

**IDRC Purpose:**  
To Defeat Global Health Threats  
*We Do the Difficult*

**IDRC Values:**  
Creativity, Knowledge,  
Achievement, Honesty,  
Competency

## BioMARC (Biopharmaceutical Manufacturing and Academic Research Center) News

**BCH Typhoid Fever Vaccine Contract Win**— BioMARC has won a large new contract for the scale-up and manufacturing process development of an innovative new vaccine candidate for *Salmonella typhi* and *Salmonella paratyphi* developed by researchers at Boston Children’s Hospital (BCH). BCH is the world’s largest research enterprise based at a pediatric hospital and is affiliated with Harvard Medical School. The work is being funded by the Bill & Melinda Gates Foundation, and builds on the groundbreaking Multiple Antigen Presenting System (MAPS) vaccine platform developed by Dr. Fan Zhang, Instructor of Pediatrics at Harvard Medical School, Dr. Yingjie Lu, Assistant Professor of Pediatrics at Harvard Medical School, and Dr. Richard Malley, Senior Physician in Medicine at Boston Children’s Hospital and Professor of Pediatrics at Harvard Medical School. “This project is a great fit for BioMARC’s expertise,” BioMARC Director John Wyckoff, PhD noted. “When creative scientists perform research that leads to promising drug candidates, at some point they need to transition from an academic laboratory setting into a regulated manufacturing environment and scale-up their processes. This often presents new sets of challenges that need to be addressed. BioMARC’s experienced technical and regulatory team are excited to work on this new vaccine platform and to help get this much needed vaccine further down the development pathway.” [Full description of the project is available here.](#) Contact: [john.wyckoff@colostate.edu](mailto:john.wyckoff@colostate.edu)

## IDRC General News

### IDRC Hosts Center for Disease Control Yellow Fever Diagnostic Kit Training



Attendees practice their lab technique

In coordination with the CDC, the World Health Organization (WHO), and the Pan American Health Organization (PAHO), in early May the IDRC hosted a hands-on training for using a CDC developed / BioMARC manufactured yellow fever diagnostics kit. A key advantage of the new kit is that results are known much faster compared to other methods. Attendees will use the kits in ongoing trials in their home countries of Angola, Uganda, the Democratic Republic of Congo, Senegal, Cameroon, Brazil, Peru, Colombia, and Paraguay.

### IDRC Hosts *Mission Mosquito* Information Sharing Program

In coordination with the US Department of State and Battelle, in early May the IDRC hosted global public health leaders from over 20 countries in South America, Africa, and Asia to discuss key trends in mosquito borne virus transmission, detection, and vector control. Much of the focus was on Zika virus, with additional attention to Rift Valley Fever virus and Bunyavirus.

### Goodrich’s Pathogen Reduction Technology Work Recognized by Military

In a moving ceremony attended by his family and many colleagues, IDRC Executive Director Dr. Ray Goodrich was accepted as an honorary member into the Order of Military Medical Merit (O2M3). His award was presented by Ret. Col. Richard Gonzalez, who described both the 25 years of arduous work Ray led to bring the Mirasol technology for blood pathogen inactivation to the market, and the remarkable impact this technology is having by saving lives globally and transforming blood banking practices around the world.



Goodrich family, Ray Goodrich, Col. Richard Gonzales



## RIC (Research Innovation Center) News

**SIVeC Business Pitch Earns Trip to China with InnoSTARS**– SIVeC Biotechnologies, a RIC tenant developing a novel aerosol based antiviral for avian flu in poultry, was selected as one of seven companies advancing to semi-finals in China this Fall. InnoSTARS is a U.S.-China innovation alliance which connects U.S.-based innovators with China-based investors and partners so the opportunity to participate in this platform represents an important networking opportunity for SIVeC. *Contact: Lynsey Linke, [llinke@sivecbiotech.com](mailto:llinke@sivecbiotech.com)*

**Immuno-oncology Startup PhotonPharma Joins RIC Community**– strategies to trigger a patient's own immune system to fight cancer are among the hottest areas in biotechnology today. New RIC tenant PhotonPharma, which has multiple CSU ties, is developing a game changing approach that combines whole-inactivated tumor cells with novel adjuvants to fight solid tumor cancers. Early animal data results are very encouraging, and the company is planning the work to get to a formal IND filing. CSU Assistant Professor of Clinical Sciences Amanda Guth, DVM, PhD, and PhotonPharma co-founder and Chief Technology Officer, noted "We are very excited to have lab and office space in the RIC. It is an ideal facility and community for us to advance the science we are building our company around." *Contact: Amanda Guth, [Amanda.guth@colostate.edu](mailto:Amanda.guth@colostate.edu)*



SiVEc intern Dawn Huggins

**SiVEc Internship Award (cloning, gene editing)**– SiVEc was awarded \$10K for the RIC / CSU Collaborative Student Project Program to hire CSU student Dawn Huggins for a summer project focused on enabling antibiotic-free selection of plasmid-delivery vehicles and enhancing expression of cell surface proteins facilitating host-cell uptake of their antiviral. Dawn recently earned her M.S. in Microbiology from CSU and begins a Ph.D. program in Cell and Molecular Biology at CSU this fall. *Contact: Lynsey Linke, [llinke@sivecbiotech.com](mailto:llinke@sivecbiotech.com)*



Vivaldi intern Lena Cuevas

**Vivaldi Internship Award (cell based assays)**– Vivaldi Biosciences, a RIC tenant developing a novel influenza vaccine, was awarded \$10K to hire CSU student Lena Cuevas for a project titled "Evaluation of Influenza Vaccine and Wild-Type Samples". The project will utilize fluorescent focus assays (FFA), fluorescent microneutralization assays, and tissue culture infectious dose 50 assays (TCID50) with a goal to characterize stored samples and create a database containing titer values. Lena is an undergraduate studying biochemistry at CSU with plans to graduate in fall 2018. *Contact: Amy Aspelund, [amy.Aspelund@vivaldibiosciences.com](mailto:amy.Aspelund@vivaldibiosciences.com)*



E-Flux intern Gabby Silco

**E-Flux Internship Award (new product validation & field testing)**– E-Flux, a RIC tenant offering novel products and services to measure petroleum biodegradation rates in soil at petroleum spill sites, was awarded \$10K to hire recent CSU grad Gabby Silco (Chemical and Biological Engineering) for a project titled "Development of Passive Sampling Flux Traps for Monitoring Nitrous Oxide (N<sub>2</sub>O) Emissions from Agricultural Fields". The project goals are to validate, optimize, and field test a novel trap design. *Contact: Julio Zimbron, [jzimbron@soilgasflux.com](mailto:jzimbron@soilgasflux.com)*

**KromaTiD Internship Award (artificial intelligence)**– KromaTiD, a RIC tenant offering products and services related to mutation detection, chromosomal rearrangements, and disease diagnosis, was awarded \$10K to hire CSU student Don Neuman to develop artificial intelligence tools to score images for KromaTiD's fluorescence-based assays. The work will include machine learning tools that acquire the ability to perform analysis without human intervention. Don is studying computer science at CSU, and plans to begin a Ph.D. program in artificial intelligence. *Contact: Gretchen Pratt, [gretchen.pratt@kromatid.com](mailto:gretchen.pratt@kromatid.com)*

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