IDRC (Infectious Disease Research Center) Newsletter February 2019

IDRC General News

Biosafety and Biosecurity Training Course (BBTC) in Fort Collins, July 2019

Members of the biosafety community are invited to sign up for an extraordinary opportunity to learn from 15 world-class experts in all aspects of biosecurity and biosafety. Three sessions are available individually or combined-- animals (July 8-9), general (July 9-11), and plants (July 11-12). The intensive, interactive training will include:

- Laboratory animal facilities and containment, ABSL-2 and ABSL-3
- Animal field investigations
- Prion Disease Research
- General Biosafety
- Ethics and Culture of Biosafety
- Select Agent regulation updates (Tier 1)
- Laboratory and Select Agent inspection preparations
- Risk Communication, Risk Assessment, and Risk Management
- Building design and operations
- Clinical and Public Health Lab Biosafety
- Plant research and diagnostics
- Plant regulations and permit procedures
- Greenhouse planning, construction and management (includes a modern research greenhouse tour)

For questions, contact: Bob Ellis, Course Director and Founder, robert.ellis@colostate.edu, 970-567-6607, https://www.bbtcfortcollins.com/

CSU Ventures to Host State of Innovation Speaker Anthony Atala, MD, February 21

The Director of the Wake Forest Institute for Regenerative Medicine will give a talk titled, "Translational Tissue and Organ Regeneration: Advances and Future Frontiers". Info and register: http://bit.ly/AAtala


Crystal Shanley

Crystal Shanley Named RBL / BSL-3 Manager

After an extensive search by a diverse search committee that identified multiple outstanding candidates, Crystal Shanley has been named the new RBL / BSL-3 Manager, reporting directly to IDRC Executive Director Ray Goodrich. Crystal brings 14+ years of experience in microbiological research at CSU involving select agents and BSL-3 agents, and holds an M.S. in Microbiology from North Dakota State University. contact: crystal.shanley@colostate.edu

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RIC (Research Innovation Center) News

KromaTiD, Photon Pharma Present at Biotech Showcase during JP Morgan week (San Francisco)

In January, RIC tenants KromaTiD and Photon Pharma presented at the large industry conference in San Francisco. Kromatid's presentation focused on applications of their directional Genomic Hybridization (dGH) for single-cell analysis of structural genomic mis-repair associated with gene editing methods such as CRISPR-Cas9. Photon Pharma presented their Innocell™ platform for inactivating solid tumor cells to stimulate the immune system as a cancer therapy. Photon Pharma CEO Jon Weston commented, "We had a great turnout for the talk and had numerous follow-on conversations with a wide variety of interested people and potential Investors." contact KromaTiD: info@kromatid.com, www.kromatid.com. contact Photon Pharma: Jon Weston, jon.Weston@photonpharma.com, www.photonpharm.com

Prieto Battery, Photon Pharma Present at Destination Startup (Boulder)

Destination Startup showcased technologies originating from, or being developed in collaboration with, a Colorado research institution or federal lab. Investors were invited in to hear the pitches. Additional info here.

SiVEC Biotechnologies Wins SBIR Grant

RIC tenant SiVEC Biotechnologies has officially been awarded a Phase I Small Business Innovation Research (SBIR) grant funded by the National Institutes of Health (NIH). This one-year grant provides funding to support research towards the enhancement of SiVEC's nucleic acid delivery platform for a variety of infectious diseases with applications in humans and other animals. The proposed scope of work includes both in vitro and in vivo work, culminating in a study using a mammalian disease model to demonstrate application as an antiviral for human influenza virus. For more information about SiVEC Biotechnologies and ongoing R&D activities visit www.sivecbiotechnologies.com or contact Lyndsey Linke at llinke@sivecbiotech.com

BioMARC (Biopharmaceutical Manufacturing and Academic Research Center) News

Trends: Q & A with Director John H. Wyckoff III, Ph.D.

Q: John, you get to speak with a lot of clients and potential clients. Any trends people should know about?

A: Yes! We are hearing from many potential clients that manufacturing slots at CMOs are currently fully booked, sometimes well into the future. As virtual biotech companies secure their financing, many are in a rush to manufacture their drug and enter the clinic as soon as possible. These firms are unpleasantly surprised to learn that even when they get a manufacturing slot, the consumables associated with many bioreactors and production systems are sold out and on back order with very long lead times. As new biologics get approved and ramp up commercial production, it seems like the entire supply chain is stressed. Sometimes we can find workarounds to meet production requirements, but other times we are forced to develop alternative avenues for production. The shortages we are seeing are apparently an industry wide phenomenon.

Q: BioMARC continues to work with many new and innovative scientific platforms. Any takeaways you can share about the transition from bench scale science to regulated biologics manufacturing?

A: There are two key points I would emphasize. First, the 'technology transfer' is the foundation of every successful project. At BioMARC, we prefer to begin with replicating the client protocols at similar bench scale before we increase to a pilot scale (~10% of full scale), then finally increase to engineering runs that are at full scale. Our teams often identify important issues that are not fully documented in the client's original protocols but which have critical impact to the scale-up effort. Biological systems do not always behave the way you want them to– technical troubleshooting is almost always involved. Second, we like to identify the steps in the bench scale protocols that are not fully applicable at manufacturing scale and work with clients to optimize these as early as possible in a project. For example, certain downstream processing / purification processes that are suitable at a 2L volume are not practical when manufacturing at a 200L or greater scale.

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