



**LIFE SCIENCES STRATEGIC STEERING GROUP**

**BUSINESS DEVELOPMENT BOARD OF PALM BEACH COUNTY, INC.**

**November 2011**



Kelly Owens 9/21/11 1:21 PM

**Comment [1]:** Need to format report with new BDB logo; Mark feels the report cover should not be page 1, and that this is page 1.

## Roster of Life Sciences Strategic Steering Group Members

(TO BE FINALIZED) – and alphabetized  
David Bates, Esq., Gunster – Chairman

Russell Allen, BioFlorida  
Jason Brown, Alpern Rosenthal  
Steve Chakoff, CHS Pharma  
Shailesh Chavan, Biotest Pharmaceuticals  
Rina Dukor, Ph.D., BioTools  
J. Michael Gregson, WaveFront Clinical Services  
Libby Handel, Ph.D., Palm Beach Community College  
Trent Hayes, Hayes Clinical Laboratories  
Claudia Hillinger, Ph.D., Max Planck Society  
Shannon Ray Johnson, Cytonics Corp  
Stanley Kim, Strox Biopharmaceuticals, LLC  
Ferris H. Lander, Inc. – IP Consultant to Pivotal Therapeutics Inc.  
Shannon LaRocque-Bass, Palm Beach County Administration  
Mark H. Mirkin, Hicks Motto & Ehrlich P.A.  
Ramaswamy Narayanan, Ph.D., Florida Atlantic University  
Harry Orf, Ph.D., Scripps Florida  
Kelly Mayfair Owens, Alchemy Communications Group  
Doug Sáenz, Workforce Alliance  
Fred Sancilio, Sancilio and Company  
Melody Sanger, MD, Drug Study Institute  
Rekha Shah, R/S Tech Prob Solutions, LLC  
Dinu Shah, R/S Tech Prob Solutions, LLC  
Brandt Shapiro, Legacy Insurance Solutions, LLC  
Claudia Zylberberg, Ph.D., Akron Biotech

### BDB Leadership:

Kelly Smallridge – President & CEO  
Shawn Rowan –Assistant Vice President

## Mission

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The mission of the Business Development Board of Palm Beach County, Inc. (the "BDB") is to stimulate economic energy, promote business diversity, and enrich the vitality of Palm Beach County through the relocation, retention, and expansion of companies to or in our area.

The BDB's Life Sciences Strategic Steering Group serves as a voice and advisory group for the local life sciences community. It analyzes the current status of the local life sciences industry, identifies challenges to growing this industry, and recommends specific strategies for addressing these challenges to help Palm Beach County grow its current life sciences cluster into a globally recognized hub for biotechnology, medical device, and clinical development enterprises.

## Introduction

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The Life Sciences Strategic Steering Group (the "LSSSG") was formed in October 2006 to serve the emerging life sciences industry in Palm Beach County. The BDB recognized the need to consult leaders in the industry, academia, research, and government to assess the quality of the life science community in this county, and recommend ways to effectively expand and incentivize this emerging industry.

The top priorities for the Group are as follows:

1. Continually monitor the state of the county's existing life sciences businesses.
2. Prepare and continually update a list of locally available equipment and services that can be used by life sciences companies to facilitate their research and development objectives, and also identify any needed resources that are not currently available.
3. Based on such assessment, identify relocation or expansion ventures that should be recruited to, and/or developed in, Palm Beach County that would be mesh with our current businesses and resources, and develop meaningful metrics for evaluating the potential economic impact of prospective organizations.
4. Develop and implement the BDB's 2011-2012 strategic plan for attracting and developing new life sciences ventures in Palm Beach County, including proposing relocation and expansion incentives, as well as designing a familiarization tour (FAM) for pharmaceutical and biotech executives..

**[STAN: THE FOLLOWING SECTIONS NEED TO BE COMPLETELY UPDATED AND REVISED SO I DID NOT MARK UP]**

**(FERRIS: My thought is to take Harry's input and try to create a visual piece within the report. I am thinking of a 2-3 page transparent overlay which would show: 1) the location of institutes within the corridor, (Scripps, Max Planck, Torrey, VGTI, etc.); 2) the universities in the corridor; and 3) the companies within the corridor. I think this would be a powerful way to show the strength and expansion of the life science corridor.)**

## Findings

The LSSSG analyzed the current status of the life sciences community in Palm Beach County. It was noted that the arrival of the The Scripps Research Institute was a seed with the potential for catalyzing growth of a vibrant life sciences industry in South Florida, which may rival those in San Diego, Boston, and the Research Triangle within the next couple of decades. Indeed, the momentum started by the Scripps project already attracted the Max Planck Society to locate its new bio-imaging center in Palm Beach County. With two of the world's most respected and lauded scientific research institutes serving as anchor tenants, and with the right strategy, Palm Beach County's manifest destiny is to become a significant hub for research and development of the life science industries.

As part of the review process, the Group performed a SWOT analysis regarding the industry in Palm Beach County (see Figure I).

**Figure I**

| <b>Strengths</b>   | <b>Weaknesses</b>  |
|--|--|
| <ul style="list-style-type: none"> <li>• Scripps Florida &amp; Max Planck Florida Institute (basic research).</li> <li>• Significant and far-reaching educational enhancements made in local schools (K-20).               <ul style="list-style-type: none"> <li>◦ Florida Atlantic University's strong biomedical, biotechnology, and neuroscience programs, and core instrumentation capability</li> <li>◦ Palm Beach State College's (PBSC) Biotech program and facilities</li> <li>◦ Banner Center for Life Sciences at PBSC</li> <li>◦ Career academies for the life sciences established by the Palm Beach County School Board</li> </ul> </li> <li>• Demographics lend themselves to development of the cluster (availability of patients; young people attracted to the county's superior quality of life).</li> <li>• BDB's Steering Group and Quick Response Action Team.</li> <li>• Collaborative relationship among academia, government, and business.</li> <li>• Cost of living &amp; doing business, as compared to other notable life science clusters.</li> <li>• Highly significant state-of-the-art incubator/accelerator centers for start-ups and spinoffs.               <ul style="list-style-type: none"> <li>◦ Alexandria Real Estate Equities'</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Lack of venture capital (VC) funds that require companies to locate in Palm Beach County as a condition of funding.</li> <li>• Lack of governmental Innovation Incentive.</li> <li>• Perception of Palm Beach County as a vacation spot or retirement community.</li> <li>• Lack of experienced managers and executives with life science experience.</li> <li>• Lack of a dedicated teaching hospital.</li> <li>• Lack of a Contract Research Organization (CRO).               <ul style="list-style-type: none"> <li>◦ Lack of pre-clinical research.</li> <li>◦ Lack of pre-clinical facilitation.</li> <li>◦ Lack of animal testing facilities.</li> </ul> </li> <li>• Lack of bridge funds to Phase I and Phase II trials.</li> </ul> |

Kelly Owens 9/21/11 1:21 PM  
**Comment [9]:** However, VCs know the presence of Scripps and MPFI will draw companies that need VC.

Kelly Owens 9/21/11 1:21 PM  
**Comment [2]:** We should spend time highlighting this section

Kelly Owens 9/21/11 1:21 PM  
**Comment [3]:** Sub-committee feels we should spend time highlighting this section in "Strengths" part of report.

Ramaswamy Narayanan 9/21/11 1:03 PM  
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Ramaswamy Narayanan 9/21/11 1:21 PM  
**Comment [4]:** strong biomedical, biotech and neuroscience programs and core instrumentation capability

Kelly Owens 9/21/11 1:21 PM  
**Comment [10]:** According to our meeting, this may not be accurate; Stan and Ferris need to comment  
 SR – Also Scripps and Tenet are applying for a research hospital

Kelly Owens 9/21/11 1:21 PM  
**Comment [11]:** According to our meeting, this may not be accurate; Stan and Ferris and others need to comment

|  |   |
|--|---|
| <p>Innovation Center</p> <ul style="list-style-type: none"> <li>o The Research Park at Florida Atlantic University</li> <li>• State Pension Fund investment potential - \$1.5 billion.</li> <li>• Expedited permitting programs for new facilities.</li> <li>• State universities pooling their technology in the Institute for the Commercialization of Public Research, in Boca Raton.</li> <li>• Strong relationship with BioFlorida, headquartered in Palm Beach County.</li> <li>• Emergence of numerous industry networking groups within Palm Beach County.</li> <li>• Relocation and expansion of life sciences companies into the area.</li> </ul>  |   |
| <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Intellectual Property will come online as Scripps Florida, Max Planck Florida Institute, Florida Atlantic University, and others mature.</li> <li>• Florida Atlantic University's increased national visibility as a "High Research Activity" university.</li> <li>• Resources available at PBSC – more additional labs, incubators, and interns.</li> <li>• Maturing angel investment networks and venture funds.</li> <li>• Strengthen the technology transfer offices.</li> <li>• U.S. market is too big for foreign operators to ignore, and South Florida is the 6<sup>th</sup> largest MSA in the U.S.</li> <li>• Florida Atlantic University's new independent medical program (M.D., and M.D./Ph.D.) creates new opportunities for translational medicine.</li> <li>• FAU's Biotech training programs and a new Masters program in Business Biotechnology to create biotech workforce.</li> <li>• Town of Jupiter Economic Development Fund.</li> <li>• Paragon Foundation of Palm Beach County.</li> <li>• Mechanism for creating an appropriately trained workforce.</li> </ul> | <p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Research is not commercialized and the economic development opportunity is missed.</li> <li>• IP continues to be commercialized elsewhere.</li> <li>• Continued increase of cost of doing business and cost of living.</li> <li>• Weakness of the financial markets and protracted volatility/insecurity will lead to a downturn in private investment deals.</li> <li>• Failure of start-ups and spin-offs.</li> <li>• Interest of other states/countries in this industry, and creation of incentives to land deals there (SC, NC, GA, MA, UK, Spain).</li> <li>• Failure to attract mid- to large-sized biotech companies.</li> <li>• Failure to seed and develop start-ups due to the lack of resources to incentivize local companies.</li> </ul> |

## Strengths

The arrival of The Scripps Research Institute in 2004 added immeasurable strength to the life sciences community in Palm Beach County, and validated the efforts of pioneer companies. Scripps Florida opened its new 360,000 square-foot facilities, and its three main departments of Infectology, Cancer Biology & Molecular Therapeutics, and Metabolism & Aging, are bolstered as more principal investigators are brought onboard. Scientists at Scripps Florida were

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**Comment [5]:** This should be further expanded upon
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**Comment [6]:** This should be further expanded upon
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**Comment [7]:** Here I'm thinking of LST I ... [1]
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**Comment [8]:** We could put facts about ... [2]
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- Kelly Owens 9/21/11 1:21 PM  
**Comment [13]:** Per Mark M., this is an ... [4]
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**Comment [14]:** •Florida Atlantic Univer ... [5]
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awarded grants from sources other than the state of Florida totaling \$188.2 million (as of September 2010).

With the addition of the Max Planck Florida Institute (MPFI), focusing on bio-imaging, bio-sensing, and cellular mechanisms, it is hoped that new discoveries arising from basic research and screening will be validated in a shorter timeframe, and that many of these validated discoveries will be commercialized locally (**Need some data or stats on some accomplishments of MPFI**).

Florida Atlantic University's (FAU) MacArthur campus in Jupiter is host to both Scripps Florida and the Max Planck Florida Institute, and the University's growing research prowess is boosted by the collaborative relationships it has developed with these two research engines. Recently, research awards at FAU increased to over \$43 million a year, and the university is now classified as a "research university – high research activity" by the Carnegie Foundation. FAU's life sciences research focus areas include neuroscience, drug discovery, targeted therapeutics, cancer/HIV research, biotechnology, bioengineering, molecular medicine, and bioinformatics.

The student body of FAU reflects the growing popularity of Palm Beach County for young professionals. Young graduates are staying in Palm Beach County after graduation and young people from other counties and states look favorably at this county as a place to relocate. Palm Beach State College (PBSC) committed to this industry by establishing a state-of-the-art, 90,000 square-foot bioscience technology complex at its Palm Beach Gardens campus, and is already providing the hands-on training technicians and research assistants need in order to contribute to the business of biotech.

(Insert information here on the Banner Center for Life Sciences)

Before students reach PBSC or FAU, they are now able to learn about life sciences in the K-12 system, thanks to established Career Academies and Magnet Programs. The Palm Beach County School District created three bioscience academies (UPDATE?) at area schools, giving students an insight into the world of research and commercialization.

All of these initiatives add to the magnetism of our area as we develop the life sciences cluster; new companies need young, skilled, and enthusiastic workers. In addition, the traditional base of older citizens living in Palm Beach County is attractive to researchers for conducting clinical trials for new therapies.

There is a healthy integration in Palm Beach County between educational institutions and city and county governments. This asset is appealing to potential recruits, as the synergy between these three disparate groups make community and economic development more efficient.

Kelly Owens 9/21/11 1:21 PM  
**Comment [18]:** Need some data or stats on some accomplishments of MPFI

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**Comment [20]:** FAU's life sciences research focus include neuroscience, drug discovery, cancer research and biotechnology.

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**Comment [21]:** We should reference Banner Center and expand upon.

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**Comment [22]:** We need a paragraph here on the Banner Center's workforce training programs and its significance as the only Banner Center for Life Sciences in the state

Kelly Owens 9/21/11 1:21 PM  
**Comment [23]:** Update



Factors that are not solely related to the life sciences industry affect the development of the industry in Palm Beach County. For example, the cost of living and the cost of doing business is an important factor for companies to consider when they are choosing where to locate their facilities. Palm Beach County enjoys a cost of living that is below other major centers of innovation and recognized leadership in life sciences, such as San Diego and Boston. It is important for this competitive advantage to be preserved in order to make our region even more attractive when compared to traditional clusters.

Testament to the efforts already made, and to the potential for development, is the investment made in Palm Beach County by Alexandria Real Estate Equities (NYSE: ARE), a leading provider of real estate for the life sciences industry. Alexandria created the first commercially available wet lab incubator/accelerator facility in South Florida, providing state-of-the-art lab space to small companies in close proximity to Scripps Florida, MFPI, and FAU. Currently, the Alexandria Innovation Center only has 1,800 square feet of space vacant of the total (need total square footage).

The Enterprise Development Corporation of South Florida (EDC) established incubator space at the Florida Blood Center facility in Palm Beach Gardens, offering approximately 4,000 square feet of space for development to high-tech start-ups. The Research Park at FAU has 70% occupancy for a current total of 350,000 square feet, employing almost 2,000, at an average salary 88% higher than the average salary in Palm Beach County; the Technology Incubator is currently expanding to meet the needs of its occupants.

The results of these conditions and synergies are the kinds of investments seen in Florida from 2004 – 2007. New investment/incentive vehicles will spur further growth. In the 2007 legislative session, Senator Jeremy Ring introduced a bill that proposed to allow the State Pension Fund to invest up to \$1.5 billion in promising Florida-based technology companies -- an effort that also attracted additional third-party investments. The Life Sciences Strategic Steering Group voiced its support for this initiative, and the measure passed. This will continue to be a very important tool spurring organic growth of this industry.

Cognizant of the fact that, as the companies that relocate here grow, they will need new facilities and continued public sector support, the Life Sciences Strategic Steering Group is committed to the BDB's initiative of supporting cities that implement expedited permitting procedures. Permits for new buildings and renovations of existing buildings can be a complicated and time-consuming process. Making this process more user-friendly and predictable will help companies spend less time on administrative hurdles, and more on innovation and commercialization.

Kelly Owens 9/21/11 1:21 PM

**Comment [24]:** Is this 2007 legislation still investing funds? If not, eliminate this paragraph.

SR: This is referring to the Florida Opportunity Fund (FOF), I believe. If not, I say we eliminate this paragraph and replace it with information on the FOF.

Taking the long view, the companies that spin-off from our research institutes and come here from other parts of the world will create a respected and recognized innovation center. Florida's public universities are collaborating to pool their technology transfer assets in order to make our community more attractive to another of the major elements needed to maintain a sustainable cluster: Investors. The new Institute for the Commercialization of Public Research is housed at the Research Park at FAU in Boca Raton, providing a one-stop solution for investors evaluating technologies from our public universities.

Last, but not least, BioFlorida, the state's trade organization for the life sciences, is headquartered in West Palm Beach, at the heart of Palm Beach County. We believe this is in recognition that the future epicenter of Florida's life sciences industry is in our community. The BDB enjoys a close relationship with BioFlorida's leadership, and collaborates on many projects with the organization.

(Per Shawn's comment, in addition to Bio Florida, discuss other networking and industry groups that have formed, such as LST HUB, Pharma Thursdays in Boca, and the Emerging Leaders Group)

The Life Tech initiative is a consortium of all public and private universities along the Interstate 95 corridor from Miami to Port St. Lucie, and it involves academia, research institutes and the biotechnology industry in southeast Florida. This consortium provides an overarching umbrella for the entire Southeast region.

The Adams Center for Entrepreneurship at Florida Atlantic University conducts a yearly business plan competition that generates new ideas in science and technology and provides sorely needed funding for the entrepreneur winners. The competition allows participating teams to meet and network with experienced venture capital principals, early stage angel investors, successful entrepreneurs and senior business leaders who serve as judges.

The MedUTech initiative, which aims to highlight and help grow Boca Raton's existing medical/health care, education and technology clusters, is entering its second year with strong support from business and political leaders.

(SHAWN: Add a section on expanding and relocating life sciences companies – and might this section might make more sense earlier in the "Strengths" section?)

Kelly Owens 9/21/11 1:21 PM

**Comment [25]:** We need to elaborate on this in detail

Kelly Owens 9/21/11 1:21 PM

**Comment [26]:** Perhaps not last -- Per Shawn, in addition to Bio Florida, we should discuss other networking and industry groups that have formed, such as LST HUB, Pharma Thursdays in Boca, and the Emerging Leaders Group.

## Opportunities

The features and benefits of this county are well known, and its quality of life is unsurpassed. Taken as a region, South Florida is the sixth-largest Metropolitan Statistical Area (MSA) in the United States. Therefore, any company aspiring to extend its operations should place Palm Beach County on its short list. These significant factors present promising opportunities as the county develops its life sciences cluster.

The creation of the Institute for the Commercialization of Public Research by the state legislature sends a positive signal to the investment community that all of Florida's public universities' research may be accessed in one location. The institute is located on the FAU Boca Raton campus in the Research & Development Authority, thanks to the efforts of the Enterprise Development Corporation, FAU Technology Transfer Office, University of Florida Technology Transfer Office, Broward Alliance, and the Business Development Board of Palm Beach County. **FAU's College of Medicine has established the** campus' full-fledged medical program -- a highly valuable asset in the development of a life sciences cluster.

Certainly, the Institute will be a valuable partner to Scripps Florida and the Max Planck Florida Institute as they begin to commercialize their discoveries, spinning off new ventures. The fact that Scripps Florida has already spun off a small number of companies and filed dozens of patent applications is an encouraging sign of things to come, and an opportunity for this region. Similarly, as FAU's profile for basic research rises, the university will also spin-off more companies on top of those already formed, providing another valuable tool in the promotion of Palm Beach County.

These new companies will be in need of qualified young scientists looking to gain real world experience, and we are fortunate to have quality **undergraduates and graduates** emerging from both Palm Beach State College's new biotech program, and Florida Atlantic University **respectively. FAU's graduate programs across the disciplines of Science, Engineering & Computer Science and Medicine produces a highly trained pipeline of high tech workforce to meet the current and future needs of life sciences industries. Further, FAU's core state of the instrumentation facility is available to the local industries.** Furthermore, the facilities at the PBSC's northern campus lend themselves ideally to use by entrepreneurs in need of small lab facilities. Indeed, Palm Beach State College collaborated with the Town of Jupiter to fund an incubator initiative.

The Town of Jupiter established a fund designed to promote and aid the development of the life sciences industry in northern Palm Beach County (Jupiter, Palm Beach Gardens, Riviera Beach, Mangonia Park, and Lake Park).

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**Comment [27]:** FAU's College of Medicine helped establish the

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**Comment [28]:** undergraduates and

Kelly Owens 9/21/11 1:21 PM

**Comment [29]:** We need to elaborate further on this program and if it has borne any results since the previous version of this report.



The Fund already made investments in local companies and is considering assisting companies from outside of our area, with the guidance of BDB.

Separately, the Paragon Foundation of Palm Beach County was established to aid in the development of opportunities for minority businesses and individuals in the life sciences industry. Paragon provides compassionate, fiscally responsible economic opportunities to African-American- and other minority-owned businesses, and gives entrepreneurs the chance they need to compete equally. These programs help traditionally underserved companies to gain access to capital, business advice, and critical resources to guide and accelerate company growth and aid in the revitalization of underserved communities in Palm Beach County. Paragon targets businesses that are socially or economically disadvantaged and can demonstrate a strong business model, an experienced management team, and exhibit the potential to thrive and grow.

These opportunities combine to provide an inviting environment to attract companies, and our angel investor networks are becoming ever more sophisticated, willing, and able to evaluate new ventures.

### **Weaknesses**

Significant progress in critical areas is still needed for the continued development of the life sciences cluster:

- A viable industry cluster needs the capability to conduct significant clinical trials at a respected institution.

A teaching and/or research hospital is highly desirable. In recognition of this, Tenet Healthcare Corp. and the Scripps Research Institute announced that they are joining forces to build a new hospital in Palm Beach County, which will specialize in orthopedics, oncology, senior care, and digestive diseases. The hospital would also provide residency and internship opportunities for students enrolled at the newly accredited Florida Atlantic University medical school, which offers a joint master's and doctorate degree program with Scripps.

- Venture Capital (VC) funds need to be attracted to Palm Beach County so that they are well-positioned to capitalize on the new discoveries coming out of Scripps Florida, MPFI, and FAU, and to monitor the progress of their investments.

~~The local venture capital firm Crossbow Ventures is entering this industry more aggressively, working with the Legislature to structure the Florida Opportunity Fund, and raising new funds, and our well-established angel groups in South Florida add credibility to our efforts. At present, however, the venture capital~~

~~infrastructure in our area needs to be strengthened and to gain more critical mass.~~ (SEE COMMENTS)

In 2008, the Legislature did not replenish the Innovation Fund that was used to recruit the Max Planck Society to Florida, and some see the lack of a large incentive fund as a weakness as we continue to build the foundations of our life sciences community.

Palm Beach County is still perceived in some quarters as a vacation spot and not as a prime location for new ventures. This perception is changing and, invariably, when CEOs visit our community they are impressed with the dynamism of our business community and the vibrancy of our scientific efforts. Those companies that do relocate or expand to Palm Beach County tend to bring their talented management teams with them from outside, and note that Palm Beach County needs to develop a stable of qualified, experienced managers from the life sciences industry in order to run the new ventures spinning out of the county's established research institutes.

The companies that gain traction and experience success here will need to test new products and conduct clinical trials. Most areas of the United States that are recognized for excellence in this industry have at least one dedicated teaching hospital which can act both as a center for trials and as a training ground for medical and scientific professionals. Palm Beach County does not have such a hospital yet but the Scripps/Tenet facility should add this much needed piece of the puzzle..

Similarly, we lack the resources of a well-known contract research organization to help companies with pre-clinical work or, later, with production. In the pre-clinical realm, we also lack animal testing facilities, essential to the development of new therapeutics.

It is also highly desirable that financial assistance be offered to companies in the form of bridge loans or credit facilities to get their operations through the periods of clinical trials, and moving towards commercial success.

### **Threats**

If additional infrastructure resources are not established in Palm Beach County, the economic benefit of investing in this industry and cluster will be lost. The risk of having locally generated IP commercialized in other counties or states is real unless the necessary tools exist in Palm Beach County.

All participants in the life sciences cluster need to remain vigilant to ensure that new discoveries are not neglected as new research is undertaken. If new

Kelly Owens 9/21/11 1:21 PM

**Comment [30]:** Crossbow is dead. Do we have a replacement VC firm to mention?

SR: That is true, Crossbow is no more. The only other established firm that may qualify for this is could be BioCatalyst – this is an area for Ferris and Mark.

Kelly Owens 9/21/11 1:21 PM

**Comment [31]:** Spell out

discoveries are not commercialized or developed further, the maximum economic development benefit to Palm Beach County will be lost.

In recent years, the cost of doing business and the cost of living have crept up in Palm Beach County, making it more challenging for small companies to operate here. It is incumbent on the business community to make the case to elected officials that regulation and taxation should be kept to a minimum in order to allow innovation to flourish. The current turmoil in the global financial markets threatens the long-term growth of our community of life science assets because any fledgling industry needs capital. When credit markets freeze, capital becomes increasingly hard to come by, for borrowers and for companies seeking angel/VC investment.

Furthermore, the protracted volatility and/or weakness in the financial sector of our economy will result in fewer companies able to access financing (either equity or debt), weakening the pipeline of new products. This industry is particularly prone to start-up failure, given the very early stage of many of the discoveries; it is important that some successes be found early in order to establish a strong track record.

Palm Beach County has seen significant growth in its life sciences industry, and several other states and countries are eager to replicate our path. The county competes with several regions for most of the prospects interested in relocating to this community. The life sciences community -- and the business community at large -- needs to remain vigilant in maintaining an attractive landscape for other companies to move here.

There is a window of opportunity to recruit medium-sized companies to our area from other parts of the United States, which will help strengthen our cluster while local start-up and spin-off ventures mature. If the community is not successful in recruiting some middle-market, accomplished companies to relocate here, our life sciences cluster will take much longer to develop.

With this risk in mind, it is important for the cities, the county, and the state to continue to support small companies in forming and locating here. Assistance should be provided financially, as well as in other tangible and intangible ways, to help these ventures grow and prosper.

### **Conclusion**

We considered it vitally important to perform the SWOT analysis before moving forward. Once the SWOT analysis was completed, the Group identified the existing weaknesses and proposed solutions to strengthen those weaknesses. Proposals can be considered to suggest a variety of incentives that could entice

organizations and companies to relocate, expand, or start up in Palm Beach County.

The objectives for the Life Sciences Strategic Steering Group are:

- **Greater awareness of the county's life sciences community**, both internally and with the wider business community. This will encourage greater involvement and support as citizens, businesses, and government better understand what is going on in the life sciences industry.
  - Support and participate in the development and execution of the BDB's *Industry Focus Lunch for Life Sciences* to give input and showcase the strength of the life sciences industry in Palm Beach County.
- **Focus the strategy of developing the cluster.** Support the Business Development Board's strategy for recruitment, expansion, and retention of the industry in Palm Beach County.
  - Collect data from Palm Beach State College, Florida Atlantic University, Scripps Florida, Max Planck Florida Institute, and others to compile an inventory of scientific resources that are accessible to smaller companies and entrepreneurs. These companies need to use expensive equipment infrequently, making purchasing it unrealistic and slowing down development.
  - Analyze potential incentives, both monetary and otherwise, that could serve to entice life science companies to move or expand to Palm Beach County.
- **Augment the inventory**
  - Companies -- Biotech companies that complement the existing research capabilities in Palm Beach County.
  - Talent — Build our pool of skilled workers at all levels.
  - Infrastructure -- Support angel investors such as the New World Angels, Gold Coast Venture Capital Association, and the Angel Investment Forum of Florida, venture capital funds, and the support industries.
- **Local commercialization of technologies** to benefit the county's economy. Technologies and discoveries should be spun out of research

institutions (Scripps Florida, MPFI, and FAU), and should then locate in Palm Beach County to employ local residents and generate more economic activity.

- **Economic development.** Expand and diversify the local economy; bring high-tech, high-wage jobs to the county; improve the education system so that young residents receive a solid education in Palm Beach County and remain here to contribute.
  - Assist local entrepreneurs in realizing their potential by serving as a central resource for companies seeking collaborations, employees, funding, and/or mentoring.
- **Education.** Ensure that the School District, Palm Beach State College, and our universities have curricula relevant to the life sciences industry. This requires regular, meaningful communication between the industry and education leaders. Outreach to students and parents to ensure that they are aware of the opportunities for career development locally, in life science and other related industries. Coordination through Workforce Alliance to ensure that those currently in the workforce have access to (re) training opportunities and to the latest information.
- **Talent recruitment** (executive management, workforce, and companies)
- **Increased avenues to funding.** Helping position companies to access angel investment, venture funding, investment from the state, or other sources.
- **Brand strengthening** (translational/applied research strength)
  - Design and implement a familiarization (FAM) tour of Palm Beach County for selected pharmaceutical and biotech company executives.



## **CRITERIA FOR RECRUITMENT OF LIFE SCIENCES COMPANIES**

The Group agreed on the importance of the following criteria when recruiting new life sciences companies to Palm Beach County (these have not been prioritized, and are not in any particular order):

1. **Quality of the organization.** Due diligence will establish whether or not the research or products being produced by the target organization are of a standard acceptable to Palm Beach County.
2. **Brand/Community Benefits.** The reputation of a particular organization will contribute to the enhancement of the cluster's reputation as a whole. An organization with a strong and respected reputation in a particular field can bring direct benefits to the citizens of Palm Beach County.
3. **Ability to create spin-offs** and their transfer potential (Can the research lead to commercialization?). Must consider:
  - ✓ Character (company and principles)
  - ✓ Historical performance, track record
  - ✓ Type of spin-off
4. **Talent,** scientific credentials, and expertise.
5. **Negotiating posture.** The willingness of the target organization to negotiate with the community so that the community sees a return on its investment.
6. **Educational collaboration.** The significance and value of a target organization's outreach activities in the educational community should be assessed. Teaching our young people and engendering interest in the industry at a young age is critical to the sustainability of the cluster.
7. **Cross-collaboration among clusters.** Synergies and potential for collaborative projects across industries are highly desirable.
8. **Three key areas to focus on when analyzing jobs:** Quantity, quality, salary.
9. **Areas of research/development.**
  - ✓ Will it fill a gap in the cluster?
  - ✓ Is it unique?
  - ✓ Will it meet community needs?
10. **Capital investment.** What level of investment will the organization commit to, either in dollars or through in-kind programs?
11. **Local mission/unique proposition.**
12. **Multiplier effect.** Opportunities for matching dollars from another source.

## Conclusion

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The Group found that the life sciences cluster, as it exists today in Palm Beach County, continues developing, and continues to show considerable promise. Existing research and development is underway at several institutions, among them Florida Atlantic University, Scripps Florida, Max Planck Florida Institute, and others. However, significant gaps exist in the infrastructure of the cluster: A teaching hospital is vital for the development of a strong cluster. As new technologies develop from today's research, they need to be commercialized and utilized for the benefit of Palm Beach County's economy so as to realize the potential of the investment made in this industry.

To fill the gaps in the infrastructure of the existing life sciences cluster, the Group recommends the Business Development Board of Palm Beach County follow its 2011-2012 life sciences recruitment strategy and use the several criteria laid out in this report to measure potential recruits.

The Group will continue to inform and educate the Palm Beach County Board of County Commissioners, and will conduct public forums for business and education leaders to inform them of its findings and recommendations.