

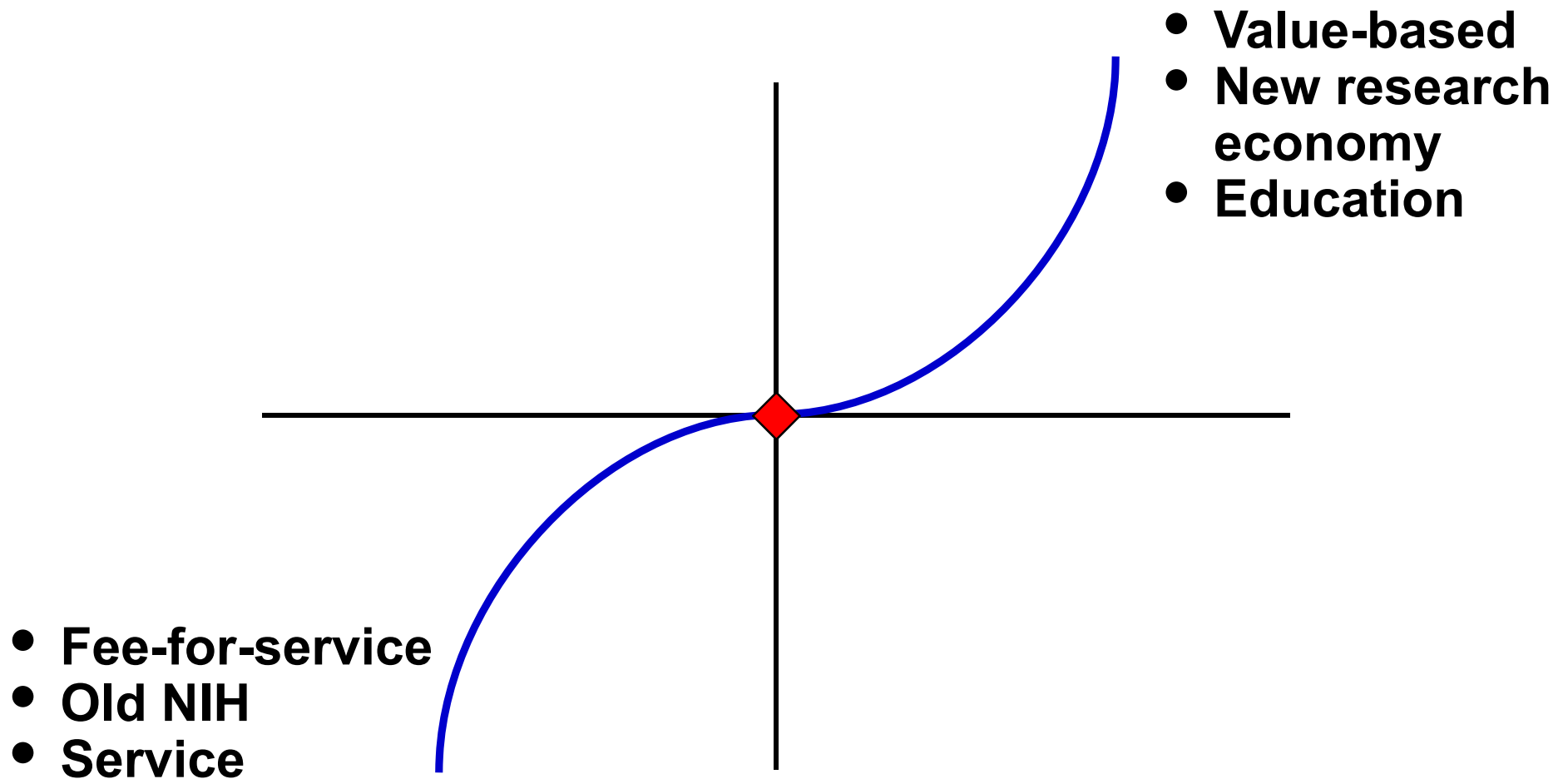
State of the Department

David A. Schwartz, MD



University of Colorado
Anschutz Medical Campus

We're at an Inflection Point



Departmental Mission

Mission: Improve human health by fostering the development of outstanding interdisciplinary programs in patient care, education, and research that serve the community, region, and nation



Departmental Vision

Vision: We will emerge as a top tier Department of Medicine by the year 2020





UCH
(N=522)

PSL
(N=13)

NJH
(N=58)

DH
(N=114)

VAMC
(N=67)

Outstanding Departmental Leadership

	Clinical	Education	Research	Quality	Faculty Advancement	Veterans Affairs
Allergy						
BIPM						
Cardiology						
Clinical Pharm						
Endocrinology						
Gastroenterology						
Geriatrics						
GIM						
Hematology						
HCPR						
Infectious Diseases						
Oncology						
Pulmonary						
Renal						
Rheumatology						



Clinical

Education

Research

Quality

Faculty Advancement

Veterans Affairs

Allergy

BIPM

Cardiology

Clinical Pharm

Endocrinology

Gastroenterology

Geriatrics

GIM

Hematology

HCPR

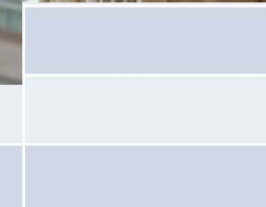
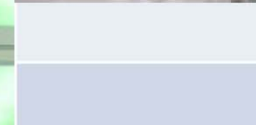
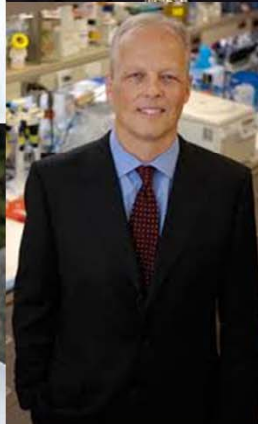
Infectious Diseases

Oncology

Pulmonary

Renal

Rheumatology



Committed to Alignment across the Medical Center [DOM, SOM, UPI, UCH, and Health System]



State of the Department

- Accomplishments (over past 5 years)
- Strategic Approach
- Five Year Plan



Clinical Enterprise

- **5 Year Growth**
 - ❑ **40% increase wRVUs (60% inpatient/25% outpatient)**
 - ❑ **80% (\$40M) increase in clinical income that is approaching \$100M annually**
 - ❑ **65% increase in clinical FTEs: FY11 (N=124) → FY15 (N=205)**
- **Hospitalists care for ≈30% of all patients admitted to UCH**
- **Non-proceduralist program: enhanced access, improved productivity, and improved profits for allergy, endocrinology, hematology, infectious diseases, renal, and rheumatology (↑wRVUs by 27% and productivity/efficiency by 15% in 2 years)**
- **Re-engineered established programs and created new programs**

Re-Engineered Bone Marrow Transplantation

- **2011-2015**
 - ❑ Changed leadership, and joined BMT and Hematology
 - ❑ Recruited 4 new faculty (lymphoma, myeloma, and cell therapy programs) and expanded roles of APPs
 - ❑ Established survivorship program and outreach program
 - ❑ Developed a BMT fellowship
- **Outcomes**
 - ❑ Doubled inpatient volumes and doubled BMTs
 - ❑ BMT survival rates in top 10% nationally
 - ❑ Patient satisfaction >95%





Center for Lungs and Breathing

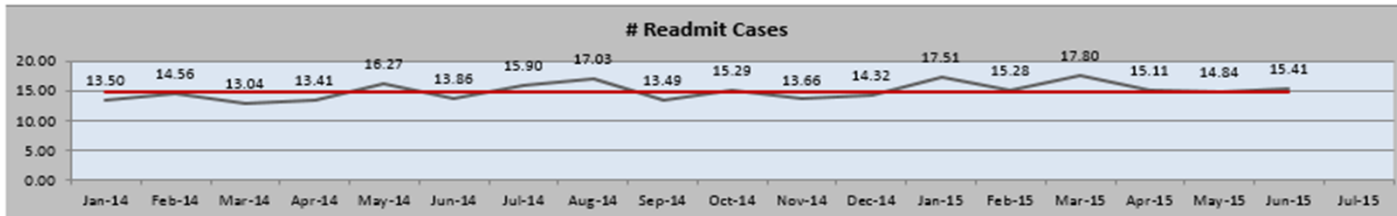
- Pulmonary, Allergy, Rheumatology, Oncology, Thoracic Surgery, and ENT
- Airway disease, advanced lung disease, lung cancer, pulmonary vascular disease, and allergy
- Programs in sleep and advanced bronchoscopy
- Link inpatient to outpatient to community
- Recruitment, marketing, and outreach

9% growth in out-patient volumes and wRVUs in Q1 FY16

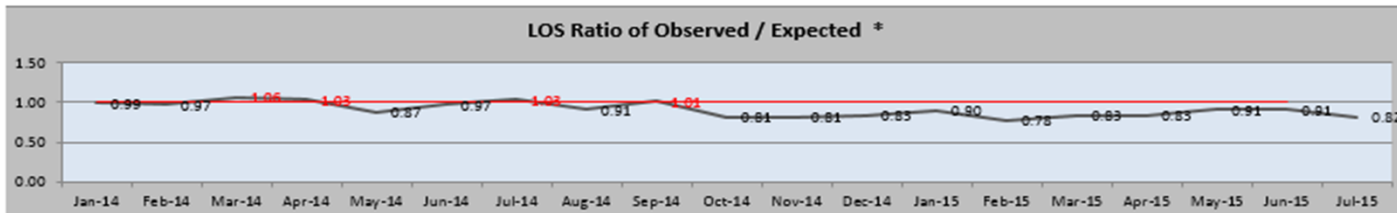
Quality Improvement Program



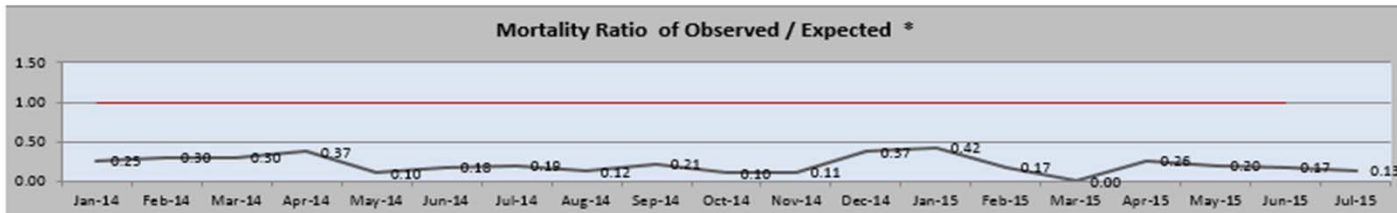
30 day Readmission, LOS, and Mortality



Month and year	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15
% 30 Day Readmit	13.50	14.56	13.04	13.41	16.27	13.86	15.90	17.03	13.49	15.29	13.66	14.32	17.51	15.28	17.80	15.11	14.84	15.41	
Median	14.98	14.98	14.98	14.98	14.98	14.98	14.98	14.98	14.98	14.98	14.98	14.98	14.98	14.98	14.98	14.98	14.98	14.98	
# of 30 Day Readmit Cases	66	68	42	68	55	75	79	93	65	78	59	69	100	81	68	79	76	96	
# of Hospitalist Cases	493	472	325	513	339	544	500	548	486	512	434	489	581	533	382	528	516	627	

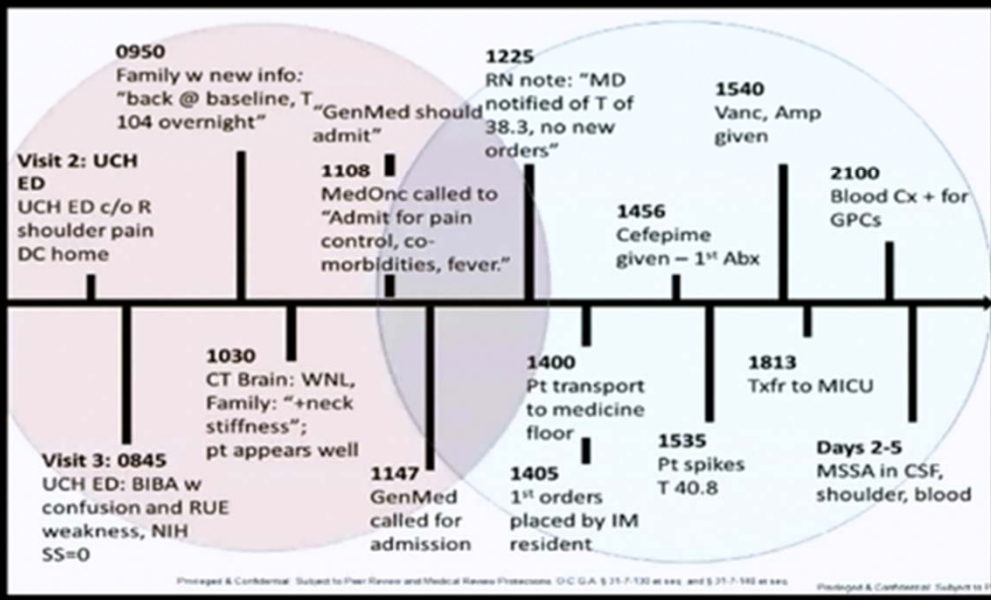


Month and year	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15
LOS: Obs / Exp	0.99	0.97	1.06	1.03	0.87	0.97	1.03	0.91	1.01	0.81	0.81	0.83	0.90	0.78	0.83	0.83	0.91	0.91	0.82
Mean LOS (Obs)	4.89	5.15	5.77	5.19	4.32	4.99	5.44	5.11	5.48	4.54	4.36	4.62	5.17	4.25	4.62	4.45	4.93	5.43	4.50
Mean LOS (Exp)	4.96	5.31	5.42	5.06	4.99	5.17	5.28	5.64	5.41	5.58	5.36	5.59	5.77	5.41	5.57	5.33	5.40	5.96	5.49
# of Hospitalist Cases	493	472	325	513	339	544	500	548	486	512	434	489	581	533	382	528	516	626	527



Month and year	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15
Mortality Obs / Exp	0.25	0.30	0.30	0.37	0.10	0.18	0.19	0.12	0.21	0.10	0.11	0.37	0.42	0.17	0.00	0.26	0.20	0.17	0.13
% Death (Obs)	0.81	1.06	0.92	1.17	0.29	0.55	0.60	0.36	0.82	0.39	0.46	1.43	1.72	0.56	0.00	0.95	0.78	0.64	0.38
% Death (Exp)	3.23	3.53	3.10	3.17	2.93	3.14	3.20	3.15	4.01	3.75	4.31	3.85	4.13	3.35	3.59	3.68	3.90	3.80	2.93
# of Deaths	4	5	3	6	1	3	3	2	4	2	2	7	10	3	0	5	4	4	2
# of Hospitalist Cases	493	472	325	513	339	544	500	548	486	512	434	489	581	533	382	528	516	626	527

Interdisciplinary Morbidity and Mortality

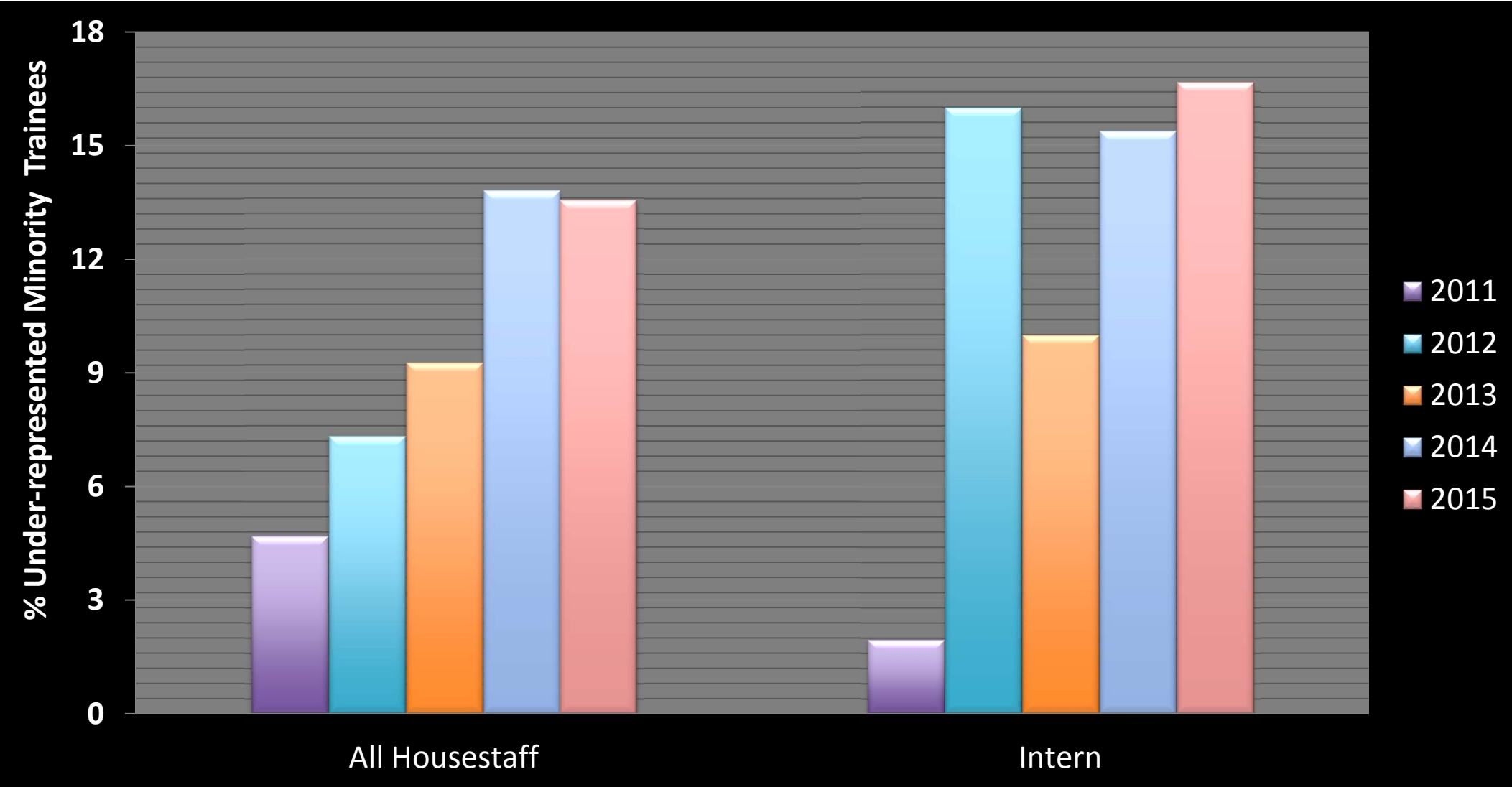


- Quarterly Medical Grand Rounds
- Interdepartmental MGRs: Emergency Medicine, Pediatrics, Psychiatry, and Radiology
- Impact
 - ❑ Debate and discussion
 - ❑ Shared commitment to transparency and systems improvement

Education and Training

- **5 Year Growth**
 - ❑ Medical student class has grown by 15% (160 → 184)
 - ❑ More UCD students are applying to our residency program (25% increase over last year)
 - ❑ Housestaff trainees increased by 25% (154 → 193)
 - ❑ Intern URM trainees increased 10-fold (1 → 10)
 - ❑ NIH T32 training programs increased from 8 to 10, and trainees increased by at least 30% (120 fellows currently)
- **Focus on career development and training pipeline**
 - ❑ Dedicated mentorship with focus on career development
 - ❑ Physician-Scientist Training Program (2011)
 - ❑ General medicine team staffed by physician-scientists
 - ❑ Medicine-Pediatrics Training Program (2014)
 - ❑ Clinician-Educator track for subspecialty fellows (2015)

Diversity of our Housestaff





Colorado-Zimbabwe International Exchange (CoZIE) Program

- Collaboration between DOMs at Universities of Colorado and Zimbabwe
- Goals
 - ❑ Meaningful exposure to different approaches to healthcare
 - ❑ Exchange of teaching methods
 - ❑ Develop research collaborations
- Bidirectional exchange of housestaff and faculty (fellows added in the future)

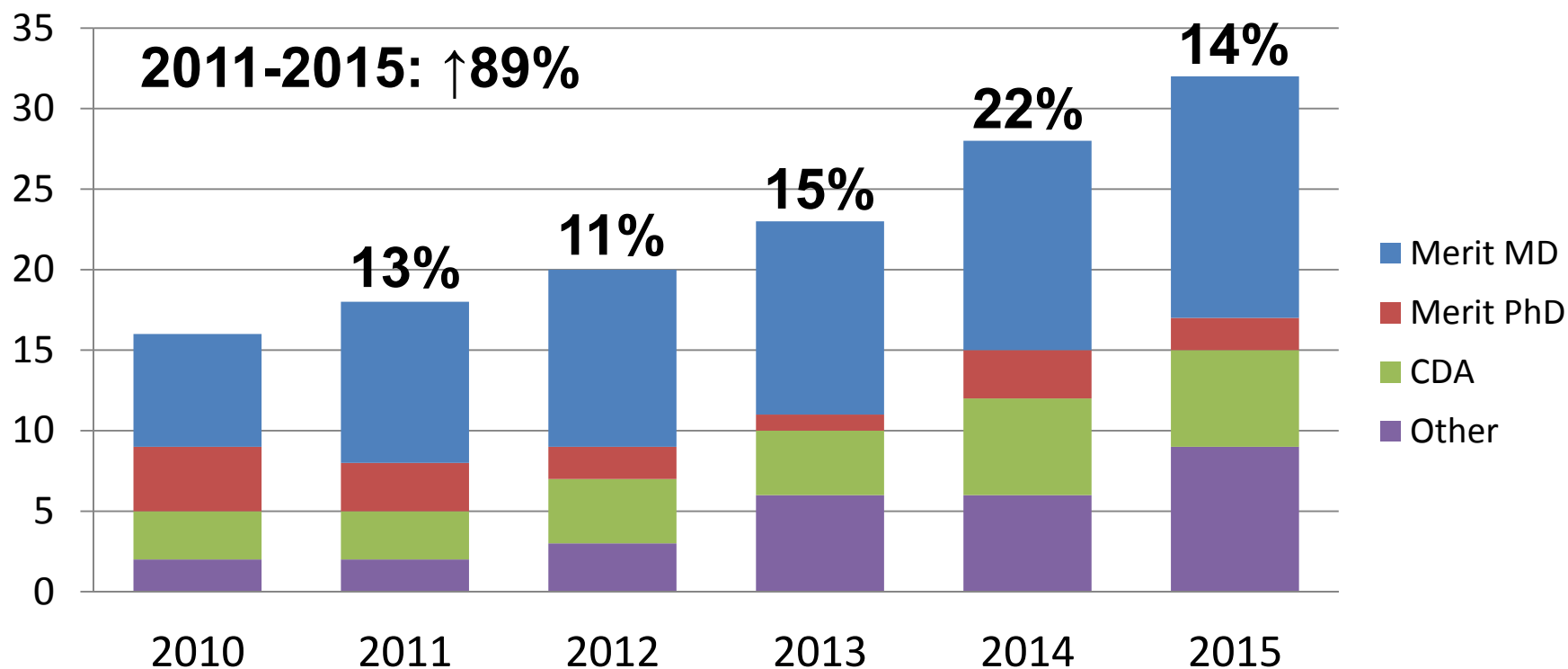


Research

- **5 Year Growth**
 - ❑ Overall research support has increased by 14% (FY15=\$93M)
 - ❑ Federal support increased by 18% (FY15=\$57M)
 - ❑ NIH support decreased by 9.7%/↓\$5M (2nd to ARRA funds)
 - ❑ CU Foundation support increased by 45% (FY15=\$12M)
 - ❑ DOM support increased by 80% (FY15=\$8M) for division heads and recruitment/retention of faculty
- **Career development, recruitment, and retention**
 - ❑ Forum for Research: Research and Innovation Conference
 - ❑ Partner in Research: Outstanding Early Scholars, Bridging Research, Team Science, and Sabbatical Support Programs
 - ❑ Commitment to our investigators: \$2.5M to retain 6 faculty
- **Interdisciplinary research programs: lung cancer, geriatrics, palliative care, pulmonary vascular disease, obesity and CVD, women's health, mucosal inflammation program, and early rheumatoid arthritis**



Research Awards



GRECC not included

Outstanding Early Scholars Program

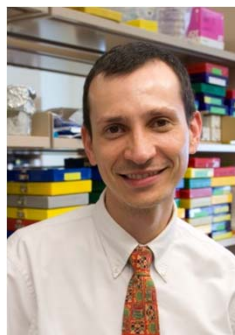
[\$75K/year x 5 years]



Larry Allen, MD
Cardiology



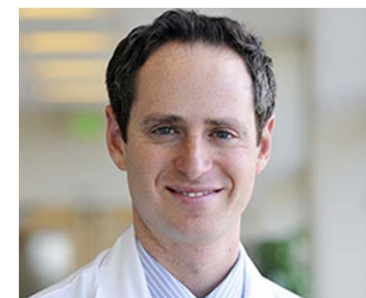
Steven Bradley, MD
Cardiology



Brian Graham, MD
Pulmonary



Daniel Matlock, MD
Internal Medicine



Daniel Pollyea, MD
Bone Marrow Transplant



Mario Santiago, PhD
Infectious Diseases



Eric Schmidt, MD
Pulmonary



Sachin Wani, MD
Gastroenterology



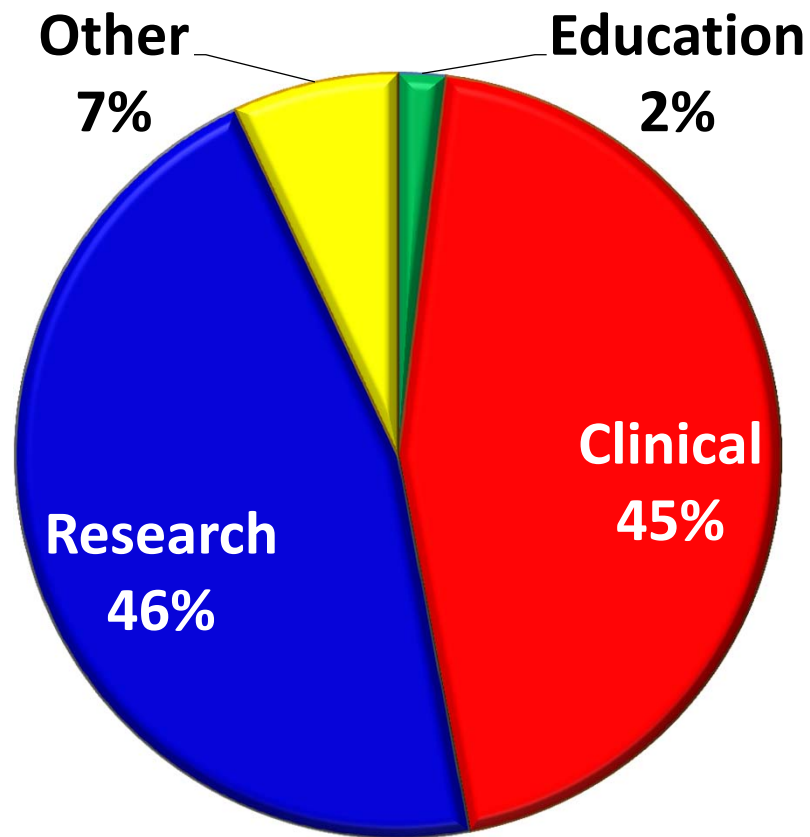
Rachel Zemans, MD
Pulmonary

Finances

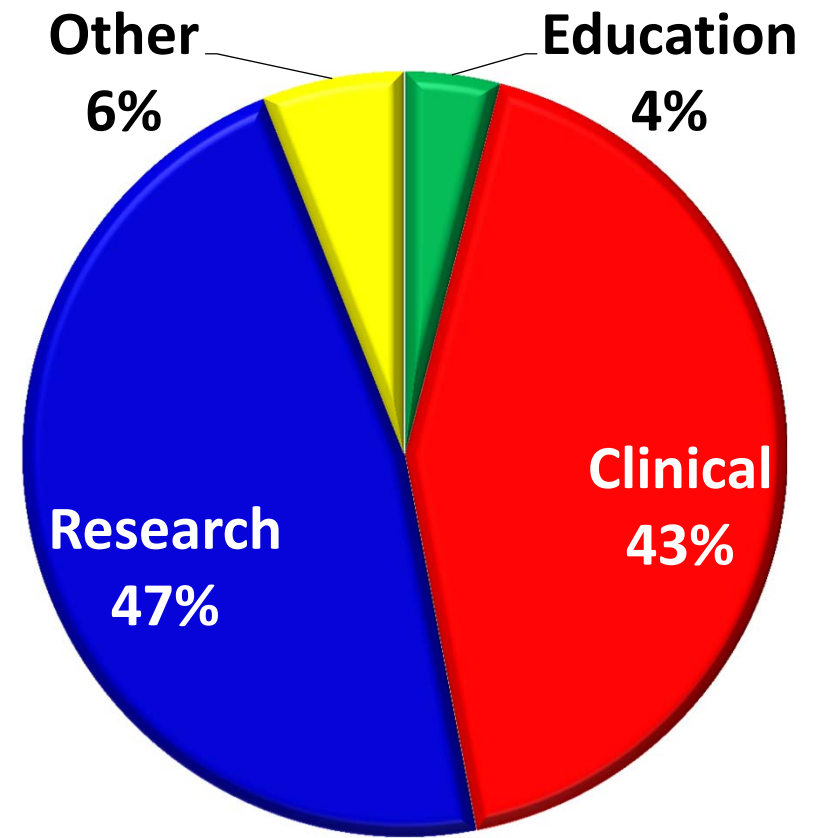
- **5 Year Growth**
 - **DOM FY11→FY15**
 - **↑revenue: \$48.7M (32%)**
 - **↑expenses: \$38.2M (25%)**
 - **Divisional FY11→FY15**
 - **↑profit margin: \$5.4M (213%)**
 - **↑incentives: \$3.1M (220%)**
- **Outstanding and dedicated faculty**
- **Sound fiscal stewardship**
- **Alignment with SOM, UPI, UCH, and Health System**
- **Diversified sources of revenue: patient income, research grants, state appropriations, UCH support, philanthropy, and contracts**

FY15 Revenue and Expenses

Revenue (\$202M)



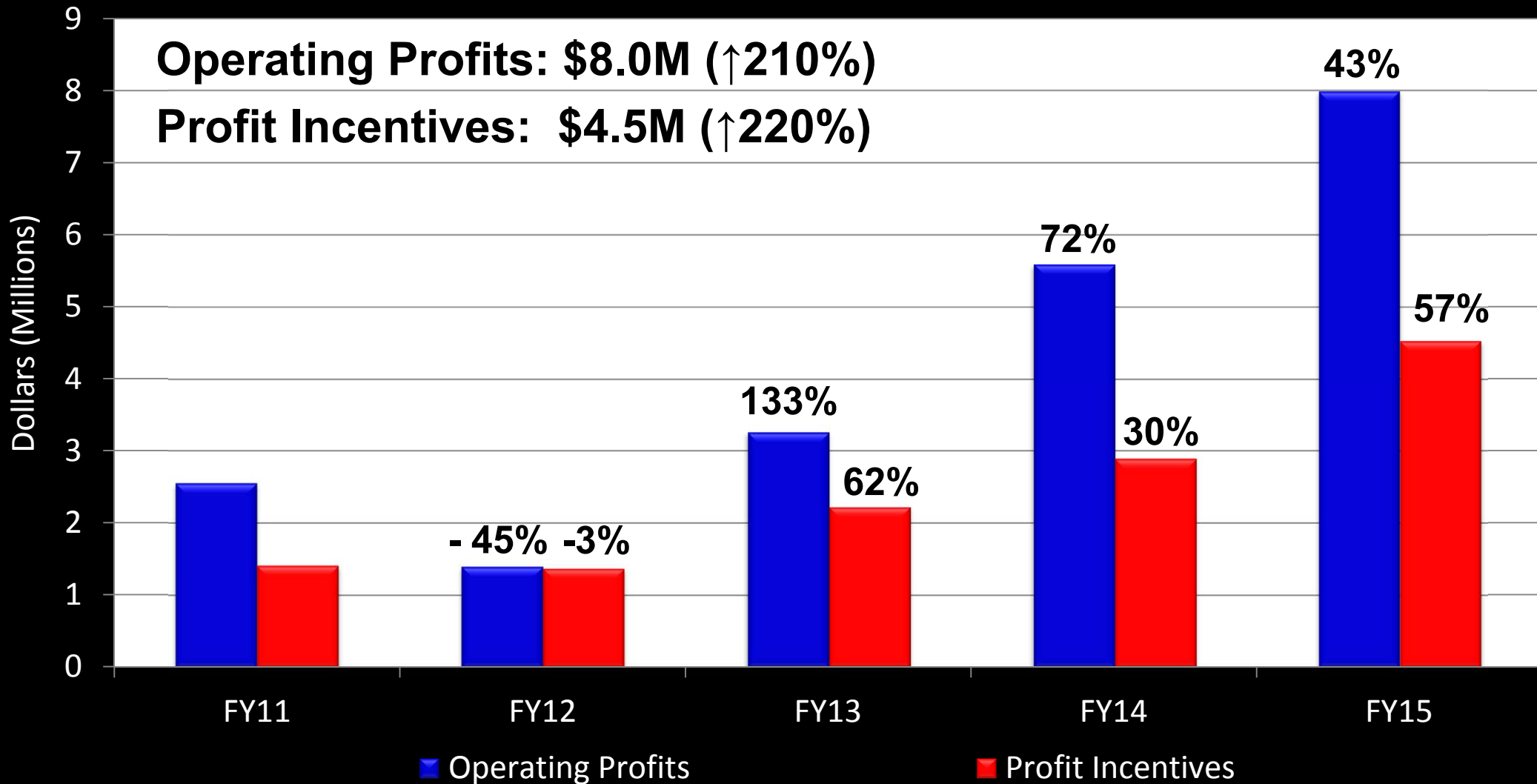
Expenses (\$193M)



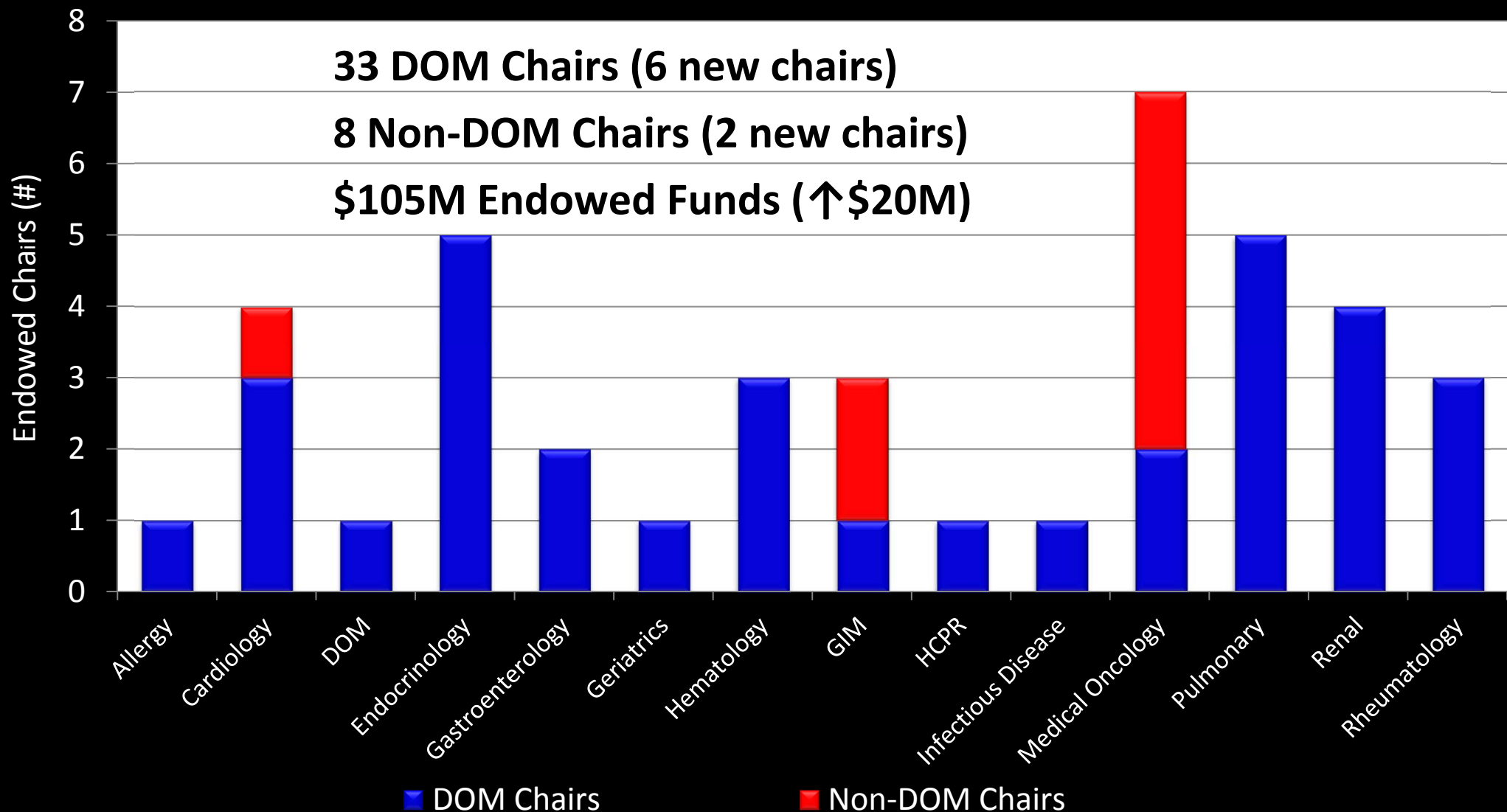
Incentivize and Reward Faculty

Operating Profits: \$8.0M (↑210%)

Profit Incentives: \$4.5M (↑220%)



Endowed Chairs held by DOM Faculty



US News and World Report Rankings

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Cancer	34	34	23	15	15
Cardiology	---	---	---	---	40
Endocrinology	---	48	---	34	30
Gastroenterology	---	---	---	46	42
Geriatrics	---	---	---	---	43
Pulmonary	1	1	2	2	2
Renal	16	42	32	18	12
Rheumatology	17	17	---	---	---

State of the Department

- Accomplishments
- **Strategic Approach**
- Five Year Plan



Principles and Values

- Recruitment, support, and retention of outstanding faculty
- Thoughtful approaches to career development
- Prioritize interdisciplinary programs
- Balanced growth while maintaining our mission, focus on career development, and commitment to innovation
- Collective values:
 - ❑ Outstanding patient care
 - ❑ Accomplishments of clinicians, educators, and investigators
 - ❑ Diversity and equity
 - ❑ Strong partnerships
 - ❑ Transparency and accountability

Faculty Advancement

- **Early career development and mentoring**
 - **Faculty orientation (≈100 new faculty each year)**
 - **Comprehensive mentorship program**
 - **Mid-course reviews with promotion/tenure training**
 - **Mentor Training Program (Greg Austin)**
- **Senior leadership development initiative**
- **Sabbatical support program**
- **Integration with campus resources**



DOM Sabbatical Financial Aid Program

[\$400,000/year]

- **Goal is to enhance our expertise and competitiveness**
- **Support innovation among clinicians, educators, and investigators**
- **Application deadlines**
 - ❑ **March 1 for a January 1 start date**
 - ❑ **September 1 for a July 1 start date**
- **DOM financial support is considered in parallel with the standard SOM/CU Sabbatical Application**



***Inaugural Recipient
Ernesto Salcedo, MD***

**Multinational project for imaging guidance of
structural heart disease interventions**

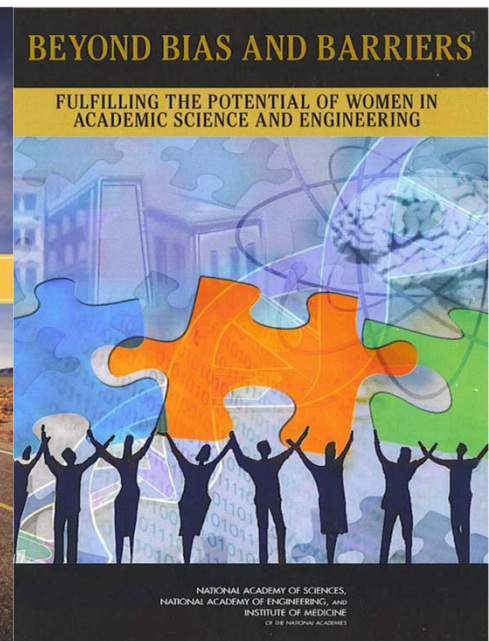
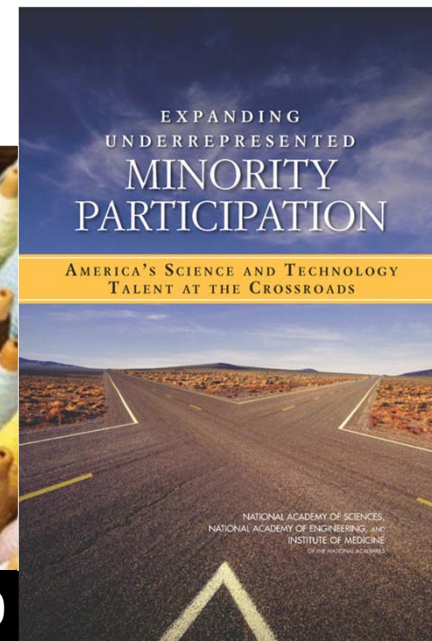
Diversity and Equity

- **DREAM Program:** research training for URM medical students
- **AAMC year-in-rank benchmarking of salary** improved gender-based salary inequity

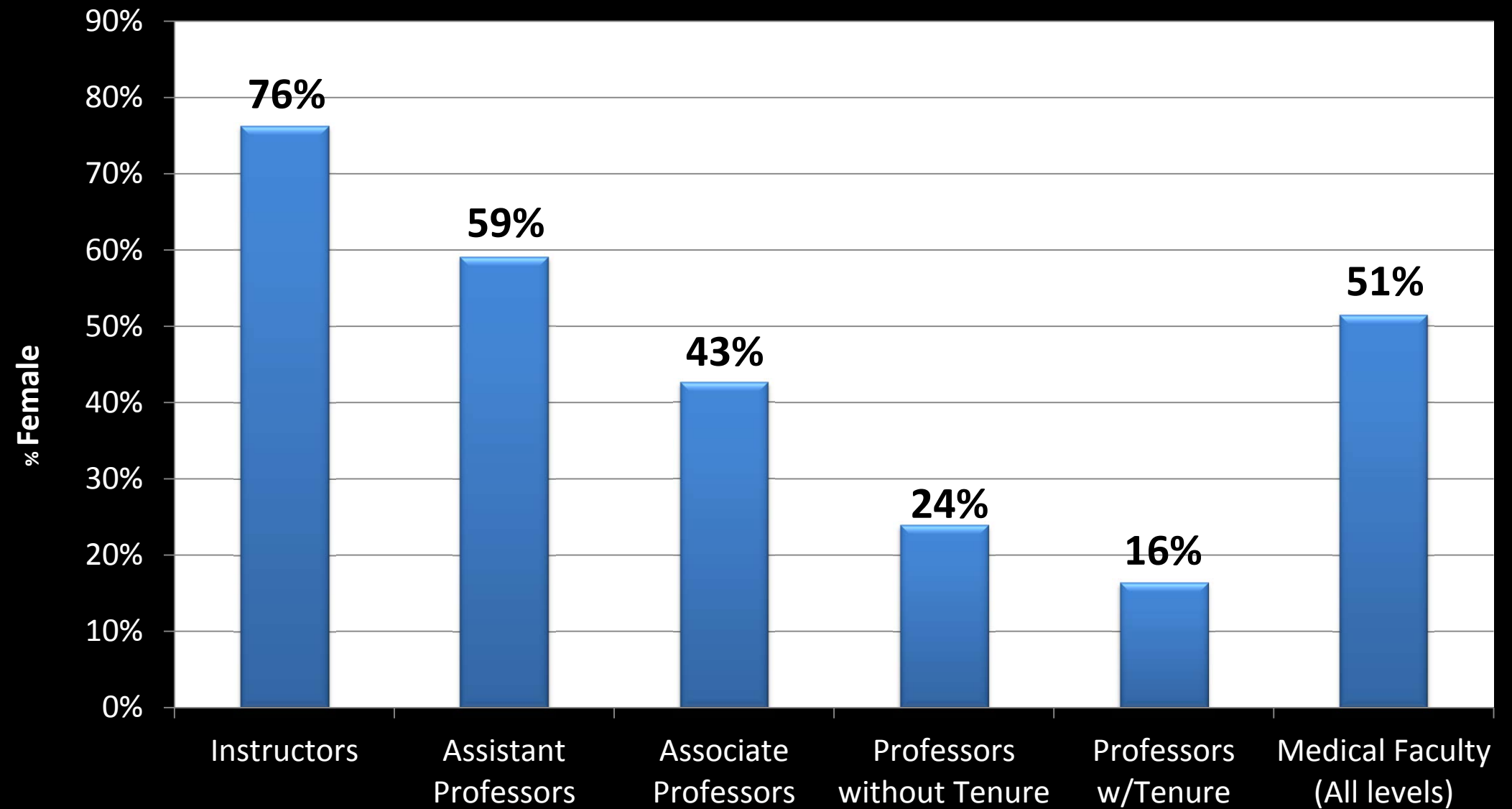
Housestaff	2011	2015
Interns	2.0%	16.7%
R1→R3	4.7%	13.6%



Tabak/Collins. *Science* 2011; 333:940



Female Faculty by Academic Rank





Support Investigators to Focus on Research

Research Office

Sean Colgan, PhD
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Marc Moss, MD
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Chris Brands
Grants Manager
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Sheryl Hartmann
Grants Coordinator
Sheryl.Hartmann@ucdenver.edu
303-724-1786

Jennifer Kemp
Grant Writer
Jennifer.T.Kemp@ucdenver.edu
303-724-9546

Grant Writing Assistance

Proposal development, writing, and editing support for early investigators and programs

Research Funding Programs

Outstanding Early Scholars Program, Bridging Research Program, Team Science Program, and Sabbatical Support Program

Clinical Research Support

Key resources and access to DOM-specific regulatory assistance

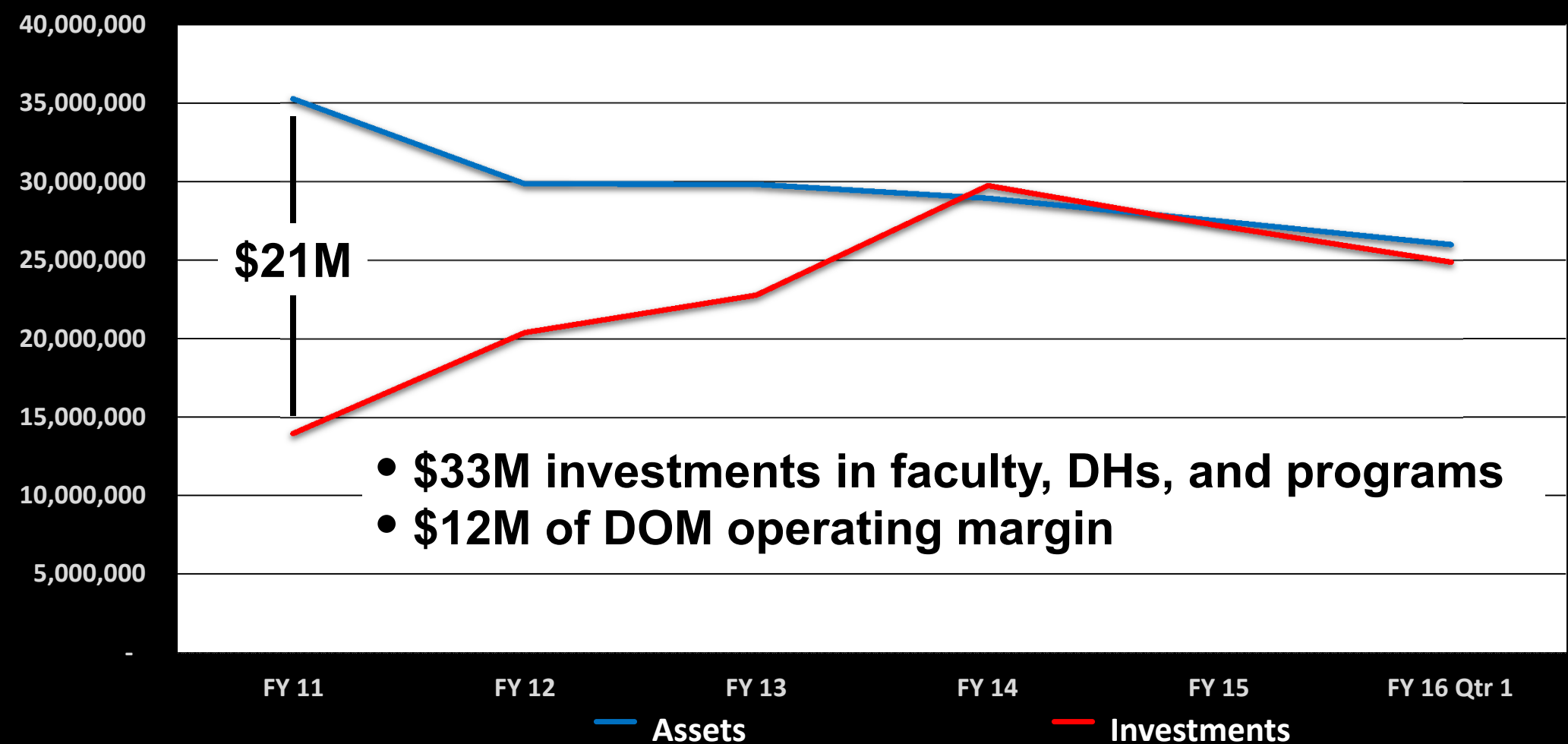
Divisional Grant Support

Pre- and post-award support augmenting divisional grant management

[medschool.ucdenver.edu/ DOMResearch](https://medschool.ucdenver.edu/DOMResearch)

DOMResearch@ucdenver.edu

Financially Committed to our Faculty



Strong Partnership with UCH

Division	FY 11	FY 12	FY 13	FY 14	FY 15 (Estimated)
Allergy	29,332	37,038	37,038	77,038	77,038
Cardiology	2,316,029	2,584,834	2,407,137	2,725,998	2,646,985
Endocrine	86,731	141,111	236,405	183,000	196,000
Gastroenterology/Hepatology	781,867	769,642	760,095	738,872	836,393
General Internal Medicine	2,906,264	2,878,114	4,205,785	4,247,605	5,663,714
Geriatrics	37,769	15,000	15,000	35,000	44,972
Heme/BMT	1,120,742	1,352,306	1,296,470	1,574,793	2,097,894
Infectious Disease	393,888	385,402	406,321	644,604	689,759
Medical Oncology	1,867,797	2,226,742	2,476,390	2,996,724	3,758,141
Pulmonary	932,737	1,148,700	1,252,941	1,449,742	1,566,575
Renal	500,927	519,819	506,226	501,153	520,882
Rheumatology	41,020	50,000	80,000	97,600	91,315
Total Support	11,015,103	12,108,708	13,679,808	15,272,129	18,189,668

State of the Department

- Accomplishments
- Strategic Approach
- Five Year Plan



Our Ambitions: *Great to Awesome*

- High quality, patient-oriented, innovative care that improves the lives of our patients
- Train leaders in medicine
- High impact science that changes our basic concepts of disease, disease pathogenesis, and health care



Clinical: *improve the lives of our patients*

- **Value the expertise of our clinicians**
- **Develop interdisciplinary programs, and integrate clinical growth with education and research programs**
- **Expand primary care in partnership with family medicine, the Health System, and the community**
- **Coordinate growth in DOM with other departments, UCH, and the Health System**
- **Enhance access to QI data and expertise, especially given shift from volume to value models of health care**
- **Maximize benefits with our affiliated medical centers**

Education: *train leaders in medicine*

- **Double down on what's working: career development, growth of under-represented minorities, and recruitment of CU students into internal medicine**
- **Rebalance education and service activities in residency**
- **Grow clinician-educators from within to meet career goals of trainees and populate the DOM/Health System**
- **Find out what we could do better: external review of program to provide guidance for achieving educational goals and maximizing outcomes**

Research: *change our concepts of disease*

- **Support and reward the spectrum of research**
- **Support career development through role modeling, mentorship, recruitment, retention, and sabbaticals**
- **Diversify sources of research support by supporting an entrepreneurial environment**
- **Expand interdisciplinary science**
 - **Integrate research with outstanding clinical programs**
 - **Recruit interdisciplinary investigators**
 - **Incent/support programmatic and team science**
- **Provide support for a sustainable component of the salaries of research intensive MD and PhD faculty**



We will succeed through Your Accomplishment

- Enhance the lives of our patients
- Train leaders in medicine
- Change our basic concepts of disease

“To wrest from nature the secrets which have perplexed philosophers in all ages, to track to their sources the causes of disease, to correlate the vast stores of knowledge, that they may be quickly available for the prevention and cure of disease – these are our ambitions”, Sir William Osler