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## **CMU NATIONAL DENDRIMER AND NANOTECHNOLOGY CENTER ATTRACTS EMERGING BIOTECHNOLOGY COMPANY**

MOUNT PLEASANT, Mich.— A company developing biotechnologies for coatings and artificial cells that could treat many health conditions is locating a laboratory at Central Michigan University.

Initially, two researchers from Connecticut-based Artificial Cell Technologies Inc. will be located in CMU's Dow Science Building. One ACT staff person has been at CMU since last summer.

The company is commercializing a new nanotechnology involving designed polypeptides that may lead to treatments for many health conditions and opportunities for research for CMU faculty and students.

Using technology originally developed at Louisiana Tech University by its chief scientist, ACT designs, characterizes, and produces complex, multi-layer, nano-assembled polypeptide films, coatings and microcapsules. Peptides are natural or synthetic compounds containing two or more amino acids. Polypeptides are small proteins typically containing between 10 and 100 molecules of amino acids.

Among ACT's current research and development priorities are enantioselective filter membranes for pharmaceutical research and manufacturing, coatings for cell and tissue culture, and the encapsulation of hemoglobin to make artificial red blood cells. A safe, universally transfusable artificial red blood cell with a long life span in the body would transform human health, potentially eliminating blood supply shortages while also representing a new treatment modality for chronic conditions such as congestive heart disease, microvasculature disease, and long-lasting anemias such as caused by malaria.

ACT's technology also appears well suited to development of microcapsules for systemic or targeted drug delivery with tunable timed-release and other useful medical properties, multi-antigen artificial virus vaccines, biocompatible coatings for medical devices and instruments, and antimicrobial coatings for food, food packaging, or clothing.

ACT Chief Scientific Officer Don Haynie said that from the time of his first visit to CMU, he has been impressed with the capabilities of CMU's faculty and students, as well as the advanced equipment and facilities. The potential for synergistic relationships with other young technology firms at CMU's National Dendrimer and Nanotechnology Center, including Dendritic Nanotechnologies and Bio-ID Diagnostic, also appeals to Haynie.

“We are excited about the opportunity to be involved in bringing new educational opportunities to CMU while also leveraging the many scientific assets available within the central Michigan community to help ACT develop and commercialize our valuable products,” said Haynie.

Working with ACT, CMU students and faculty will have the opportunity to collaborate on projects and learn new skills through hands-on research experiences, including polypeptide synthesis and purification and the design and assembly of polypeptide nanostructures.

ACT Chief Executive Officer Tom Malone said, “The potential for achieving world-leading therapeutic and industrial advancements is greatly advanced by CMU’s willingness to invest time, money, and energy in fostering university-private company partnerships.”

Malone also credited the support and vision of top officers at the university, valuable business services from the CMU Research Corp., and lower operating costs associated with research and development activities, when compared to the east coast.

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