

 University at Buffalo The State University of New York  
School of Medicine & Biomedical Sciences

 **University at Buffalo**  
*The State University of New York*


UB Faculty Senate

School of Medicine and Biomedical Sciences

October 5, 2010

Michael E. Cain, MD  
Dean

 University at Buffalo The State University of New York  
School of Medicine & Biomedical Sciences

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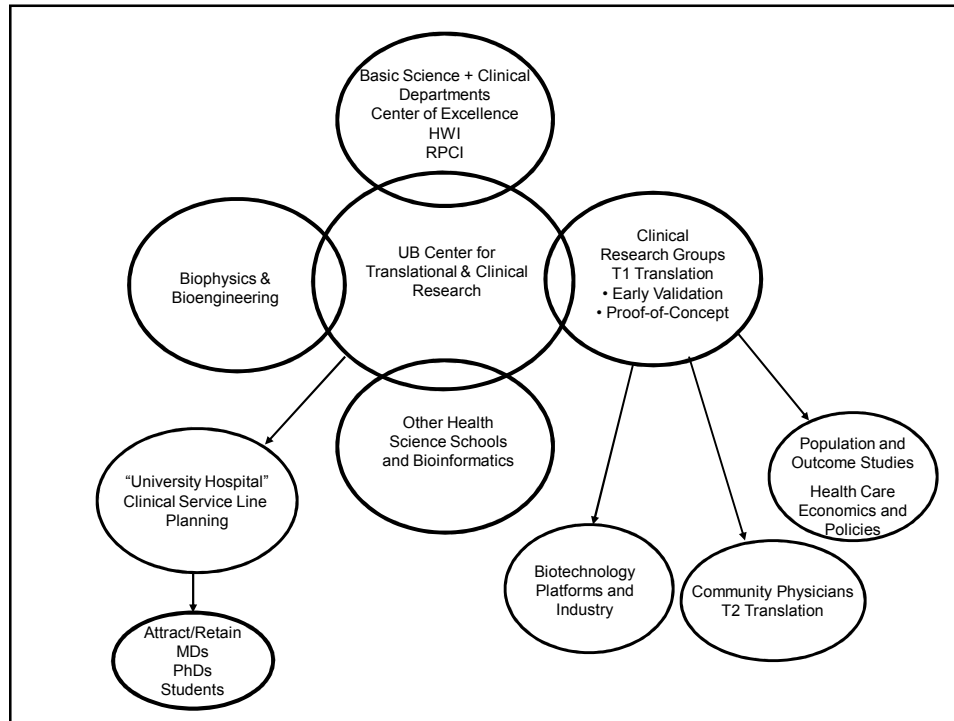
## Our Mission and Goals

**Our Mission**

To advance health and wellness across the life span for the people of New York and the world through the **education of tomorrow's leaders** in health care and biomedical sciences, **innovative research** and **outstanding clinical care**.


**Our Goals**

- Attract the most promising individuals and support their development
- Enhance our intellectual and technological environment to foster **exceptionally creative science and education**
- Develop and maintain **excellent clinical programs** to provide outstanding care
- **Cultivate excellence**, collegiality, and diversity
- Observe the highest standards of ethics, integrity, professionalism, and humanism
- Apply advances in science, medicine, and education to the betterment of humanity



## Requirements

- Leadership
- Facilities and Space
- Funded Research Programs
- Clinical Service Lines
- Students/Trainees
- Faculty
  - PhD Scientists
  - MD Scientists
  - Translational and Clinical Investigators
  - Educators
  - Clinicians
- Resources
- Development/Communications/Marketing

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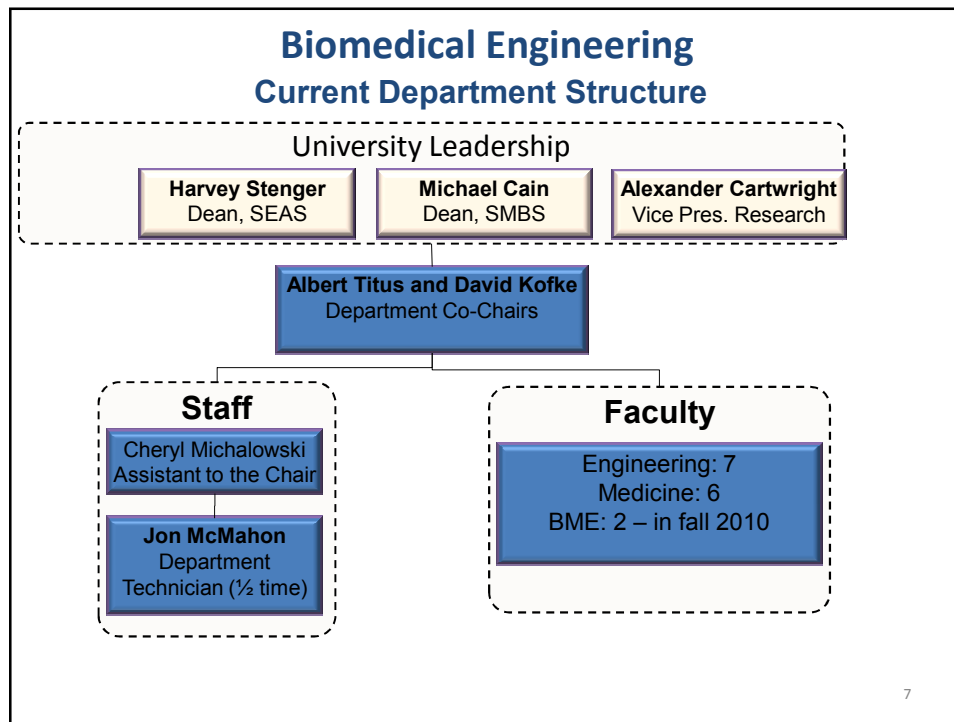
### Leadership/Governance Initiatives 2009-11

New Chair/Leadership Appointments	
Chair, Department of Pharmacology and Toxicology	Margarita Dubocovich, PhD (Northwestern University)
Chair, Department of Pediatrics	Teresa Quattrin, MD (University at Buffalo)
Chair, Department of Medicine	Anne B. Curtis, MD (University of South Florida)
Senior Associate Dean for Medical Education	Avery Ellis, MD (University at Buffalo)
Senior Associate Dean for Clinical and Translational Research	Timothy Murphy, MD (University at Buffalo)
Senior Associate Dean for Research and Graduate Education	Kenneth Blumenthal, PhD (University at Buffalo)
Senior Associate Dean for Faculty Affairs and Facilities	Suzanne Laychock, PhD (University at Buffalo)
Senior Associate Dean for Student and Academic Affairs	David Milling, MD (University at Buffalo)
Director, Hunter James Kelly Research Institute	Lawrence Wrabetz, MD (San Raffaele Scientific Institute, Milan, Italy)

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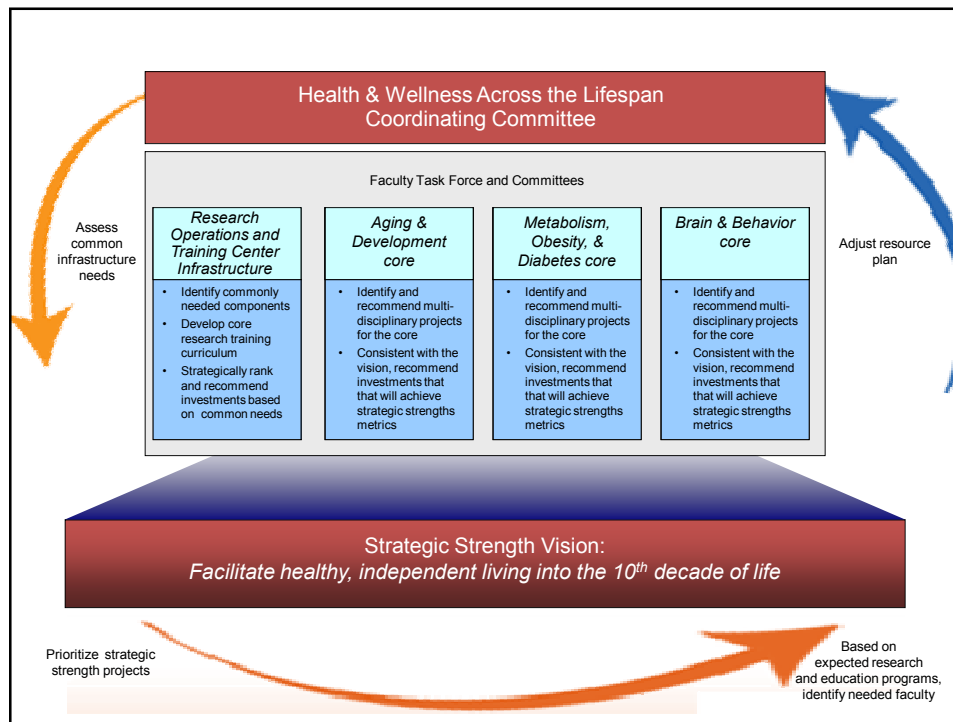
### Leadership/Governance Initiatives 2009-11

Active Chair/Leadership Searches
Structural (and Computational) Biology
Dermatology
OB/GYN
Neurology
Pathology and Anatomical Sciences
Microbiology and Immunology
Upcoming Chair/Leadership Searches
Biomedical Engineering
Radiology



### UB2020: School of Medicine and Biomedical Sciences

	Integrated Nanostructured Systems	Molecular Recognition / Bioinformatics	Health and Wellness Across the Life Span	Extreme Events	Civic Engagement
Medicine	X	X	X	X	X
Nursing			X	X	X
Pharmacy	X	X	X	X	X
Dental	X	X	X		X
Public Health			X	X	X
Engineering	X	X		X	
Architecture			X	X	X
Management					X
Social Work			X	X	X
CAS	X	X	X	X	X
Law			X	X	X
GSE			X	X	X



## Buffalo Translational Consortium

### Member Institutions

University at Buffalo Health Sciences Schools  
 School of Medicine and Biomedical Sciences  
 School of Public Health and Health Professions  
 School of Nursing  
 School of Dental Medicine  
 School of Pharmacy and Pharmaceutical Sciences  
 Roswell Park Cancer Institute  
 Hauptman Woodward Research Institute  
 UB Research Institute on Addictions  
 New York State Center of Excellence in Bioinformatics and Life Sciences  
 Great Lakes Health System of Western New York  
 UBMD (UB School of Medicine and Biomedical Sciences practice plan)



### Community Partners

The P2 (Pursuing Perfection) Collaborative of Western New York  
 Upstate New York Practice-based Research Network (UNYNET)  
 New York State Area Health Education System (AHEC)  
 HEALTHeLINK

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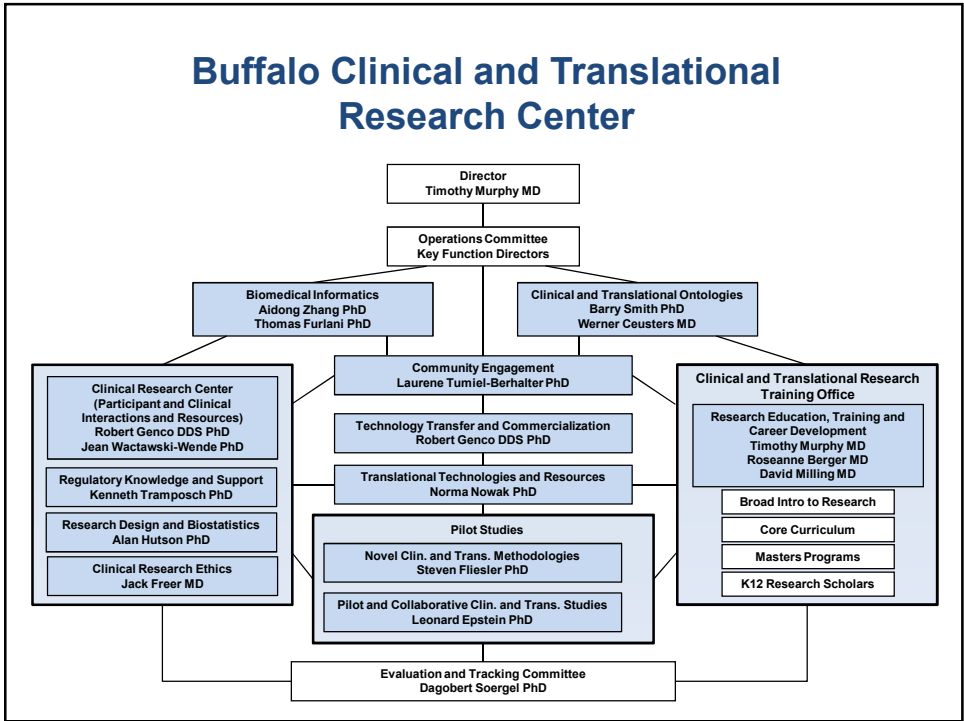
## Buffalo Clinical Translational Research Center (Buffalo CTRC)

**Mission Statement**

Serve as an integrated academic home for outstanding clinical and translational science and as the hub of the Buffalo Translational Consortium, providing innovative research tools, support, training, resources and coordination.

**Vision**

Perform innovative clinical and translational research to improve the health of our community and the nation.



## Molecular Recognition in Biological Systems and Bioinformatics

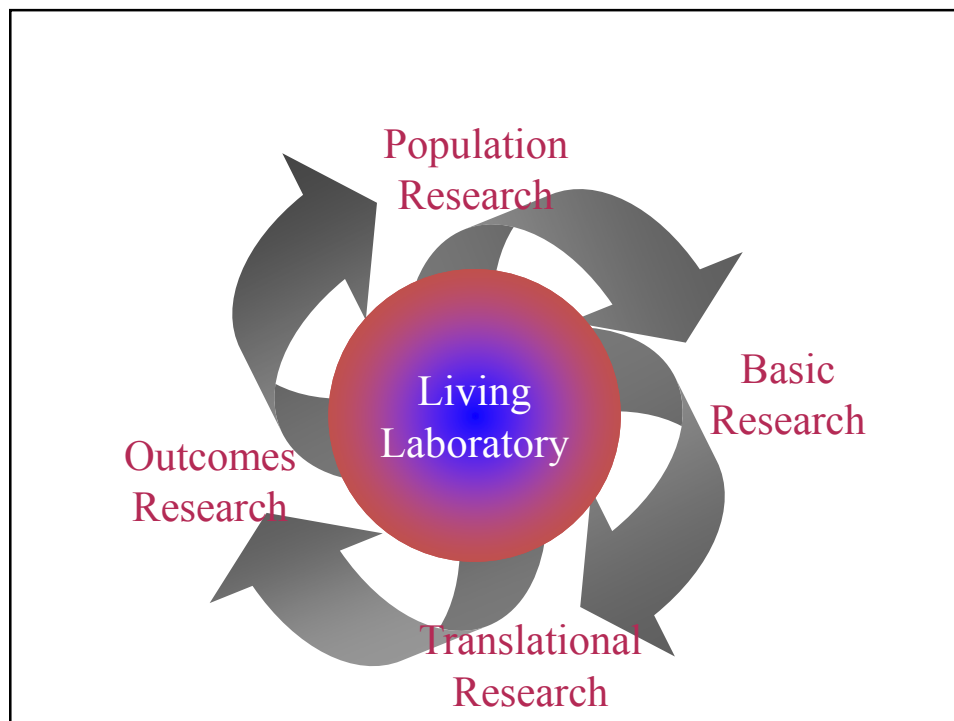
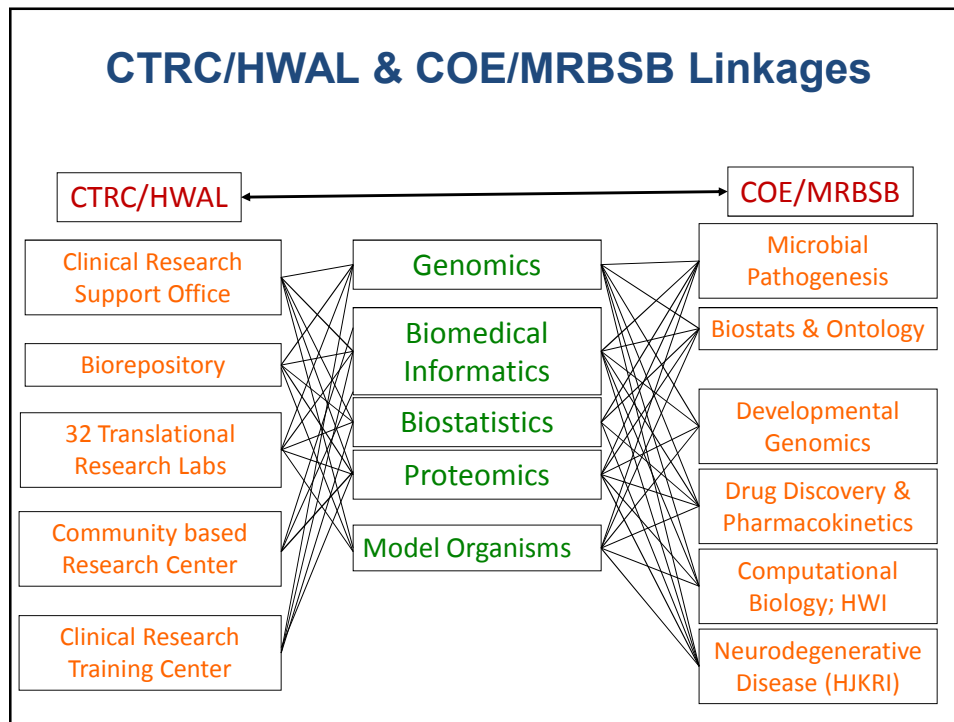
- FACULTY HIRES (09-10)
  - Olga Baker (Oral Biology)
  - Ji Li (Pharmacology & Toxicology)
  - Andrew Murkin (Chemistry)
  - Raj Rajnarayan (Pharmacology & Toxicology)
  - Fraser Sim (Pharmacology & Toxicology)
  - Debanjan Sarkar (Biomedical Engineering)
  
- FACULTY RECOGNITION
  - John Canty (SUNY Chancellors Award)
  - Paul Cullen (Milton Plesur Award)
  - Derek Daniels (Epstein Research Award)
  - Matt Disney (Dreyfus Scholar)
  - Dan Kosman (Stockton Kimball Award)
  - Norma Nowak (ACS Group Res. Award)
  - Gabriela Popescu (UB Faculty Achievement)

## Molecular Recognition in Biological Systems and Bioinformatics

### New and Competitively Renewed Grants (2009-10)

<u>Name</u>	<u>Department</u>	<u>Agency</u>
Autschbach	Chemistry	DOE
Campagnari	Microbiology	NIH
Canty	Medicine	NIH
Connell	Microbiology	Oishei Fdn
Disney*	Chemistry	MDA
Diver	Chemistry	NSF
Dubocovich*	Pharmacology & Toxicology	NIH
Feng	Physiology & Biophysics	NIH, NYS
Ferkey	Biology	NSF
Garrett-Sinha	Biochemistry	NIH
Gronostajski	Biochemistry	NYS
Hakansson	Microbiology & Immunology	ALA
Halfon	Biochemistry	NSF, NIH
Kolega	Pathology	NIH
Koudelka	Biology	NSF
Li*	Pharmacology & Toxicology	NIH, AHA
Lin*	Chemistry	NIH
Morrow	Chemistry	NSF
Murphy	Medicine	NIH
Ochs-Balum*	Stat Gen	NIH, Komen
Oh	Elec. Engineering	NSF
Read	Microbiology & Immunology	NIH
Snell	Structural Biology	Nih
Sutton	Biochemistry	NIH
Williams	Microbiology & Immunology	NIH
17 Investigators		NIH (ARRA)

\*UB2020-authorized hire





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## Research Grants Funded

	2007	2008	2009	2010
SMBS	59	64	81	115
	\$18,683,789	\$20,526,492	\$25,504,584	\$29,759,812

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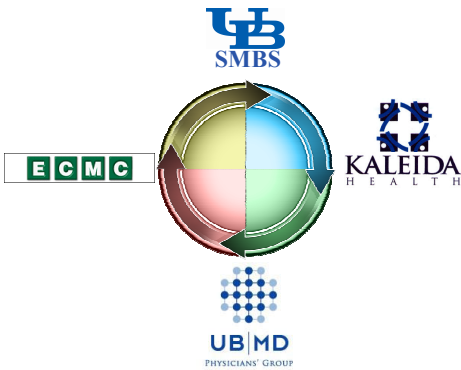
American Recovery and Reinvestment Act (ARRA)  
NIH Proposals submitted with SMBS PIs 2009

Total Proposals	80	Total Costs	
\$43,326,610			
Total Awards	19	Total Costs	
\$3,500,000			

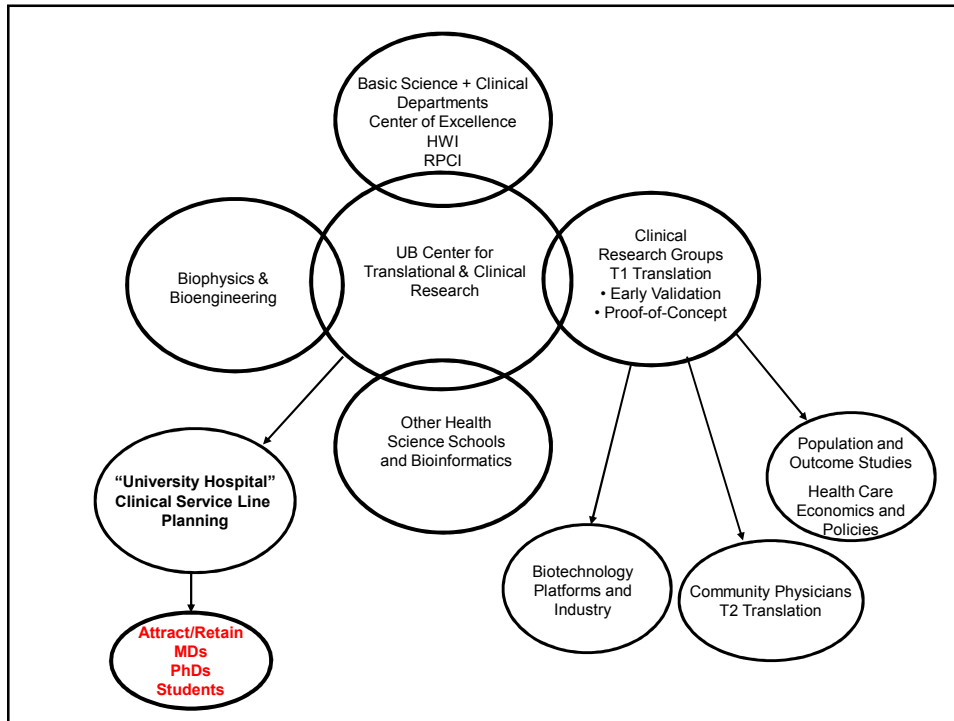
SMBS Clinical Studies, Training Grants \$9,330,000

## Clinical Service Line Planning

- **2008-09 Great Lakes Health**
  - Cardiovascular
  - Transplant
  - Pulmonary and Critical Care
  - Orthopedics/Bone Health
  - Psychiatry
- **2009-11 Great Lakes Health**
  - Primary Care
  - Neurology
  - GI
  - Oncology
- **Roswell Park Cancer Institute**
- **VA Hospital**
- **UBMD**
  - Serves as the focal point for establishing strategic direction and coordinating clinical program activities across clinical departments and with our major teaching hospitals
  - Establishes school-wide clinical practice policies
  - Public policy advocacy
  - Provides key services and infrastructure for the clinical departments
  - Triple-threat departments
    - Basic scientist (PhD, MD/PhD, MD)
    - Physician-clinical scientist
    - Clinician-scholar/educator

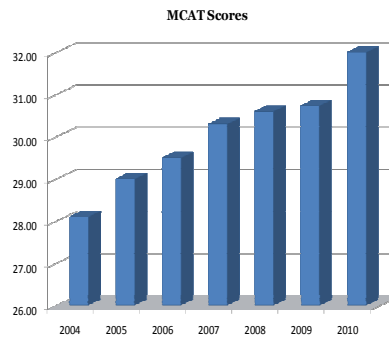
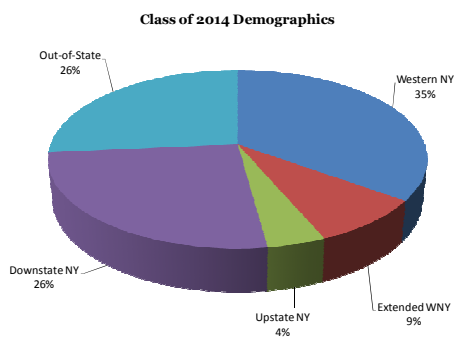


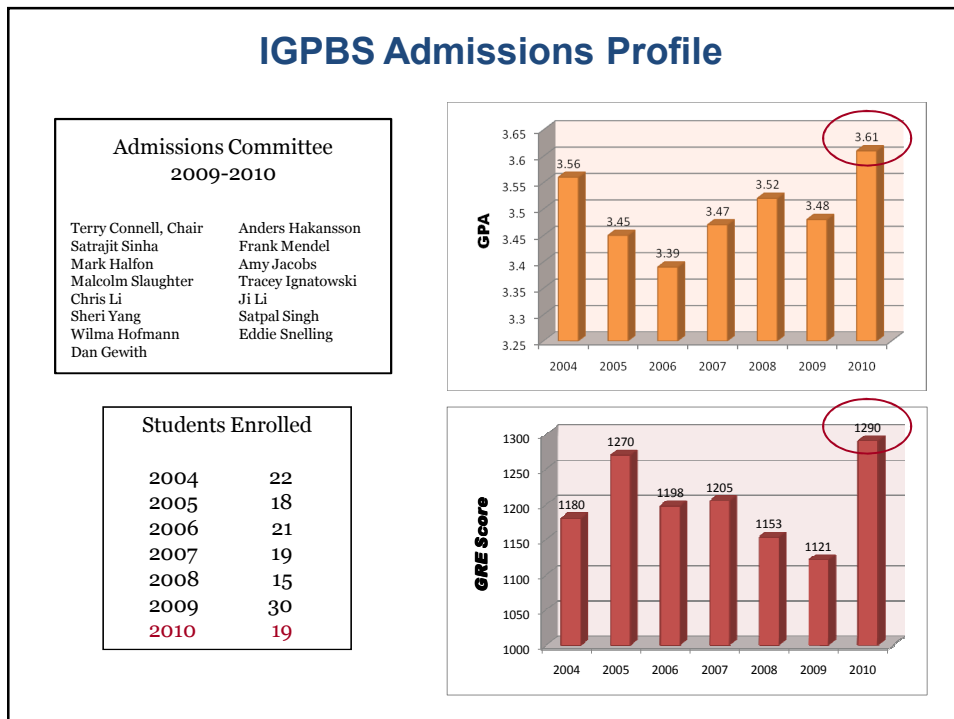
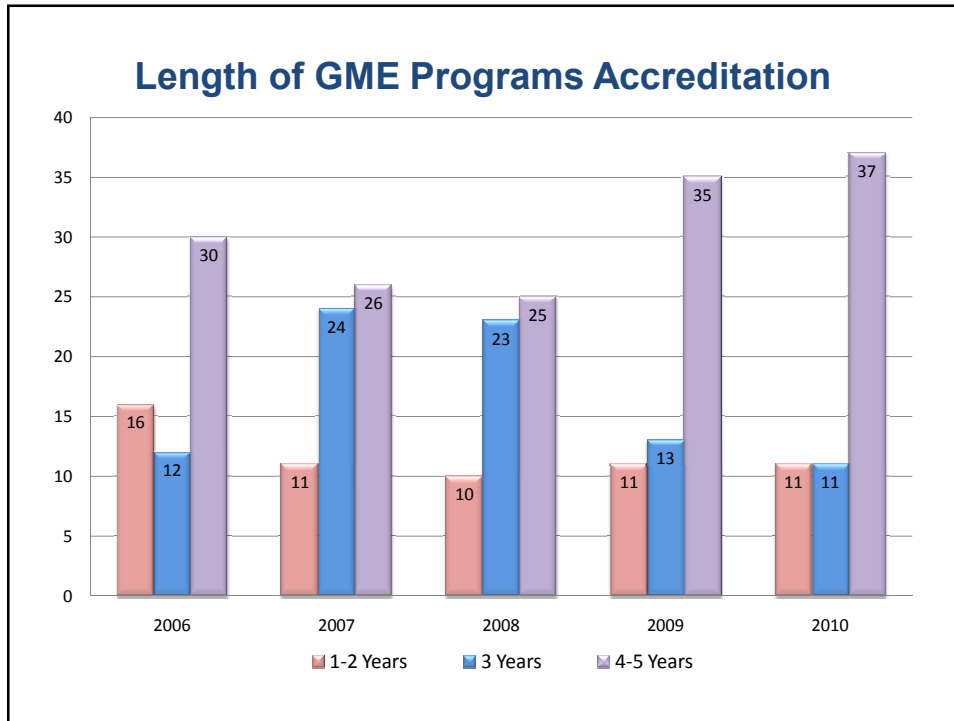
The image contains four logos: the University at Buffalo School of Medicine & Biomedical Sciences (UB SMBS) logo at the top; the E C M C logo in a green box; the KALEIDA HEALTH logo with a stylized human figure; and the UB MD PHYSICIANS' GROUP logo at the bottom.



## Medical Admissions Profile

- Class of 2014; A Melding of Science, Art and Civic Duty
  - New class includes United States military members, community outreach activists, artists and athletes, entertainers and research enthusiasts
  - Total applications 4,329 of which 645 were interviewed
  - 1 Student earned a PhD and 12 Students have earned Masters Degrees






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## SMBS Faculty Growth 2010 - 2012

- Recruit 58 New Faculty Members
  - 22 PhD- and MD-Scientists
  - 36 Clinician Educators
- Recruitment of Nationally Recognized Chairs in Core Departments
  - Anne B. Curtis, MD; Department of Medicine
  - Teresa Quattrin, MD; Department of Pediatrics
  - Dermatology-Offer letter to #1 finalist
  - OB/GYN-Two finalists
  - Neurology-Four finalists
  - Pathology and Anatomical Sciences-search started
  - Radiology-search to begin in 2011
  - Structural and Computational Biology-search started
  - Microbiology/Immunology-search started
- Investment in Existing Research and Clinical Base
- Investment in Research Growth and Productivity both in Basic Science and Clinical and Translational Research

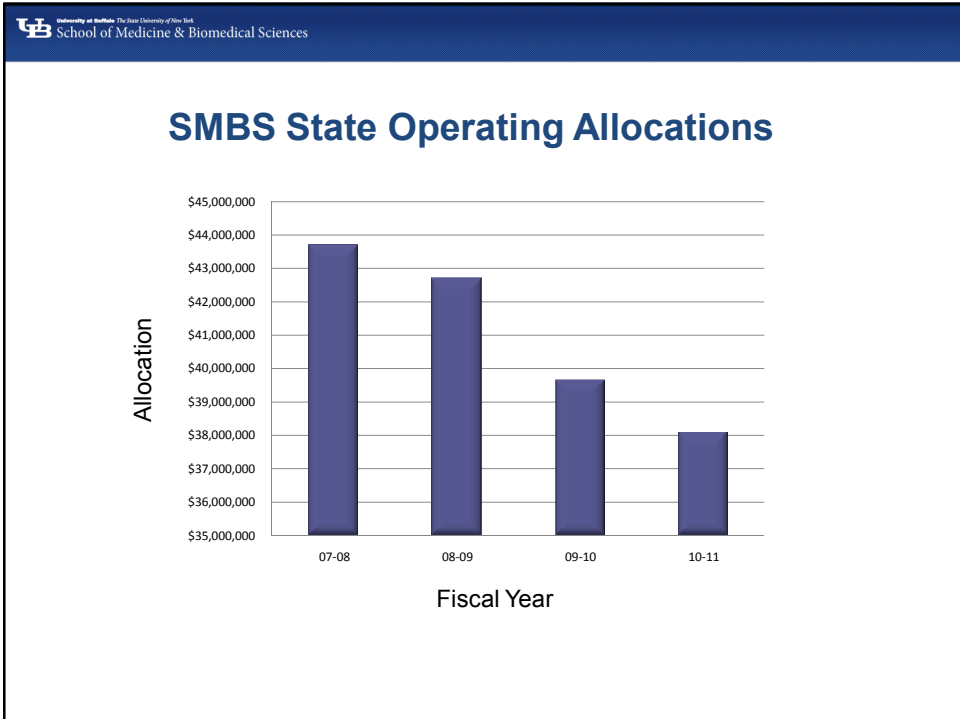
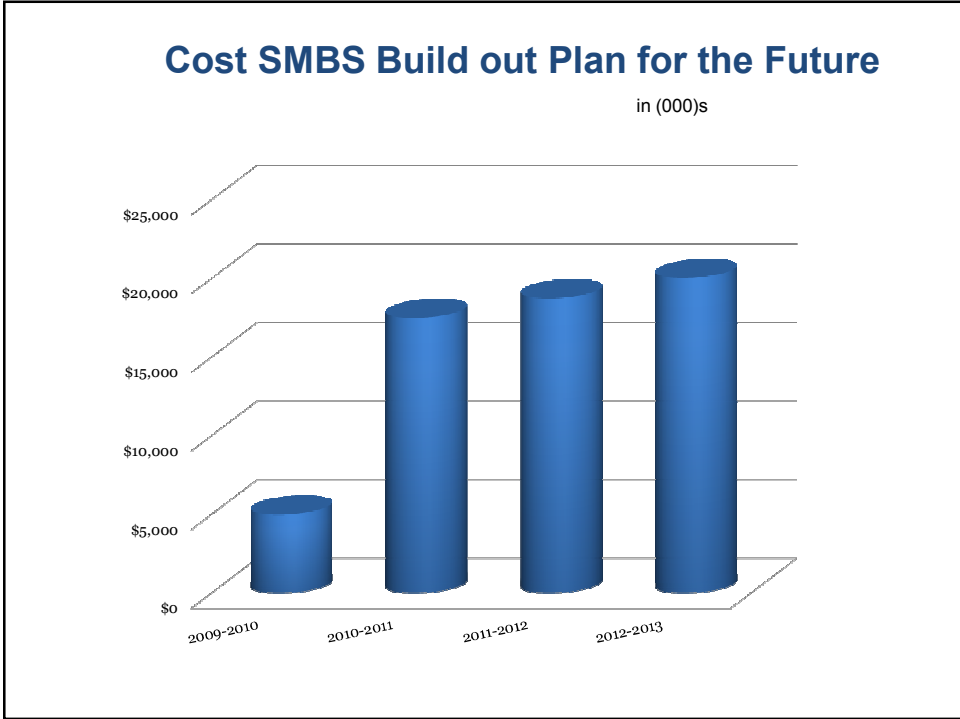


The screenshot shows the website for the School of Medicine and Biomedical Sciences at the University at Buffalo. The browser is Internet Explorer, and the address bar shows 'medicine.buffalo.edu'. The website has a blue header with the university logo and the text 'University at Buffalo The State University of New York | REACHING OTHERS'. Below the header is a navigation menu with links for 'About Us', 'Education and Training', 'Departments', 'Research', 'Patient Care', 'News and Events', 'Find Faculty', 'Support Us', and 'Contact Us'. A search bar is located in the top right corner. The main content area is divided into several sections:

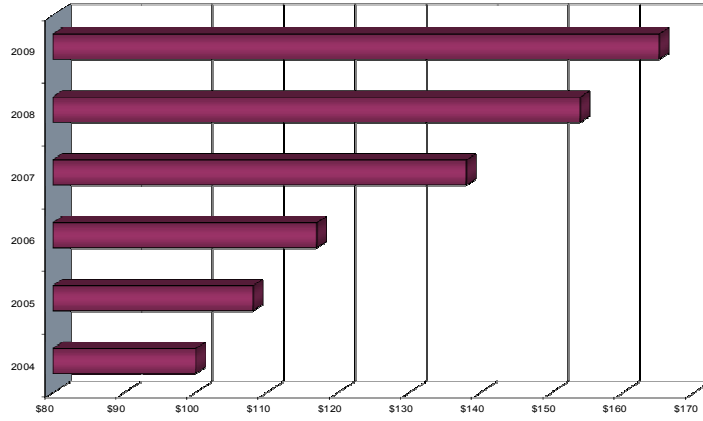
- Statin Side Effects:** A featured article with a large image of a woman, Georgianna D. Vardoulis, PhD. The text reads: "Research by UB geneticist Georgianna D. Vardoulis, PhD, provides early, key insights on the side effects of statins." There is a 'Read more' link.
- OUR FACULTY:** A section with three small images of faculty members. The first image is of Xianglan Pu, Assistant Professor of Ophthalmology, with a quote: "It's very, very easy to collaborate with people here." There is a 'See All' link.
- OUR STUDENTS:** A section with two small images of students. The first image is of Matthew Corey, UB Medical School class of 2011, with a quote: "UB Medical School allows you to contribute knowledge—not just consume it." There is a 'See All' link.
- RESEARCH HIGHLIGHTS:** A section with one small image of a medical device, with the title 'Portable Patient Ventilator' and a description: "A medical device that introduces into hospital intensive care units the same powerful and effective method of anesthetizing patients that works so well in the operating room." There is a 'See All' link.
- SMBS NEWS:** A list of recent news items with dates:
  - UB Neurosurgery Ranks Seventh In North America in Publications 9/15/10
  - Side Effects of Statins 8/26/10
  - Fourth-Year Student Serves on LCPE 8/26/10
  - Tow Humanism In Medicine Award 8/24/10
  - Curtis Honored by International Academy of Cardiology 8/18/10
  - Neurosurgeons Place Stroke-Preventing Stent In Adolescent 8/17/10

At the bottom right of the page, there is a small icon and the text 'Internet Protected Mode On'.

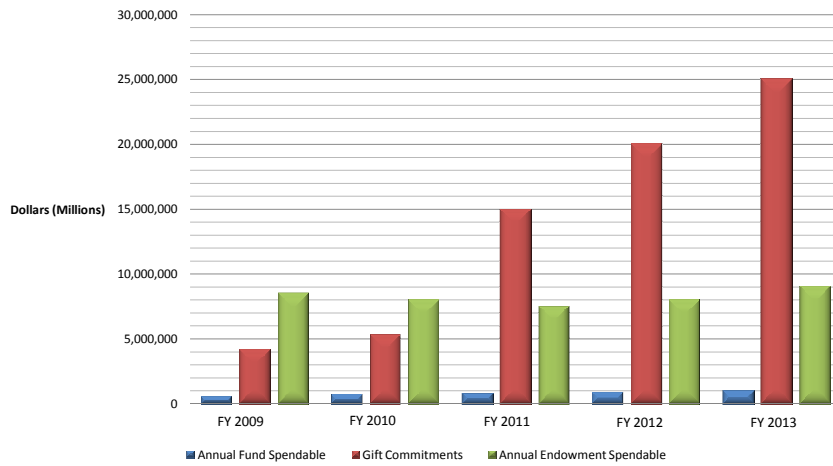
The slide features a blue header with the University at Buffalo logo on the left and the text 'University at Buffalo The State University of New York School of Medicine & Biomedical Sciences' on the right. The main content area is white and contains the word 'Discussion' in a large, dark blue, sans-serif font, centered on the page.



### UB/MD Practice Plans



### SMBS UBF Endowments

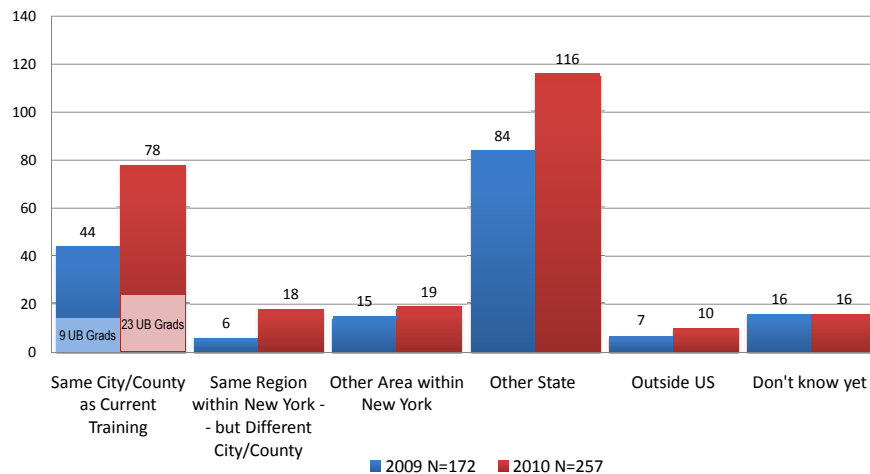


### Health and Wellness Across the Lifespan (2007-10)

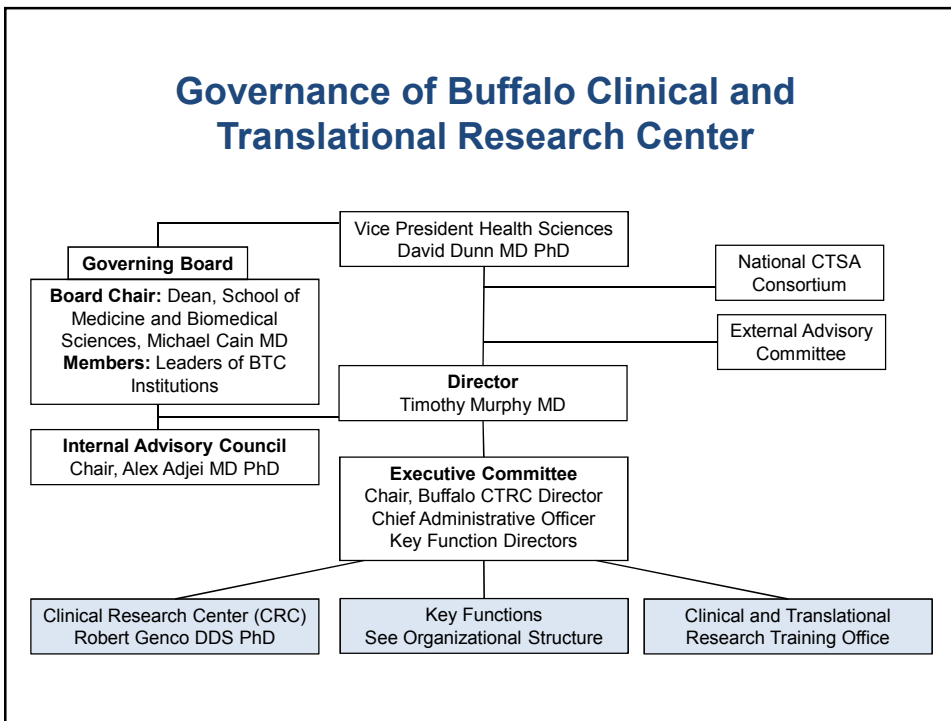
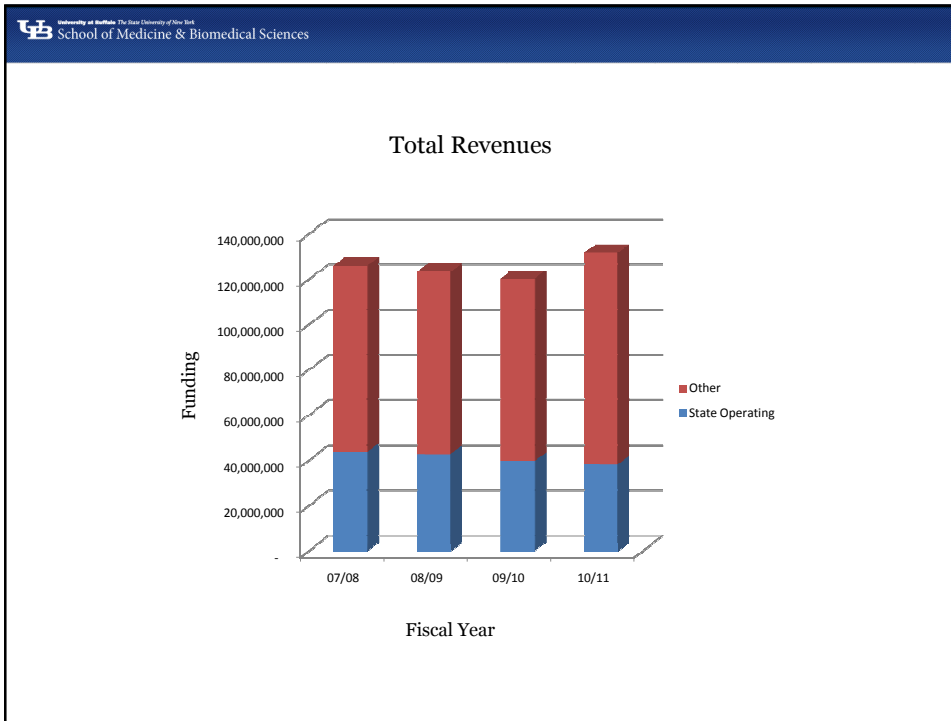
- 19 Letters of Intent/10 Invited Full Proposals/2 Approved
- Clinical and Translational Research in Brain and Behavior (Barry Smith, PhD)
  - Goal: Develop and integrate theoretically grounded and innovative work in biomedical informatics an integral part of NIH-funded clinical research undertaken at UB in the field of brain and behavior.
  - Hiring Plan (Phase 1)
    - 1 Neuroinformatician – Department of Neurology (SMBS)
      - Search Completed/offer letter extended
      - Alexander Diehl, PhD/The Jackson Laboratory
    - 1 Cognitive Neurologist – Department of Neurology (SMBS)
      - Kinga Szigeti, MD, PhD, Baylor College of Medicine
    - 1 Dental Information – School of Dental Medicine
      - Alan Ruttenberg, MS (PhD-pending), Neurocommons Project, Science Commons, Cambridge, MA
  - Hiring Plan (Phase 2)
    - 1 Biomedical Informatician – Department of Biostatistics (SPHHP)
    - 1 Ontologist – Department of Philosophy (CAS)
    - 1 Clinical Neurologist with MS focus OR Cognitive and Behavioral Neuroscientist OR Neuroimaging Scientist – Department of Neurology (SMBS)
- Bioinformatics and Medication Management Research Network (Gene D. Morse, PharmD)
  - Goals:
    - Develop an interdisciplinary core program that will facilitate clinical and translational research in biomedical informatics and medication management research.
    - Build on the COE recent designation from the NYSDOH as a coordinating center for integrating ePrescribing with biomedical informatics platforms, ontology research and outcomes research with the Center for Computational Research,
    - Explore collaborative medication management research with UB/MD faculty
    - Collaborate with BNMC partners with expertise in pharmacoconomics and pharmacovigilance during drug development and post-approval.

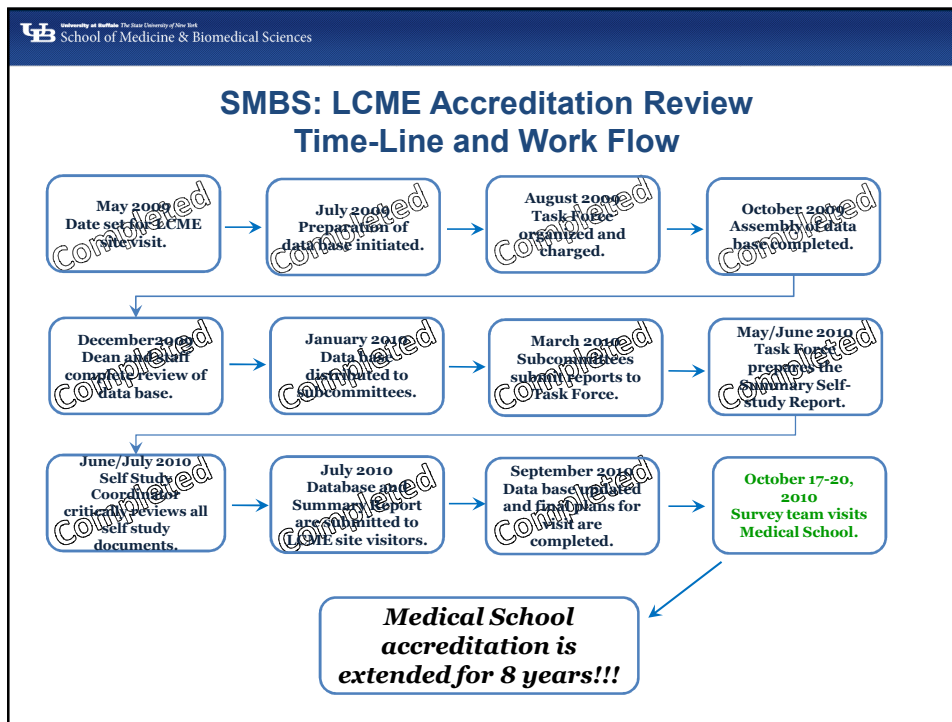
### Graduation Survey Comparison 2009/2010

Where is the location of your primary activity after completing your current training position?









## Biomedical Engineering Initial Research Areas

1. Molecular-Cellular, Cell and Tissue Engineering
2. Computational Biomedical Engineering and Modeling
3. Biomedical Sensors, Instrumentation, and Diagnostics
4. Medical Imaging and Analysis