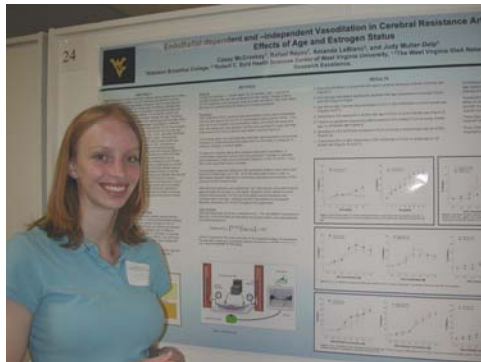


WV-INBRE NEWSLETTER

Volume 9
Spring 2007



McCroskey Wins APS Undergraduate Research Award



Casey McCroskey, a junior from Alderson-Broaddus College, has been selected as one of six awardees of the David S. Bruce Award for Excellence in Undergraduate Research presented at the recent meeting of the American Physiology Society (APS) held in Washington, D.C. McCroskey is first author on a poster from her summer research project that she presented at

last year's WV-INBRE 2006 Summer Symposium. The APS' David S. Bruce Award for Excellence in Undergraduate Research provides funds to undergraduate students presenting their research at the annual APS meeting. To be considered for the award, a student must: (1) be enrolled as an undergraduate at the time of application and the FASEB meeting; (2) be the first author on a submitted abstract for the EB meeting; and (3) be working with an APS member. The recipients receive \$500 and a certificate, and they must attend and present their posters at the meeting. Selection of the 17 finalists is based on the abstract and letter of application, as well as an oral presentation of the poster to the David Bruce Award Selection Committee. Additional information can be found at the following website <http://www.the-aps.org/awards/student/bruce.htm>.

Inside this issue:

McCroskey Wins Undergraduate Research Prize	1
Bioinformatics Workshops	2
Undergraduate Research Day at the Capitol	2-3
Student and Mentor Present Research	4
Message from Principal Investigator	5
2007 Summer Interns	6-7
Write Winning Grants Seminar	7
Alvin Named Director of NIH	8-9
Liebler Named to EAC	9
STaR Symposium	10
Steering Committee Members	11

Casey will return to the WV-INBRE Summer Program this year to work with Dr. Judy Muller-Delp (pictured below). Dr. Muller-Delp is an Associate Professor of Physiology and Pharmacology at the Robert C. Byrd Health Sciences Center and works on the role of exercise training in reversing age-related dysfunction in the arteries of skeletal muscle.



Institutions of the WV-INBRE

Lead Universities

Marshall University
West Virginia University

Network Research Institutions (NRIs)

Alderson-Broaddus College
Fairmont State University
West Liberty State College
West Virginia State University
Wheeling Jesuit University

Network Outreach Institutions (NOIs)

Bluefield State College
Concord University
Davis & Elkins College
Shepherd University
University of Charleston
West Virginia Wesleyan College

Extended Outreach Institutions (EOIs)

Bethany College
Glennville State College
Mountain State University
Salem International University

Bioinformatics Summer Workshops at WVU Health Sciences Center

The Summer, 2007 WV-INBRE Bioinformatics Workshops are scheduled for June 12-14, 2007 at the West Virginia University Health Sciences Center. These workshops feature Accelrys GCG® (formerly known as the Wisconsin Package) and SeqWeb®.

Accelrys GCG® is the most widely used bioinformatics suite in the world. Containing over 130 programs, it covers almost every aspect of biological sequence analysis. Based on published algorithms from the fields of mathematical and computational biology, the Package includes tools for:

Comparison
Database Searching and Retrieval
DNA/RNA Secondary Structure
Editing and Publication
Evolution
Fragment Assembly

Gene Finding and Pattern Recognition
Importing and Exporting
Mapping
Primer Selection
Protein Analysis
Translation

The first two days of the workshop covers the use of the Wisconsin Package through the X-Windows interface SeqLab®. In addition to exposing users to the graphical user interface, many of the basic functions are described in detail with enough theoretical description to obtain an understanding of many of the programs.

SeqWeb® will be covered on the third day. SeqWeb® provides internet access to the more frequently used applications in the Wisconsin Package from a web browser. The unique program grouping approach

and condensed parameter option sets provide a quick and easy way for common sequence analysis tasks. The enhanced Java applets empower users with greater ability to interact with sequences and analytical results. It is easier to use and is especially convenient for infrequent users.

These workshops are open to all WV-INBRE participants. There is no charge to participate. All instruction will be held in computer labs. There will be lecture, hands-on work and problem sessions. Participants are encouraged to bring their own sequences or research problems to work on. The instructor will be able assist with advanced questions during the lab sessions. Attendance is limited to 20. To register, email Dr. Mary Davis, WV-INBRE Bioinformatics Core Director at mdavis@hsc.wvu.edu.

Undergraduate Research Day at the Capitol

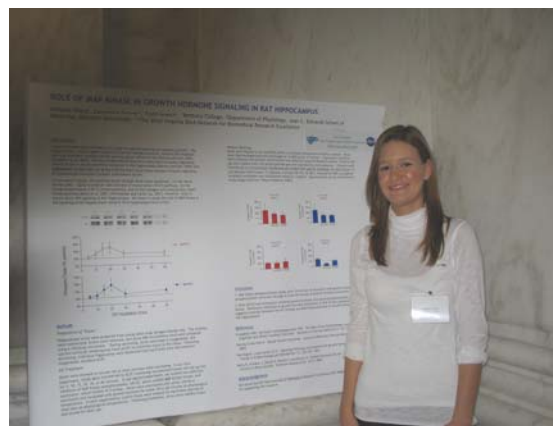
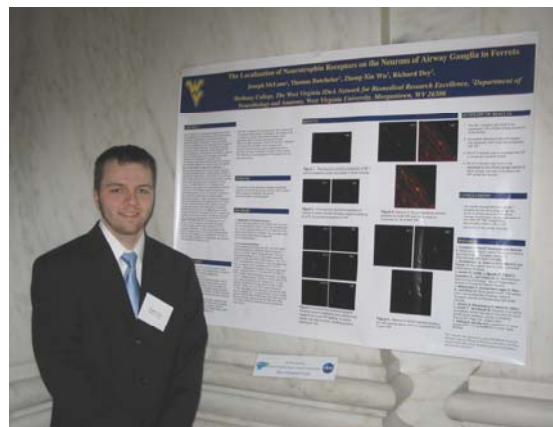
Three student interns who participated in the 2006 WV-INBRE Summer Research Program were selected to present posters of their summer research at the 4th Annual Undergraduate Research Day at the Capitol held February 8, 2007, in Charleston, WV. This event highlights undergraduate research conducted at institutions in the state and helps members of the State Legislature and Executive Branch understand the importance of undergraduate research by talking directly with the students whom these programs impact.

<u>Intern</u>	<u>Institution</u>	<u>Summer Mentor</u>	<u>Poster Title</u>
Joe McLane	Bethany College	Dr. Richard Dey	The Localization of Neurotrophin Receptors on the Neurons of Airway Ganglia in Ferrets
Melanie Ward	Bethany College	Dr. Lawrence Grover	Role of MAP Kinase in Growth Hormone Signaling in Rat Hippocampus
Kristina Bacon	Wheeling Jesuit	Dr. William Petros	Variations in the Genetic Coding Sequence of AGP and its Effect on the Binding of Docetaxel in the Blood Plasma of Prostate Cancer Patients

(Continued on the page 3)

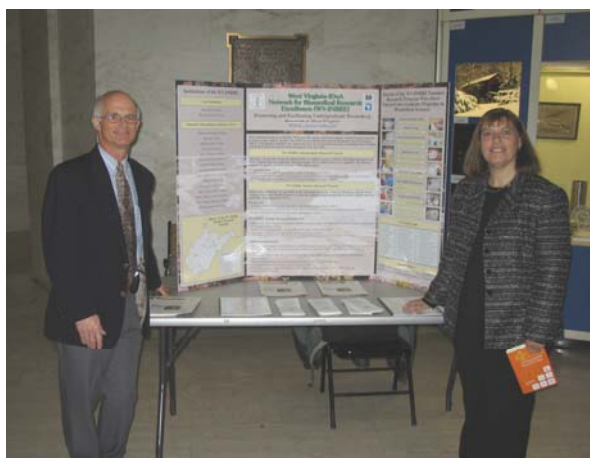
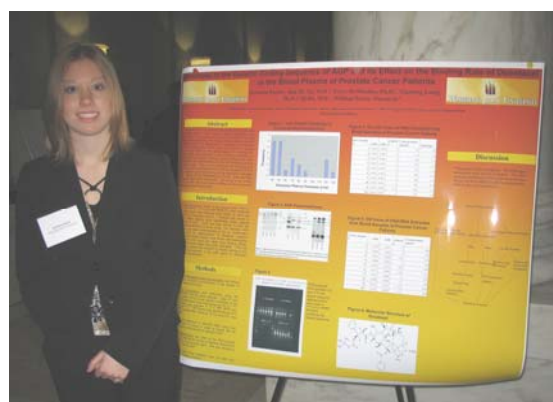
Undergraduate Research Day at the Capitol (continued)

Joe McLane, Bethany College, with his poster presentation, “The Localization of Neurotrophin Receptors on the Neurons of Airway Ganglia in Ferrets”.



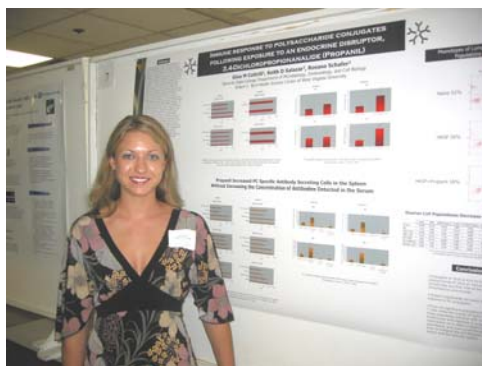
Melanie Ward, Bethany College, with her poster presentation, “Role of Map Kinase in Growth Hormone Signaling in Rat Hippocampus”.

Kristina Bacon, Wheeling Jesuit University, with her poster presentation, “Variations in the Genetic Coding Sequence of AGP and its Effect on the Binding Rate of Docetaxel in the Blood Plasma of Prostate Cancer Patients”.



Dr. Mark Reasor, Outreach Core Director at West Virginia University, and **Dr. Elsa Mangiarua**, Summer Program coordinator at Marshall University, stand beside the WV-INBRE poster display at Undergraduate Research Day at the Capitol.

WV-INBRE Student and Mentor Present Research at International Meeting



Gina Cottrill, a junior from Glenville State College and WV-INBRE Summer Program participant, and Dr. Rosana Schafer, a WVU immunologist, will be presenting their research, "The immune response to T-independent and T-dependent antigens is enhanced by the pesticide 3,4-dichloropropionanilide", at the International Congress of Immunology on August 21-25, 2007, in Rio de Janeiro, Brazil. Ms. Cottrill worked in Dr. Schafer's lab during the 2006 WV-INBRE Summer Program. Ms. Cottrill coauthors this presentation with Dr. Schafer, Dr. Michael Miller and Dr. Keith Salazar.

Ms. Cottrill feels that attending this meeting would be beneficial to her in many ways. First, it will allow her to receive exposure to research in the field of immunology from professionals around the world and learn about numerous different research projects in the field. She added that by attending both the WV-INBRE summer program and this meeting, it will assist her in her

decision to pursue Immunology as a course of study when she enters graduate school. Ms. Cottrill also feels this opportunity will allow her to make connections that will serve her through out her life and career. In addition, Ms. Cottrill said "I will be able to set an example for future interns in the program and serve to show them just how far their summer research projects can take them".

The pesticide, 3,4-dichloropropionanilide (propanil), increases the antibody response to the T-independent type-2 antigen (TI-2), phosphorylcholine (PC), after vaccination with heat-killed *Streptococcus pneumoniae* in female mice. The enhanced response requires gonadotropic support of the ovaries, but surprisingly it is independent of estradiol. This suggests propanil can be used to investigate estrogen-independent interactions between the endocrine and immune systems. In addition, it has been demonstrated that the requirements for antibody production to antigens on whole bacteria are different than to purified antigens.

To provide insight into mechanisms by which propanil alters the immune response, the effect of propanil exposure on the response to three antigens was determined: pneumococcal surface protein A (PspA), a major T-dependent (TD) antigen on intact *S. pneumoniae*,

purified PC-keyhole limpet hemocyanin (PC-KLH), a TD antigen, and purified PC-Ficoll, a TI-2 antigen. The serum antibody response and antibody secreting cells (ASC) in the spleen were measured by ELISA and ELISPOT assays, respectively.

Exposure to propanil did not affect serum antibody titers to PspA, PC-Ficoll or PC-KLH. In contrast, propanil significantly increased the number of PspA, PC-Ficoll, and PC-KLH ASC in the spleen. These results demonstrate that an environmental chemical can increase the immune response to bacterially associated and purified TD and TI-2 antigens. The role of the ovary in the response is under investigation.

Defining the mechanism by which propanil enhances the immune response will provide insight into interactions between the endocrine system and immune system which



impacts ovarian disease, autoimmune disease, and infertility.

"I will be able to set an example for future interns in the program and serve to show them just how far their summer research projects can take them".

Message from the WV-INBRE Principal Investigator Gary O. Rankin, Ph.D

As I am writing this message, we are completing the third year of WV-INBRE. As in the previous two years, this year has been full of activity at all levels. So, I'll try to highlight some of the activities that have occurred since our Fall newsletter and talk a little bit about what the future holds.

In our last newsletter, I mentioned that Dr. Nalini Santanam would be joining Marshall University and WV-INBRE as a Cardiovascular Scientist in November, 2006. Dr. Santanam did indeed arrive last November and is beginning to interact with the Appalachian Cardiovascular Research Network (ACoRN) group. ACoRN is also actively recruiting patients for the study entitled "Genetic basis for familial combined hyperlipidemia (FCHL)", Dr. Mark Flood, Fairmont State University - Project Investigator, with several families recruited in the last few months. WV-INBRE will also be featured in the 2007 spring issue of the *NCCR Reporter*. ACoRN is a key focus in the article. This is certainly an exciting recognition for WV-INBRE and its activities.

On November 16-17, 2006, the Second West Virginia INBRE/COBRE meeting was held at Stone-wall Jackson Lodge and Conference Center. The theme was bioinformatics, and Drs. Sheil and Davis helped plan and coordinate this meeting. WV-INBRE will be taking the lead on hosting the Third West Virginia INBRE/COBRE Meeting which will be held in Charleston, WV this fall. The idea of a combined INBRE/COBRE meeting is being encouraged by National Cen-

ter for Research Resources (NCCR), as the traditional Southeast Region INBRE PIs Meeting will now be a combined INBRE/COBRE meeting. This meeting will be held on June 10-11, 2007 in Charleston, SC.

Our Outreach Core has been active getting ready for the 2007 Summer Research Program. This summer three faculty members and twenty-eight students from network schools will be conducting research at Marshall University (1 faculty member and 10 students) and West Virginia University (2 faculty and 18 students). The summer's activities will conclude on August 2, 2007 with the Summer Research Symposium, which will be held at Marshall University this year. Our featured speaker will be Dr. Sidney McNairy, Director of Research Infrastructure, National Center for Research Resources, National Institutes of Health. Details of the research symposium will follow later.

Dr. Mary Davis is working to prepare a bioinformatics workshop on June 12-14, 2007, at the West Virginia University Health Sciences Center (*see page 2*). The workshop entitled "GCG101: SeqLab & SeqWeb; The Wisconsin Package" will be held in the Learning Center. This workshop is free, but reservations are required. Contact Dr. Davis at mdavis@hsc.wvu.edu to register or for more information.

Researchers in our network continue to make progress on their projects. Recently, Dr. Haitao Luo joined the faculty at Alderson-Broadus College where he will participate in the research project of



Dr. Charlie Chen to investigate signaling pathways in apigenin-inhibiting effects on tumor growth. We have also added a new member to our External Advisory Committee (EAC), Dr. Daniel Liebler, Director of the Proteomics, Mass Spectrometry Research Center at Vanderbilt University School of Medicine. We are currently in the process of seeking one additional member for the EAC.

Lastly, I would like to mention that NCCR will be holding a special INBRE Principal Investigator's meeting on July 16, 2007 at NIH. This meeting will replace the normal INBRE PI's meeting normally held in October each year. The purpose of the special meeting is to discuss what the Request for Applications (RFA) for the next round of INBRE might contain. I will be representing WV-INBRE and will have input into the discussion phase of the meeting. The results of this meeting are extremely important for the future structure of the INBRE program and our ability to participate for an additional five years. I'll look forward to reporting to you the results of this meeting and working toward continuing the INBRE program in West Virginia.

2007 SUMMER INTERNS
West Virginia University Health Sciences Center

Alderson-Broaddus College

Casey McCrosky (returning intern)
 mccroskeycl@mail.ab.edu
Mentor: Dr. Judy Delp

Jason McNair
 mcnairje@mail.ab.edu
Mentor: Dr. John Hollander

Bethany College

Ashley Berardi
 aberardi@bethanywv.edu
Mentor: Dr. Al Berrebi

Davis & Elkins College

Katie MacGregor (returning intern)
 katie.macgregor@gmail.com
Mentor: Dr. Jeff Frisbee

Fairmont State University

Stephanie Boblett (returning intern)
 labchickgidget@yahoo.com
Mentor: Dr. Mike Gunther

Jordan Moran
 jmoran1@fairmontstate.edu
Mentor: Dr. James O'Donnell

Glenville State College

Gina Cottrill (returning intern)
 cottrill.gina@glenville.edu
Mentor: Dr. Rosana Schafer

Shepherd University

Hiliary Miller
 hmille05@shepherd.edu
Mentor: Mario Scuri

Sarah Reinhardt
 sreinh01@shepherd.edu
Mentor: Dr. Pat Callery

West Liberty State College

Michael Hager
 myjetliner@yahoo.com
Mentor: Dr. Kathy Brundage

West Virginia Wesleyan College

Joshua Briscoe
 briscoe_jc@wwvc.edu
Mentor: Dr. Tim Nurkiewicz

Wheeling Jesuit University

Kristina Bacon (returning intern)
 wju242004@yahoo.com
Mentor: Dr. William Petros

DoBin Choi
 dchoi939@ignatius.wju.edu
Mentor: Dr. Lisa Salati

Stephanie Geer
 sgeer779@ignatius.wju.edu
Mentor: Dr. Heather Billings

Kelly Koral
 kkoral272@ignatius.wju.edu
Mentor: Dr. Jun Liu

Cathern Krupinski
 ckrupinski891@ignatius.wju.edu
Mentor: Dr. Greg Konat

Eric Lopez
 elopez099@ignatius.wju.edu
Mentor: Dr. Laura Gibson

Jonathan Proto (returning intern)
 jproto391@ignatius.wju.edu
Mentor: Dr. Peter Gannett

2007 SUMMER INTERNS
Marshall University School of Medicine

Bethany College

Kelly Reneau

kreneau@bethanywv.edu
 Mentor: Dr. Larry Grover

Concord University

Dustin Buchanan

buchanand03@concord.edu
 Mentor: Dr. Monica Valentovic

Davis & Elkins College

Christopher Racine

watanamzngoal03@yahoo.com
 Mentor: Dr. Gary Rankin

University of Charleston

Crystal Bennett

cyrstalbennett@cc.ucwv.edu
 Mentor: Dr. Elsa Mangiarua

Jessica Frankel

jessicafrankel@cc.ucwv.edu
 Mentor: Dr. Will McCumbee

Somaiah Ahmed

som_somy@hotmail.com
 Mentor: Dr. Nalini Santanam

Clifton Umstead

cliftonumstead@cc.ucwv.edu
 Mentor: Dr. Beverly Delidow

West Virginia State University

Virginia Hunter

ginhunter@frontiernet.net
 Mentor: Dr. Kelley Kiningham

West Virginia Wesleyan College

Christine Lansdale

lansdale_ce@wwvc.edu
 Mentor: Dr. Dick Niles

Allison Teter

teter_ma@wwvc.edu
 Mentor: Dr. Mike Moore

“Write Winning Grants” Workshop at WVU — July 13, 2007

The WVU Research Corporation is sponsoring the upcoming "Write Winning Grants" seminar to be held in the National Research Center for Coal and Energy (NRCCE), Evansdale Campus, Assembly Room on July 13, 2007. The seminar is free and all interested WVU Faculty are invited and encouraged to participate.

A multi-phase program, "Write Winning Grants" is an acclaimed seminar that comprehensively addresses both practical and conceptual aspects that are important to the proposal-writing process. The program content is designed to increase WVU faculty competitiveness for federal agency funding. All participants receive extensive

handouts and a copy of "The Grant Application Writers' Workbook."

More information on the seminar and registration form can be found at <http://www.wvu.edu/~research/>. Information on Grant Writers' Seminars and Workshops, LLC can be found at www.grantcentral.com.

Alving Named Director of NIH's National Center for Research Resources



NIH Director Elias A. Zerhouni, M.D. has named Barbara Alving, M.D. to be the director of the National Center for Research Resources (NCRR). As Acting Direc-

tor of NCRR, Alving has overseen the launch of the Clinical and Translational Science Awards (CTSA) program - a new national consortium of academic health centers that will transform the conduct of clinical and translational research to ensure that biomedical discoveries are rapidly translated into prevention strategies and clinical treatments for rare and common diseases.

"Dr. Alving has demonstrated exceptional leadership in the recent efforts of the NIH to energize the discipline of clinical and translational research across the nation," said Dr. Zerhouni. "The CTSA program marks the first systemic change in clinical research in 50 years and is a critical component of how we will effectively re-engineer the clinical research enterprise, including training the next generation of researchers. It will be with Dr. Alving's vision, creativity, and leadership that we will be able to maximize our investment in the CTSA consortium, ensure that benefits extend to the greater research community, and that new medical advances are delivered to the people who need them."

"I am honored to lead NCRR at such a critical time and welcome

the opportunity to work with my very talented and dedicated colleagues in NCRR as we capitalize on NCRR's long standing investment in clinical and translational science to enrich the CTSA program," Dr. Alving said. "I have been impressed by the variety and depth of the research that NCRR-funded investigators are conducting and the contributions NCRR makes to the entire biomedical research community. These investigators are fueling advances in clinical care by developing pre-clinical models, new technologies in imaging, and new informatics systems, which are critical to transforming clinical and translational research."

The NCRR budget of greater than \$1 billion will enable investigators throughout the country to conduct research that ranges from basic and clinical projects to community outreach and education. NCRR funding provides training and research opportunities at minority institutions and colleges, as well as in academic centers located in states that are challenged by distance and low or often rural populations.

A native of Indiana and a graduate of Purdue University, Dr. Alving earned her medical degree - cum laude - from Georgetown University School of Medicine, where she also served as an intern in internal medicine. She completed her residency training, followed by a research fellowship in hematology at the Johns Hopkins Hospital in Baltimore. She began her research career as a Public Health Officer in the Division of Blood and Blood Products at the Food and Drug Ad-

ministration (FDA) on the NIH campus. Dr. Alving then joined the Walter Reed Army Institute of Research, where she served at the rank of colonel as the Chief of the Department of Hematology and Vascular Biology. In 1997, Dr. Alving became the Chief of the Section of Hematology and Oncology at the Washington Hospital Center in Washington D.C. In 1999, she joined the National Heart, Lung, and Blood Institute (NHLBI) as the Director of the Division of Blood Diseases and Resources. She then became the NHLBI Deputy Director and Acting Director while also serving as the Director of the Women's Health Initiative (2002-2006). In 2005, Dr. Zerhouni tapped her to be the Acting Director of NCRR.

A Professor of Medicine at the Uniformed Services University of the Health Sciences in Bethesda, Dr. Alving is also a Master in the American College of Physicians, a former member of the subcommittee on Hematology of the American Board of Internal Medicine, and a previous member of the FDA Blood Products Advisory Committee. Before joining NIH, she served on the Hematology Study Section for NIH and was a member of the NHLBI Clinical Trials Review Committee. She currently serves the NIH Director as the official NIH liaison for the Centers for Medicare and Medicaid Services and is a member of the Advisory Board for Clinical Research at the NIH Clinical Center.

(Continued on page 9)

Dr. Alving is a recipient of the American Society of Hematology award for outstanding service and also received a Commendable Service Award from the FDA for her work on hypotensive agents in albumin products. Her military honors include the U.S. Legion of Merit, awarded by the U.S. Army, for work that improved the care of soldiers in combat.

She is a co-inventor on two patents, has edited three books, and has published more than 100 papers in the areas of thrombosis and hemostasis.

NCRR provides laboratory scientists and clinical researchers with the environments and tools they need to understand, detect, treat, and prevent a wide range of dis-

eases. Central to this effort, NCRR leads the Clinical and Translational Science Award (CTSA) program - a national consortium of academic health centers that will transform the conduct of clinical and translational research to ensure that biomedical discoveries are rapidly translated into prevention strategies and clinical treatments for rare and common diseases. With NCRR support, scientists make biomedical discoveries, translate these findings to animal-based studies, and then apply them to patient-oriented research. Through the CTSA consortium and other collaborations and networks, NCRR connects researchers with one another, and with patients and communities across the nation. These connections bring together innovative research teams and the power of

shared resources, multiplying the opportunities to improve human health. For more information, visit www.ncrr.nih.gov.

Information in this article was provided by the NIH Office for Communications. The National Institutes of Health (NIH) - The Nation's Medical Research Agency - includes 27 Institutes and Centers and is a component of the U.S. Department of Health and Human Services. It is the primary federal agency for conducting and supporting basic, clinical and translational medical research, and it investigates the causes, treatments, and cures for both common and rare diseases. For more information about NIH and its programs, visit www.nih.gov.

Liebler Named As Newest WV-INBRE External Advisory Committee Member



Daniel C. Liebler, Ph.D., newest addition to the WV-INBRE EAC

At the recommendation of the WV-INBRE External Advisory Committee (EAC), the Administrative Core (AC) is expanding the EAC by two members. We are pleased to welcome Dr. Daniel C. Liebler as the newest member of the WV-INBRE EAC.

Dr. Liebler is an expert in proteomics and bioinformatics and is currently Professor of Bioinformatics, Pharmacology and Biomedical Informatics with the Vanderbilt University School of Medicine in Nashville, Tennessee. He serves as Director of the Proteomics, Mass Spectrometry Research Center at Vanderbilt University School of

Medicine. In addition, Dr. Liebler is Director of the Jim Ayers Institute for Precancer Detection and Diagnosis of the Vanderbilt-Ingram Cancer Center.

Dr. Liebler is an internationally-recognized expert in proteomics and bioinformatics approaches to the pharmacology and toxicology of cancer detection and prevention. He authored a book in 2002, entitled "Introduction to Proteomics: Tools for the New Biology" (Humana Press). The WV-INBRE AC also plans to add one additional EAC member in the near future.

* * *

WVEPSCoR Announces Call for Papers for STaR Symposium *Student Research Poster Competition Included*

The planning committee for the upcoming West Virginia STaR (Science, Technology and Research) Symposium has announced its Call for Papers. The event, which will be held Sept. 17-18 at the Waterfront Place Hotel in Morgantown, is intended to provide a forum for the state's increasingly competitive science and technology enterprise. University and college faculty members, researchers, students and members of the business community will gather at the symposium to share research developments, ideas and collaborations.

The committee is seeking papers to be delivered during the symposium to provide attendees with information about the latest advances in scientific research being conducted in West Virginia. Research sponsored by federal agencies (National Science Foundation, National Institutes for Health, Department of Defense, etc.) is of particular relevance. All accepted papers will be published in symposium proceed-

ings. Researchers interested in submitting a paper should visit the symposium website at www.starsymposium.org for guidelines. The deadline for submission of research papers is July 1st.

There will also be a student research poster competition held in conjunction with the STaR Symposium. Designed to showcase the best student research in West Virginia, the competition is open to all West Virginia college and university undergraduate and graduate students who are actively involved in a scientific research project. The deadline for student abstract submissions is July 15th.

From the abstract submissions, 20 students--10 undergraduate students and 10 graduate students--will be invited to prepare research posters to be presented at the symposium. One Undergraduate Researcher of the Year and one Graduate Researcher of the Year

will be selected from among the finalists. The student selected as the Undergraduate Researcher of the Year will win a cash prize of \$1,200 and the student selected as the Graduate Researcher of the Year will win a cash prize of \$1,500. Second-place student researchers will receive \$600 and \$750, respectively. Contest guidelines are available on the symposium website.

Sponsors of the West Virginia STaR Symposium include the NASA IV & V Facility, the NASA West Virginia Space Grant Consortium, the National Science Foundation, the West Virginia High Technology Consortium Foundation and the West Virginia Experimental Program to Stimulate Competitive Research (WVEPSCoR).

For more information or to register for the symposium, visit the symposium website or call (304) 558-4128, ext. 244.



STARS SYMPOSIUM 2007

WV-INBRE Steering Committee Members

Gary Rankin, PhD

Principal Investigator
School of Medicine
Marshall University
1542 Spring Valley Drive
Huntington, WV 25704
rankin@marshall.edu

James M. Sheil, PhD

Program Coordinator
West Virginia University
Health Sciences Center
PO Box 9177; HSN
Morgantown, WV 26506
jsheil@hsc.wvu.edu

L. Howard Aulick, PhD

Vice-President for Research
Marshall University
1542 Spring Valley Drive
School of Medicine
Huntington, WV 25704
aulick@marshall.edu

Donald A. Primerano, PhD

Director, ACoRN
Marshall University
1542 Spring Valley Drive
Huntington, WV 25704
primeran@marshall.edu

Mark J. Reasor, PhD

Director, Outreach Core
West Virginia University
PO Box 9229
Morgantown, WV 26506
mreasor@hsc.wvu.edu

Charles L. Harris, PhD

Evaluations Coordinator
West Virginia University
Health Sciences Center
PO Box 9142
Morgantown, WV 26506
clharris@hsc.wvu.edu

Mary E. Davis, PhD

Director, Bioinformatics Core
Health Sciences Center
West Virginia University
PO Box 9229
Morgantown, WV 26506
mdavis@wvu.edu

Michael J. McCarthy, MA

Information Technology Coordinator
School of Medicine
Marshall University
1542 Spring Valley Drive
Huntington, WV 25704
mccarthy@marshall.edu

Vickie Sanders, MA

Administrative Associate
WV-INBRE Office
West Virginia University
Health Sciences Center
Room 2113 HSN
PO Box 9177
Morgantown, WV 26506
vsanders@hsc.wvu.edu

Kristen Webb, BS

Administrative Associate
WV-INBRE Office
School of Medicine
Marshall University
1542 Spring Valley Drive
Huntington, WV 25704
perry12@marshall.edu

NRI Representatives

Yi Chen, PhD

Biology Department
Alderson-Broadbush College
College Hill Road
Philippi, WV 26416

Steve Roof, PhD

Fairmont State University
Hardway Building
1201 Locust Avenue
Fairmont, WV 26554

Robert Kreisberg, PhD

Department of Natural Sciences
West Liberty State College
Arnett Hall, Room 103
West Liberty, WV 26074

Kathy Harper, PhD

Biology Department
West Virginia State University
PO Box 1000
Institute, WV 25112-1000

Robert Shurina, PhD

Biology Department
Wheeling Jesuit University
316 Washington Avenue
Wheeling, WV 26003

NOI Representative

Darrell Crick, PhD

Assistant Professor, Department of
Chemistry
Concord University
P.O. Box 100
Athens, WV 24712-1000

External Advisory Committee

Alice Lee, PhD

Professor, Department of Biology
Washington & Jefferson College
60 S. Lincoln Street
Washington, PA 15301

Jeff Vance, PhD, MD

Miami Institute for Human Genomics
School of Medicine
University of Miami
PO Box 019132 (M-860)
Miami, FL 33101

Ken Ramos, PhD

Professor and Chair,
Department of Biochemistry
& Molecular Biology
University of Louisville
Louisville, KY 40292

Daniel C. Liebler, PhD

Professor, Biochemistry, Pharmacology
& Biomedical Informatics
School of Medicine
Vanderbilt University
Nashville, TN 37232



Supported by:



TEL: 304-293-0775

FAX: 304-293-4426

WV-INBRE
West Virginia University
Health Sciences Center North
Room 2113
PO Box 9177
Morgantown, WV 26506-9177