

Mount Sinai School of Medicine



MOUNT SINAI
SCHOOL OF
MEDICINE

DENNIS S. CHARNEY, M.D.

Dean

September 21, 2010

Quality



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Best Doctors in NY

- 147 FPA Doctors in 49 specialties
Total 394 in 56 specialties (includes voluntaries, affiliates and non-FPA)

US News & World Report Rankings

- Medical School 2010 #18 (#22 in 2009)
Hospital 2010 - “One of the Best Hospitals in US”
Top 20 in 7 Specialties (up from 6 in 2009)
Top 50 in 13 Specialties (up from 11 in 2009)
(out of 4,852 hospitals analyzed)

NIH Funding Rank

- Highest level in Sinai’s history at >\$250M

AAMC Rank (unchanged from 2009)

- U.S. Medical Schools (AAMC) 2010 #3 Research Dollars/Principal Investigator
#2 Research Density

“A” on AMSA Pharmafree Scorecard on COI policies (1 of only 12 in country)

Major Recruitments



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Chair	Medicine	Mark Babyatsky, MD
Chair	Neurology	Stuart Sealton, MD
Chair	Pediatrics	Lisa Satlin, MD
Chair	Psychiatry	Wayne Goodman, MD
Chair	Radiation Oncology	Kenneth Rosenzweig, MD
Director	Transplant Institute	Sander Florman, MD
Chief	Division of HemOnc/DOM	William Oh, MD
Chief	Division of GI/DOM	Bruce E. Sands, MD MS
Chief	Breast Surgery	Elisa R. Port, MD FACS
Chief	Thoracic Surgery	Raja Flores, MD
Director	Mood & Anxiety Program	Dan Iosifescu, MD
Director	Multiple Myeloma Program	Sundar Jagannath, MD
Director	Head & Neck Onc Program	Marshall R. Posner, MD
Medical Director	Ruttenberg Cancer Center	Randall Holcombe, MD

Over 350 faculty recruited at all levels

Accelerating Science
Advancing Medicine

Achieving and Maintaining
Greatness

Tripartite Missions of MSSM



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1. Education
2. Research
3. Clinical

Education:



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Teaching tomorrow's doctors and scientists that:

Science, Service and Advocacy are inextricably related

&

Our scientific goal is to bridge the gap between Bench-Bedside-Community

Curriculum Reforms in both Medical & Graduate School to seamlessly integrate:

– Clinical relevance into scientific research

&

– Scientific principles into clinical training

To produce leaders in bio-medicine & healthcare

Committed to clinically relevant breakthrough science

Science and Medicine in the Service of Society

John H. Morrison, Ph.D. & David Muller, M.D.

Biomedical science matters most when it is translated into tangible benefits for patients. Every day, scientists expand our understanding of the genetic basis and molecular pathways underlying disease. This knowledge should ultimately be translated into highly personalized approaches to diagnosis, treatment, and prevention of disease for individual patients and communities.

As leaders in the education of tomorrow's physicians and scientists, how are we to respond to the expanding scope of twenty-first-century research? At every level of our educational mission, we must seamlessly integrate clinical relevance into scientific research, and scientific principles into clinical training.

Historically, medical schools emerged within universities primarily to educate physicians, yet Master's and Ph.D. programs centered at medical schools now produce the vast majority of the scientists trained in biological arenas relevant to medicine.

All too often, these programs simply co-exist, isolated by different curricula and cultures. If we are to maximize our capacity to impact clinical practice through scientific discovery, we need to produce leaders in biomedicine and health care who see themselves as members of large, interactive teams committed to clinically relevant breakthrough science. Clinically oriented medical school courses should become part of the graduate school curriculum and translational scientists should be part of bedside rounds for teaching physicians-in-training.

But we can take this one step further. For over a century, the defining missions of medical schools have

been to care and advocate for the underserved and to push the envelope of biomedical research. Because of increasing specialization, technological advances, and the competitive nature of research funding, most medical schools in the country have had to commit to one primary goal: they are either research oriented, or community and public-service oriented.

Teaching tomorrow's physicians and scientists this "hidden curriculum" — that science, service, and advocacy are unrelated — is an injustice to both our students and society.

They can no longer exist as separate entities if we are to achieve our potential for applied innovation, such as preventing a patient from developing dementia and protecting a community from the environmental risks that will lead to cancer.

Science and service, innovation and advocacy: The National Institutes of Health (NIH) has already embraced the need to

bridge the chasm between the researcher's laboratory bench, the patient's bedside, and the community by setting the expectation for translational research that moves us toward the ultimate goal of better and more accessible care for all.

Medical schools must acknowledge the equal importance of these missions if we are to produce leaders who will be agents for change, translating the bounty of scientific discovery into improved quality of life in our communities and across the globe.

Science is the underpinning of everything we do, but in the absence of service, there is no context for understanding why our scientific breakthroughs matter.

John H. Morrison, Ph.D., is Dean of Basic Sciences and the Graduate School of Biological Sciences at Mount Sinai School of Medicine in New York City.

David Muller, M.D., is Dean for Medical Education.



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Education:



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Medical School Curriculum reform continues:

- Longitudinal Clinical Experience(LCE) allows each student to follow a patient for first 2 years
- INSPIRE provides opportunities for scholarly research
- New track started-MD/MS in Clinical Research (PORTAL)
- Tailored clerkships in primary care & neuroscience for students planning a career in either
- On-going evolution of 1st and 2nd year curricula towards a competency & systems based model

Education:



Medical School Additional Reforms:

- Develop a parallel track to HuMed program that allows students to develop their own undergraduate curriculum based on HHMI/AAMC Scientific Competencies
- Complete the redesign of Genetics/Genomics curriculum
- Develop competitive tracks dedicated to Primary Care & Global Health
 - Dual degree, with Masters in either Public Health or Bioethics
 - Offer scholarships to 5 students in each track
 - Loan forgiveness if they stay in the field 2 years after completing residency
- Fundraising priority
 - Scholarships and relief of student debt

Education:



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Graduate School Curriculum reform:

- Redefined Training Areas to align with institutional priorities and strengths
 - Promotes optimal match between student interests and faculty strengths
 - Provides opportunities for students to work in the best labs
 - 3 broad Training Areas converted to 5 new focused Training Areas
- Integrated all patient and population-based programs into Graduate School
 - MS & PhD in Clinical Research, MS in Genetics Counseling, Masters in Public Health
 - Genomics course part of core requirements for PhD students
 - PhD students may also take courses in Clinical Research
- Concerted effort to increase Training Grants
 - Every Training Area has a Training grant or is applying for one
- Development of metrics to assess success of both students and mentors
- Due to these changes
 - # of applicants increased 20% for PhD program & 10% for MD/PhD program

Education: Quality – Matriculating Class of 2010



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MD Students

• Number of Complete Applications:	4,751
• Number of Interviews (excl EA/MSTP)	784
• Size of Class	141
• MSTP	11
• Humanities and Medicine	28
• NYS State Residents	32%
• Women	47.8%
• URM	19.7%
• Average MCAT	35.4
• Average GPA	3.71
• Number of Undergraduate Schools	59

(Brown=12, Harvard=10, Columbia=9, Cornell=9, Duke=6, Princeton=6)

Education: Quality – Matriculating Class of 2010



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PhD Students

- Number of Complete Applications: 436
- Size of Class 39
- NYS State Residents 28%
- Women 46%
- URM 8%
- Average GRE 1,290
- Median GPA 3.53
- Number of Undergraduate Schools 32

(Columbia 2, Emory 2, Boston College 1, Dartmouth 1, Hopkins 1, NYU 1, Tufts 1, Wash U 1)

Education: Quality – Matriculating Class of 2010



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MD/PhD Students

- Number of complete applications: 256
- Size of class: 11
- NYS State Residents: 54.5%
- Women: 27%
- URM: 0
- Average MCAT 37
- Median GPA 3.84
- Number of UG Schools: 11

(Brown U: 1, Bowdoin College: 1, Pomona College: 1, Johns Hopkins: 1, Harvard: 1)

Institute for Medical Education



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Mission

The IME serves to support and develop our education community by improving:

- Teaching
- Leadership
- Curriculum Development and Assessment
- Individual Scholarship
- Recognition of Our Educators

Three Levels of Membership

- Basic for all educators
- Fellow and Master Educator for those who demonstrate excellence and have made significant scholarly contributions to medical education

First Advanced Members inducted in 2009

- 14 Master Educators
- 11 Fellows
- From 14 Departments

Important Resource for Mentoring and Developing Scholarship

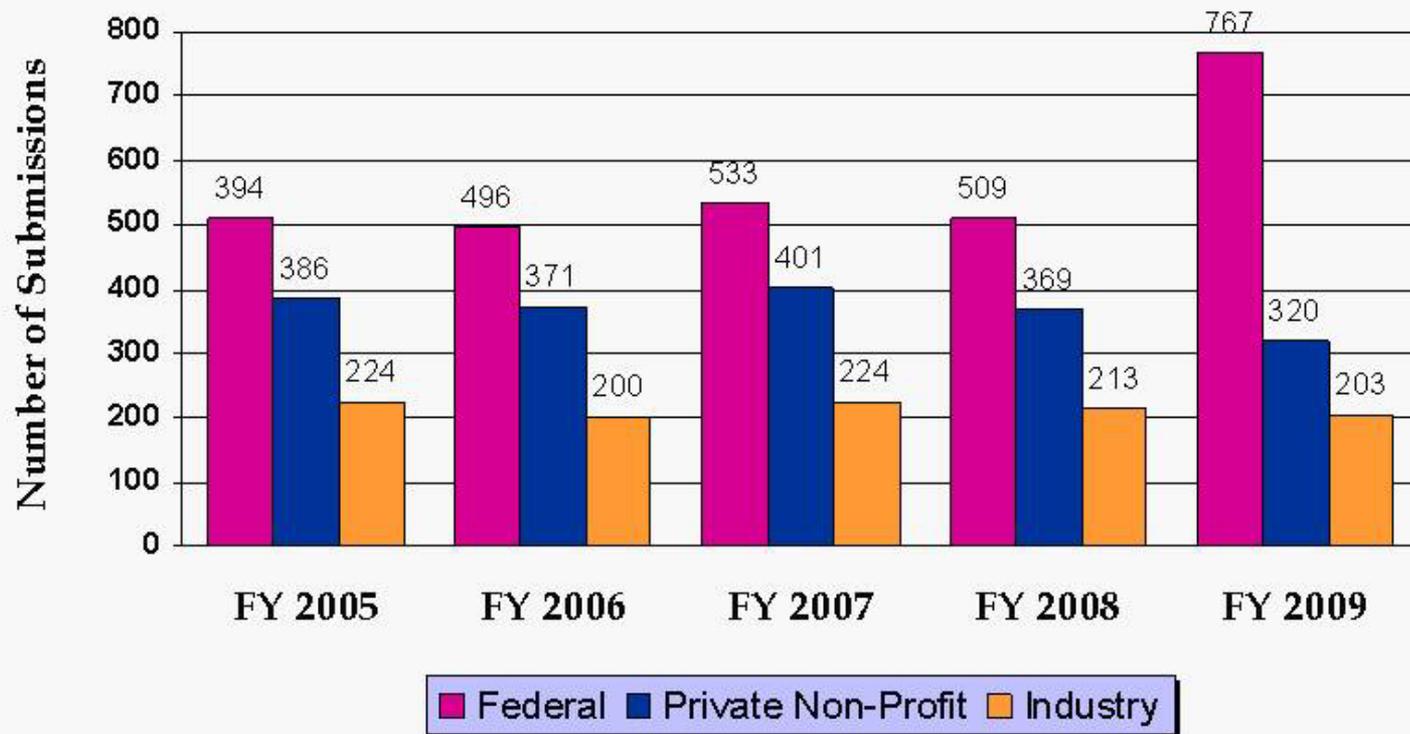
Accelerating Science
Advancing Medicine

Achieving and Maintaining
Greatness

- MSSM maintained #18 in NIH Funding with >\$250M in grants
- AARA Funding Outstanding with over \$50M awarded this year
- The efficiency of space utilization has increased significantly:
 - In 2006, the average institutional research density was \$565/sf
 - In 2007, the average institutional research density was \$639/sf
 - In 2008, the average institutional research density was \$651/sf
 - In 2009, the average institutional research density was \$750/sf
- This increase has enabled us to make major recruitments within our existing space

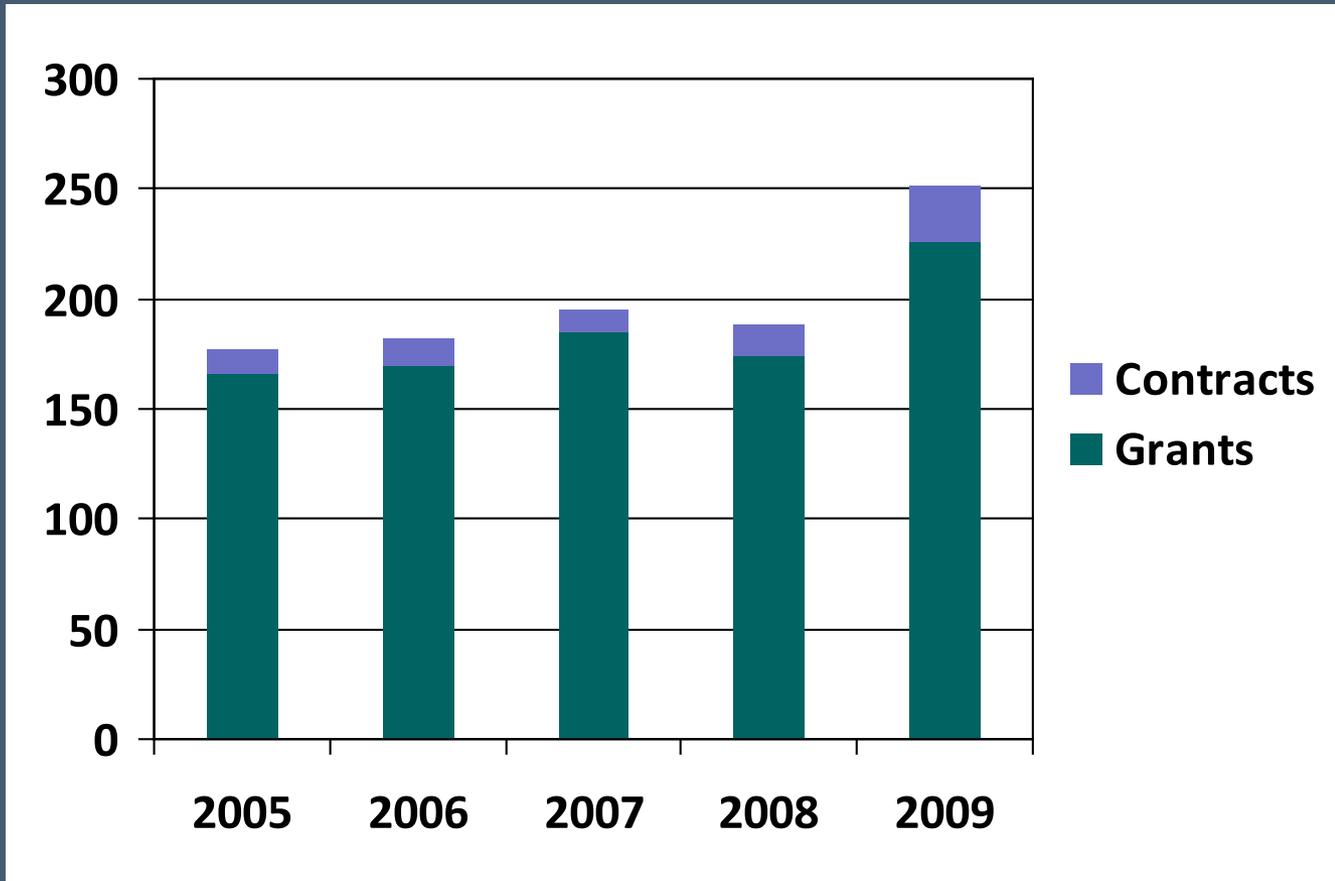
Research Productivity

Number of Grant Proposals submitted to NIH
Increasing the number improves funding probability



Research Productivity

NIH Grant Trend



Direct Expenditures per Principal Investigator

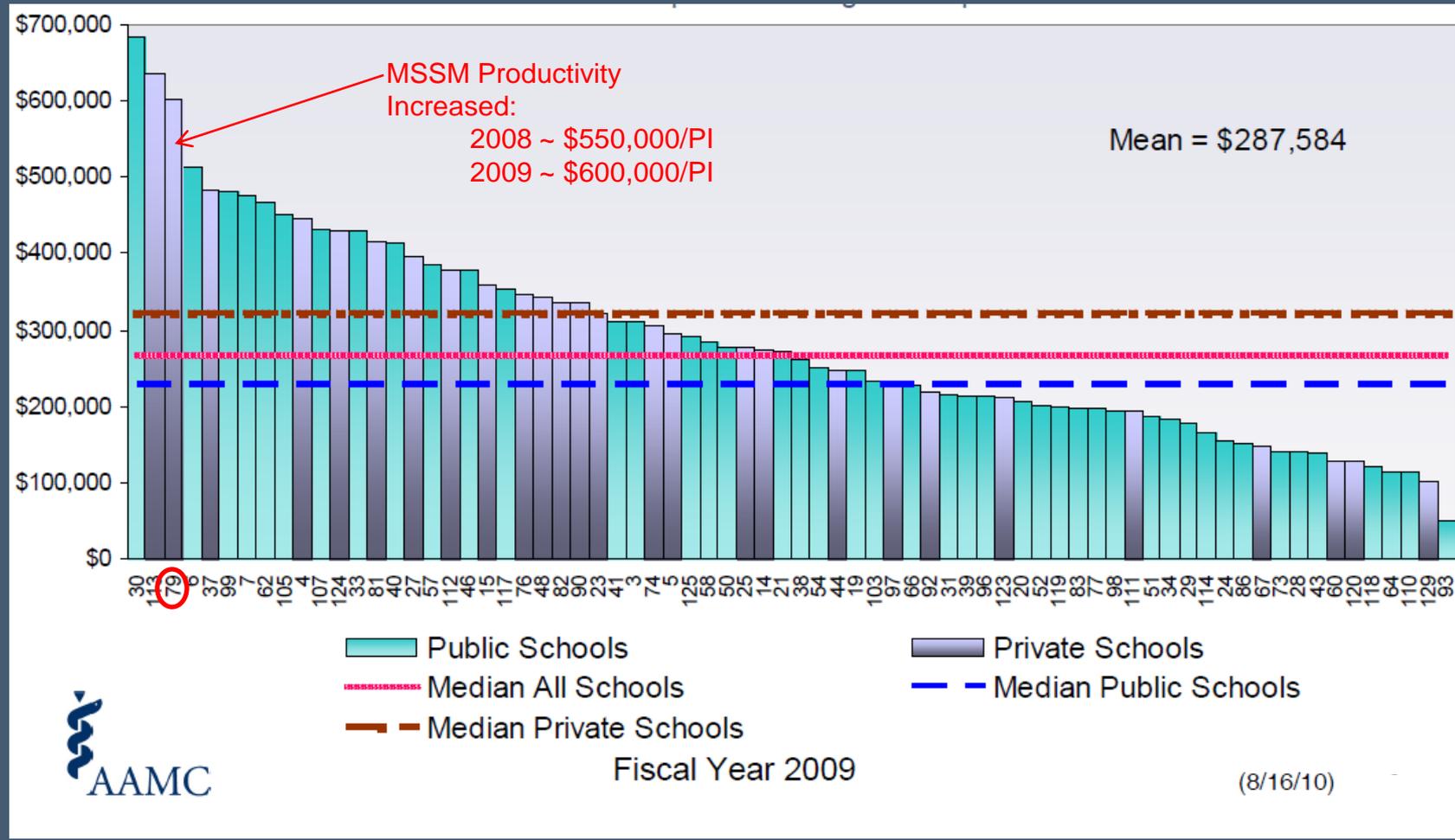


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Purpose: Assesses research productivity of faculty engaged in research

Higher Number is Favorable

Formula: Direct Expenditures / Number of PIs



Grant \$s per Net Assignable Square Foot (NASF)

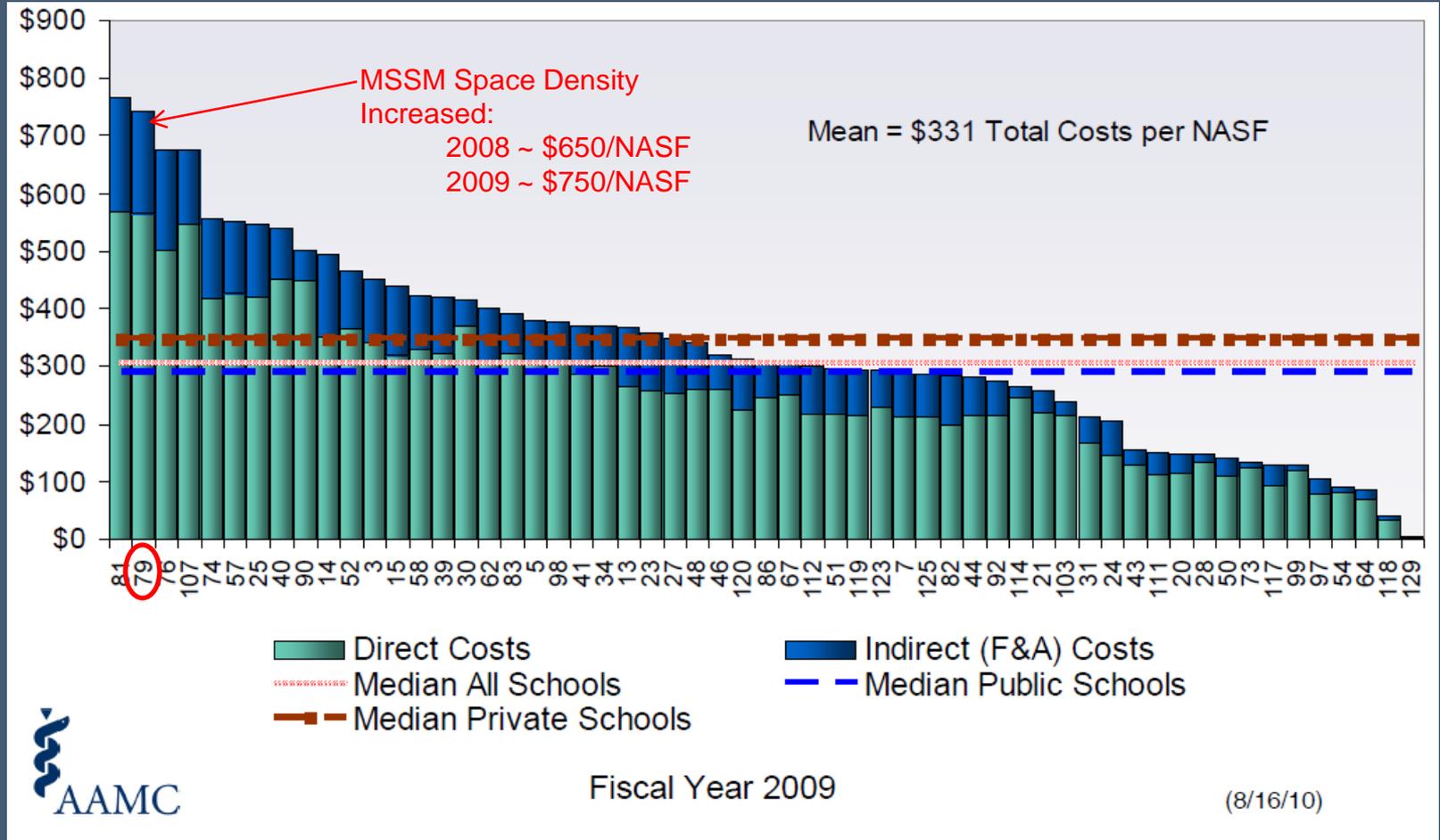


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Purpose: Reflects productivity of research space

Higher Number is Favorable

Formula: Total Grant \$s / NASF



Research Strategic Goals



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- Initiatives in Genomics and Experimental Therapeutics
- Recruitments:
 - Chair of Pathology
 - Division Chiefs in Pulmonary & Infectious Diseases
 - Research faculty to occupy CSM – process will start late 2011
- Fund-raising for key initiatives
- Ensure that initiatives are aligned with resources
- Continue efficient management of space

Faculty Practice



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Accomplishments:

- Visits increased 8.4% over 2009
- Charges increased 9.8% over 2009
- Mount Sinai Faculty 4th nationally in Revenue/Faculty
- Key personnel recruitments:
 - Chief Operating Officer – Rick Deese
 - Chief Medical Officer – Mark Callahan
 - Director of Ambulatory Revenue Cycle & Practice Development

Initiatives:

- 5 East 98th to be renovated & renamed in honor of May gift
- Rebranding of Faculty Practice and related Marketing efforts
- Off-campus practice development
- Impact of Healthcare Reform

Faculty Practice –In Top 5 in Revenue/Faculty

FPA Patient Care
Receipts compared to
other Top Ranked
Schools

2009 - #5

2010 - #4

School	Receipts	Clinical MDs	Receipts/ MD
Northwestern U Feinberg SOM	426,896,137	670	637,158
Cornell U Weill Med Coll	412,018,192	702	586,921
Washington U in St Louis SOM	560,665,653	1,112	504,196
Mount Sinai School of Medicine	394,983,757	863	457,687
Wake Forest University SOM	274,770,681	638	430,675
U Wisconsin Medical School	472,683,202	1,144	413,185
U Rochester SOM & Dentistry	303,314,024	746	406,587
Emory University Sch of Med	467,485,488	1,168	400,244
Columbia U Coll of P & S	467,594,615	1,248	374,675
Duke University Sch of Med	383,038,352	1,071	357,646
Ohio St U Coll of Med-Pub Hlth	200,907,316	633	317,389
Indiana University Sch of Med	377,268,053	1,192	316,500
Johns Hopkins University SOM	375,699,502	1,208	311,010
Yale University Sch of Med	293,827,070	972	302,291
UC Los Angeles Geffen SOM	372,202,804	1,307	284,776
University of Virginia SOM	209,803,348	760	276,057
Univ Iowa Carver Coll of Med	181,539,940	686	264,635
Beth Israel-Deaconess Med Ctr	243,579,961	923	263,900
University of Florida COM	179,287,531	742	241,627
University of Maryland SOM	176,398,700	777	227,025
Oregon Health & Science U	196,950,585	893	220,549
Massachusetts General Hospital	490,116,067	2,271	215,815
University of Cincinnati COM	138,223,060	650	212,651
UC San Diego Sch of Med	134,875,529	843	159,995
University of Washington SOM	190,317,754	1,332	142,881

FPA - Impact of Health Care Bill



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- Sole practitioners moving to integrated practices
 - Opportunity for FPA to align with physicians in private practice
- Incentives for primary care physicians
 - Currently not well compensated in Fee for Service (FFS) model
 - New compensation models need to be developed
- Electronic Medical Records (EMR)
 - Sinai has already implemented
- Expenses vs Reimbursement
 - Efficient high quality care delivery to reduce complications & readmissions
- Quality Initiatives
 - Patient satisfaction is a measure of quality of service & patient experience
 - EMR's allow better monitoring/assessment of outcomes of new initiatives

FPA Challenges



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- Development of capacity for continued growth, particularly off campus
- Payor market continues to evolve away from non-par physician advantage
- Faculty office space – essential for further growth
- Standardization of the use of systems and process flows
- Improving the patient experience, by specifically focusing on telephone access and wait time issues

FPA Strategic Goals



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- Meet the 7% growth target for FPA revenues
- Strengthen the bottom line for the Departments, the FPA and the School
- Continue to improve the patient experience, as measured by Press Ganey survey scores
- Streamline and automate payment posting
- Complete the rebranding of the FPA and renovations at 5 East 98th Street
- Complete the implementation of the Epic EMR and ensure Meaningful Use criteria are met
- Set a standard for excellence in the FPA website
- Improve the revenue cycle – reach top quartile of UHC benchmarks (AR management, charge capture, cost, etc.)

School Financial Goals



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- Positive financial operating results using only the 5% endowment spending rate investment income.
- Philanthropy supports the gap between strategic plan revenues and spending on growth initiatives.

Department's Financial Goals

Departments must consistently achieve positive financial results.

- Positive financial margin targets will be developed for each Department for 2011 along with incentives for achieving the targets

Research and Clinical Performance Guided by Metrics:

- Research Faculty Salary Recovery - minimum 65%
- Research Density per sq. ft. minimums:
 - \$500 - Wet bench
 - \$1,000 - Dry Bench
- Monthly Monitoring of Research Spending targets for every grant

Clinical

- FPA revenue cycle metrics (A/R mgmt, gross/net collection rate)
- Compensation models for every department
- Performance goals for every physician

Philanthropy used to support growth initiatives.

Financial Results



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The School has met its overall financial goals since the Strategic Plan was approved (000's).

Financial operating results:

		<u>Results</u>
2010	(Budget)	\$ -
2009		\$ 71
2008		\$ (2,880) *
2007		\$ 236
2006		\$ 852

* Loss resulted from market downturn

Fund raising for the \$1 billion Capital Campaign, exceeding \$598 million, has been sufficient to support the Strategic Plan spending.

Research and FPA growth major contributors to School's financial success.

Financial Challenges to Continued Success



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- The School's continued financial success requires:
 - Clinical and research growth from:
 - new recruits,
 - faculty productivity, and,
 - efficient, cost effective operations.
 - Additional space to support education, research and clinical operations.
 - Philanthropy support according to capital campaign goals.

Action Plan to Meet Financial Challenges



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- Establish positive margin targets for every department and incentives to encourage achievement.
- Continued research & clinical growth from new recruits:
 - 100+ researchers for CSM
 - Additional clinicians based on business plans
 - Productivity of existing faculty.
- Generate more program space from moving Administrative Services off campus.
- Philanthropy support according to Capital Campaign goals.

Research Faculty Survey



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Survey conducted in Spring/Summer 2010

- 287 faculty responded (38% response rate)

Purpose - to assess overall satisfaction with:

- Research support services
- Institutional support services
- Teaching responsibilities
- Conflict of Interest issues
- Faculty development
- School policies and work environment

Research Faculty Survey



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Overall Conclusions

- 75% of respondents agree that Mount Sinai promotes Basic Science research and reputation
- The most satisfied respondents were new recruits or long-term faculty
- There are broad opportunities for research collaboration (across departments, labs, basic and clinical, outside MSSM)
- NIH and financial COI regulations and Mount Sinai's implementation are well understood
- GCO, IACUC and Academic Computing received the highest satisfaction ratings

Research Faculty Survey- Highest Scores

(Ranked by score-high-low)

Education

- Helpfulness of Graduate School & Post-doc office staff
- Opportunity to teach in the Medical and Graduate School
- Equity in teaching assignments in the Medical and Graduate School
- Academic Computing

Research

- Library Resources/Education/Support
- Inter-laboratory and inter-departmental collaboration
- Grants & Contracts Office

Institutional Policies and Work Environment

- Appreciation for and understanding of NIH/COI Disclosure Policies
- Promotion of Basic Science
- Computing Resources, network & data exchange

Research Faculty Survey- Lowest Scores

(Ranked by score-high-low)

Education

- Faculty development opportunities for Graduate School educators
- Recognition and reward for teaching effort
- Administrative support for Medical Education teaching

Research

- Sufficient mentorship of junior faculty
- Research is rewarded equitably compared to clinical and teaching activities
- Effective interfaces between Departments and Institutes

Institutional Policies and Work Environment

- Engineering
- Usefulness of website
- Construction
- Space Planning

Research Faculty Survey – Next Steps

August

- Survey distributed to Chairs and Department Heads
- Departments asked to develop actions plans in response to survey results

September

- Action plans submitted to Dean's Office for review

October

- Approved plans implemented

Will use web to communicate additional details

Follow-up survey will be conducted in the future to monitor satisfaction

Lessons from Lewis & Clark's Expedition 1804-6

United States' first official exploration into unknown spaces



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In May 1804, Capt. Meriwether Lewis and William Clark headed up the Missouri River with 45 men and a well-stocked keelboat.

They would be the first American citizens to experience the Great Plains, to see the daunting peaks of the Rocky Mountains and struggle over them, and after encountering cold, hunger, danger, and wonders beyond belief – they would become the first of their nation to reach the Pacific Ocean by land. They wrote the first scientific descriptions of an astounding 178 plants and 122 animals.

How did they do it?

Lewis & Clark were great friends and molded their men into a great team

They demonstrated that there is almost nothing that people cannot do if they support each other

They knew each man's strengths and were willing to trust and rely on each other when needed

The men shared their hopes, dreams and came to love each other and would sacrifice their life for each other

They had developed a bond - to become a band of brothers

Together, they were able to accomplish feats that astonish us even today

What were they called?

The Corps of Discovery

Accelerating Science
Advancing Medicine

Achieving and Maintaining
Greatness

The Mount Sinai Corps of Discovery



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A Band of Scientists

with

No boundaries or silos

who

Know each other's strengths

and

Can work collaboratively

with

Synergism and no competition

providing

Great mentorship to each other

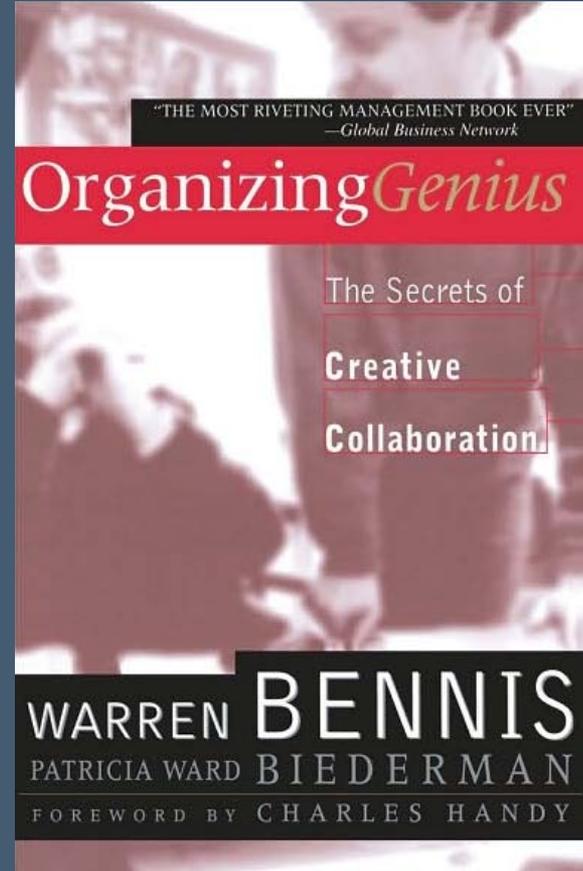
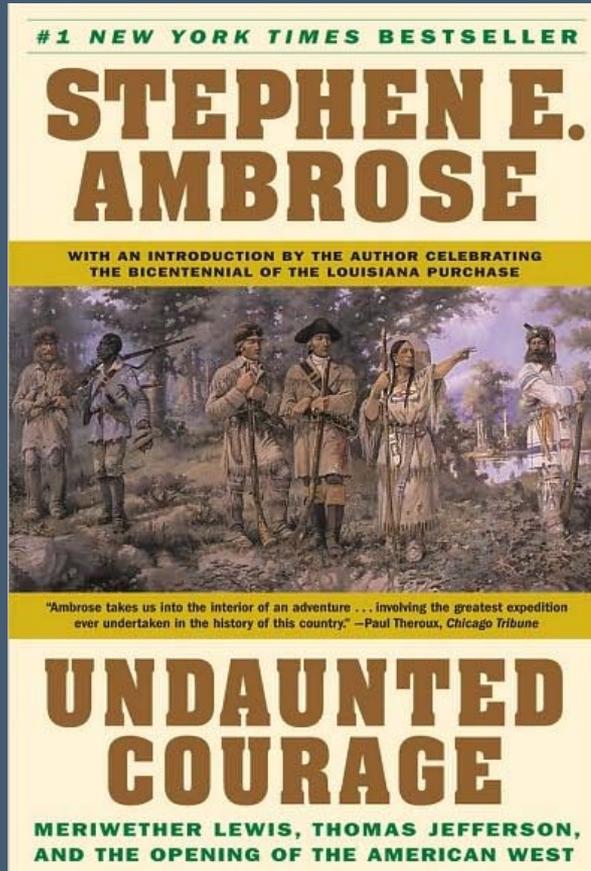
will be

Amazed by what can be accomplished.....TOGETHER

We'll buy'em –If you'll read'em



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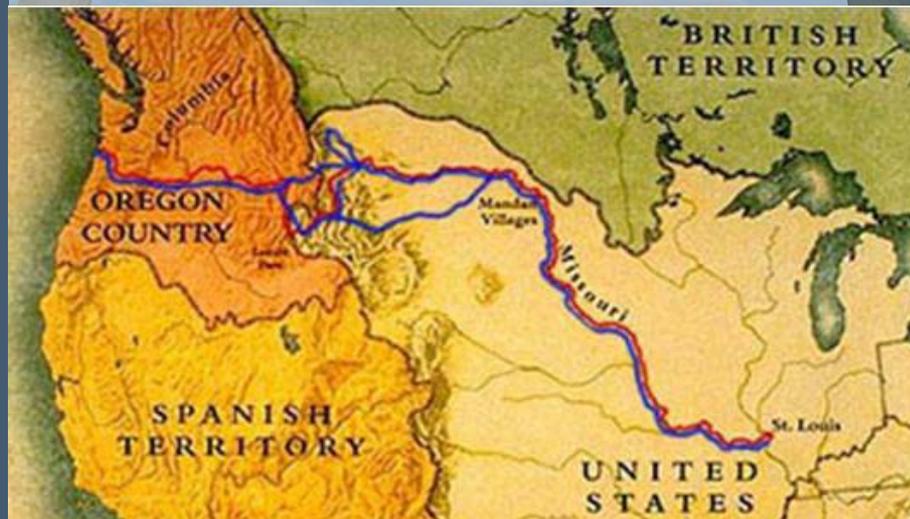
Contact: paulette.moore-akonnor@mssm.edu

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The Mount Sinai
Corps of Discovery
Seek the Ocean of Knowledge



Center for Science and Medicine-Occupancy 2012



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Help meet the strategic plan goals of excellence in translational research
Explore new horizons and discover breakthrough cures for today's diseases



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