

Micro Nano Breakthrough Conference

July 28-29, 2004

Summary of Healthcare Focus Group Discussion

Keith Ritala
University of Washington
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Overview

Close to 40 attendees participated in the Healthcare Focus Group meetings, representing private industry, universities, a national laboratory, investors, consultants, and other service providers. Overall, the group was optimistic about the opportunities and possibilities for micro- and nanotechnologies in medical applications ...with reservations.

Opportunities

The greatest opportunities were seen in portability and individualized medicine applications. These include:

- (early) detection of disease
- diagnosis of disease
- therapy
- monitoring
- prevention

Barriers

Barriers to commercial application of micro- and nanotechnologies in medical fields are:

- Regulatory (FDA) approval
- Reimbursement from medical insurance organizations
- Money
 - For research funding
 - For investment in commercial firms
- Time to market
- Acceptance by health care providers (e.g., physicians, hospitals)
- Public perception
 - Toxicity
 - Ethical implications
 - Liability

How can we work together?

A number of mechanisms were identified that would facilitate overcoming barriers to capitalize on opportunities for application of micro- and nanotechnologies to healthcare:

- Networking

- Communication
- Collaboration
- Education
- Marketing
- PNNL's N4 database and network
- Bring in Oregon Biotech Ass'n., WA Biotech and Biomedical Ass'n., other trade and industry groups
- Include
 - veterinary and agriculture groups
 - payers, e.g., medical insurance organizations
 - medical providers
- Adopt a regional focus: Oregon, Washington, Idaho
- *A key missing participant from this conference: OHSU.* They need to be involved!
- Incorporate experience from other states/regions
- Develop political advocacy locally and nationally

Needs

- Regular regional conferences like his one
- Dissemination of the results of the conference beyond attendees
- Healthcare representation on ONAMI Advisory Board
- Availability of technology/business incubator space specifically for micro/nano technologies
- Increased research funding

Additional research needed

- Both evolutionary and revolutionary in:
 - Materials
 - Devices
 - Fabrication
 - Manipulation
 - Metrology
 - Testing

Summary

- No radically new ideas identified, but strong confirmation of what others have been discussing for some time
- Enhanced education, awareness and support base is essential to success
- Build political advocacy
- Identify unique niche(s) that can be served by research, development and commercial expertise in the Pacific Northwest
- ONAMI should be a core agent of change