GROWING RESEARCH in NEW JERSEY: the Garden State

OBSTACLES to change

- no sense of urgency
- lack of communication system
- lack of funding
- lack of IP policy
- lack of middle ground between university & industry
- "lack of gen" awareness

buffer institut for ge inte

GOVERNMENT

- NJ = research state
- nationally we need bigger emphasis on research as economic future of USA
- message needs to be broader for R+D in general
- role at every level! local planning boards on up, law firms, school boards

ask industry what we can become

Nat Science Support

NIH

permanent tax credits

...UNIVERSIT

- ✓ expand federal
- ✓ support recruiti professor
- ✓ seed money cri
- ✓ fund CST
- ✓ state establish new cooperat capacity

A Report
on

GROWING BIOMEDICAL RESEARCH IN NEW JERSEY: THE GARDEN STATE

A Forum for Thought-Leaders from Industry, Academia and Government

Doubletree Conference Center
Somerset, New Jersey
March 10, 2003

Biotechnology Council of New Jersey
New Jersey Association for Biomedical Research
University of Medicine & Dentistry of New Jersey

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Growing Biomedical Research in New Jersey: The Garden State

A Thought-Leader Forum

I. Executive Summary

The Biotechnology Council of New Jersey (BCNJ), the New Jersey Association for Biomedical Research (NJABR), and the University of Medicine & Dentistry of New Jersey (UMDNJ) convened a leadership forum on growing biomedical research in New Jersey. This cross-sector dialogue was held on March 10, 2003, at the Doubletree Conference Center in Somerset, New Jersey, with nearly 80 leaders from the pharmaceutical/biotechnology industry, academia, and government in attendance. The HealthCare Institute of New Jersey (HINJ) and Rutgers University joined the organizers as co-conveners of the forum.

Participants identified the cultural, funding, communication and information barriers to attracting research to New Jersey and offered suggestions to overcome those obstacles. They recommended better strategic planning, new "Centers of Excellence," a Life Sciences Czar, a clinical trials network and encouragement for entrepreneurs. Forum participants identified three critical needs:

- Cultivation of a research-friendly environment.
- Communication among government, academia, and private industry.
- Coordination of activities and resources among government, academia, and private industry.

The Participants agreed that New Jersey is poised to develop as a Life Sciences Supercluster, but all sectors must be committed to the tasks that will position the state as a national leader in bioscience research:

- Establish a vehicle for ongoing cross-sector communication among government, academia, and industry.
- Create topical "actionators" -- small, focused work groups to build on and implement

> *"By the end of the decade, New Jersey should be known worldwide as the Research State."*
> *– Congressman Rush*

ideas growing out of the forum dialogues.

- Create directory of available resources and a statewide Life Sciences calendar.

II. Background and Participants

As the global epicenter of the pharmaceutical industry, New Jersey has always been a logical home for a thriving Life Sciences industry and world-class research at the state's universities. The pharmaceutical industry continues to thrive, but there is growing concern that the State has not reached its potential as a superior location for biomedical research.

Public attention was focused on this dilemma in a dramatic manner by Governor James E. McGreevey's proposal last fall to merge the state's research universities into one "super research university" to propel New Jersey into the top tier of academic research. This recommendation resulted from the work of a commission appointed by the Governor and chaired by Dr. Roy Vagelos, former CEO of Merck & Co., Inc.

The Life Sciences Supercluster Study, commissioned by Prosperity New Jersey, HINJ, and BCNJ and conducted by Professor Michael Porter of Harvard University and The Monitor Group, confirmed the conclusion of the Vagelos Commission that New Jersey has not taken sufficient steps to strengthen the cluster. The sponsors have since created the "New Jersey Life Sciences Supercluster Initiative" to implement the study's recommendations.

These activities reflect state government's interest in cluster development, but leave unanswered the question of how best to grow biomedical research in New Jersey. The organizers of this forum -- BCNJ, NJABR, and UMDNJ – created the opportunity for thought-leaders from different sectors to begin the process of problem-solving in an environment conductive to open communication and collaboration.

The forum opened with lunch discussions designed to forge new relationships and initiate problem identification and solutions, and continued, with the assistance of Dr. Glenna Crooks, Ph.D., President of Strategic Health Policy International, in a facilitated dialogue to explore aspects of New Jersey's Life Sciences Supercluster potential.

Leading the dialogue were Congressman Rush Holt, D-7, N.J.; Bob Franks, President, HINJ; Michael Breton, Ph.D., Assistant Vice President for Research, Rutgers University; Bill Stephenson, Ph.D., Vice President for Research, UMDNJ; and Kenneth Moch, President and CEO of Alteon and Vice Chairman, BCNJ.

Speakers highlighted the need to attract top researchers to New Jersey, since federal grant dollars follow the researchers. Proposed cuts in the state budget to a range of programs affecting not only science and technology but also the arts and education will add to the challenge of recruiting world-class scientists who consider cultural, educational and economic factors when considering a move to a new state. Further, the Life Sciences community lacks a comprehensive plan for soliciting business, as well as following up on inquiries from both inside and outside the state.

Participants noted the different cultures between the pharmaceutical industry and academia, and urged that regular avenues of discussion be created. Companies are obligated to stockholders to be efficient and productive, and therefore will conduct studies and clinical trials wherever they find the best resources. Given the global reach of their operations, industry will not develop services and programs in New Jersey that are readily available elsewhere. As a result, New Jersey must make great strides in order to compete with California, Massachusetts and North Carolina Superclusters and to brand the state as a research leader.

III. Barriers to Growing Biomedical Research in New Jersey

Participants and panelists identified a number of barriers to collaboration, communication and cultivation of a more receptive research environment:

Little sense of urgency – Until recently, there has been no sense of urgency about the need to focus on growing biomedical research in New Jersey. Now that other states are competing for what we already have, stakeholders need to act with urgency to prevent even greater losses and to restore New Jersey's leadership role.

Confusion in Technology Transfer – It has not been clear to companies where technology transfer discussions should take place within universities. Universities should make contact people and processes more transparent.

Overlooking the gems in our backyard – Some believe that New Jersey-based pharmaceutical companies do not recognize the excellent research and facilities located at the state's own universities, and unless they do, they will search for research resources elsewhere, and at potentially higher costs. Similarly, academia is not sufficiently aware of what industry needs or how to market itself when competing with Life Sciences Superclusters with better reputations. Improved and more frequent contacts between these sectors can change this situation.

Industry doesn't appreciate what academia has to offer; Academia doesn't understand what industry needs.

Expectations differ and divide us – Academia and industry differ in their cultural expectations for research efficiency, timing, and accountability, and for intellectual property. Universities must become more business-like in their outreach to industry, and industry must communicate about deliverables more clearly. Better communications will bring about a meeting of the minds on expectations and eventually resolve any tensions about intellectual property.

Intersectoral communications are limited – There is a lack of communication among sectors that impedes collaboration. The state needs new forums for communication about research. Many initiatives are in place, but too often they fail to reach their intended audiences. Entrepreneurs and academic researchers often have difficulty connecting with major companies, and many relationships that could produce desired results for all parties never get off the ground.

University funding is inadequate – The state's university budget is not adequate to attract world-class researchers. A plan to secure more state, federal and private funding is needed. Regardless of the structure of our higher education system, we will never emerge as a leader in bioscience research without increased funding.

New Jersey not known as "research friendly" – Other states finance scientific advances at significantly higher rates than does New Jersey. These states also promote their support of research, yet New Jersey advertising and promotion spending is actually decreasing. Like New Jersey, these states are also suffering from budget deficits, and like them, we must not only remain competitive now; we must plan ahead for the economic rebound.

> ***CAUTION!***
>
> *Don't let the Research Community be viewed as just another single-issue advocacy group!*

IV. Strategies for Growing Biomedical Research in New Jersey

Participants suggested methods to overcome these barriers and increase New Jersey's prospects for increasing biomedical research in the state:

- **Strategic planning among all sectors and at coordinated city/county/state levels** – Strategic planning is necessary not just at the state level, but in a coordinated manner with municipalities and counties as well. This planning encompasses research incentives that include encouraging the growth of incubators and research locations across the state. Municipalities and counties are often not aware of state programs that would reward them for efforts they might make to foster research growth.

- **Enhance "Centers of Excellence"** – "Centers of Excellence" will bring a focus to activities currently in place and increase dialogue among participants. The "Centers of Excellence" strategy has worked successfully in business and in academia, and it should be implemented on a statewide basis.

- **Create a stronger Life Sciences brand for New Jersey** – Regionalize efforts with surrounding states. Regionalization is often seen as a threat to individual states' attempts to brand and attract desired industries, but regionalization is a vital part of strengthening individual state economies. We must continue our attempts to create a stronger bioscience brand for New Jersey, and engage in ongoing discussions with surrounding states as well.

- **Create a Life Sciences "Czar" for New Jersey** – A "Czar" would create a focal point for leadership, discussion and action from all state agencies involved in fostering research, emphasizing the importance of research in New Jersey. The Life Sciences Czar would be responsible for oversight of all ongoing activities from the state, and within the state.

- **Create a central database to track clinical trials** – This database will aid recruitment efforts, enhance communication, and increase the number of clinical trials in the state. New Jersey is dramatically underrepresented in clinical trials, and one reason may be that there is no central clinical trial registry that lists all ongoing trials in the state. Physicians and patients who wish to participate in trials don't know how to reach potential sponsors, and pharmaceutical companies are unaware of the research potential that exists within our state. Many potential participants don't understand the benefits of clinical research, or are unaware of how to be enrolled if they wish to proceed. A central registry would help solve these problems.

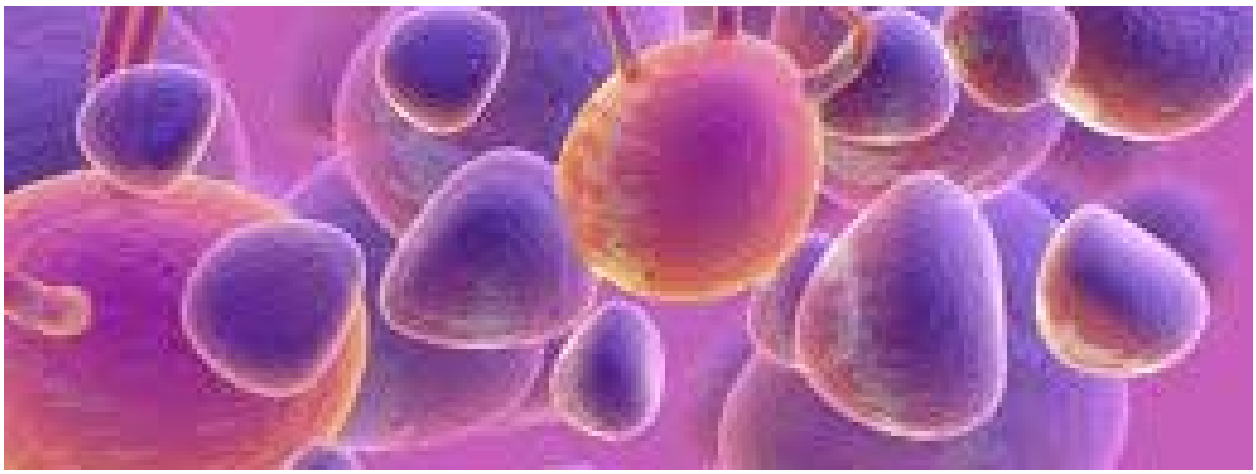
- **Encourage entrepreneurship in the Life Sciences Supercluster** – The state must offer incentives for entrepreneurship in the Life Sciences Supercluster that are at least competitive with other states. Tax incentives are only a beginning. Other possibilities include offering assistance in selecting a location, attracting researchers, and increasing opportunities for collaboration with academia and industry.

- **Streamline IRB reviews** – The current academic IRB process is often cited as a major obstacle to research. Delays are common and often discourage the industry from approaching academic researchers. Use of a centralized IRB to streamline reviews

would overcome this barrier.

- **"One-stop shopping" at universities** – Universities should review their internal contact mechanisms and bureaucracies to facilitate industry relationships and promote greater collaboration.

- **"Spin off" pharmaceutical patents** – The NJ Life Sciences Supercluster Initiative has noted that, unlike other states where most patents come from universities, the majority of New Jersey's patents come from the pharmaceutical companies. Since the resources do not exist to pursue each patent, pharmaceutical companies may hold patents with the potential to create successful new companies. Industry should review its portfolio to determine if it holds patents that might be "worked" by academia or emerging companies.



V. Next Steps

New Jersey is poised to continue its development as a Life Sciences Supercluster, and this forum was an important step in creating a breakthrough dialogue, with many expressing appreciation for the opportunity to meet – some for the first time – and connect with others of like minds.

Active discussion involving all forum participants resulted in strong support for continued meetings intended to produce concrete follow-up directives. The forum organizers, Debbie Hart (BCNJ), Jayne Mackta (NJABR), and Rebecca Perkins (UMDNJ),

committed to producing this report and identifying immediate next steps:

1. **Establish ongoing communication among government, academia, and industry.** Working with existing groups such as the New Jersey Biotechnology and Life Sciences Coalition and the NJ Life Sciences Supercluster Initiative, organizers of **Growing Biomedical Research in New Jersey** will coordinate a central clearinghouse for discussions about research. The focus will be on maximizing opportunities to brand New Jersey as a research center and increase interaction between parties who need to be aware of ongoing efforts. Success with this step will serve to attract new companies to the state since it will demonstrate a genuine commitment to growing biomedical research in New Jersey.

2. **Create topical "actionators."** Small, focused work groups to build on and implement ideas from this forum will be created. These "think & do" groups will lay specific plans to solve problems and create new ways to reach common goals. The "actionators" will focus on specific topics, take "action" when appropriate and report back to larger meetings that will be convened periodically.

3. **Compile a Life Sciences Resources Directory and New Jersey Life Sciences Calendar.** A comprehensive resource directory and calendar for all interested parties in the state will enhance communication, coordination and recognition.

Future forums will explore specific topics of interest to all sectors and offer new opportunities for the meaningful exchange of information. Those meetings will build on the enthusiasm of this first gathering and result in specific actions to benefit improved communication, collaboration and culture change to nourish a thriving Life Sciences community.

In the words of Congressman Rush Holt, "Talk up research everywhere." Let the dialogue continue.