

Spring 2007

INSIDE

- Dr. Howard Aulick Retires (cover)
- Dr. Terry Fenger and the Forensic Science Center (p. 3)
- Dr. Tina Cartwright and MU ADVANCE (p. 6)
- Funding Reports (external link) (p. 8)
- Proposal Clearance (p. 9)
- Board of Directors (p. 9)
- Fall 2007 Workshop Series (p. 10)
- Contact MURC (p. 11)

Achieving Excellence

in education, research, and service. . .

Good-bye, Dr. Aulick!



by Howard Aulick



Retiring after 23 Years of Service, Howard Aulick Leaves His Parting Thoughts

When asked to describe my thoughts about Marshall's research growth over my 23-year tenure along with my vision for the future, I was reminded of my Ph.D. advisor's constant admonition to be concise. He would point out that the greatest refinement of thought came at impending death and the next greatest in the preparation of a concise manuscript. So, while there are many thoughts, I will limit my comments to three primary points.



First, Marshall has come a long way toward becoming a research university in the last couple of decades. When I first arrived at Marshall, I found a medical school and university still asking whether research was an essential part of its mission. I kept hearing, "Marshall's different. You don't have to do research to get tenure and promoted." This uncertainty was supported by the response I received by the pre-MURC organization upon notification of my first grant award. "Is this another one of those *rocks and rats* grants?" asked the head research administrator with some disdain when he called me with the award notice.

...continued on page 2



...Good-bye, Dr. Aulick!
con't from cover

Four pivotal events have enabled Marshall to grow a research environment. The **first** was the creation of MURC and the recruitment of Ron Schelling, because it gave Marshall a legitimate grants administration. I have watched a number of smaller schools try to grow a research capacity without investing in knowledgeable research administrators, and it just doesn't happen. In fact, without good research technical support the institution will make mistakes that adversely affect its relationship with funding agencies. The second major change in Marshall research growth came in 1989 when Dr. Gary Wright secured the first multi-million dollar NSF EPSCoR grant. This gave the School of Medicine resources to significantly expand its research base, and, more importantly, it made clear to our faculty, our upper administration and the State that Marshall University could compete in the national research arena. The third pivotal event came with Senator Byrd's support of our proposal for a new state-of-the-art research building. Now, anyone driving down Third Avenue clearly understands where Marshall places research in its overall strategy. Finally, and in some ways most importantly, came the recognition that research universities play a major role in economic development. With the exceptional support of our alumni and HADCO, Marshall's scientists, engineers and students have begun to turn out new regional businesses. Marshall's research has become extremely relevant to the economic future of this community and the State.

Second, everything I see points to an extremely bright research future for the University. A major part of the physical

infrastructure is largely in place with the promise of new engineering buildings to follow. The growth of the engineering program will enhance our research and commercialization efforts. The President, Provost and a number of new deans understand and actively promote research. And, finally, the increased national and state attention to the critical role of academic research in our economic future will serve us well. The State's new strategic plan, Vision 2015, and the Marshall Institute of Interdisciplinary Research are bold and visionary. In fact, things look so encouraging I wonder if my decision to retire is not premature.

Third, the thing that has impressed me most is how slow and painful growth occurs. Expectations commonly run well ahead of reality. Marshall is extremely indebted to our pioneer research faculty and research administrators who continuously seek ways to support their work. Through this cooperation we continue to build the necessary physical, fiscal and administrative support structures. Pain comes when compliance and good business principles bring new rules and regulations. Twenty years ago when we didn't have MURC, local vendors stopped doing business with us because they couldn't get paid in a timely fashion. Now MURC is asking for details that cause many to suggest that we are no better than the old state system. What most don't realize is that regulations governing research administration have markedly increased over the last 20 years. Last year, the National Council of University Administrators reported over \$87 million dollars in non-compliance fines to 12 institutions. Things like misuse of federal funds, questioned costs, inflated research grant costs, and mischarging federal grants were some of the infractions listed. There are big and smaller institutions on this list. So my final plea is to recognize that MURC works very hard to keep you and Marshall off this list. I ask for your continued cooperation, so when you retire you can say, like me, that the growing pains were well worth it.

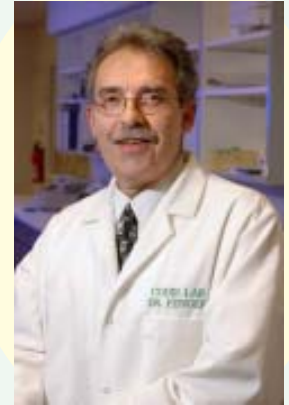




Terry Fenger and the Forensic Science Program

Helping Law Enforcement Through Science

By Amy Deborde



Dr. Terry Fenger, Director of the MU Forensic Science Center

As the field of forensic science flourishes, so too does Marshall University's Forensic Science Program. The major influence behind the growth and development is Dr. Terry Fenger.

Dr. Fenger began his career at the Marshall University School of Medicine in 1979 with the Department of Microbiology, Immunology, and Molecular Genetics. He became interested in "fingerprinting" in criminal cases in 1993 and, subsequently, has worked tirelessly to create a nationally recognized forensic science program at Marshall University. He is currently the Director of the [Marshall University Forensic Science Center \(MUFSC\)](#) which includes the Combined DNA Index System (CODIS) database laboratory for West Virginia.

In 1995, Fenger initiated graduate coursework for forensic studies following the 1994 passing of Senate Bill 252, which established the West Virginia CODIS Laboratory under the authority of the WV State Police.

[MUFSC](#) performs DNA testing of convicted felons for the State of West Virginia and, thus, serves as the CODIS database laboratory. All state CODIS systems are tied to the FBI identification facility in Clarksburg, WV, the site for the National DNA Index System. This national database enables the comparison of DNA profiles of convicted felons throughout the country. In addition, the center performs DNA analysis on certain types of forensic cases for law enforcement agencies and the West Virginia Office of the Chief Medical Examiner.

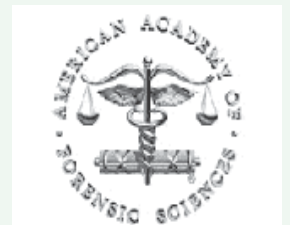
In West Virginia, the Department of Corrections performs the initial step of collecting blood samples from convicted offenders. Before sending samples

to Marshall University, the WV State Police assigns a bar code to each sample, making the felon anonymous.

"We perform DNA testing on convicted offenders and send the profiles to the State Police where they review and send them on to the national system in Clarksburg through a secure, electronic network," Fenger explains.

In 2003, [MUFSC](#) became one of only three DNA laboratories in the nation to receive International Organization for Standardization (ISO) 17025 accreditation. Today the center is accredited by Forensic Quality Services International for forensic testing, DNA data-basing, and as an ISO 17025 testing laboratory.

"Receiving our accreditation equates to having well-defined foci, exceptional security, and policy and procedure manuals that meet the national standards,"



Fenger notes. In addition to its DNA laboratory accreditations, the [MUFSC](#) also obtained academic accreditation for the graduate degree program.

In 2005, the MU Master of Science Degree program received the Forensic Science Education Program Accreditation Commission (FEPAC) accreditation through the [American Academy of Forensic Science](#). This recognition puts the MU

Continued on page 4



*Forensic Science, con't
from page 3*

Master of Science degree program as one of five graduate programs in the country to be fully accredited by FEPAC.

"The accreditation recognizes our programmatic efforts for ensuring the highest quality of education in our field," Fenger states. "Students have the choice of three areas of concentration including DNA Technologies, Computer Forensics, or Forensic Chemistry. The uniqueness of the program is that students can choose one, two, or all three to study during their time at MU," Fenger adds. In addition to national research and academic standards, is the [MUFSC](#)'s steadfast mission of providing research, service, training, and outreach to both the forensic field and the community.

"We focus on four core components [at the [MUFSC](#)]: research, service, training, and outreach," Fenger explains. "With research, our directive is developing new protocols and procedures. With service and outreach, our approach is to host national meetings and meet multiple needs within the community including parentage testing. With training, we host the President's DNA Initiative to state, local and federal forensic scientists all over the United States," Fenger notes. He credits U.S. Senator Robert C. Byrd as one of the significant individuals behind supporting the MUFSC.

"Byrd is instrumental in identifying funding," Fenger states. "He enabled the growth and progression that has led us to both quality service and quality staff."



A DNA analyst processes evidence

*A
DNA
Analyst uses
genetic analyzer
in state-of-
the-art
laboratory*



To date, Fenger has participated in over forty grant submissions and has generated a total of \$28,705,217 for the [MUFSC](#). Two of the MUFSC's most recent grant awards total \$5,300,000 and focus on using computer forensic investigation of digital evidence at crime scenes, and to provide DNA laboratory and training services to state and local forensic crime labs on a national basis.

Research, Training, and Technical Assistance for Criminal Justice Systems Engaged in Computer Forensics (US Department of Justice/Bureau of Justice Assistance) applies three major goals to conducting research and continuing education in forensic studies: (1) maintain the statewide virtual Regional Computer Forensics Laboratory (vRCFL) which provides computer forensics services to West Virginia and the surrounding states; (2) train law enforcement personnel in computer forensics using five online courses related to computer search and seizure techniques, forensic uses of digital imaging, digital evidence, and data recovery; and, (3) validation testing of commercially available computer forensic hardware and software. The beneficial outcomes of this project are providing a model laboratory for other states and equipping law enforcement personnel with the knowledge and training necessary to solve crimes using digital evidence.

The *Marshall University Forensic Science Center and Forensic Resource Network (FRN) Initiatives to Improve Forensic Crime Labs* (US Department of Justice/National Institute of Justice) project enables the [MUFSC](#) expand its

Continued on page 5



Forensic Science Center con't from page 4

role as a model working laboratory in support of the forensic community in conjunction with its role in the FRN.

The FRN is a program of the National Institute of Justice that is a resource to increase the capabilities and capacities of local and state forensic laboratories. The core members are MUFSC, West Virginia University, National Forensic Science Technology Center, and the National Center for Forensic Science.

MUFSC's services include DNA testing on suspect case backlogs as well as identification of human remains, forensic paternity, and casework samples from sexual assaults and property crimes. It has received national recognition for its role in the NIJ Expert Systems Testbed Project. The center serves as the host site for evaluating expert systems for automated review of convicted offender data and provides demonstrations to forensic scientists.

The training initiative has greatly expanded over the past few years. Forensic scientists from across the country come to [MUFSC](http://forensics.marshall.edu) for DNA training provided through the PDI initiative. The crime scene house is the newest addition to the well-established crime scene course within the academic program and law enforcement investigators and students alike are already benefiting from the training offered at the house. The center also sponsors training for Sexual Assault Nurse Examiners (SANE).

The [MUFSC](http://forensics.marshall.edu) partners on collaborative efforts with the WV State Police, the National Laboratory Center for Alcohol, Tobacco, and Firearms, and the WV Foundation for Rape Services. The NIJ Technical Assistance Program teams up forensic labs with the academic

program which supplies graduate student support for DNA laboratory validation and instrumentation implementation.

Funding from the *MUFSC FRN Initiatives to Improve Forensic Crime Labs* cooperative agreement allows MUFSC to co-sponsor the National Institute of Justice Applied Technologies Conference, showcasing new technological advances and tools in forensics. President Stephen Kopp, Fenger, and staff traveled to Orange County, California in early April for the meeting, placing Marshall University's forensic program and services in the national spotlight. Over 300 forensic scientists and law enforcement officers attended.

For more information about MUFSC services including its DNA Laboratories, Master of Science Degree Program, research projects, and outreach programs, please visit the MUFSC website at: <http://forensics.marshall.edu>.



*Laboratory technician operates robot to
prepare DNA for testing*



The Marshall University Technology Transfer Office (TTO), is available to all Marshall University faculty, staff, and students for all of your Material Transfer, Intellectual Property Protection, and Confidentiality Disclosure needs. Please contact Amy Anastasia, Assistant Director at (304) 696-4365 or via email at amy.anastasia@marshall.edu for more information.

<http://www.marshall.edu/tto>

MU ADVANCE:

Changing the Atmosphere

by Nita Sue Kent



State Climatologist Tina Cartwright retrieving the stream sample for the Dissolved Oxygen measurement at the Rocky Mountain National Park during her certification training for the GLOBE program

When the West Virginia State Climatologist talks about initiating and maintaining institutional climate change at Marshall, she doesn't mean the Ohio Valley weather patterns. Dr. Tina Cartwright, Program Director of [MU-ADVANCE](#), is working to improve the atmosphere affecting recruitment, retention, and advancement of women in STEM disciplines. STEM is the acronym for science, technology, engineering, and mathematics—areas that receive most [National Science Foundation](#) (NSF) grant funding.

As the NSF web site explains, scientific and technological success in the future "requires the talent, perspectives and insight that can only be assured by increasing diversity in the science, engineering and technological workforce."

NSF recognized that in colleges nationwide, several issues can be barriers to women in achieving tenure. In spite of some cultural shifts in the past few decades, the burdens of birth, childcare, and long-term care of elderly parents tend to fall on women. Seeking creative solutions from women and men already in STEM disciplines, NSF established the ADVANCE program.

Dr. Marcia Harrison, Professor of Biology and the Principal Investigator for the MU-ADVANCE

project, received \$1.2 million in funding from the National Science Foundation (NSF) in September 2006. When she and her colleagues prepared the proposal for funding, Harrison was responding to a situation she had observed over the years. At Marshall, women students outnumber the men by 58% to 42%. Only 39% of full-time faculty is female. Since 2001, the number of female STEM faculty has actually decreased to 21%. These figures are similar in colleges and universities nationwide.

In the proposal, Harrison emphasized an integrated approach to solving the problem of recruiting and retaining female faculty. MU is one of the smallest of the schools to receive one

Continued on page 7

Dr. Marcia Harrison, PI for the MU ADVANCE project



ADVANCE ...continued from page 6

of the highly competitive awards. Because a large number of Marshall students are first-generation Appalachians, and Marshall is a predominantly undergraduate institution, NSF funding has the potential to produce a different model than would be found in a large urban research university. If Marshall's project can be replicated at other similar institutions, the nation as a whole could benefit.

When MU-ADVANCE was funded, one of the first orders of business was to search for a program director with strong research credentials in a STEM field. Cartwright had proven her research skills at both MIT and West Virginia State University and is the Principal Investigator of two NSF grants of her own.

In January, Cartwright joined a mostly female group of research faculty and administrators, who partner in a multi-faceted approach. Four different Marshall colleges participate in MU-ADVANCE: the College of Science, College of Liberal Arts, School of Medicine, and College of Information Technology and Engineering. Their collective experiences and insights allow them to speak with authority about the barriers to women in the academic world.

Even though the grant specifically targets women in STEM areas, supporting the dual goals of strong researchers and a family-friendly atmosphere for tenure-track faculty leads to policies that are gender-neutral. Already, MU search committees work hard to maintain objective criteria when recruiting and hiring all faculty. MU-ADVANCE prepares packets of information about the University and the community for all candidates, not just the women. Once a faculty member is hired, topics such as networking, mentoring, co-teaching, promotion and tenure, dual career, workload, evaluation, negotiable goals for merit awards and advancement, and equitable workload impact both men and women.

Howard Aulick, Vice President for Research and a MU-ADVANCE team member, echoes other administrators when he says, "There are subtle differences that impact hiring females.



State Climatologist Tina Cartwright providing additional assistance for teachers at an Advanced Atmosphere workshop for the GLOBE program at the NASA IV&V Facility in Fairmont, WV.

Those of us doing the hiring have to be aware. Being educated, sensitive, and going for the goal of more female faculty members helps the whole University."

A number of universities funded through NSF's Advance program have reported that creating policies that allow automatic extensions for all for childbirth and adoption is one way to overcome the hesitation some faculty members feel. Virginia Tech has a program called "Stop the Clock!" to extend probationary periods to allow new parents to have more time to complete the work necessary to obtain tenure. Such policies are one way the university can clearly communicate a commitment to faculty members with families. Virginia Tech also has a series of lactation centers on campus to support nursing mothers.

The [MU-ADVANCE](#) action plan has four major initiatives to increase the number of female STEM faculty: recruitment and networking, faculty development, research enhancement, and State and institutional policy changes.

Recruitment and networking are under the

ADVANCE ...continued from page 7

guidance of Judy Silver, professor in the Mathematics Department and Jan Fox, Vice President for Information Technology. Their initiative includes strengthening recruitment packages, developing the web site to include biographies and web pages for researchers, and assistance with start-up packages—all tools to attract high-quality candidates and increase success in hiring and retaining them.

Another way to help retain female faculty is in the area of **faculty development and research enhancement**. Four other experienced researchers who provide leadership in the initiative are as follows: **Beverly Delidow**, Associate Professor in the *School of Medicine's Biochemistry and Molecular Biology Department*, **Elaine Baker**, Professor of *Psychology and Director of the Center for the Advancement of Teaching and Learning*, and **Drs. Aulick and Harrison**. The goal of their group is to provide multiple methods to help new faculty balance and integrate teaching and research responsibilities. New faculty mini-grants and competitive fellowships provide support to help identify research partners, receive reassigned time, and hire graduate assistants.

They also foster collaboration among STEM faculty. Their initiatives in research enhancement include mini-grants and fellowships to improve faculty research capabilities. The NSF funding also provides help to departments to better attract and retain talented female faculty, for example, through start-up funding. One of their strategies is to prepare information packets for all candidates, not just the females, to help with MU recruiting. Cartwright makes sure she gets on the interview schedule for female candidates if possible.

Liz Murray, Integrated Science and Technology, and Frances Hensley, Associate Vice President for Academic Affairs, lead the ADVANCE efforts to study and identify

possible **State and institutional policy changes** that create significant barriers to the advancement of female STEM faculty in West Virginia. Although MU-ADVANCE project was designed to help increase the university's recruitment and retention of female faculty, changes in policy will help men at all levels as well. For example, one thing under investigation is provision of an onsite adult day care center for faculty or staff who have someone in their home needing daytime care.

Part of the challenge for Marshall is that there is such a spectrum of needs across the different science disciplines—start up funds, teaching loads, travel money, or the availability of student assistants. MU-ADVANCE will require study, feedback, and imagination from all the faculty and staff at the University. With everyone working together, the winds of change just might make an impact.

State
Climatologist,
Dr. Tina
Cartwright serves
as the director of
the MU
ADVANCE Program



Funding Reports:

For an updated list of all submitted and funded proposals, please visit:

www.marshall.edu/murc/edge.htm



Are you
"IN THE KNOW"?



MURC encourages you to subscribe to its **campus-wide Listserve**. Through this Listserve, MURC can communicate funding opportunities, upcoming training, new or changed policies and procedures and current events in the research community.

To subscribe: email Kim Skeens at skeens24@marshall.edu.

Proposal Clearance

A grant or contract resulting from a proposal is awarded to the Marshall University Research Corporation, with the faculty or staff member who submitted the proposal as the director of the project. **The Executive Director of the Research Corporation is the only person legally empowered to enter the University into a research contract or agreement.** Since the University is legally responsible for the performance of the work and the administration of the award, the units of the University affected by a project must be aware of commitments involving them which are included in a proposal. For this reason, a proposal is directed to the appropriate University offices for review and approval before it can be submitted to the funding agency. The proposal will be reviewed to ensure that the project is within the mission of the University and to ensure that the University can obligate the resources committed by the project. To route your proposal for clearance, one signature copy of the entire proposal and In-House Proposal Routing form are needed.

The faculty or staff member is responsible for routing the form (and obtaining signatures) from Co-principal investigators (if applicable), Department chair(s), Dean(s), and VP for Academic Affairs or the Associate Dean of Finance MUSOM, then deliver the proposal to the MURC Grant & Contract Development Office.

FREE SERVICE

Pre-proposal Peer Review

Serious about finding Federal funding? How about having someone in your field willing to review your draft BEFORE you submit it to the pitiless gazes of the Federal review panel? The [WVEPSCoR](#) office provides this free service to any faculty member preparing a competitive Federal proposal.

Although [WVEPSCoR](#) emphasizes STEM faculty and has easy access to NSF peer scientists, their goal is to help Marshall University become more competitive. By sending them a draft two weeks before the deadline, WVEPSCoR will find a reviewer or team to read and comment, usually within 48 hours.

Contact Chris Schlenker, Grant and Contract Coordinator located in 279B Science Building, 696-4307, schlenker@marshall.edu for details.



F.Y.I.

Current MURC Board of Directors:

Stephen J. Kopp, *Chair*
Sarah Denman, *Vice Chair*
Layton Cottrill, *Secretary*

Howard Aulick
Richard Begley
Michael Castellani
Betsy Dulin
David Graley
John G. Hess
Paul Hill

Lloyd Jackson
Herb Karlet
Richard Niles
Dwight Sherman
Charles Somerville
Charlotte Weber

Upcoming Workshop Series



June 12, 2007

Conflict of Interest: How to Spot and Manage It

The words "Conflict of Interest" have been known to strike fear into the hearts of even the most seasoned research administrators. As institutions increase their research enterprise, the gateway for conflicts widens. Our job is to first identify it - whether real or perceived - and then, if possible, determine ways in which to manage it. The faculty will give tips on what to do when you uncover a conflict and, in particular, for those out in the department, where they can go for help. This program, with its expert panel, will relate best practices in managing a COI and give examples of what works, and what doesn't.

Lunch Provided! Pre-registration requested.

Coming soon In Fall 2007:

General Administration Issues
Pre- and Post-Award Grant Administration
Technology Transfer at MU
Introduction to Proposal Preparation
Locating Funding Opportunities
Proposal Budget Preparation
Electronic Research Administration
Introduction to Human Subjects Protection
Introduction to Research Using Animals
Biosafety
Conflict of Interest
Sub-Awards



These workshops are provided free of charge to all participants. For registration information, please contact Lisa Daniels, 696-3368 or adkins244@marshall.edu.

For Further Course Information (description, dates, etc.) please visit our website by clicking on the link below:

[MURC Professional Development Series](#)

Achieving Excellence is a publication of the Marshall University Research Corporation.

Editor: Ron Schelling Managing Editor: David Ice

Newsletter Design & General Editor: Lisa Daniels

Contributors: Amy Deborde, Chris Schlenker, Martha Mazingo, and Nita Sue Kent

HOW ARE WE DOING?

Achieving Excellence has been published strictly in an electronic format in an effort to improve conveyance of research information in an up-to-date, user-friendly format. As excellence is our continual goal, we welcome any comments or suggestions for improvements to this publication.

OFFICE OF VP FOR RESEARCH CONTACT INFORMATION

VP for Research

Dr. Howard Aulick, VP Research 696-4748
Julia Dickens, Executive Secretary 696-6271

Technology Transfer Office

Dr. Howard Aulick, Executive Director 696-4748
Amy Anastasia, Assistant Director 696-4365

Office of Research Integrity

Cynthia Winger, MD, Director 696-7173
Bruce Day, Research Program Mgt Specialist 696-4303
Elizabeth Keville, Compliance Officer 696-3468
Trula Stanley, MU IRB Coordinator 696-7320

Click on each name for the personal email link



MURC CONTACT INFORMATION:

Office of the Executive Director

Dr. Howard Aulick, Executive Director 696-4748
Ron L. Schelling, Grants & Education Officer 696-6249
Lisa Daniels, Administrative Assistant 696-3368
Kim Skeens, Information Systems Manager 696-6322

Grant and Contract Development

David R. Ice, Grant Development Officer 696-4837
Amy Deborde, Grants Specialist 696-4845
Nita Sue Kent, Grant & Contract Specialist 696-6485
Martha Mazingo, MUGC Sponsored Programs 746-1998
Chris Schlenker, Grant & Contract Coordinator 696-4307
Jan Morgan, Administrative Assistant 696-2468

Finance Division

Perry Chaffin, CPA, Controller 696-7118
Lori Perry, Receptionist 696-6598

Grant Administration & Compliance

Bill Byrd, Financial Compliance Director 696-6324
Panda Powell, CRA, Grant Compliance Administrator 696-6676
Jane Cantrell, Budget Compliance Administrator 696-2889

Financial Administration

Jennifer Wood, Finance Director 696-2829
Ann Corns, Accounting Assistant (travel) 696-6203
Tina Dean, Grant Accountant (grant invoicing) 696-6321
John Lowe, Senior Accountant (property) 696-4821
Kathy Waddell, Accounting Clerk (accts. payable) 696-6532
Gloria Oglesby, Payroll Accountant 696-6793

Personnel & Payroll

Dee Preston, Payroll Administrator 696-2830
Pam Harmon, Benefits Administrator 696-6320