

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

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

Big News

Zoetis to Join RIC (Research Innovation Center) Community



Zoetis, the world's leading animal health company, will establish a 'Zoetis Incubator' in the RIC facility and expects to hire 17-20 scientists to start operations by the beginning of 2020. Research will focus on the livestock immune system, with a goal of developing biotherapeutic alternatives to antibiotics. Facility modifications are currently underway to accommodate what will become the RIC's largest tenant.

Ray Goodrich, Executive Director of the IDRC, commented, "Our agreement with Zoetis represents the beginning of an era of collaboration, cooperation and innovation between public and private research leaders, all in the interest of improving animal health." Key factors that attracted Zoetis to CSU were the impressive infrastructure of the RIC facility at CSU's Foothills Campus, cutting-edge research programs at CSU's veterinary school, and the significant scientific talent that CSU graduates every year at all degree levels. Chad Ray, Senior Director of Global Therapeutics Research for Zoetis who will serve as the local site leader, commented, "Zoetis is committed to continuous innovation and going where the science is. CSU is at the forefront of infectious disease innovation and animal health research in a vibrant biotech community, making it the ideal environment for our Incubator Research Lab."

Full article CSU Source article available [here](#), and a video link is [here](#).

Contact: Ray.Goodrich@colostate.edu; Chad.Ray@zoetis.com

BioMARC, CSU Win \$9.5M Rift Valley Fever Vaccine Project from CEPI



New
vaccines
for a safer
world

The Coalition for Epidemic Preparedness Innovations (CEPI) and CSU have announced a partnering agreement to develop and manufacture a vaccine candidate for Rift Valley Fever (RVF) Virus. RVF is found across Africa, is emerging in the Middle East, and has been identified by the World Health Organization as a priority pathogen in need of urgent R&D investment. A CSU team led by principal investigator John Wyckoff, Director of BioMARC, will include Richard Bowen, Professor in the Department of Biomedical Sciences and Rebekah Kading, Assistant Professor of Microbiology, Immunology, & Pathology. The research consortium will also include researchers at the University of California, Davis' One Health Institute.

Dr. Wyckoff noted that the project was a great fit for the type of work BioMARC excels in— scaling up and optimizing the manufacturing processes for vaccines and bio-therapeutics so they can move further down the development path towards commercialization. The work will be performed under the appropriate regulatory framework and within the specialized high-containment environment BioMARC's infrastructure allows.

CEPI is an innovative partnership between public, private, philanthropic, and civil organizations launched in Davos in 2017 to develop vaccines to stop future epidemics. Alan Rudolph, Vice President for Research at CSU, commented, "We are excited to partner with CEPI and to work towards manufacturing a Rift Valley fever vaccine for humans. Our team and UC Davis are well-positioned to develop this much-needed medical countermeasure to reduce suffering and mortality from this disease."

Full press release [here](#). Contact: John.Wyckoff@colostate.edu



RIC (Research Innovation Center) Tenant News

SiVEC Awarded Student Grant

SiVEC Biotechnologies has been awarded a \$12K grant from the RIC / CSU Collaborative Student Project Program to further develop their nucleic acid based therapeutic platform. SiVEC expects to hire up to two students; each student will fully complete one of three key objectives and may contribute to progress on another. The three objectives: 1) assess a novel cell-entry mediator for improved target cell entry, 2) evaluate the bacterial delivery vehicle's ability to generate functional nucleic acids applicable to vaccine development, 3) assess bacterial delivery vehicle's ability to generate and deliver functional gene-editing mediators to eukaryotic cells. *Contact Darcy Mora, dmora@sivecbiotech.com*

Photon Pharma Awarded Student Grant

Photon Pharma has been awarded a \$12K grant from the RIC / CSU Collaborative Student Project Program to work with a Senior Design Team from the School of Biomedical Engineering. The overall goal will be for the team to develop a prototype medical device that would be used as a part of Photon Pharma's novel approach to immunotherapy for cancer patients. The device will combine microfluidics with UV light in the presence of a photosensitizer to inactivate cancer tumor cells. Students will need to combine chemical, biological, and mechanical engineering considerations with the necessary electrical engineering to power the system and use photodiodes. The overall project provides an excellent opportunity for senior undergraduate students to apply their classroom learning to a real-world problem as a part of their Senior Design Project course. *Contact Jon Weston, Jon.Weston@photonpharma.co*

Vivaldi Biosciences Awarded Student Grant

Vivaldi Biosciences has been awarded a \$14K grant from the RIC / CSU Collaborative Student Project Program to work on the development of a digital droplet PCR assay to measure the vRNA levels in upstream virus production. The assay will help Vivaldi better understand the growth properties of each virus they are optimizing in order to maximize efficiency for future large-scale vaccine production. The student will develop a method to extract the sample, design primers and probes, and optimize them using a digital droplet PCR system. *Contact Amy Aspelund, Amy.Aspelund@vivaldibiosciences.com*

Vivaldi's Amy Aspelund Interviewed by ABC for National TV News Story on Universal Flu Vaccine



Amy Aspelund

Amy Aspelund, CSU alum and VP of Research and Development for Vivaldi Biosciences, was recently interviewed and featured on an ABC news story about Vivaldi's work to develop a universal flu vaccine. Unlike current flu vaccines (which typically use chicken eggs as the growth substrate in manufacturing), Vivaldi's approach utilizes a modern biotechnology (cell based) manufacturing strategy. Vivaldi's unique deltaFLU vaccine candidate is based on the deletion of the influenza NS1 gene using a 'reverse genetics' technique to remove the virulent portion of the virus. The vaccine, administered as a nasal spray, rapidly induces an interferon response from the immune system, resulting in a broadly protective immune response. Clinical studies indicate that deltaFLU protects against a broad range of influenza strains, even including the A/H5N1 'bird flu'. Video link [here](#). *Contact Amy Aspelund, Amy.Aspelund@vivaldibiosciences.com*

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