

Meeting Notes

“An Innovation Conversation -- New Opportunities in Photonics Created by Lake Nona’s Emerging Medical City”

June 23, 2010

Sanford/Burnham Institute, Lake Nona

Current Activities and Plans at Medical City – Lake Nona

- I. Lake Nona & Tavistock Group – Rob Adams, VP Marketing <http://www.tavistock.com/?id=24>
 - Rob outlined the several developments in Central Florida that Tavistock is involved with as an investor.
 - MD Anderson has a cancer lab on the top floor of the UCF Burnham School building
 - A Town Centre is planned for Lake Nona: theaters, restaurants, retail shops
 - Lake Nona will soon have a full range of educational units:
 - Elementary and Middle schools – being planned and designed
 - Lake Nona High School – now open
 - Valencia Community College – breaking ground for new site. Will have a joint degree program with Lake Nona High School
 - University of Florida is planning to have a Research Center at Lake Nona
 - There are 4 major elements in the Lake Nona design with approximately equal square footage in buildings: commerce, research, education, clinical. What has been done in San Diego, CA is being used as a model/benchmark for the planning. By 2017, the projections are:
 - 7,000 acres of protected and park space
 - 30,000 jobs
 - \$2.8B in wages
 - \$7.6B total economic impact

- II. Sanford-Burnham Medical Research Institute – Dr. Steve Gardell, Dir. of Translational Resources <http://www.sanfordburnham.org/default.asp?contentID=555>
 - Overall Institute research focus areas: cancer; neurological, infectious, & childhood disease; diabetes; obesity
 - Focus of Orlando campus: diabetes & obesity. Dr. Dan Kelly is the Director, with his specialty being cardio-vascular disease in diabetics.
 - Currently 150 employees; 300 planned total
 - Currently 19 faculty; 30 planned total

- Research relies heavily in imaging technologies
 - Strong utilization of High-Throughput Screening (HTS) to search for chemical probes and drug leads. The local campus is one of 4 NIH comprehensive screening centers.
 - “Translational Research” is advancing discoveries to realize therapeutic potential. Dr. Steve Smith leads the Translational Research Institute for Diabetes and Obesity.
- III. UCF College of Medicine – Dr. Deborah German, Dean and UCF VP for Medical Affairs <http://www.med.ucf.edu/>
- Within the College of Medicine, the Burnett School of Biomedical Sciences conducts all of the current research activities. Full information on the research programs, other programs, and faculty of the Burnett School is on the web at <http://www.biomed.ucf.edu/index.php>
 - In addition to the MD degree programs, UCF also offers through the Burnett School PhD, MS, and undergraduate programs in biomedical science.
 - The college currently has 18 clinical faculty, with more to be hired.
 - Current expansion plans include hiring of 10-15 scientists and 5-10 clinicians per year for several years.
 - There are many opportunities for collaboration in the area of photonics.
- IV. Orlando VA Medical Center – Dr. Bill Fite, Research Officer <http://www.orlando.va.gov/>
- Orlando has the largest VA hospital for ambulatory care.
 - The Center has 130 acute care beds, 120 recovery beds, and a 60-bed comicialary for homeless and addiction recovery.
 - There is no research being conducted in the Center now, but there are plans for research activities in the future. These plans include:
 - Initial 7,000 sq ft “research suite”, with long-range plans for a free-standing 90,000 sq ft research lab building.
 - Possible collaboration with UCF units, including IST (have had some discussions)
- V. Nemours Children’s Hospital – Dr. David Milov <http://www.nemours.org/about/location/nchorlando.html>
- Nemours has locations in 4 states: Pennsylvania, Delaware, New Jersey, and Florida (Jacksonville, Orlando, & 2 others with 107,000 patients)
 - Currently \$13.6M of internally-funded research
 - Orlando campus:
 - Focus is on patient care
 - 60 acre campus, with 630 sq ft facility in phase 1
 - Phase 1 is a \$380M project, with 95 beds, and education and research centers. Completion is expected in 2013.
 - Plan is for 800 associates, including 50 physicians and 200 nurses
 - Dr. Roger Oxendale, Sr. VP, is in charge of the Orlando operation.

Tour of Burnham Facilities

The FPC is a 501c(6) nonprofit corporation whose mission is to support the growth and profitability of the Florida photonics industry through the strength of a unified voice, and to make Florida the place to go for photonics solutions.

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Other presentations

- I. Florida Photonics Cluster – Dr. Jim Pearson, Executive Director. <http://www.floridaphotonicscluster.com/>
 - The photonics industry in Florida currently has a large economic impact:
 - Over 270 companies
 - \$3.6 billion impact on Florida’s gross state product
 - Over 27,000 jobs
 - Significant research and innovation in photonics at Florida universities:
 - 77+ photonics faculty researchers
 - \$20+ million in annual federal, industrial and state-funded research at UCF CREOL alone
 - The Florida Photonics Cluster (FPC) currently has 42 members: 26 photonics companies, 7 university organizations, 5 suppliers, 4 others.
 - “Biophotonics” is the intersection of photonics and bio-sciences: *the interaction of light with biological material, focusing on innovative application of light creation and detection technologies for diagnostic, therapeutic, and research applications*
 - 26% of Florida photonics companies (~70 companies) and 8% of employees (~450) serve the biophotonics market
 - Some of the FPC companies in this market include:
 - Gooch & Housego
 - Harris
 - Ocean Optics
 - Ray Williamson Consulting
 - Tower Optical
 - VLOC
 - Research at CREOL in biophotonics includes the following faculty:
 - A. Dogariu, CREOL, K. Sugaya, Biomolecular Sciences: <http://random.creol.ucf.edu>
 - M. Bass, CREOL; S. Seal, AMPAC; W. Self, Biology: <http://bass.optics.ucf.edu/>
 - N. Riza: <http://pips.creol.ucf.edu>
- II. GrowFL – Fran Korosec, Client Services <http://www.GrowFL.com>
 - Cultivating growth companies across the state is the mission of the Florida Economic Gardening Institute, funded by the Florida Legislature at the University of Central Florida and involving a host of partners committed to local delivery of statewide services to help second-stage companies achieve their potential.
 - GrowFL is designed to help fill the gap between entrepreneurial resources available to incubator-level companies and well-established small-to-medium enterprises (SMEs).
 - 2nd Stage companies typically provide ~36% of jobs in a region.
 - GrowFL will provide technical services to ~300 companies in 2010 at no charge to the companies.. Services provided include:

- Sorting of databases for qualified leads
- Mapping of geographical areas for targeted marketing
- Review of core business strategy related to target markets
- Using social media to reach customers
- Search engine optimization

Discussions

- I. Needed items to help build collaborations in the photonics arena
 - a. Definition of the problems and needs of industrial photonics companies that could be addressed by training and research programs at the College of Medicine and/or at CREOL.
 - b. Topics for potential collaboration among all interested parties.
 - c. List of contacts at all interested organizations to discuss potential collaboration
 - d. Database of companies in the biophotonics arena and what they do, particularly those in Florida and in the FPC.

- II. Action items – for consideration and further discussion
 - a. The College of Medicine, and possibly other Lake Nona hospital facilities, can provide opportunities for researchers to make rounds with physicians. This will help define the needs of the physicians and the hospitals that require new research and development work.
 - b. Create forums to promote collaborations where
 - i. Researchers and practitioners define the limitations of their current equipment, procedures, and materials so that companies can tailor their research and development work to overcome the limitations.
 - ii. Companies describe what they can do, and possibly also the things that may be unique to them and not yet commercially available.
 - c. The FPC can be a “matchmaker” – a central point of contact – for issues, questions, etc. that need to be transmitted to industry.
 - d. The Metro Orlando EDC will get invitations to BioFlorida meetings to the attendees of this meeting and all FPC members.
 - e. The FPC will develop a database of contacts at the organizations attending this meeting, and others that were unable to attend.
 - f. The FPC and the UCF Incubator will work together to build a collaboration database and network for proposals.