

# Our job today

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- Enlist you to help us cross the “Translational Divide” between the lab bench and the patient’s bedside
- Demonstrate that this *will* be done in our Kimmel Cancer Center at Hopkins, for at least 2 key reasons:
  - ❖ Our bedside is just across the street from our bench
  - ❖ Our scientists and physicians play well together toward this shared mission



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# Why should potential Corporate/Venture Partners consider Hopkins?

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## ➤ The Region

- ❖ \$ 11 Billion Federal Research
- ❖ Proximity to DC (Regulatory Agencies, Federal Customers, Federal Policy)
- ❖ Major, Prestigious Universities
- ❖ IT/Telecomm Entrepreneurial History

## ➤ Hopkins

- ❖ # 1 Research Institution ( \$1.6 Billion)
- ❖ # 1 Hospital
- ❖ # 2 Medical School
- ❖ Translating our Outstanding “Bedside” and “BenchSide” to “*BusinessSide*” benefits

# Johns Hopkins Medicine

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- **\$4 billion enterprise uniting**
  - ❖ **Physicians, scientists and research and educational facilities of the Johns Hopkins University**
  - ❖ **Health professionals and health care delivery system of the Johns Hopkins Health System (including 3 large hospitals, long-term care, home care, and several outpatient care loci)**
  
- **Mission**
  - ❖ **Improve the health of the community and the world by setting the standard of excellence in medical education, research and clinical care**



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# Johns Hopkins Health System

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## COMPONENT HOSPITALS:

- **The Johns Hopkins Hospital**
  - ❖ 1017 beds
  - ❖ *USNWR* #1
- **Johns Hopkins Bayview Medical Center**
  - ❖ 341 beds
  - ❖ Blue collar community base in research park containing 2 NIH Institutes and base for several Hopkins divisions
- **Howard County General Hospital**
  - ❖ 222 beds
  - ❖ Affluent community base



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# Johns Hopkins University School of Medicine

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## ➤ #2 medical school

- ❖ *U.S. News & World Report*

## ➤ #1 recipient of NIH research dollars

- ❖ \$1.6B annual research

## ➤ Faculty

- ❖ Has included 3 Nobel Laureates, 11 Lasker awardees, 12 members NAS, 32 members IOM, and *the 5 most highly cited cancer researchers*

- ❖ 2400 full-time, 1200 part-time faculty

## ➤ Trainees

- ❖ 1400 postdoctoral trainees

- ❖ 700 PhD students

- ❖ 500 medical students, 80% involved in research including 50 MD/PhD students



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# **Institute of Basic Biomedical Sciences**

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**UNIFIES THE SCHOOL OF MEDICINE'S 9 BASIC SCIENCE DEPTs:**

- **Biological Chemistry**
- **Biomedical Engineering**
- **Biophysics & Biophysical Chemistry**
- **Molecular Biology & Genetics**
- **Molecular Cell Biology**
- **Neuroscience**
- **Pharmacology**
- **Molecular Sciences & Physiology**
- **Comparative Pathobiology**



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# Kimmmel Cancer Center

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- **National Cancer Inst-designated Comprehensive Cancer Center**
- **#3 ranked Cancer Ctr (*USNWR*)**
- **Weinberg clinical bldg**
  - ❖ **\$95M hospital budget (to grow)**
  - ❖ **350K nsf**
  - ❖ **62 med oncology beds, 72 surgical, 20 intensive/intermed care (+ 20 ped oncology in Children's Ctr)**
  - ❖ **Imaging, supportive services**
  - ❖ **Radiation Oncology**
- **Bunting-Blaustein and Koch Cancer Research bldgs**
  - ❖ **250K nsf**
  - ❖ **\$155M Cancer Ctr grants, including 7 SPOREs, 3 Program Project grants, Ludwig, HHMI, FAMRI, etc**
- **250+ Cancer Center member faculty**



# SKCCC Shared (Core) Resources

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- **Animal Resources**
- **Bioinformatics**
- **Microarray**
- **Cancer Functional Imaging**
- **Cell Imaging**
- **Cytogenetics**
- **Flow Cytometry**
- **Mass Spectrometry**
- **Medicinal Chemistry**
- **Specimen Accessioning**
- **Tissue Microarray**
- **Pharmacology Analytical**
- **Cellular Therapy (GEL)**
- **Cell Processing and Gene Therapy (GMP)**
- **Human Immunology**
- **Biostatistics**
- **Clinical Research Cores**



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# SKCCC Research Programs

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- **Cancer Biology**
- **Cancer Immunology**
- **Viral Oncology**
- **Cancer Prevention & Control**
- **Chemical Therapeutics**
- **Hematologic Malignancies & Bone Marrow Transplant**
- **Prostate Cancer**
- **Breast Cancer**
- **Gastrointestinal Cancer**
- **Upper Aerodigestive Cancer**
- **Brain Cancer**
- **Cancer Imaging**
- **Female Reproductive Cancers**



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# Johns Hopkins: A Leader in Technology Development

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- **#2 in Patents filed**
- **#3 in Biotech Patents issued**
- **#3 in Biotech Patent ranking**
- **#4 in Invention Disclosures**
- **#5 in Licenses executed**

- 2000 – 2004

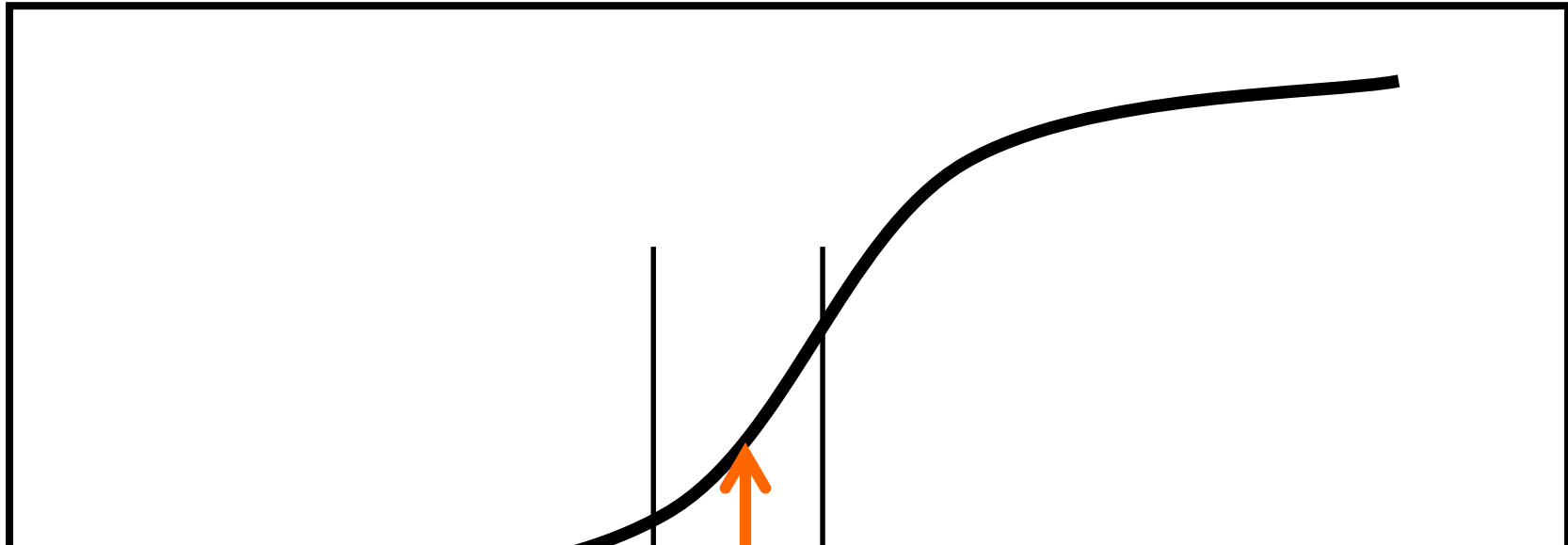
– Source: *Mind to Market: A Global analysis of University Biotechnology Transfer and Commercialization*. Milken Institute, September 2006

# Johns Hopkins: A Source For Successful New Enterprises

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- **Since 2000, 31 new companies have been created based on JHU technology**
- **Those companies have received over \$400M cumulative funding**

# Need for investment *early* on the Technology Value Curve

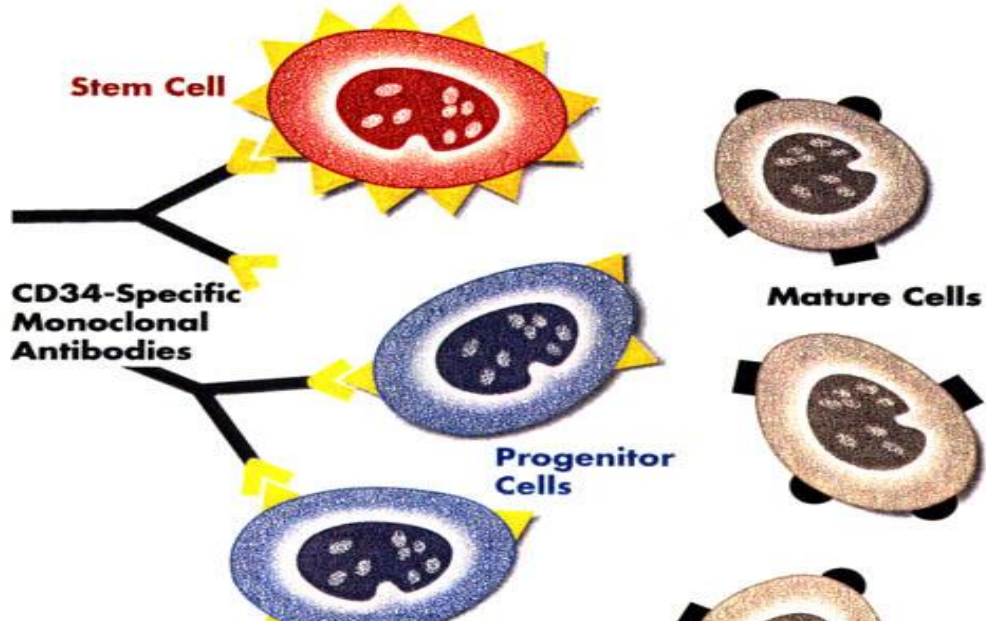


- In the life science arena, this inflection point is associated with drugs/devices entering human clinical trials
- However, obtaining funding for preclinicals and clinical trials are difficult hurdles in translational research
- *Visionary industry-academic partnerships are needed to cross the translational divide between the lab bench and the patient's bedside*

# Civin: Financial Disclosure

## **PURIFYING STEM CELLS WITH CD34 SPECIFIC MONOCLONAL ANTIBODIES**

CD34-Specific Antibodies Bind to Stem & Progenitor Cells



➤ **Dr. Civin** is entitled to a share of the sales royalty received by the University under licensing agreements between the University, Becton Dickinson Corporation and Baxter HealthCare Corporation. These arrangements are being managed by the University in accordance with its conflict of interest policies.

➤ **No conflict ... No interest**