

bwtech@UMBC Times

SUMMER SEMESTER 2007

BWTECH@UMBC CONSTRUCTION UPDATE



bwtech@UMBC is a 41-acre research and technology community at the University of Maryland, Baltimore County (UMBC). bwtech@UMBC has a total development capacity of up to 350,000 square feet of office and laboratory space. The park will ultimately comprise five new state-of-the-art buildings occupied by research and technology firms. The firms have access to university expertise, students, technology, programs and facilities. Construction of the university's research and technology park is on schedule.

bwtech@UMBC was Maryland's first university research park. It is the only research and development park in Baltimore County. The Park's first building, 5521 Research Park Drive, completed in 2001, is occupied by RWD Technologies. A second building, 5523 Research Park Drive, completed in 2004, is fully leased. Both buildings are owned by Merritt Properties, LLC.

The real estate development firm Corporate Office Properties Trust (COPT) is managing construction of both the U.S. Geological Survey (USGS) building and a 110,000 square-foot, four-story, multi-tenant building at bwtech@UMBC, the park's fourth of five planned buildings.

The Erickson facility will be the fifth bwtech@UMBC building.

5522 Research Park Drive – The third building, USGS Water Science Center, will be a 1-story, 23,000 square-foot facility located at 5522 Research Park Drive. The total construction cost of the project is projected to be approximately \$4,236,000.



COPT broke ground for the USGS building in 2006. The steel erection is complete and the slab on grade is poured. Exterior wall construction began the week of January 15, 2007. The masonry walls at the Receiving Area are being constructed. Roofing should start in mid-February.

The USGS Center employs over 60 scientists and support staff, who are expected to strengthen collaborative work with UMBC and U.S. Forest Service scientists who monitor the ecosystems of the Chesapeake Bay watershed and the health of the region's water supply, rivers and streams.

The USGS's decision to move from its previous location in White Marsh was strongly influenced by the longtime research partnership between USGS and UMBC's Department of Geography and Environmental Systems, Center for Urban and Environmental Research and Education (CUERE), Department of Civil and Environmental Engineering, the U.S. Forest Service and the Baltimore Ecosystem Study.

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RESEARCH & TECHNOLOGY PARK

CONSTRUCTION UPDATE (continued)

5520 Research Park Drive

Construction for the 110,000 square-foot multi-tenant building is underway. The total construction cost is projected to be approximately \$22 million.

5525 Research Park Drive

Erickson Development Services will construct a \$20 million building. Erickson will begin construction of the four-story, 97,695 square-foot building in June 2007. Erickson will move its information technology (IT) department, its adult living national broadcast network Retirement Living TV (RL-TV), and its private charitable foundation to the building, expected to be completed by August 2008.

RL-TV

RL-TV will house its corporate headquarters and three production studios in the new facility. The network recently signed a national broadcasting agreement with DirectTV to expand its viewing audience to over 24 million homes. Retirement Living TV produces programming focused on health, finance, politics and living for people over the age of 55. RL-TV recently partnered with UMBC's New Media Studio to produce pilots for two programs and is expected to collaborate further with UMBC's Imaging Research Center and College of Arts, Humanities and Social Sciences.



ACTiVATE Company Calls UMBC Home

Traxion Therapeutics Embraces the techcenter@UMBC Incubator Program



The techcenter@UMBC welcomed Traxion Therapeutics, Inc., a privately held biotech company which came through the University of Maryland, Baltimore County's (UMBC) ACTiVATE program.

Traxion Therapeutics is a biotech company focused on the development of novel drugs for the treatment of intractable pain, specifically neuropathic pain.

"techcenter@UMBC is an excellent location to grow our biotech company," says Kerrie L. Brady, founder and CEO of Traxion Therapeutics. "Its wealth of strategic alliances, outstanding support services, and proximity to federal agencies and world-class research institutions are sure to accelerate our successful business development."

Neuropathic pain afflicts more than 10 million people in the US alone and the incidence is set to increase significantly. Sales of prescription drugs for neuropathic pain are over \$5 billion and at 7% annual growth, it is one of the most rapidly-growing segments of the pain market.

Traxion has assembled a diversified portfolio of novel, proprietary small molecule products to address this market

opportunity. These products use more selective, mechanism-based approaches which utilize recent scientific discoveries to develop more effective, better tolerated treatments for neuropathic pain.

"We are excited to see new companies formed around technologies from research institutions in Maryland and delighted to see them choose techcenter@UMBC's business incubator program," says Stephen Auvil, director of UMBC's office of technology development. "Traxion is an inspiring success story for the ACTiVATE program – one that will surely experience rapid growth."

Traxion's experienced team plans to take its products through to Phase II proof of concept studies and then enter worldwide corporate partnerships for later-stage development and commercialization.

Brady is an experienced international business development executive with a successful 20 year plus track record in working with both entrepreneurial ventures and established companies. Most recently, Brady was vice president of business development at KMG Japan Inc. where she established partnerships between Japanese and Western companies. Brady began her career in the healthcare industry with regulatory and marketing positions at Rhone Poulenc.

Continued on page 6.

TENANT PROFILES

Another Two techcenter@UMBC Incubator Graduates *Surviving and Growing Through the Start-Up Phase*

Two companies graduated from the techcenter@UMBC business incubator program: Next Breath, LLC and Fluorometrix Corporation.

"Our Incubator and Accelerator programs nurture the development of technology-led companies, helping them survive and thrive during their start-up phase," says David Fink, techcenter@UMBC director of entrepreneurial service. "We have graduated over 30 companies, including: BDMetrics, Receptor Biology, Athena Environmental Sciences, Cybergroup, In Vitro Technologies, COLUMBIA Technologies, and Epitaxial Technologies."



Next Breath, LLC is a contract pharmaceutical research and development organization dedicated to analytical testing of respiratory and nasal drug delivery platforms. Next Breath discovers and optimizes drug and delivery device combinations that increase the probability

of success for its clients when their products advance into human clinical trials and the marketplace. Next Breath's primary clients are in pharmaceutical, biotechnology and drug delivery companies. Since its inception, Next Breath has provided services to over 44 companies from New Zealand, India, Europe, Canada, and the US.

Next Breath has two Drug Enforcement Administration (DEA) licenses – controlled substance for research and development and analytical testing. The licenses allow Next Breath to work with clients that develop controlled substances for pain management, hormone replacement and seizures.

"The management guidance and technical assistance provided by the techcenter@UMBC team accelerated our rapid growth and minimized possible pitfalls that many bioscience start-up companies face," says NextBreath founder and president Julie Suman. "Next Breath has experienced continual growth each year and now has ten employees."

Fluorometrix uses advanced sensor technology developed by Govind Rao, head of UMBC's Center for Advanced Sensor Technologies (CAST). The Fluorometrix family of products is designed to significantly offset the cost of labor and materials of the highly labor-intensive fermentation and cell culture processes that are the heart of biotech and pharmaceutical research and development. "The partnership formed by Sartorius and Fluorometrix, through a sublicense agreement, will accelerate international marketing of products invented by a chemical and biochemical engineering team at UMBC," stated director Stephen Auvil, UMBC Office of Technology Development.

"The license agreement with Sartorius, along with other similar agreements signed in recent years, should help substantially in overcoming the market inertia that has inhibited adoption of this innovative technology," adds Joe Qualitz, president of Fluorometrix.

"The graduating companies underscore techcenter@UMBC's portfolio of high technology companies," says techcenter@UMBC's Business Advisory Board chair Thomas Peltier, and Managing Director & Group Head of Aerospace, Defense & IT Services Group of Stifel, Nicolaus & Company, Inc. "We are thrilled about the level of activity surrounding techcenter@UMBC companies – from multimillion dollar investments by the financial community to an increasing involvement of UMBC faculty, students, and alumni."

"UMBC's incubation programs help young businesses create jobs, enhance the entrepreneurial climate, and diversifying our economy," stated David S. Iannucci, executive director of the Baltimore County Department of Economic Development. A great example of achieving those incubation goals is techcenter@UMBC's incubator graduate, In Vitro Technologies. With a workforce of 60 scientist and technicians, IVT was recently sold to Celsis International plc, a large multinational drug testing company, for over \$30 million. "We expect to continue to operate in Baltimore County – while growing at a faster pace," says founder and president Paul Silber.

FACULTY PROFILE



UMBC Dean of Engineering & Information Technology Receives International Honor
Society of Manufacturing Engineers Recognizes Warren DeVries' Accomplishments with Albert M. Sargent Progress Award

The Society of Manufacturing Engineers (SME), the world's leading professional society serving the manufacturing industry, named Warren R. DeVries, dean of engineering and information technology at UMBC, the 2007 winner of the SME Albert M. Sargent Progress Award for his significant accomplishments in the field of manufacturing processes, methods and systems.

The SME recognized the recipients of the 2007 SME International Honor Awards at its International Awards Gala which took place in conjunction with SME's Annual Meeting and WESTEC 2007 Exposition and Conference.

"To be recognized by your colleagues is always a great honor. During a time of change in the world and in the manufacturing profession, receiving the Albert M. Sargent Progress Award makes me eager to take up the challenge of education and innovation as the engines that will drive 21st century manufacturing enterprises," said DeVries.

DeVries is a leader in the national push for excellence in engineering education and is also well known in his field for his pioneering research in material removal processes and manufacturing systems. Prior to coming to UMBC to lead its College of Engineering and Information Technology, he served as the National Science Foundation's Division Director for the Division of Design and Manufacturing Innovation.

DeVries came to the NSF on assignment from Iowa State University, where he was a professor and then chair of the department of mechanical engineering. He has also held faculty positions at Rensselaer Polytechnic Institute, University of Michigan and University of Wisconsin-Madison.

DeVries has served on the Board of Governors and as Senior Vice President for Engineering for the American Society of Mechanical Engineers (ASME) and on the Board of Directors and as President for the North American Manufacturing Research Institution of the Society of Manufacturing Engineers (SME). He is a Fellow of both the ASME and the SME.

SEMESTER HIGHLIGHTS

Invoke Systems Merger



Invoke Systems, a customer-centered technology solution

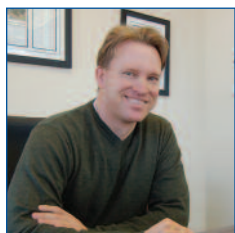
provider with extensive Microsoft Dynamics CRM 3.0 (customer relationship management) expertise, was acquired by Ascentium Corporation, a leading technology and marketing consulting firm. The deal firmly establishes Ascentium as the largest Microsoft Dynamics CRM consultancy in the United States and a global leader in the field, supporting more than 100 CRM customers with over 15,000 business users. Invoke Systems has delivered customer-centered technology solutions for more than 15 years and is a two-time winner of the Pinnacle Award, the highest honor awarded by Microsoft Dynamics.

“This is an incredible business move for Invoke Systems, and we are thrilled to be joining forces with Ascentium, which has demonstrated its ability to support and maintain extraordinary growth,” said Jim Stout, CEO, Invoke Systems. “Combining the two CRM practices will create more innovative solutions for our clients and allow us to grow at even faster rate than we are growing today.”

UMBC Incubator Welcomes Two New Board Members *Geritz, Zuga Offer Technology and Funding Expertise*

The University of Maryland, Baltimore County’s business incubator and accelerator, techcenter@UMBC, recently appointed two new members to its Business Advisory Board (BAB). The techcenter@UMBC’s Board represents a distinguished group of education, science, and business leaders.

The new board members are:



» Rick Geritz is CEO of BDMetrics and has over 15 years of experience in building profitable technology product companies. Previously, Geritz held senior level executive roles for SafeNet (NASDAQ; SFNT) including president and general manager responsible for overall product

strategy and operations for their silicon and enterprise software businesses. He also served as executive vice president and a board member at Rockville-based ICARUS Corporation, an engineering cost modeling software company, in which he led

the company’s worldwide product strategy and operations, and subsequently led its sale to Aspen Technology (NASDAQ; AZPN). Geritz earned a degree in Economics from St. Mary’s College.

» Matt Zuga is a founder and managing director of Red Abbey Venture Partners, a life sciences focused investment firm based in Baltimore, Md. Zuga has been responsible for the firm’s investment in 12 privately held and 8 publicly traded companies since September 2004, including Alba Therapeutics, Inc., CoGenesys, Inc. and MacroGenics, Inc. Red Abbey invests across the life sciences sector in high-quality companies that are developing novel therapeutics and medical devices based on distinctive technologies. Previously, Zuga was a managing director in the investment banking department of Legg Mason Wood Walker, Inc. and the head of the Life Sciences Group. Zuga received an M.B.A. from the University of North Carolina at Chapel Hill and a degree in Business Administration/Finance from The Ohio State University.

Two More Life Science Companies Embrace UMBC *Tradezyme and Biomedica Management Corporation Join techcenter@UMBC Incubator Program*



The techcenter@UMBC welcomes Tradezyme, LLC and Biomedica Management Corporation, both privately held biotech companies. Tradezyme, formerly known as GeneTrade, has a rich connection with Greater Baltimore. The founders, Paul M. Kim and Daniel S. Higginson, are Johns



Hopkins University medical students. They won the Greater Baltimore Technology Council’s 2005 MoshPit Business Plan competition, which included \$15,000 and free office space at the Emerging Tech Center in Baltimore. The company received \$75,000 in funding from the Maryland Technology Development Corporation’s (TEDCO) Maryland Technology Transfer Fund (MTTF) last year.

Tradezyme is developing a registry and exchange for plasmids which are specially designed pieces of DNA used in scientific research. Tradezyme will also provide a gene-cloning service to biotech companies and academic labs.

“UMBC’s biotech cluster is growing stronger, with such companies as In Vitro Technologies, Cognate Bioservices, Lentigen, Profectus Biosciences, and Traxion Therapeutics among the group,” says techcenter@UMBC Director of Operations Walt Schulz. “We are delighted to welcome Tradezyme and Biomedica into the fold.”

Biomedica Management Corporation assists small businesses to move their research innovations into the commercialization path. Biomedica focuses on the Small Business Innovation Research (SBIR) program and other agencies under the auspices of federal Public Health Service. Biomedica helps scientific investigators obtain and manage funding, pursue patents, and market the commercialization. Biomedica is moving its laboratory facilities from Kalamazoo, MI to the techcenter@UMBC in Catonsville, Maryland.

Biomedica recently received \$75,000 in funding from TEDCO's MTTF program to improve the treatment of combat-related injuries which are the major cause of death among wounded soldiers.

"techcenter@UMBC is an outstanding place to grow our biotech company," says George Falus, CEO of Biomedica. "Its wealth of strategic alliances, outstanding support services, and proximity to federal agencies and world-class research institutions are sure to accelerate our successful business development."

Biomedica is working with UMBC chemistry professor James C. Fishbein on the development of wound healing and anti-inflammatory compounds that can prevent serious organ damage resulting from hemorrhage, heart and liver disease, and transplantation.

Two UMBC firms garner Greater Baltimore Committee's 2007 Baltimore region bioscience awards



Greater Baltimore region biotech CEOs and companies were honored in March by the Greater Baltimore Committee as winners of the region's second bioscience award competition.

Two of the four winners of the Greater Baltimore Region Bioscience Awards were:

Best New Product or Process: Lentigen Corporation. Using proprietary gene delivery technology for a wide range of applications in biotechnology and medicine, Lentigen's applications can transport genes or gene slicing sequences into cells with high efficiency and stability. Lentigen Corporation received government funding to develop an improved and novel therapy for patients with Chronic Lymphocytic Leukemia (CLL). Lentiviral vectors allow for the rapid creation of stable cell lines and Lentigen has been working with the Department of Health and Human Services on development of a VLP-based influenza vaccine.

Best Academic/Industry Collaboration: Profectus Biosciences, Inc. Profectus Biosciences, Inc. worked in partnership with the Institute of Human Virology at the University of Maryland Biotechnology Institute to develop an antiviral therapy for HIV that addresses some of the ongoing problems associated with HIV treatment such as toxicity from treatments and drug resistance. Founded by experts in the fields of virology and immunology, Profectus was chosen by the Institute for Human Virology at UMBI to commercialize several products related to enhancing the treatment of HIV and similar viruses.

"It is terribly important that we recognize the growing success and accomplishment in our life science community," said Donald C. Fry, president and CEO of the Greater Baltimore Committee. "Today's awards serve as notice of the emerging role that life science is to our region's economy and the important role in will play in job growth."

INTERESTING HAPPENINGS

USGS Groundbreaking - photos



PROFILE



VETERAN ENTREPRENEUR & BIOTECH EXPERT TO ADVISE START-UP COMPANIES

Fink Named techcenter@UMBC's Director of Entrepreneurial Services

David J. Fink, Ph.D., has been named the Director of Entrepreneurial Services at the University of Maryland, Baltimore County's (UMBC) techcenter@UMBC. With more than two decades of experience as an entrepreneur and officer in biotechnology start-ups, Fink will provide techcenter@UMBC companies with invaluable expertise and mentoring.

Fink is the first Director of Entrepreneurial Services for techcenter@UMBC, UMBC's on-campus tech incubator and accelerator, home to 16 start-up and 10 emerging high-tech and biomedical companies. Fink will coordinate business services, including identifying funding sources for companies and connecting them to UMBC's academic resources.

"I enjoy working with dynamic entrepreneurs who are committed to their companies. In these technology-based businesses, situations can change rapidly," said Fink. "It is exciting to think the resources provided by techcenter@UMBC, along

with the support I can offer to these professionals, will make a difference in their success."

Prior to accepting the new position, Fink was UMBC's Biotech Entrepreneur-in-Residence, Vice President of Business Development for Osiris Therapeutics, a researcher and research manager at Battelle in Columbus, Ohio and an executive officer in six start-up biotech companies. Fink was trained in chemical engineering at the Universities of Cincinnati and Michigan and was a post-doctoral fellow in biochemistry at Purdue University.

In addition to Fink's role as Director of Entrepreneurial Services, he is an instructor for the ACTiVATE program and has been an active member of the techcenter@UMBC Business Advisory Board and the Baltimore Bioscience Consortium. He also serves as an Adjunct Professor in UMBC's Department of Chemical and Biochemical Engineering.

"David is an exceptional asset to our strong management team," said Ellen Hemmerly, Executive Director of UMBC Research Park Corporation. "Expanding UMBC research opportunities, facilitating technology transfer between the University and the private sector, and creating jobs are important elements of the techcenter@UMBC and our research park, bwtech@UMBC."

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"We are delighted to see the remarkable growth in tech transfer companies that choose our program to build their businesses successfully," stated David Fink, techcenter@UMBC biotech entrepreneur in residence. "We have graduated nearly 30 companies – much of our success can be contributed to strong programs that support the growth of tech transfer companies in the IT, engineering, and biotech industries."

Some of techcenter@UMBC's services include: entrepreneurs in residence, legal assistance, marketing and public relations strategy, finance and capital counseling and commercialization strategy.

Many corporate sponsors have contributed to the resources provided to techcenter@UMBC start up companies. They include law firm Whiteford, Taylor & Preston L.L.P. and accounting firm Katz, Abosch, Windesheim, Gershman & Freedman, P.A. (KAWG&F). "We appreciate the high level of commitment to building relationships that go beyond the typical role of accounting consultant and legal advisor," says Ellen Hemmerly, executive director of UMBC Research Park Corporation. "Both firms' generous support will help strengthen our programs, such as the entrepreneurs in residence, CEO networking luncheons, pro bono legal advice, and monthly bookkeeping."

About ACTiVATE: ACTiVATE, which stands for Achieving the Commercialization of Technology in Ventures Through Applied Training for Entrepreneurs, is an entrepreneurship program focused on technology commercialization and economic development. Participants work with technology innovations from universities and research institutions in the region. ACTiVATE is supported by a \$712,000 grant from the National Science Foundation.

For more information about the ACTiVATE program visit the website at www.umbc.edu/activate.

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