

The R&T Connection Newsletter

A Publication for the Research and Technology Directorate

October 2010

UPCOMING CONFERENCES/ MEETINGS

November 2-5, 2010
[CBRNe Convergence](http://www.icbrnevents.com/cbrne-convergence-2010/conference-programme), Florida
<http://www.icbrnevents.com/cbrne-convergence-2010/conference-programme>

November 15-19, 2010
[2010 Chemical and Biological Defense Science and Technology Conference](http://sainc.com/general_information/default.aspx), Florida, http://cbdstconf2010.sainc.com/general_information/default.aspx

November 29 – December 2, 2010
[27th Army Science Conference](http://www.armyscienceconference.com/overview.htm), Florida, <http://www.armyscienceconference.com/overview.htm>

December 7-9, 2010
[4th National Conference on Environmental Sampling and Detection of Bio-Threat Agents](http://sampling-conference.com/info.htm#schedule), Louisiana, <http://sampling-conference.com/info.htm#schedule>

Connecting Through Social Media

Can't get enough of ECBC? Connect to the Center through Facebook (Edgewood Chemical Biological Ctr) and Twitter (@Army_ECBC) for the latest news. Now that the Department of Defense has released an official policy on social media, there is increased interest in using these sources responsibly to collaborate, share news and build networks.

R&T Connection

Have an item for the R&T Connection? Whether it's a technical accomplishment, an upcoming speech, an employee award or any other news story, please share it with R&T Communications Officer Mia Scharper at mia.scharper@us.army.mil or 410.436.2262.

Message from the Director



"The unexamined life is not worth living."
– Socrates

You may have noticed a renewed

emphasis on core values within the Center. From the Center-wide town hall this summer to the directorate-specific core values sensing sessions held in August to the Tech Director's monthly video messages, we are examining ECBC's core values – which ones define us, how we can

most effectively demonstrate our commitment to values, how we can best mentor and develop our staff.

Along with our examination of core values, we are also reviewing and celebrating our FY10 capabilities and accomplishments. The primary venue for this is the upcoming ECBC Capabilities Showcase – 2010, scheduled for Nov. 2. The showcase will serve both the workforce and our customers, demonstrating how we are "Delivering CBRNE solutions to the Warfighter and the Nation." I look forward to seeing you there.

Senior Technologist Supports Counter IED Mission in Iraq

By the time you read this, Augustus Way Fountain III, Ph.D., ECBC's senior technologist for chemistry, will have just returned from his 30-day temporary assignment in Iraq, where he served as chief scientist for Task Force Troy. The task force coordinates the Counter Improvised Explosive Device, or C-IED, mission in Iraq.

Before he departed for the Middle East, Fountain explained that he planned to visit four expeditionary laboratories

while in Iraq "to gain a better understanding of their capabilities and the limitations of running a complex analytical laboratory in an austere environment." When he returns, he will be able to make recommendations to the Army on future expeditionary laboratory requirements.

This trip was Fountain's first visit to Iraq as a civilian. He served with the 82nd Airborne Division in the first Gulf War, spending nine months between Saudi Arabia and Iraq.

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New Division Chief Brings Change and a Renewed Spirit of Collaboration



Peter Emanuel, Ph.D., discusses ECBC's biosciences initiatives outside the McNamara Life Sciences Research building.

Enter the McNamara Life Sciences Research building, and you won't have to walk far to see that change is happening in R&T's BioSciences Division. From new branding and signage promoting the division to a wall-size FY11 planning calendar to a large jar of M&M's inspiring friendly competition, new division chief Peter Emanuel, Ph.D., is bringing a fresh approach to his role.

The signage, calendar and candy jar are tangible artifacts of the culture change that Emanuel is working toward. "Before our first BioSciences town hall meeting, we conducted a climate survey, which resulted in a clear mandate for change," Emanuel said. "I promised the division that they would see real change."

Emanuel's vision is of a world class research division that feels valued and protected by

its leadership, is energized by its mission, and is motivated by a high bar and friendly competition. He uses the terms "collaboration," "transparency" and "opportunity" frequently, and his enthusiasm is compelling.

"I'm excited about the changes that Dr. Emanuel is bringing to the Biosciences Division," said Leslie I. Williams, a scientist with the BioDefense Branch. "I think the changes will bring a more unified feeling between the branches."

Nicole Rosenzweig, also a scientist with the BioDefense Branch, said, "Between his bullet-formatted 'E-Meetings' to his 'Coffee with Colleagues,' Dr. Emanuel is introducing new methods to create a more collaborative, informed environment."

"We're already starting to see results from our renewed spirit of collaboration," Emanuel said. "For example, we're in negotiation on a large-scale, bundled proposal on the Edgewood campus. The cross-cutting nature of bundled proposals requires that we embrace all the communities on campus as true partners. MRICD [the Medical Research Institute of Chemical Defense] will be one of our partners; we will move seamlessly within each other's labs, publish together and do drug discovery together."

Emanuel mentioned that ECBC scientists are also heading to Los Alamos National Laboratory as part of a visiting scientist exchange program under development. "We need to partner with the national labs, not compete with them," he said.

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Emanuel communicates the benefits of working at Edgewood to his staff. "BRAC [the Base Realignment and Closure program] has given us an opportunity and it's ours to seize. In addition, the quality of life here at Edgewood affords us the luxury of focusing on the science and delving into our minds, rather than contending with traffic and a complex political environment as you might face in DC."

Emanuel began working at ECBC in 1994 as a National Research Council post-doctoral fellow, research biologist and later as science

advisor in what is now DPI Directorate. For the past three years, he's been matrixed to DC, serving as the Assistant Director for Chemical and Biological Countermeasures at the White House. He helped develop CB policy and guidance documents, including Executive Order 13486 & 13546, Strengthening Biosecurity in the United States, which will directly impact our BioSciences initiatives.

"I'm excited to be back," Emanuel said. "We have a critical mission here. I see Edgewood producing the best non-medical CB products in the world."

Senior Technologist Supports Counter IED Mission in Iraq

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"There are opportunities for civilians to deploy in theater to support [the Army Materiel Command and the Research, Development and Engineering Command]," Fountain said. "While ECBC had folks deployed early in the war for the counter WMD mission, we haven't deployed many people lately. I have professional and personal reasons for going over – professionally, I want to set an example for the workforce to find other opportunities to support the Army."

"Way's efforts in Iraq will significantly advance our Counter IED mission there," said Joseph L. Corriveau, Ph.D., director of Research and Technology. "His expertise and on-site research will help ensure our expeditionary labs stay relevant and cutting-edge. We're proud of his service and looking forward to his safe return."



Way Fountain III, Ph.D., in his ECBC office



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ECBC Partners With Defense and Industry to Test Futuristic Technologies for the Warfighter



Demonstration participants had a chance to get a closer look at the Ripsaw after the day's high speed test run. Photo credit Sean Kief, U.S. Army Garrison Aberdeen Proving Ground

Employees from the U.S. Army Edgewood Chemical Biological Center's (ECBC) Smoke and Target Defeat Branch, in support of the Joint Project Manager Nuclear Biological Chemical Contamination Avoidance (JPM NBC CA) Obscuration Team, recently hosted more than 50 interested parties during a "proof of concept" demonstration of futuristic, non-lethal battlefield capabilities at the Edgewood Arsenal's M-Field.

The "performance test" demonstrations were pulled together in 90 days in collaboration with the U.S. Army Armament Research, Development and Engineering Center (ARDEC), Howe and Howe Technologies, Inc., and Saab South Africa and included a manned and unmanned Ripsaw ground vehicle with mounted

smart launchers and cutting-edge portable obscurant generators.

"Perhaps more important than the fact that the demonstration was a success is that it has stimulated dialog across industry, multiple Army research development and engineering centers and military organizations to help create clarification of future requirements that will help to save the lives of warfighters," said demonstration coordinator, Brian McFadden, a systems engineer matrixed to the JPM NBC CA from ECBC.

The collaborative team of defense and industry professionals came together to evaluate potential solutions to satisfy sustainability requirements at the request of the U.S. Army Maneuver Center of Excellence's leadership to address a capability gap in non-lethal weapons. While many of the teams were already working on separate pieces of the demonstration, the JPM NBC CA team was responsible for merging efforts, performing tests on obscurant and launcher components of the demonstration, as well as hosting and executing the demo.

"ARDEC has been working with Saab, South Africa, to develop the Multi-Mission Modular Weapon System, which has the capability to fire 40mm, 66mm and 80mm rounds from one common launcher," McFadden added. "This demonstrates the launcher's flexibility to use numerous existing rounds of ammunition. It also highlights the capability to use this launcher for both smoke screening and non-lethal missions."

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Recent Staff Awards

Patent Awards:

Arthur H. Carrieri
Patent no. 7,737,399
"Infrared Mueller Matrix Acquisition and Preprocessing System and Method"

Gregory W. Peterson
Co-inventor Christopher J. Karwacki
Patent no. 7,713,334
"Process for Removing Epoxides"

Dr. Vipin K. Rastogi
Co-inventor Dr. Steven P. Harvey
Patent no. 7,723,558
"Non-Corrosive, Non-Caustic, Non-Flammable, Catalyst-Based Decontaminant Formulation"

Dr. George W. Wagner
Patent no. 7,678,736
"Modified Reactive Sorbents Exhibiting Enhanced Decontamination of Chemical Warfare Agents"

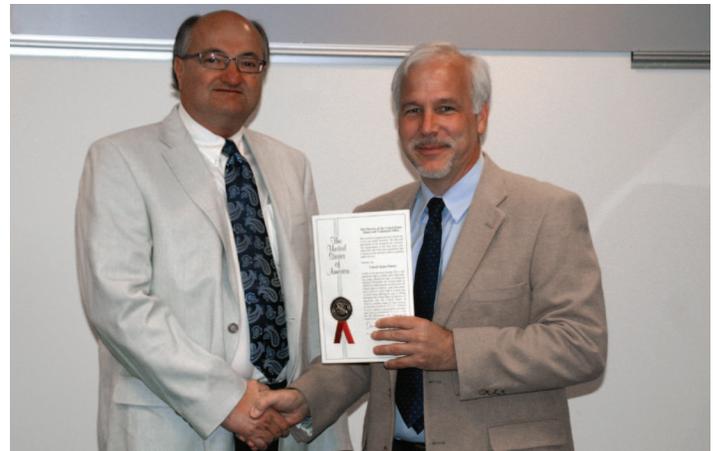
Daniel G. Wise
Patent no. 7,690,276
"High-Efficiency Air Intake for Aerosol Air Samplers"

Group Invention:

Dr. Cheng Cao (MEDCOM)
Jennifer R. Horsmon
Mark V. Gostomski
Dr. James J. Valdes
Patent no. 7,642,082
"Methods for determining the presence of staphylococcal enterotoxin A gene in a sample"

RDECOM Commander's Coin:

Randy Conlon - FIO



Art Carrieri receives his patent award from Joe Corriveau, Ph.D., at the Sept. 21 R&T awards ceremony.

ECBC Partners With Defense and Industry to Test Futuristic Technologies for the Warfighter

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In addition to the Multi-Mission Modular Weapon System Launcher, the demonstration also included the Ripsaw, a very maneuverable, unmanned/manned armed tank that performs at over 60 MPH, a Screen Obscuration Module prototype, fabricated by the Missouri University of Science and Technology, called the UMR generator.

Aiming to build on the success of the "proof of concept" demonstration, the ECBC team plans to continue to work with ARDEC and others to further development and eventually deliver the technologies to theater.



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Interview With R&T's XO

The R&T Connection met with Ryan Kuhns, our new executive officer, to discuss his role and plans for the future. Kuhns was previously working with the Engineering Directorate before joining R&T.

- Q.** During what timeframe will you be serving as R&T's XO?
- A.** I started in August and will be with R&T through January 2011.
- Q.** What did you do when you were with the Engineering Directorate?
- A.** I was the mobile lab systems manager within JPM CM under JPMG [Joint Project Manager Guardian]. I was responsible for developing mobile labs for consequence management efforts for the Army.
- Q.** Will you be returning to that work when your service as an XO is up?
- A.** Yes, I will be.
- Q.** What does an XO do?
- A.** I'm still learning the scope of an XO's duties, but so far I've been involved in some very significant strategic planning – for the Directorate and for the Center's role with biodefense. I've also assisted with ECBC's core values sensing sessions, preparation for the end-of-year poster sessions, our POM briefing, and the list goes on. Most of my days are filled with meetings. Being involved in so many initiatives has been a great introduction to the wide range of R&T's efforts.
- Q.** What are your thoughts on the XO concept?
- A.** I love the concept because it's a great opportunity for the participant to see other areas, meet new people, and interact with different customers doing different missions. I also like the concept of each directorate having an XO. It should be a way to assist the directorates in leveraging each other's capabilities.
- Q.** Why and how were you selected as our XO?
- A.** When a broad announcement was sent to the ECBC workforce, I applied, interviewed, and was selected.
- Q.** What has been your most interesting experience with R&T?
- A.** Interacting with scientists has been my most interesting experience because they think differently than engineers. My time here so far has been fun and refreshing.
- Q.** What are your personal career goals – short and long term?
- A.** My short-term goals are to gain as much experience and meet as many new people as possible while I am on this assignment. My longer-term goal would be to continue to build on my experiences, and attain a deputy PM position or similar in the future.

