



PUBLIC FORUM OF THE LSAB

May 2, 2008

Maryland Life Sciences Advisory Board



**University of Maryland, Baltimore
Life Sciences Conference Center
UMB BioPark, Bldg. 2
Baltimore, MD**

The second Public Forum of the LSAB was convened at 9:35 a.m. Approximately 60 were in attendance, not including the Board.

Attending Board members and Working Group Chairs:

Tom Watkins, Chair
Hercules Pinkney
Philippe Jacon
David Ramsay
Norma Allewell
David Iannucci
George Korch

Attending Staff: Larry Mahan and Ben Wu, DBED; Jerry Parrott, HGS

Summary

Tom Watkins welcomed those present and acknowledged the sponsors TCM/MdBio, Greater Baltimore Tech Council, Women in Bio, and the Maryland Department of Business and Economic Development. Dr. David Ramsay, President of UMB gave a brief introduction of the University of Maryland, Baltimore and the UMB BioPark initiative. The Chair then proceeded with an overview of the LSAB, its structure, mission and focus of efforts over the past six months. Following this was a summary of strategic concepts that came from the efforts of the various working groups with integrated public comment and Q&A for each. The meeting was adjourned at 12:15 p.m. Presentation materials and public comment will be posted on the LSAB website located on www.choosemaryland.org.

SUMMARY OF PUBLIC COMMENTS and Q&A

Capital Formation

Patrick Burke, Amarex: While there has been focus on raising awareness and capital from U.S. VCs, what about foreign investment? Are there strides in this area in the strategic planning process?

Hercules Pinkney, LSAB: There are examples of foreign companies coming into the incubators. Montgomery Co. has made trips overseas, in particular and most recently India, and others with the state, to attract FDI.

Norma Allewell, LSAB: The University of Maryland research parks offer more locations for foreign investment; examples are the recent location by NOAA at M-Squared and the USM-China research park at College Park.

David Ramsay, LSAB: UMB has a focus on Japan and we have made many trips there over the years interacting with Japanese pharma and others. SNBL decision to locate at the UMB BioPark is example.

Abba Poliakoff, Gordon, Feinblatt, Rothman, Hoffberger & Hollander, LLC: The upcoming (and past) Governor's trip to Israel is good outreach to Israeli biotech companies but other states are throwing large incentives for companies to locate in their states. How are we addressing incentive programs?

Jonathan Genn, Percontee: Likes incentivizing the entrepreneurs but the funds are too small at \$6M in most of the State's programs. A Maryland "symptom" is that graduate incubator companies move out of state. Consider programs that curtail this migration.

Cha-Mei Tang, Creativ Microtech: State programs have very small sums of money. These need to increase. Even the federal SBIR programs have recognized this and have increased the limits per company of allowed awards.

David Bower, DCCA: The uniqueness of our environment and proximity to all the federal resources is a plus. The federal agencies are putting lots of money into bio. How do we get access to this?

Business Environment

Kerry Brady, Arcion Therapeutics: (and CEO, Traxion) Thinks the suggestions are excellent, especially tax credits as stimulus, the expansion of R&D tax credit program thoughts, etc. It is the "whole picture" that can/needs be integrated even better. Likes the ACTiVATE program as an example of great assistance to start-up companies.

Liz Pettengill, GBC: As the industry moves forward, one needs to look at regulatory issues and standards, especially in the big over-riding issues that affect all and voice opinions on things such as transportation and energy.

Matt Seward, Colliers Pinkard: In the context of the public discussion regarding the use of Maryland pension fund monies, comparatively speaking, how does the pension fund concept compare to other states?

Larry Mahan, Staff LSAB: Cited CalPERS and the AIM fund as an example of how such a pension program might be structured.

Steve Kozak, GBTC: Let's make the Pension Fund idea happen! What is the likelihood?

Abba Poliakoff, Gordon, Feinblatt, Rothman, Hoffberger & Hollander, LLC: GBTC has looked into this a bit more – talked to the pension fund individuals – they are not generally aware of the details of such programs. Managers of the funds are key along with analyses of in-state (prospective investment) companies although overall ROI is the primary goal.

David Bower, DCCA: The environment that the company faces is key – the regulatory environment is key. An obvious example is the recent legislation on computer services taxation and the Tech Council of Maryland and others' lobbying efforts that eventually overturned it. This tax would have affected bio companies as well.

David Ramsay, LSAB: The notion out there is that Maryland has a bad business environment, yet when one examines the facts or asks for the examples, it has been difficult to produce all these “bad examples.”

Irene Gonzales, Valens Therapeutics: Even if the funding is there, and business environment is good, she feels that companies developing therapeutics are left behind because they are high risk. Feels that the programs need balance as the less risky companies are more attractive. The universities can help in this area. Feels that funding (VC) conferences focus on IT. The biocompanies get the “valley of death” acknowledgement and not much else.

Workforce Development & Education Programs

Libbie Mansell, White Oak Biopharmaceuticals: The UMBC ACTiVATE program speaks to entrepreneurs but what about leadership (C-level) development. This needs to be included!

Philippe Jacon, LSAB: In general, BD has not found it terribly difficult to get upper management individuals but recognize that other companies have found this an issue.

Ginette Serrero, A&G Pharmaceutical: Need to groom C-level people that an NEA would be comfortably with when considering VC funding. Visa issue for Ph.D.s: 25 % are foreign scientists that have to have an H-1 or residency card. This represents \$5,000-7,000 cost to a small company and a real financial burden. We must encourage they stay ... lobby federal

government to allow all SMEs to use a J-1 mechanism. Can the LSAB consider a state fund or loan to assist SMEs in covering these visa costs.

Jonathan Genn, Percontee: Can we share entrepreneurial development resources as well to assist scientists on the business side of the company?

Hercules Pinkney, LSAB: Explained the P20 Consortium program. The incubators around the state are working on this. Then discussed the Montgomery College program with University of Maryland College Park (UMCP) and AAs/BS degrees interconnectivity, reaching back to middle school teachers to engage in the system, and the science camps for students.

David Ramsay, LSAB: Baltimore City Community College (BCCC) is moving into the UMB BioPark for this exact level of interaction.

Norma Allewell, LSAB: Comparable activities on UMCP with Howard Hughes programs, NSF grants for out reach to HS and ES students, etc.

Jim Saunders, Towson University: Each academic institution in MD is reaching down. We must strongly emphasize the value of the internships for the university-level student.

Shira Kramer, Sterilex: Has had difficulty in getting senior level expertise requiring the company to use expensive recruiting firms, which is a time consuming process. We need State assistance for SMEs that don't have this infrastructure. Example: paid \$7000 for an H-1 visa chemist that subsequently almost did not get a renewal do to pool limitations on the number of visas alone thus adding uncertainty to an expensive process.

Dale Potter, Omnia Lifesciences: Felt that Maryland does well in the K-12 arena and in providing scientists, etc. Considers the availability of C-level executives a more acute problem. Noted that no one from the Smith School was on the Board

Kara Kattau, BIOCON Inc: She is in the Hopkins biotechnology oriented MBA program and struggled to find an internship before finally getting one at BIOCON.

Early Stage and Pipeline Programs

Harry Wallace, RCM&D: Worked in Boston in this space. Boston does well with their "soft landing program." Maryland's gap is in the commercialization process. Maybe one solution is a better link to proven service providers, dedicated to the life sciences space. Often companies set up unnecessary redundancies, and misplace their efforts and resources when good local service providers can address the issues.

Larry Mahan, Staff LSAB: This is true but there are a number of circumstances where the service providers do not want to discount rates or do *pro bono* work in centers like incubators even though this is their future client base. Good example is the success of the Maryland Law School effort at the MDTC incubator in Montgomery Co. despite skepticism (and lack of

participation) of the legal firms. Young companies cannot afford market rates of service providers.

Joshua Levine, KPL: What support is being planned for the *growth*, not just the start up of companies?

Shawn O'Brien, Profectus: The “read” on Maryland is that it is the most productive IP state, but poor on development and commercialization. Feels that this has still not gotten leadership buy-in, in other words we need on leadership on getting academics and industry together. We need to get rid of the “industry is bad”, “academics is good” attitudes.

Helen Montag, Johns Hopkins: Hopkins has the largest business school in the state – students will be fully immersed in the technology transfer office and in Hopkins spinouts to gain experience in their first two years of the program.

Ginette Serrero, A&G Pharmaceutical: Salary and health benefits for Small and Medium Size Enterprises (SMEs) are very costly – could a “Resource Center” get bargaining power on these? GBTC has tried to implement this: the company has to have 2 employees.

Academic Institutions, NGOs, and Translational Research

Kerry Brady, Arcion Therapeutics: Systemic problems in the state – entrepreneurs knocking and begging to get IP. Start-up companies experience costly up-front fees to pay for patent costs. UMBI formed a partnership with one company to reduce up-fronts and share risk.

Helen Montag, Johns Hopkins: The Hopkins Alliance meets each year representing ~30 outside high-level business executives that assist the School of Medicine faculty in facilitating commercialization of their inventions and award \$50,000 grants. The grants are intended to provide bridge financing during development of new technology.

Also MTECH’s VentureAccelerator, which is a selective program open to University of Maryland faculty and students committed to creating new companies based on technology innovations. Once admitted into the program, VentureAccelerator company founders receive intense, hands-on assistance with a range of new business processes, including market validation, business planning, staffing and initial funding through grants and/or equity investment.

Hopkins would welcome assistance from the State in this area. Presently Hopkins is limited from participating in the MIPS program in System.

Ginette Serrero, A&G Pharmaceutical: GS is a former faculty of UMB and head of a company. She feels there are practical issues and solutions – look to the benchmark states – they have been making it easier for faculty to start companies – in Maryland, conflict of interest (COI) issues prevail. The Board of Regents must review these policies. They exhaust faculty in the process. Another problem: technology transfer takes a long time to rework a contract ... too long and

turns companies away. Technology transfer offices have to be given a strong emphasis (incentive?) to work with Maryland companies – especially small.

Leveraging Maryland's Unique Federal Resources

George Korch, LSAB: The federal government looks monolithic, but all agencies operate differently – some are acquisition oriented, some are research funders, etc. NASA, DOD, DOE, HHS, all have needs for C-level executives as well! How do we capture *these*? Another issue is providing for a federal workforce from the academic institutions in Maryland. Additionally, partnership opportunities are big. There is investment to do this in USAMRIID on product opportunities. Internal scientists do not know the resources outside – the “play book” concept will help them land that opportunity in Maryland where “proximity will accelerate the process with fidelity” not always easy in long distance relationships.

Jonathan Genn, Percontee: What are the roadblocks working with the feds?

George Korch, LSAB (reply): Knowing the requirements in the broad announcements and contracting language. Feds struggle with technology transfer just like the universities do. It is an under resourced area. Service providers providing technology transfer and IP expertise could be very helpful. Patent funding has limitations.

Cha-Mei Tang, Creativ Microtech: Gave an example of some of the difficulty working with the federal labs from her own experience. Creativ worked with USDA and they wanted \$50,000 for a CRADA renewal which was too costly for a small company to address.

George Korch, LSAB: There are hardships of maintaining lab infrastructure in the federal labs just as in the academic sector – and this puts pressure on the CRADA relationship. And there cannot be favoritism to a particular company – evaluation of a relationship requires funding. Can Maryland take a national lead in a new CRADA format?

George Korch, LSAB: On federal IP: the intent is to move it to the private sector and actually the practices prove favor to companies more than the internal scientist and federal organization. Standard IP ownership applies: if internal, then the agency retains IP rights. If companies bring it, stays with them. If co-developed, then negotiated but still favors the company.

Marketing and Promotion of Maryland Globally

Abba Poliakoff, Gordon, Feinblatt, Rothman, Hoffberger & Hollander, LLC: We have an alphabet soup in State: great efforts, albeit scattered, in place but we need one leader to unite these efforts. How do we create this? We get Montgomery Co. and Baltimore centric efforts. We need to continue efforts to cross this divide.

Ellen Hemerlley, UMBC: UMBC has ACTiVATE, an incubator, an accelerator ... but is struggling to tap into state resources to help good programs like ACTiVATE. It was initially funded by a grant, and now looking at TEDCO, but they don't have enough money. We are all competing for resources. We do not have a central place to go to have the program evaluated and funded. These programs would have no problem producing all the metrics. But political variance is at play.

OPEN DISCUSSION:

Patrick Burke, Amarex: We are really hurting for well trained people in clinical trials. We are trading staff among a small group of companies like MedImmune and HGS. Can we get these skill sets training in place? We have seen cut backs in big pharma like Pfizer – let's get these people with recruitment packages.

Jonathan Genn, Percontee: We need to get past the parochialism to deal in the global economy. Encouraged by the JHU and USM joint efforts. Need to expand the pie in Maryland to be able to attract but can't be divisive between counties. Everyone can't be pitchers. We can't have intramural wars. We need to pre-wire to DC and VA resources as well.

George Korch, LSAB: We can look at other areas in biotechnology that are well suited in other parts of the state. The vision for the long haul could be to place future opportunities with advantages in a geographic view – where are they best suited to be based on inner cluster micro-environments.

Larry Mahan, Staff LSAB: Cited the UMBI efforts on the Eastern Shore and Western Maryland as examples of “bio-geographic” opportunities.

David Ramsay, LSAB: On this subject, the State has enormous resources in personalized medicine. This is a tremendous opportunity but the economic model has to change, the policies have to change. We could take the lead in this.

Libbie Mansell, White Oak Biopharmaceuticals: Maryland is perfectly placed to combine technologies such as *in vitro* diagnostics with cancer therapeutics as an example. We are perfect for this.

George Korch, LSAB: Recently visited Leroy Hood's Systems Biology Center in Seattle. These kinds of efforts require a statewide integration effort.

Jonathan Genn, Percontee: How we brand Maryland is very important. FDA Commissioner Eischenbach described the old world of public health as a golf game ... now public health is a basketball game – fast passing interactions. Maryland could go into both food and drugs' roles in personalized medicine ... what are other areas? Maryland could take the national brand for holistic medical approaches. We could also be international leaders in nanotechnology.

Norma Allewell, LSAB: Very supportive of the integrative approach concept in medicine and biology. We have to guard against balkanization that she experienced 8 years ago – we have strong counties that help create this situation whether intentionally or not.

Jonathan Genn, Percontee: The “ONE MARYLAND” concept is the key.