without having to drive to them.

**STOUT, Bruce: Assessing Disproportionate Minority Contact in NJ's Juvenile Justice System – NJ Governor's Committee on Juvenile Justice & Delinquency Prevention – 07-01-2011 – 08-31-2012 – F1243 - Awarded $37,041:**

This is a proposal to the Governor’s Juvenile Justice and Delinquency Prevention Advisory Committee to conduct an in depth review and analysis of disproportionate minority contact (DMC) in New Jersey’s juvenile justice system. This proposal outlines a plan designed to meet the Committee’s desire to conduct a more thorough assessment than is done annually based on the Relative Rate Index (RRI) and is intended to augment the Committee’s ongoing efforts to understand and reduce DMC throughout New Jersey’s juvenile justice system.


The seminar will feature lectures by economists, historians, and philosophers (possibly also academic lawyers), as well as discussion sections, and we will have logistical support from the educational foundation the Institute for Humane Studies. Students will be actively encouraged to challenge the views presented, and lecturers encouraged explicitly to acknowledge that this approach to things doesn't have all the answers. The idea really is to encourage discussion of all political viewpoints.

**THORNTON, Leeann: Regulation of Plant Metabolism through CYP72A Cytochrome P450 Enzymes – Research Corporation for Science Advancement – 7/1/2011- 7/2012 – N1235 - Awarded $35,000:**

Our preliminary results in the model plant, Arabidopsis, indicate that CYP72A enzymes regulate growth. Minor changes in metabolism alter plant growth patterns in response to changing environmental conditions or attack by predators. This project will test the hypothesis that the CYP72A subfamily of enzymes is important for regulating plant growth and that each subfamily member contributes individually to different stages of growth and development.


The central goal of this proposed project is to create a highly qualified community of professionals who can provide appropriate instruction and services to ELLs. The project will provide staff development opportunities for in-service teachers, paraprofessionals, administrators, counselor and psychologists, etc. within the PDSN network. It also targets pre-
service professionals graduating from TCNJ programs, many of whom remain within the PDSN purview during their careers.


The specific goals of symposium contributions are to (i) highlight and synthesize the mechanisms by which developmental plasticity might contribute to evolution and (ii) feature novel empirical and conceptual approaches to the study of developmental plasticity's role in evolution.