Helping Jacobs School discoveries take flight

Commercialization advisory services for Jacobs School inventors
Seed funding to enhance commercial value of discoveries
Community partnerships to advance new technologies into the marketplace
**Commercialization Advisory Services**

The von Liebig Center team includes professional staff and technology advisors who are experienced in helping companies commercialize technologies and in raising or investing venture capital.

The team advises and guides UCSD faculty through the commercialization process and introduces them to experts, alliances and opportunities both inside and outside the University.

The team can help UCSD inventors assess the commercial viability of their technology, the stages of development necessary to commercialize the technology, the options in commercialization, and the competitive environment. They can provide continuing advice throughout the commercialization process and act as an advocate. The team has a variety of resources they can draw upon in order to get the best help for the inventor. Working closely with campus partners, the von Liebig Center provides a full spectrum of services to UCSD inventors.

**Funding Opportunities**

The von Liebig Center awards Pre-seed Technology Funds of up to $50,000 to faculty, students and staff of the Jacobs School. The funds are targeted to assess and confirm the commercial potential of new discoveries, and to perform proof of concept research. For example, von Liebig awards can be used for development, testing, or prototype construction; to undertake more specific market research; or to protect intellectual property.

The von Liebig Center funds are awarded competitively through an external review process by a pool of independent experts. Proposals are accepted throughout the year, and generally 10 to 12 projects are funded annually. Please see our website for details - www.vonliebig.ucsd.edu.

**Molecular Diagnostics**

Bioengineering professor Michael Heller and his student Ben Sullivan received von Liebig Center seed funding to commercialize a nano-technology-based approach to genotyping that could significantly improve the speed and accuracy of diagnostic tests for such diseases as cancer and Staph infection. The novel concept represents a new mechanism to detect and precisely identify trace amounts of target DNA without PCR amplification and sample preparation.

Their work led to the start up of Los Angeles-based Pulsar Diagnostics, Inc., which has executed an exclusive worldwide license to the technology. CEO Eric Donsky says: “This proprietary platform potentially makes it possible to perform a range of diagnostic tests at the point-of-care, such as the physician’s office or the emergency room, which could lead to a dramatic improvement in the quality of patient care.” Donsky notes that most diagnostic tests are currently performed at reference labs, therefore delaying the time required to prescribe therapy. Another application may be for rapid detection and identification of biological weapons in the field.

Pulsar is in the early stages of commercializing the technology, and is focused on validating the mechanism, prototyping diagnostic devices, and building a comprehensive intellectual property estate.
Today’s integrated circuits can contain up to 100 million elements packed onto nanometer-sized chips. Simulating and verifying these elements are critical to chip designers, but the sheer density of the latest chips are stretching current simulation tools to their limits. Jacobs School computer science and engineering professor C.K. Cheng developed a technology for a quick and accurate transistor level full-chip analysis. The technology is based on a different algebraic formulation as a solver engine. This approach avoids the high complexity and slow convergence of other tools on the market.

von Liebig Center technology advisors approached San Jose-based Fastrack Design, a company focused on improving ASIC design productivity. Working with UCSD Technology Transfer and Intellectual Property, Fastrack acquired the exclusive license for this circuit simulation technology.

“Simulation and verification is a major area that requires a lot of improvement to keep up with chip technology advancements”, says Fastrack CEO Moazzem Hossain. “We believe the UCSD technology has potential to offer significant capacity and speed improvement over existing tools for circuit simulation”. Fastrack plans to offer value added services and tools solutions using this technology.
EDUCATION

The von Liebig Center courses are designed to enhance the effectiveness of Jacobs School of Engineering students who on graduation will join fast-moving, innovative, high-tech organizations.

Five graduate courses have been developed to introduce engineering students to entrepreneurism and the culture of entrepreneurial environments. The curriculum gives students an overview of how entrepreneurial companies work, while also providing them with the basic tools necessary for contributing to business discussions and decision making. Courses emphasize teamwork as well as the business skills needed by engineers preparing to work in entrepreneurial companies in different capacities, e.g., project engineer, CTO, or CEO.

The courses are based on readings, case studies, exercises and projects with local entrepreneurial companies. Faculty for the courses have both engineering and business qualifications.

FACILITIES

The von Liebig Center is headquartered in the Powell-Focht Bioengineering Hall at the UCSD Jacobs School of Engineering. The 6,000 square foot facility is used for classes, meetings and inventor workspace. The von Liebig Center is equipped to support the preparation of presentations, proposals and marketing materials.

The Legacy of an Entrepreneur

William J. von Liebig was a medical-device entrepreneur and a pioneer in vascular grafts.

He established Meadox Medicals, Inc., in 1961, which manufactured and distributed vascular grafts and other devices designed to treat cardiovascular disease. In 1975, von Liebig created The William J. von Liebig Foundation, and in 2001, the Foundation generously donated $10 million to establish the von Liebig Center for Entrepreneurism and Technology Advancement at UCSD.