IDRC (Infectious Disease Research Center) Newsletter Fall 2020

BioMARC Joins the Fight Against COVID-19

CSU Scientists Combine Forces for Vaccine Project

A team of scientists at Colorado State University was awarded a base contract worth $3.1 million from the National Institutes of Health to continue development of a coronavirus vaccine candidate known as SolaVAX™. The funding comes from the National Institute of Allergy and Infectious Diseases (NIAID), a part of NIH, and includes an additional $15.5 million over five years if all options are implemented. The additional funding will support pre-clinical research and a move to Phase I human clinical trials to test the safety and immune response of the vaccine. Full CSU Source article on the latest award is available here. Video information on SolaVAX™ here.

This award follows a $699,994 award from the Biomedical Advanced Research and Development Authority (BARDA) to support preclinical research on the vaccine technology process.

Contact: Ray Goodrich, Ray.Goodrich@colostate.edu

RIC Community Welcomes GT Molecular

Start-up Focused on Ultra-sensitive Molecular Assays Targeting Early Detection of Cancer Also Working on COVID-19

Christopher McKee, GT Molecular (GTM) CEO and Co-founder, is no stranger to the local business community. As Chairman of In-Situ for the past 17 years, he has overseen the global growth of the Fort Collins based firm that designs, manufactures, distributes, and rents environmental and aquaculture monitoring systems. His newest venture, GT Molecular, builds on a passion for biotechnology that started years ago when he was a biochemistry master's student at CSU. GTM's core technology was licensed from Stanford University and allows GTM to develop and offer kits based on the single-color PCR platform. The approach can see mutations in tiny amounts of DNA, without the need for pre-amplification of samples, thus avoiding this source of potential error and bias. Early research has applied the approach to circulating tumor DNA (ctDNA) for the early detection of cancers.

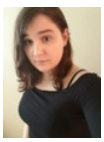
When COVID-19 struck, the GTM team saw an opportunity to apply some of their expertise and subsequently developed a high throughput protocol for quantifying COVID-19 in wastewater. Using this protocol, GT Molecular provides weekly testing for over 70 cities and facilities around the United States including several large universities and municipalities. GTM's SARS-CoV-2 wastewater testing kits are now available commercially on their website here and are seeing strong initial demand. (See the next page for more information on their work with CSU on COVID-19.)

Ray Goodrich, IDRC Executive Director commented on the RIC's newest tenant: "GT Molecular is exactly the type of company we want in the RIC. They can utilize the specialized BSL-2 labs that we offer, and they are very collaborative in their approach to science and development. Locating their labs and offices at the RIC puts them in the heart of our thriving community of industrial and academic scientists, and I am confident that both GT Molecular and CSU will benefit from those interactions."

Contact: Chris McKee, cmckee@gtmolecular.com; website: gtmolecular.com

IDRC Administrative News

Welcome Zoe Azalea, Financial & Research Project Coordinator



Zoe Azalea

The IDRC is delighted to welcome Zoe Azalea as our new Financial & Research Project Coordinator. This position is responsible for our financial reporting and accounting functions, and Zoe brings a great background to the role. Most recently, Zoe was the Business Process Manager / Accounting Support Coordinator at the CSU Ramcard office, and prior to that she was a tax accountant at Plante Moran. Zoe describes herself as a passionate supporter of CSU and earned her B.S. in Business Administration with a Concentration in Accounting and a Minor in Biomedical Engineering from CSU in 2018.

RIC (Research Innovation Center) Tenant News

GT Molecular, CSU, Colorado, Collaborate on COVID-19 Testing

The GTM R&D team, led by Dr. Rose Nash, was offered an opportunity to apply some of their expertise and collaborated with CSU Microbiology Prof. Carol Wilusz on a project to test wastewater for COVID-19. This project also included major contributions from CSU Civil & Environmental Engineering Prof. Susan DeLong, CSU's Molecular Quantification Core (MQC), the OVPR, the city of Fort Collins, and Colorado's Metro Wastewater Reclamation District. In less than three months, these efforts led to a sensitive and effective assay. CSU's MQC currently tests wastewater covering ~60% of Colorado's population (including 5000 CSU students), and CSU recently signed a $500K contract with the Colorado Department of Public Health and Environment for the testing.
Contact: Carol Wilusz, Carol.Wilusz@colostate.edu

SiVEC Wins External Funding from Colorado, NIH

Colorado Advanced Industry Funding
SiVEC Biotechnologies has been awarded a $250,000 grant under the Colorado Office of Economic Development and International Trade (OEDIT)'s Advanced Industries Accelerator Grant Program. This Early Stage Capital and Retention grant is intended to fund companies like SiVEC who are commercializing innovative technologies to create viable products that meet a market need and can be created or manufactured in Colorado and exported globally.

Phase II NIH NIAID Funding Awarded to SiVEC for Human Influenza Antiviral Development
Following successful completion of a Phase I SBIR funded by the NIH, SiVEC Biotechnologies has been awarded a Phase II grant for continued development of SiVEC-IAV antiviral for human influenza treatment and prevention, built on SiVEC's novel bacterial delivery platform. Phase II funding from NIH NIAID provides $3 million over three years to support IND-directed work including preclinical and preliminary CMC activities.
Contact Lyndsey Linke, llinke@sivecbiotech.com

E-Flux Awarded Student Grant

E-Flux has been awarded a $15K grant from the RIC / CSU Collaborative Student Project Program to fund a student intern who will work on radiocarbon analysis of samples from petroleum contaminated soils, as well as accelerator mass spectrometry analysis of graphitized samples. Additionally, the student would have the opportunity to work on a research project developing a new colorimetric method for CO_2 analysis.
Contact Julio Zimbron, Jzimbron@soilgasflux.com

Amblyn Hauck, E-Flux Intern
Senior Ecosystem Science & Sustainability Major

Vivaldi Biosciences Awarded Student Grant

Vivaldi Biosciences has been awarded a $15K grant from the RIC / CSU Collaborative Student Project Program to work on the development of a live attenuated influenza vaccine that expresses SARS-CoV-2 antigens. The project will focus on upstream process development tasks like creating the vaccine strain viruses, evaluating their SARS-CoV-2 expression levels, and selecting strains for pre-clinical testing.
Contact Amy Aspelund, Amy.Aspelund@vivaldibiosciences.com

Miranda Coldren, Vivaldi Intern Junior Neuroscience Major, Chemistry Minor

SiVEC Biotechnologies Awarded Student Grant

SiVEC Biotechnologies has been awarded a $15K grant from the RIC / CSU Collaborative Student Project Program to work on the development of a human flu antiviral agent and several novel delivery systems, including an mRNA approach. The work is also expected to evaluate the agent against H1N1 infection.
Contact Darcy Mora, Dmora@sivecbiotech.com

SiVEC Interns: McKenzie Fletcher
Senior Microbiology Major

Tim Enroth
Senior Microbiology Major

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