

**Department of Surgery
FY 2015 Annual Report
July 1, 2014 to June 30, 2015**

EXECUTIVE SUMMARY

The Department of Surgery completed another successful year in FY 2015. The Department continues to increase and strengthen its core mission of education, patient care, and research. The entire departmental faculty has contributed to these activities. The past fiscal year included recruitments of high quality faculty, clinical program development, investment in research programs, and success in attaining research funding. We completed the national search for a Chief of Thoracic Surgery and were successful in recruiting Dr. Joseph Friedberg. We added six faculty to the Department and a new Senior Administrator. The past year also included transition as we issued nine non-renewal letters and received six resignations.

CLINICAL OVERVIEW

Overall, the clinical mission of the department experienced significant growth in FY 2015. The clinical programs primary case volume at UMMC in FY 2015 was 8,819 representing a 4.6% increase over FY 2014. Overall case volume at system and non-system hospital increased to 14,934 representing a 10.6% over FY 2014. System hospitals that supported our case growth include UMSJ (20.1%), UM-Midtown (37.8%), and UMUC (14.1%). We also increased our UMMC Cath Lab volume by 19.4%, transferring cases from the O.R. to a more cost effective and efficient location. Clinical Revenue increased by \$2,381,546, representing an 11.5% increase over FY 2014. Our faculty wRVU productivity increased by 6.8% over FY 2014. We have not yet closed our financial books for FY15, so we do not have a profit and loss statement to share at this time. However, we are anticipating that we will exceed budget for FY2015.

CLINICAL HIGHLIGHTS

- Cardiac Surgery surpassed JHM as the market leader in Maryland
- The University of Maryland multidisciplinary mitral valve team performed the first transcatheter mitral valve repair in Maryland
- The Cardiac Surgery team lead by Si Pham implanted the Hemoplus respiratory dialysis machine, saving the life of a 31 year old patient as a bridge to transplant. This was the second time this was performed in the U.S.

- Established cardiac surgery program at the Dimensions/Prince Georges Hospital completing 85 cases in FY15
- The University of Maryland established the Mesothelioma and thoracic oncology treatment and research center – The most comprehensive mesothelioma center in the country
- UMMC established the thoracic intermediate unit (TIMC) – The first fully integrated general thoracic nursing unit in the region
- Performance of the first robotic thoracic surgical procedure at the UMMC
- Thoracic Surgery team initiation of Multidisciplinary Airway and Esophageal Programs
- Thoracic Surgery team initiation of Lung Cancer Screening and Thymic Disorder Programs
- Liver Transplant program surpassed JHM as the market leader in Maryland
- Transplant Team established a 1-mth observational training program for Dow University of Health Sciences, Karachi, Pakistan

COST SAVINGS INITIATIVE (CSI)

- With implementation of Maryland's All-Payer Hospital System Modernization Initiative, the HSCRC has initiated a model with a shared goal to develop a health care system that enhances patient care, improves health outcomes and lowers costs.
- In FY15 the Department of Surgery partnered with the UMMC to develop a shared cost savings initiative with the goal to review all inpatient operations and incorporate efficiencies to reduce UMMC's surgical costs while maintaining patient safety, improving quality and outcomes.
- Dr. Bartlett commissioned the Department's four largest divisions (Cardiac, General/Surgical Oncology, Transplant & Vascular surgery) to take on this challenge.
- Everything from LOS and readmissions to supply chain standardization, blood usage and pharmaceuticals were reviewed.
- The Department worked with the UMMC to setup a transitional care center (TCC) to monitor post-operative patient outcomes and manage readmissions
- The Department worked with the UMMC to diligently review pre-operative and post-operative LOS patterns, changing rounding times and working closely with nursing, rehab, case management and patient's families to discuss patient needs so efficient patient discharges could be achieved
- FY15 savings to UMMC = \$2,338,425
- FY15 Incentive to Surgery = \$467,685
- The Department will continue this initiative in FY16

RESEARCH

- 109 Grant Applications this Fiscal Year
- 22 New NIH applications
- 10 NIH sub-contract applications
- 20 other-Federal applications
- 57 Corporate and Foundation sponsored applications

- 55 new awards TO Date
- 8 NIH awards/sub-contracts
- 10 other-Federal awards
- 37 Corporate or Foundation award
- Department of Surgery ranked 21th in NIH funding for all Departments of Surgery in CY 2014 up from 24th in CY2013

Notable New Awards:

- A \$1.8M gift from United Therapeutics to the UMBF in support of Dr. Pierson's lung xenotransplantation research.
- An extension of NIH U01 grant for Dr. Pierson's study of Immunomodulation for Heart Allograft Tolerance and renewal of an NIH U19 subcontract for a project to study the Coagulation and Adhesion Pathway to Protect Lung and Liver Xenografts
- Two grant awards from the Air Force Office of Sci. Research for Dr. Stein 's work , Transport Assessment for Critical Traumatic Injuries, and for Assessing the Impact of Standard-practice Ventricular Drainage
- A \$250K annual grant from the Living Legacy Foundation to support Transplant and Cardiac Surgery projects
- MII award from MD TEDCO for Dr. Xu's Development of Anti-Thrombosis Antibody
- Two new NIH R01 awards for Dr. Bromberg's work on the Role of Lymphotoxin in the Induction and Migration of Regulatory T cells and on the Role of Laminins in Lymph Node Structure and Function

Submitted NIH RO1 Proposals, Pending Review

- Dr. Bromberg for a study of microbiota as a target to improve transplant outcomes
- Dr. Wang for a renewal of his Surgical Studies of Gut Permeability
- Dr. Kaushal for the Proteomic Characterization of Resident Cardiac Stem Cells
- Dr. Stickland for a study titled, "Mechanisms by which LRP1 protects the Vasculature"
- Dr. Winkles for a proposal to study the Role of TWEAK/Fn14 pathway activation in tumor cell metastatic colonization

Division Awards

CARDIAC

- Pablo Sanchez was awarded the F. Griffith Pearson Fellowship at Association for Thoracic Surgery and presented during the General Thoracic Surgery Forum entitled: A Novel Large Animal Model of Acute Respiratory Distress Syndrome Induced by Mitochondrial Products

THORACIC

- Basic Science grant application submitted by Dr. James Donahue

- Epidemiologic research grant application submitted by Dr. Shamus Carr
- Cross-Campus collaboration established between Dr. Joseph Friedberg (Baltimore Campus) and Dr. Zhihong Nie, nano researcher, Department of Chemistry (College Park)
- Dr. Linda Martin name lead investigator on Alliance lung cancer clinical trial
- Dr. Joseph Friedberg and Melissa Culligan RN, MS to take lead role in International Thymic Malignancy Interest Group trial for Stage IVa Thymic Tumors
- Initiation of collaborative program integrating lung cancer screening and micro RNA and metabolic products detection for non-small cell lung cancer
- DOD Congressionally Directed Medical Research Program Idea Award Pre-Application Grant submission – *“Combining rare earth nanophosphors, radioisotopes, biodegradable plasmonic nanovessicles and immunotherapy for Photobrachytherapy, a new treatment for mesothelioma”* June 2015
- Grant Application – Mesothelioma Applied Research Foundation - *“Combining rare earth nanophosphors, radioisotopes, biodegradable plasmonic nanovessicles and immunotherapy for Photobrachytherapy, a new treatment for mesothelioma”* July 2015

UROLOGY

- Minhaj Siddiqui is leading the prostate cancer focal therapy study which will use MRI fusion technology to precisely locate a prostate tumor and direct treatment directly to the tumor instead of having to treat or remove entire prostate

VASCULAR

- Rishi Kundi received the Mentored SVS Clinical Grant
- Brajesh Lal received Crest 2 Registry Grant

RESEARCH OVERVIEW

Table 1: New Awards Comparison – Fiscal Year 2015 vs. Fiscal Year 2014

New Sponsor Award	FY2015	FY2014	Variance
NIH direct awards	\$5,002,041	\$5,092,625	-\$90,584
NIH sub-contracts	\$4,086,192	\$2,905,172	\$1,181,020
Corporate	\$958,834	\$913,861	\$44,973
DOD direct and sub-contracts	\$2,263,538	\$2,462,875	-\$199,337
Foundation, State, Other Non-profit	\$605,790	\$1,452,862	-\$847,072
Total	\$12,916,395	\$12,827,395	\$89,000

Table 2: Revenue from Awards - Fiscal Year 2015 vs. Fiscal Year 2014

FY15 vs FY14 Revenues from Awards			
	FY2015	FY2014	Variance
Common Trust	\$57,834	\$30,507	\$27,327
Federal Standard:		\$0	\$0
DOD	\$1,489,326	\$936,933	\$552,393
IPA/Contract	\$660,248	\$480,936	\$179,312
NHTSA	\$0	\$0	\$0
NIH	\$5,426,215	\$6,068,818	-\$642,603
Non-Gov. Deliverable:		\$0	\$0
Corporate	\$1,919,768	\$1,355,124	\$564,644
DOD Subcontract	\$0	\$0	\$0
Foundation	\$287,445	\$176,825	\$110,620
Other non-profit	\$2,000	\$0	\$2,000
NIH Subcontract	\$137,003	\$220,861	-\$83,858
Non-Gov. Standard:		\$0	\$0
Corporate	\$76,684	\$278,156	-\$201,472
DOD Subcontract	\$250,578	\$225,554	\$25,024
Foundation	\$115,988	\$76,558	\$39,430
Other non-profit	\$13,093	\$45,816	-\$32,723
JPA	\$4,450	\$25,926	-\$21,476
NIH Subcontract	\$1,443,302	\$1,097,857	\$345,445
State Standard:		\$0	\$0
MD TEDCO	\$346,803	\$519,437	-\$172,634
NIH Subcontract	\$117,246	\$587,382	-\$470,136
Other (UMCP/UMBC)	\$70,000	\$30,837	\$39,163
Totals	\$12,417,983	\$12,157,527	\$260,456

Table 3: Revenue from Awards by Type - Fiscal Year 2015 vs. Fiscal Year 2014

FY15 vs FY14 Revenues from Awards by Type			
	FY2015	FY2014	Variance
Total NIH	\$7,123,766	\$7,974,918	-\$851,152
Total Other Federal	\$2,404,602	\$1,669,349	\$735,253
Total Other	\$2,889,615	\$2,513,260	\$376,355
TOTAL	\$12,417,983	\$12,157,527	\$260,456

**Table 4: Grant Proposal Submissions (excluding non-competitive renewals & transfers)
Fiscal Year 2015 vs. Fiscal Year 2014**

Type	FY2015		FY2014	
	# submitted	# funded TO DATE	# submitted	# funded
NIH direct -Research	19	3	13	1
NIH direct - Training	1	0	1	0
NIH direct - Fellowship	2	0	0	0
NIH subcontract -Research	10	3	4	1
NIH subcontract -Clin.Trial	0	0	5	4
Other Federal direct -Research	9	1	4	2
Other Federal direct -IPA	6	5	3	2
Other Federal direct -Clin. Trial	1	0	0	0
Other Federal subcontract -Research	2	2	1	1
Other Federal subcontract -Training	2	2	2	2
ALL FEDERAL	52	16	33	13
MD TEDCO direct -Research	4	1	7	1
MD TEDCO direct -Fellowship	3	2	0	0
MD TEDCO subcontract -Research	2	1	3	3
Corporate - Research	0	0	2	1
Corporate - Clin. Trial	26	22	12	12
Assoc./Foundation direct -Research	11	6	13	9
Assoc./Foundation direct -Fellowship	4	0	5	2
Assoc./Foundation direct -Clin. Trial	0	0	2	2
Assoc./Foundation direct -IPA	0	0	1	1
Assoc./Foundation subcontract -Research	2	1	0	0
Hospitals	1	1	0	0
Public Universities	2	1	2	2
UMD internal seed funding	2	2	1	1
ALL NON-FEDERAL	57	37	48	34
TOTAL	109	53	81	47

**Table 5: Revenue from Federal Awards by Department/Program
Fiscal Year 2015 vs. Fiscal Year 2014**

FY15 Revenues from Federal Awards by Department/Program				
	Surgery	CVID	Trauma	Total
NIH- direct	\$2,976,718	\$2,306,624	\$142,873	\$5,426,215
NIH -subcontract	\$1,312,317	\$283,080	\$102,154	\$1,697,551
Total NIH	\$4,289,035	\$2,589,704	\$245,027	\$7,123,766
Other Federal- direct	\$1,029,447	\$332,898	\$787,229	\$2,149,574
Other Federal- subcontract	\$251,000	\$4,000	\$28	\$255,028
Total Other Federal	\$1,280,447	\$336,898	\$787,257	\$2,404,602
TOTAL FEDERAL	\$5,569,482	\$2,926,602	\$1,032,284	\$9,528,368

FY14 Revenues from Federal Awards by Department/Program				
	Surgery	CVID	Trauma	Total
NIH- direct	\$3,861,759	\$2,021,066		\$5,882,825
NIH -subcontract	\$1,210,425	\$322,747	\$558,921	\$2,092,093
Total NIH	\$5,072,184	\$2,343,813	\$558,921	\$7,974,918
Other Federal- direct	\$693,489		\$724,380	\$1,417,869
Other Federal- subcontract	\$208,505	\$2,600	\$40,375	\$251,480
Total Other Federal	\$901,994	\$2,600	\$764,755	\$1,669,349
TOTAL FEDERAL	\$5,974,178	\$2,346,413	\$1,323,676	\$9,644,267

EDUCATION

- Strong match with class of interns for FY 2016 from the following programs: New York Medical College, Drexel University College of Medicine, University of Rochester School of Medicine & Dentistry, American University of Beirut, Rutgers, and West Virginia University School of Medicine.
- Incoming Preliminary General Surgery Residents matched from the following King Saud University, East Tennessee State University College of Medicine, State University of New York Upstate Medical University, Universidad de San Martin de Porres Facultad de Medicina Humana, University of Science, Arts, and Technology, Sri Ramachandra Medical College, and Nnamdi Azikiwe University College of Health Sciences.
- Our graduating FY15 class matched into the following fellowships,
 - Jefferson University-Vascular Surgery
 - Johns Hopkins University-CT Surgery
 - Ohio State University-Vascular Surgery
 - Brown-Pediatric Surgery
 - Elvis Presley Memorial, Nashville-Trauma/Critical Care
 - Roswell Park-Surgical Oncology
- Medical Student shelf exam scores of 51st percentile nationally.

- Graduated in FY15, the first resident from the integrated I6 Program, Zachary Kon.
- The undergraduate and graduate educational programs continue to provide quality learning experiences. The residency program graduates successfully match into quality fellowships and the fellowship graduates attain excellent employment opportunities.

FACULTY RECRUITMENT AND ACADEMIC ACTIVITIES

- Dr. Joseph Friedberg joined us in February, 2015 as the Professor and Chief of the Thoracic Surgery division. He was the Director of the Mesothelioma & Pleural Disease program at Penn. He brought with him Dr. Shamus Carr from the University of Utah. Together they are building the Mesothelioma Center at UMMC. Joe is also expanding existing programs with the Thoracic Surgery division and building networks throughout the UMMS system hospitals, the State of MD and surrounding states. He is extremely energetic, has superb collaboration and networking skills and is a wonderful addition to our senior department leadership team.
- Dr. Mohummad Siddiqui joined us in July, 2014 as Assistant Professor and Director of Urologic Robotic Surgery in the division of Urology. He is leading the prostate cancer focal therapy study which will use MRI fusion technology to precisely locate a prostate tumor and directly treat it without having to remove the entire prostate.
- Dr. Kimberly Lumpkin joined us in September, 2014 as Assistant Professor in the division of Pediatric Surgery and Associate Director of the General Surgery Residency Program.
- Dr. Pablo Sanchez joined us in December, 2014 as Assistant Professor in the division of Cardiac Surgery.
- Dr. Nader Hanna was appointed the UMSJMC Cancer Center Director in April, 2015.
- Dr. Nelson Goldberg elected Chief of Surgery at Chestertown and appointed Chief of Plastic Surgery at BWMC

FY2015 Recruitments

Josue-Alvarez-Casas, MD	Transplant
James Brown, MD	Cardiac
M. Minhaj Siddiqui, MD	Urology
Kimberly Lumpkins, MD	Pediatric
Shamus Carr, MD	Thoracic
Pablo Sanchez, MD	Cardiac
Joseph Friedberg, MD	Thoracic
David Bruno, MD	Transplant
Amelia Pasley, MD	Shock Trauma

FY2015 Departures

•Srinevas Reddy, MD	General/Surg Onc
•Zhongjun 'Jon' Wu, PhD	Cardiac
•Kapil Gopal, MD	Vascular
•Faisal Cheema, PhD	Cardiac
•Samuel Alaish, MD	Pediatric
•Keshava Rajagopal, MD	Cardiac
•Teng Lee, MD	Cardiac
•Shani Belgrave, MD	General/Surg Onc
•Leigh Ann Slater, MD	Shock Trauma

Divisional Updates:

Cardiac Surgery:

- New collaborative program with St. Joseph's Hospital: STS 3-Star
- Robin Pierson named Senior Associate Chair for Research
- Bart Griffith: Golden Apple Teaching Award
- Zachary Kon – 1st graduate of the 6-yr Cardiothoracic Surgery integrated training program joins us as an Assistant Professor in FY16
- Jim Donahue appointed Associate Program Director for the Integrated Cardiothoracic Surgery Residency Program

General and Oncologic Surgery

- John Olson, M.D., Ph.D – named to American Surgical Association.

Plastic Surgery

- Sheri Slezak, M.D. Elected Chairman of the American Board of Plastic Surgery
- University of Maryland Center for Cosmetic Surgery
- Devinder Singh: Chair, Maryland Board of Medicine

Thoracic Surgery

- Linda Martin Awarded Carolyn Reed Traveling Fellowship
- Jim Donohue completed Tour in Afganistan

Transplantation

- Jonathan Bromberg, M.D., Ph.D. – Established Basic Science Investigator Award from the American Society of Transplantation
- Living donor liver transplant program initiated
- #2 in the U.S. in kidney transplant volume
- Liver survival 96% under Dr. Barth's leadership
- Jonathan Bromberg received the National Kidney Foundation of MD – Kidney Champion Award
- John LaMattina received The Daily Record's Very Important Professionals Successful by 40 Award

- John LaMattina – Top Poster of Distinction (American Society of Transplant Surgeons – 14th Annual State of the Art Winter Symposium & 2014 World Transplant Congress)

Trauma

- Tom Scalea elected President –elect AATS
- Sharon Henry ACS ATLS course director
- Jim O’Connor promoted to Professor
- Jay Menaker appointed head Lung Resuscitation Unit (LRU)

Vascular

- Fenestrated Aortic Program to begin FY15
- Aortic Center in collaboration with Cardiac Surgery
- 2 of 2 residents matched into Vascular Surgery Fellowships for FY15 (Siefert and Arosemana)

Other Notable Faculty Activities

Dr. Gammie was named the University of Maryland – Baltimore’s Entrepreneur of the Year

Baltimore 2014 Best Doctors:

Cardiac:

Finney, RC Stewart - UMSJ
 Gammie, James
 Griffith, Bartley
 Kaushal, Sunjay - Pediatric
 Pollock, Stephen – UMSJ

General:

Drogula, Cynthia – BWMC
 Kavic, Stephen
 Kligman, Mark

Colo-Rectal:

Bafford, Andrea

Hepatobiliary:

Hanish, Steven

Pediatric Surgery:

Moore, James
 Strauch, Eric
 Voight, Roger

Plastic Surgery:

Slezak, Sheri

Surgical Oncology:

Alexander, H.R.
 Boutros, Cherif – BWMC

Transplant – Kidney, Pancreas, Liver:

Barth, Rolf

Bartlett, Stephen

LaMattina, John

Trauma:

Scalea, Thomas

Stein, Deborah

Urology:

Kramer, Andrew

Vascular Surgery:

Benjamin, Marshall

The Department of Surgery enters FY 2016 with a strong, efficient and expanding faculty, demonstrated excellence in educational, research and clinical arenas, and with solid partnerships with our School, our Campus and a rapidly expanding Medical System. We have added ten promising faculty for FY2016. FY2016 will be a challenging year as we have an extremely aggressive clinical budget and a large influx of new faculty, but we are optimistic that we will have a successful year.

News Articles

Several news stories featured the Department of Surgery during fiscal year 2015. Inserted below are a sample of some prominent articles.