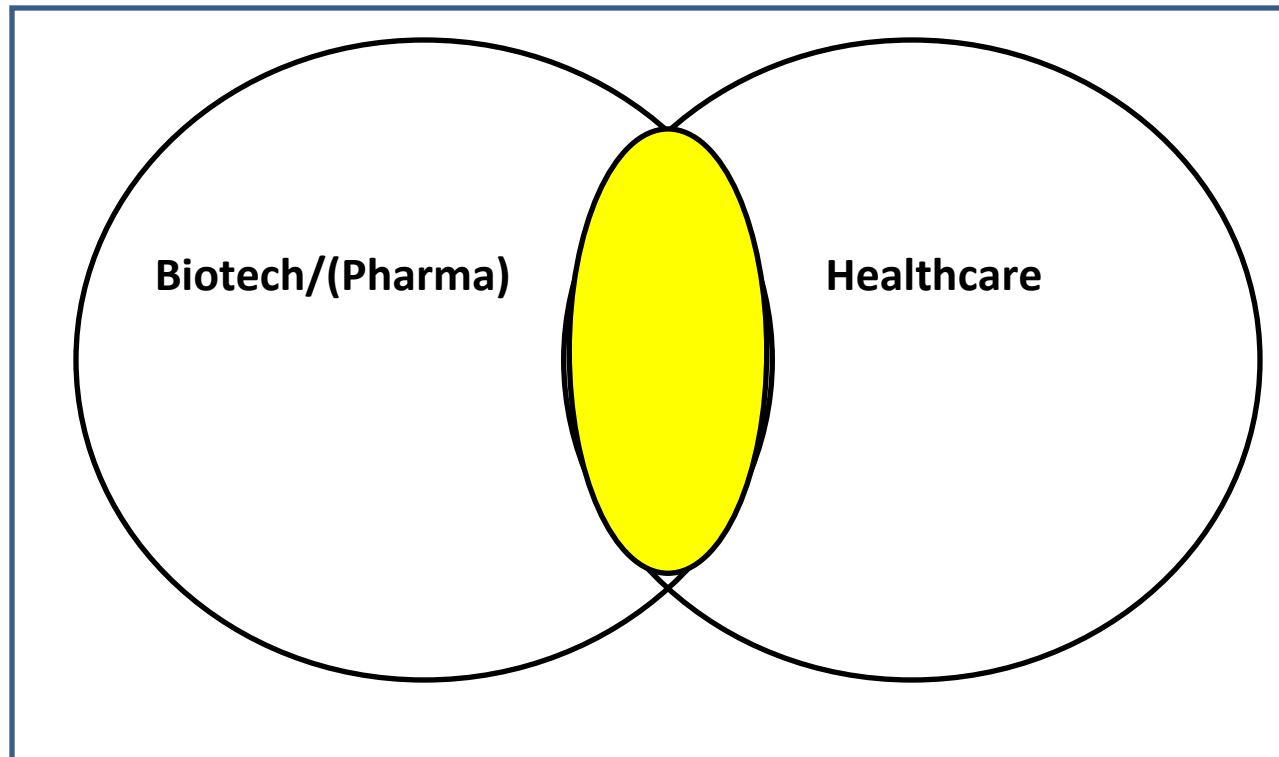


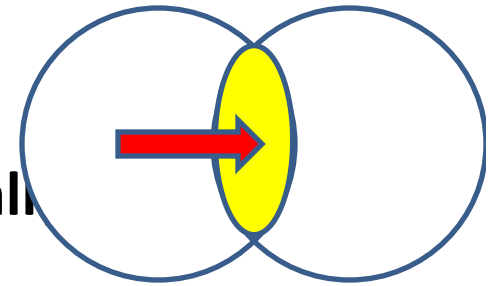
Synergy Between BIO/Healthcare Industries

The Life Sciences Industry



- Understand synergy between Biopharma and Health
- Understand trends affecting each of them
- Develop sense of community by understanding our region

Trends from the BIO Side



- **Big Pharma challenged, buying up biotech globally**
 - (Astra Zeneca buys Medimmune)
 - Ocimum Biosolutions (India) bought GeneLogic
- **Technology is a catalyst for change**
 - ‘omics and systems biology growing in importance
 - Growing identification of biomarkers for disease
- **Personalized medicine** – “one size fits all” coming to an end
 - Massive growth in diagnostic care
 - Personalized Therapeutics/Diagnostics takes off - **Theranostics**
- **“Genomics is an Information Technology”** - Local companies helping HHS, NCI, etc.
 - Lockheed, ScenPro Mitre), SAIC, 5am Solutions, SRA

Trends from the Health Side

- **Healthcare Delivery will be digitized**

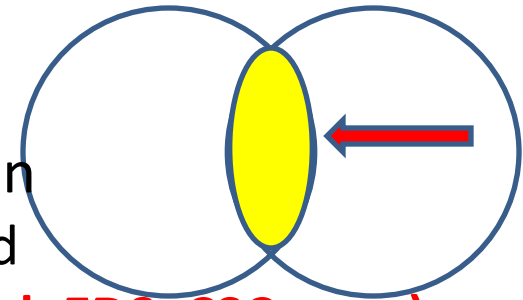
- Need EMR to store personalized information
- US Government's DoD and VA systems far ahead
- Major SI's have Chief Medical Officers (**Lockheed, EDS, CSC., etc.**)
- Market entry by large and small companies
 - **Revolution Health, Google, Microsoft, WebMd**
 - **Oasis Healthcare for Orthopedics**
 - **Companies like BearingPoint, Booz Allen, General Dynamics/ViPs**
 - **Companies like PwC and Noblis, SRAs performing consulting**

- **Increased IT solutions to help in Clinical Trials**

- **Recruitment of patients, submission of results, etc.**
 - **ZAI, VisionPoint Systems, ClincaHealth (now Inspire)**

- **Health care monitoring a growing subsector**

- Not just patches and gels etc. for medicine delivery but Walmart
- Home Health Monitoring Systems (**Aframe Digital**)



So what is going on here in NoVA?

Northern Va Life Science Communities (NVLSC)

- pioneering consortium
- Counties - Arlington, Fairfax, Loudoun, Pr. Wm., GMU

■ Inova

- VCU's 3rd/4th year Medical School Program
- Medical Information and Transformation Institute

■ GMU - spinoffs and programs growing

- New Biodefense facility
- CAPMM - 2 life science-**Theranostics Health, Ceres Nanoscience**
- HIV breakthrough
- New Biomedical Engineering Program
- Krasnow Institute of Advanced Study is expanding

...and more in NoVA?

- CIT Gap Fund in Life Sciences active - IBI, Otraces
- New Startups like Kappametrics, Aframe Digital
- HHMI will be fully populated in 2009
- Va Tech's Bioinformatics Institute - Arlington Campus
- Shenandoah and GWU has Personal Medicine - Pharmacogenomics Bachelor's Program at GWU's NoVa campus
- NOVA RHIO -pilot stage w/GE Health Systems , Inova

Let's Play Stump the Speaker

What can I learn from you?

Reminders:

Mid-Atlantic BIO event - October 22-24, Westfields

www.midatlanticbio.org

Medical Automation – Dec. 12, CIT

www.medicalautomation.org

Clusters growing globally

- **BIO is global (China! China! China!...India! India! India!)**

- [BIO](#) – annual meeting > 22,000 participants from globe
- 2007 biggest year for investment in Bio/Health - >\$12B

- **Health is global (GE, Siemens, Oracle, IBM, etc.)**

- HIMSS annual meeting - > 28,000 participants from the globe
- Medical Tourism big and growing – a growing staple for all
- “Biotech parks being built in empty parking lots all over the world” - that is how Richmond’s Bio park got started!
- “Fuji film becoming a health care company” –
- “Concern that US is losing our science edge....no politics here...
...But still we all want our piece of the pie so here is what is happening in NoVA