

The R&T Connection Newsletter

A Publication for the Research and Technology Directorate

End of Summer Issue, 2008

UPCOMING CONFERENCES

Dec 2 -3 2008

[New Directions in Chemical Process](#), Sanibel Island, Florida

Jan 13-18 2009

[Innate, Adaptive & Reg. Immune Responses to Intestinal Microbiota](#), Taos, New Mexico
Abstracts due: October 15, 2008

Feb 22 – 25 2009

[ASM Biodefense and Emerging Diseases](#), Baltimore, MD
Abstracts due: November 12, 2008

R&T EMPLOYEE HIGHLIGHT



Dr. Harry Salem, Chief Scientist for Life Sciences (right), R&T Directorate at ECBC is also

a visiting professor at Rutgers University, and participated in their summer graduation procession. Dr. Salem is shown with Professor Sidney Katz who was the Grand Marshal and led the procession. Dr. Katz had for many years participated in ECBC's Summer Professor Program where he made significant contributions in multiple laboratory studies, and in the chromium issues.

SPECIAL THANKS

Dr. Corriveau would like to thank ECBC leadership, particularly the Technical Director Richard Decker and Program Integration Director Joseph Wienand for their championing of the Genomics Program effort. Biosciences Division Chief Dr. Evan Skowronski, spear-headed the enterprise, spending many late hours pulling together program proposals, presentations and schedules. Evan was assisted in his efforts by Dr. Sandy Gibbons (Molecular Engineering Team), Jay Markarian (R&T Directorate Office) and Lauren McNew (Biophysical Chemistry).

Message from the Director



Inspections are a regular and essential part of Research and Technology operations and ECBC overall. They are a measurement of our effectiveness in management, regulatory compliance, and most importantly—the accomplishment of

our mission. In recent months, R&T successfully passed an inspection by the Center for Disease Control (CDC) that focused on inventory and accountability. In my opinion, the passing of the CDC inspection went far beyond a compliance metric—we proved to the whole nation we are trustworthy experts in chemical and biological defense.

We also just recently completed an inspection by the Department of the Army Inspector General (DAIG) that brought many visitors to your work areas during mid-August. The DAIG originally intended to do chemical and biological surety inspections as specified in AR 50-6. Those inspections have been rescheduled until after the first of January 2009. Instead

they conducted a special inspection that looked at the security and accountability of chemical and biological agents and recovered chemical weapons. The DAIG did not generate a report on their visit. Instead they will generate a single report to the Secretary of the Army and the Chief of Staff of the Army on the status of all Army activities. However, during their daily outbriefs, the DAIG team did not identify to us any significant problems within ECBC. The one concern they noted was with contractors' medical surveillance program for our on-site contract workers in the PRP. As a consequence, those workers were temporarily medically restricted while they are being transferred to the same medical surveillance program at the Kirk Clinic that already serves our government employees. Two thirds of the contract workers have already been to the clinic and it is anticipated that all of these workers will be recertified by 15 September.

I would like to take this opportunity to applaud and thank each one of you for your efforts in preparing for inspections. Successful evaluations are not only a testament to your preparation but also to your daily efforts that help make our Directorate a continuous success.

R&T's Biosciences Team Receives \$3.5 Million to Reinvigorate JSTO's Genomics Program



ECBC's R&T Directorate was recently awarded \$3.5 million in FY 2008 funding for the Joint Science and Technology Office's (JSTO) Genomics Program.

"We are thrilled about the chance to lead one of JSTO's première medical programs," said Research and Technology Director Joseph

Corriveau," a rare and exciting opportunity for a non-medical laboratory. Both our staff and JSTO representatives realized that we are working toward the same ultimate cause—a better protected warfighter, and this program allows for the perfect marriage of skills from both the medical and non-medical worlds," said Corriveau. "I am proud that R&T's Biosciences Division will lead this effort and will be able to demonstrate their leadership, know-how and experience within the genomics field."

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Quilts of Comfort

R&T Employees Donate Time to Comfort Injured Soldiers

Carol Hansen entered Walter Reed Hospital two years ago, noticing a soldier supporting his amputated leg with one of the quilts made by the sewing group she founded, "Quilts for Broken Heroes."

"My whole reason to make them [the quilts] is because I wanted to comfort soldiers and give them something worthy of the sacrifice they've made," said Hansen. "I use the best material and I like to do a lot of them by hand...you'd almost have to be a quilter to know the difference between hand-made and machine stitched quilts, but I know the difference—and I know I put a lot of love into them."



Estrella Cacal preps material to begin sewing.

Since the club's 2005 inception, Quilts for Broken Heroes volunteers have made some 275 quilts that are delivered to Walter Reed Hospital every six months for a blessing and to be distributed to injured soldiers recovering there. "It makes all of the long hours worth it and we go away with tears in our eyes," said Hansen about her experiences meeting injured soldiers who receive the group's quilts.

Hansen started the now 12-member, APG-based group after viewing television coverage on a similar quilting club in

Delaware. Knowing Hansen's passion for quilting, Hansen was further encouraged by her husband, also an ECBC employee and veteran from a military family, and her ECBC coworkers. Hansen is a 34-year ECBC employee who works in the Engineering Directorate and launched her career in the R&T Directorate, where she spent her first 20 years of service.

Hansen's initial solicitation call to fellow quilters was posted on B-Board and was first answered by R&T Project Assistant Estrella Cacal, an 18-year employee. "I had never quilted before in my life," said Cacal who is now at work on her fourth quilt. "I just felt like I needed to do something for the soldiers while they are at war," she said. Aside from being a pleasurable activity that helps her relieve stress, Cacal explains "the group is like a family to me and I look forward to quilting with the group on Monday evenings."



Patricia Reeves proudly shares one of the quilts she's made as part of the quilter's group.

Another founding member is Technical-Writer Editor Patricia (Pat) Reeves, a 27-year R&T employee who lists her own reasons for joining the quilter's group.

"I am very supportive of the military," said Reeves. "I lived through the Vietnam era, and I had family members that served in Vietnam. When they came home, they didn't get welcomed home or the needed support; that needs to never be repeated," said Reeves. "Quilting is my way to give back a little bit and to let the soldiers know that we care about them and appreciate their sacrifice."



The Quilts for Broken Heroes group displays one of the group's creations. Pictured (standing, left to right) Founder Carol Hansen, Estrella Cacal, Damon Smith, Barbara Knapp (seated, left to right) Beatrice Mott, Dottie Kreutzer and Major William Mott.

Quilts for Broken Heroes receive fabric and monetary donations and they also have periodic fundraisers. If you are interested in making a donation or joining the group, please contact Carol Hansen at carol.hansen@us.army.mil. The group meets every Monday beginning at 4 p.m. at the APG Chapel.

Years of Service Awards

"Congratulations and a special thanks to those R&T employees who have served with ECBC for five years and beyond. We are pleased that you have offered your knowledge and expertise to our organization and our country for so many years. You single-handedly contribute to ECBC's continuous success."

- Dr. Joseph Corriveau, R&T Director

5 Years:

• Avi Ben-David • Terry J. Henderson • Erin E. Shelly • Andrew J. Walz
• Mark D. Winemiller

10 Years:

• Ernest L. Black

15 Years:

• Patrice L. Abercrombie • Laurie A. Fazekas-Carey
• Richard G. Vanderbeek

20 Years:

• Roy Thompson • Janna S. Madren-Whalley

25 Years:

• Estrella Cacal • Arthur H. Carrieri • Paul J. DeLuca
• Regina Evans • Theodore S. Moran

30 Years:

• Jerold R. Bottiger

35 Years:

• Dennis W. Johnson

40 Years

• J. Michael Lochner • Horace Pearce

SMART Scholars Joined R&T Directorate for Summer Internships

By Carmen Hayes, an AMC Fellow

This past summer, the Research and Technology (R&T) Directorate became the first at ECBC to welcome four scholars from the Department of Defense's Science, Mathematics, and Research for Transformation (SMART) Defense Scholarship for Service Program.

The Department of Defense's SMART Defense Education Program is part of a concentrated effort to increase the influx of skilled technical labor into DoD laboratories and agencies, in addition to enhancing the skills of the current workforce. SMART students receive scholarships to pursue an undergraduate, master's, or doctoral degree in the science, technology, engineering or mathematics disciplines. The scholarship includes placement in paid summer internships at DoD laboratories. After participants graduate from college, they are placed in civilian jobs at DoD laboratories and agencies.

"This is an exciting opportunity for ECBC," said Technical Director Richard Decker. "The students get the opportunity to practice applied science and we get to benefit from their fresh academic perspectives—it's a real win for both parties," said Decker.

Since the program piloted in 2005, 350 scholars have participated. This year, seven students were sponsored by the Defense Threat Reduction Agency and of them, the following four conducted their summer internships at ECBC's R&T Directorate.



Kelly Kyro

Kelly earned her B.S. in Chemistry from South Dakota State University. She is currently working towards a Ph.D. in Chemical Biology from University of Minnesota – Twin Cities, where she also earned a M.S. in Chemistry.

Kelly received first place in the Dobberstein Research Award. Additionally, she was one of 10 to obtain a NSF/EPSCoR grant. Kelly is interested in researching Chemical Biology and Protein Engineering. Upon degree completion, she would like to work in patent law. This summer, she analyzed protein fragments under Dr. H. Dupont Durst.



Daniel M. Sweet

Daniel obtained an Associate's in Mathematics from Frederick Community College. He is working towards a B.S. in Computer and Computational Science from the University of Southern California.

Daniel plans to study Computer Forensics, Security, and Cryptology. He is also the youngest person licensed as a Certified Computer Examiner. Danny Sweet conducted testing and evaluation for the NBC Battlefield Management Team on the Installation Warning and Reporting Network application under Bill Ginley.



Kathryn "Kato" Taylor

Kato received a B.A. in Chemistry from Whitman College. She anticipates the completion of a Ph.D. in Materials Chemistry from the University of California - Santa Barbara in 2010.

Kato is interested in a career in scientific research, focusing on polymer synthesis. She was a recipient of the Stephen B.L. Penrose Scholarship as well as the two-time recipient of the Sutters Scholar Award during her time at Whitman. Kato investigated novel polymer synthesis for colorimetric detection of energetic materials under Drs. Way Fountain, Dr. H. Dupont Durst and Steve Christesen.



James Wright

James Wright earned a B.S. in Biochemistry and Molecular Biology from Belmont University and a M.A. in Biochemistry from Boston University. He expects to receive a Ph.D. in Biochemistry in 2011.

His research interests include circadian rhythm and aging, as well as immunology and infectious diseases. James worked as a U.S. Army Combat Medic from 1999-2004 and served in Iraq in 2003. James researched the cloning and characterization of putative nitrogenase genes and proteins from clostridium phytofermentans under Dr. Steve Harvey.

R&T Organized Administrative Assistant Meetings/Training Sessions



Based on a survey sent to R&T administrative assistants in the spring, R&T leadership learned that an overwhelming number of administrative professionals desired regular staff meetings and customized training. For interested R&T administrative staff, bi-monthly meetings are being held on topics indicated in the initial survey. To date, three, one-hour meetings have been held.

The June training meeting was lead by Human Resources Representative Linda Stoflet who covered Appraisals (TAPES) and awards (RPAs). Budget Analyst Stephen O'Connor lead a Budget 101 session during the August meeting to better explain the basics of budgeting as it applies to the Directorate and each Division. Upcoming topics include:

October - *OCONUS Travel Review*

December- *Personnel Training*

If you would like additional information, please contact Cindy Harvey at cynthia.harvey@us.army.mil.

R&T Employees on the Move

Awards:

Dr. Stephen Channel received the Commander's Award for Civilian Service in early August.

Dr. Channel is an Air Force employee that is on assignment at ECBC as a subject matter expert for the Joint Contamination Hazard and Risk Group for chemical and biological agent exposure standards. Dr. Channel is recognized for his technical contributions and exceptional leadership as Program Manager for the DoD Low Level Chemical Warfare Agent Toxicology Research. The products of this highly successful program represent an improved scientific basis for setting military exposure standards for improving Operational Risk Management (ORM) processes as well as serving new standards to adjust requirements for chemical detection, protection and decontamination technologies.



Prior to joining ECBC, Markarian spent eight-years at EPA's Office of Quality Assurance and Office of Emergency Response. He also spent nearly three years at DTRA/JSTO and 13 years in the Chemical Demilitarization Program, located at APG where he was responsible for working with all phases of Demil facilities—from construction to closure.

Markarian also spent a two-year stint overseas working as a senior officer in the Organization of the Prohibition for Chemical Weapons. In that role he was the mandating officer for 90 international inspections, negotiated 70 internationally binding agreements and provided numerous technical assistance visits to various countries.

Welcome to New Staff:

James (Jay) Markarian recently joined the R&T Front Office as Assistant to the Director. In this capacity, Markarian is tasked with stabilizing and expanding R&T funding, with the primary focus on biological threats, or as he puts it, "to put the b back into ECBC." Since he's joined R&T, Markarian has been instrumental in securing the Genomics Program funding.



Markarian's plans include reaching out to non-JSTO programs and stimulating business there. For example, he is investigating all opportunities to leverage current and future R&T projects across the variety of clients already funding R&T.

Retirement:

Mr. Dennis Kravec retired in June and received the Superior Civilian Service Award for more than 33 years of service. During his tenure at ECBC, Kravec has provided expertise in chemical, industrial, general engineering with a special emphasis on collective protection, organizational management, business process development and financial planning. Most recently, Kravec has held the position of R&T Business Manager and has returned to the position in a part-time, post-retirement capacity. In this position, he manages more than 10 employees and is the decision authority for overhead planning, execution and reporting, oversight of authority of business processes and task order contracts.



Dennis Kravec (right) is presented with the Superior Civilian Service Award and is congratulated by R&T Director Dr. Joseph Corriveau.

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R&T's Biosciences Team Receives \$3.5 Million to Reinvigorate JSTO's Genomics Program

Biosciences' Division Chief and Program Coordinator, Dr. Evan Skowronski, plans to leverage previous genomics experience to focus not only on sequencing but on data tracking and LIMS systems—the necessary follow-up that happens after sequencing is completed. "This needs to be a genomics effort and not just a sequencing effort," said Skowronski. "Specific experience in the Human Genome Project and bacterial genomics is crucial to the success to the program and that's what we [ECBC] bring."

The Genomics Program is at the heart of the Transformational Medical Technologies Initiative (TMTI), a thrust to leverage new discoveries to improve the safety of the warfighter. For example, TMTI focuses on rapid new vaccines, drug development and the study of how pathogens and host organisms interact. Genomics research, which focuses on the study of an organism's DNA or RNA sequencing, will be fundamental in the development of TMTI efforts.

To strengthen the knowledge base for the program, ECBC formed a partnership with the United States Army Medical Research Institute for Infectious Diseases (USAMRIID). USAMRIID will use their labs to perform viral sequencing while ECBC focuses on bacterial sequencing. "The Genomics Center will be virtual because some of its components will rest in partnering locations," said Skowronski. "It will be a good relationship because we play to each other's

strengths, which works out quite well." Key staff for the center include: Dr. Peter Hobert (Chief Scientist, USAMRIID), Dr. Sophi Ibrahim (USAMRIID), Dr. Tim Read (NMRC) and Dr. Henry "Sandy" Gibbons (ECBC, Molecular Engineering Team, R&T).

The Genomics Program was originally located at the Naval Medical Research Center (NMRC) which is scheduled for BRAC relocation. The BRAC relocation would place the continuity of the research effort at risk, and the program would have been interrupted for at least a year. As a result, JSTO wanted to ensure the program continued seamlessly with leadership experienced in genomics, a major reason ECBC was selected.

The initial program investment of \$3.5 million will cover the purchase of capital equipment (i.e. sequencers and capital hardware, culture media) as well as the cost to renovate facility space (now identified as building E3160) including the labor for the renovations and the testing of equipment. The program is expected to begin processing data by the beginning of FY2009 and is in the POM for annual funding through 2015.

"I am confident that USAMRID and ECBC will enjoy a long and productive partnership as a result of this program," said Dr. Corriveau. "I am sure this is just the beginning of similar efforts."