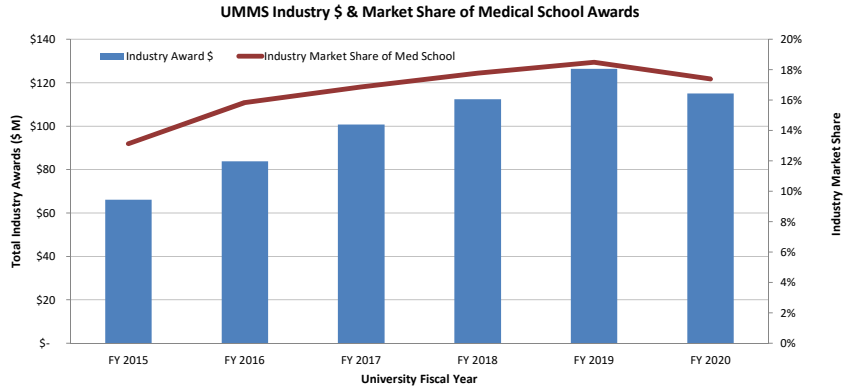


# Fast Forward Medical Innovation Metrics

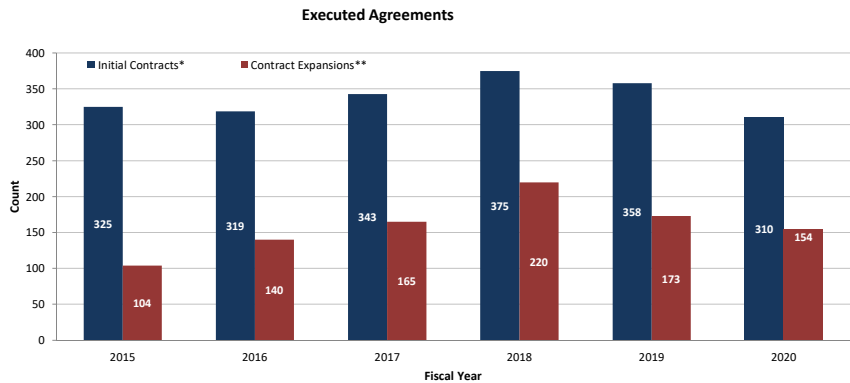
## Industry Sponsor Awards & Market Share of UMMS Awards



	University Fiscal Year					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Med School Total Award \$	\$ 504,140,209	\$ 529,762,313	\$ 597,810,547	\$ 632,986,942	\$ 684,212,398	\$ 662,027,255
Industry Award \$	\$ 66,197,994	\$ 83,878,509	\$ 100,877,362	\$ 112,442,195	\$ 126,506,208	\$ 115,182,892
Industry Award Count	865	1025	1193	1317	1368	1304
Industry Market Share of Med School	13.13%	15.83%	16.87%	17.76%	18.49%	17.40%

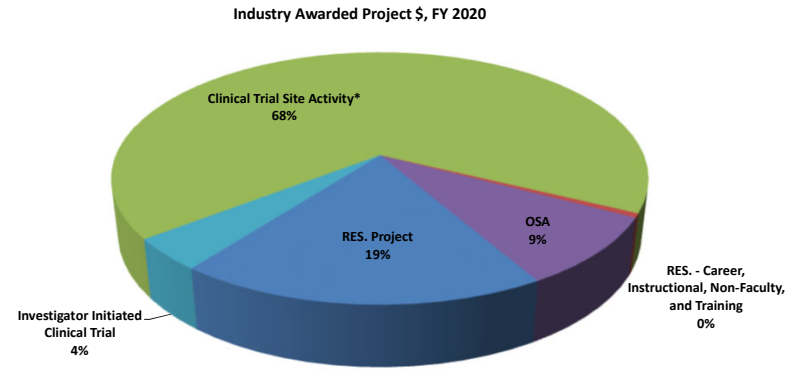
	University Fiscal Year					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
# of Unique Sponsors*	273	318	351	371	413	414
# of Unique PIs Awarded	279	305	320	335	340	324

## Executed Agreements with Industry Sponsors



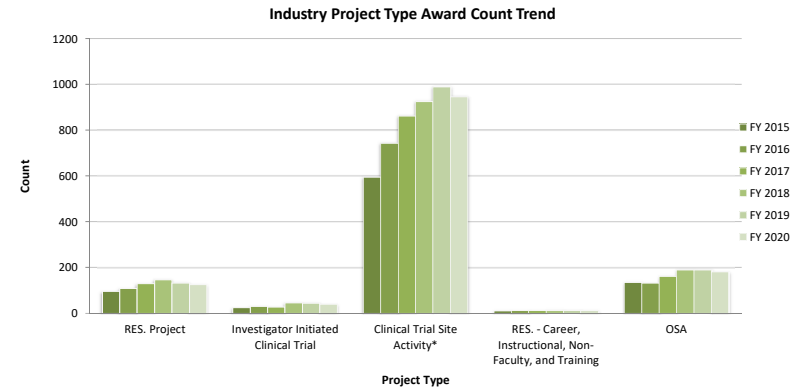
\*Initial Contracts are newly negotiated agreements that are for a new project or a distinct new phase of a project that require a set of new terms.  
 \*\*Contract Expansions are incremental agreements which provide additional funds for ongoing project activities.

## Industry Projects Award \$ by Project Type



	University Fiscal Year					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
RES. Project	\$ 17,091,965	\$ 16,717,823	\$ 21,986,762	\$ 23,102,722	\$ 35,941,952	\$ 21,546,494
Investigator Initiated Clinical Trial	\$ 3,289,118	\$ 4,923,887	\$ 4,333,686	\$ 7,364,082	\$ 4,408,463	\$ 4,728,747
Clinical Trial Site Activity*	\$ 39,086,749	\$ 53,790,807	\$ 63,591,315	\$ 70,504,766	\$ 74,151,468	\$ 77,810,057
RES. - Career, Instructional, Non-Faculty, and Training	\$ 529,693	\$ 791,695	\$ 519,926	\$ 529,321	\$ 607,098	\$ 602,716
OSA	\$ 5,675,392	\$ 7,550,401	\$ 10,241,633	\$ 10,937,411	\$ 11,258,742	\$ 10,250,833

## Industry Projects Award Count by Project Type



	University Fiscal Year					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
RES. Project	95	108	129	146	132	124
Investigator Initiated Clinical Trial	24	29	27	45	43	39
Clinical Trial Site Activity*	595	743	862	925	989	946
RES. - Career, Instructional, Non-Faculty, and Training	10	11	12	11	11	11
OSA	135	131	161	189	189	180

**Industry Awards by Department**

	Award Count				Awards (\$ Millions)			
	2018	2019	2020	2015-2019	2018	2019	2020	2015-2019
<b>Basic Science Departments</b>								
Biological Chemistry	0	1	0		0.00	0.02	0.00	
Cell and Developmental Biology	0	0	0		0.00	0.00	0.00	
DCMB	2	1	1		0.70	0.52	0.28	
Department of Learning Health	1	0	2		0.23	0.00	0.02	
Human Genetics	2	2	2		0.18	0.18	0.48	
Microbiology and Immunology	3	1	0		0.08	0.06	0.00	
Molec & Integrative Physiology	3	10	8		1.40	0.69	0.49	
Pharmacology	4	1	3		0.65	0.31	0.59	
<b>Clinical Departments</b>								
Anesthesiology	3	4	4		0.12	15.01	4.75	
Cardiac Surgery	45	49	39		2.78	2.58	1.95	
Dermatology	14	24	21		0.89	1.99	1.26	
Emergency Medicine	3	1	9		0.18	0.00	0.26	
Family Medicine	1	1	3		0.09	0.08	0.99	
Internal Medicine	848	836	810		76.47	73.75	74.80	
Neurology	42	49	43		3.61	5.40	3.19	
Neurosurgery	6	6	9		0.09	0.06	0.19	
Obstetrics/Gynecology	4	7	6		0.29	1.21	0.75	
Ophthalmology	44	54	53		3.47	3.61	3.60	
Orthopaedics	15	19	18		0.80	0.95	0.96	
Otolaryngology	15	10	5		1.25	0.39	0.40	
Pathology	11	9	7		1.64	1.10	1.42	
Pediatrics	146	147	158		7.86	7.32	6.54	
Physical Medicine and Rehab	0	1	1		0.00	0.01	0.08	
Psychiatry	3	7	3		0.50	0.36	0.03	
Radiation Oncology	9	16	19		0.41	1.13	1.76	
Radiology	16	29	19		1.68	2.24	3.04	
Surgery	39	42	31		3.81	4.24	3.97	
Urology	16	16	9		1.16	1.27	0.89	
<b>Other Med School Departments</b>								
Cancer Center	4	3	1		0.35	0.29	0.03	
Division of Anatomical Science	2	0	0		0.94	0.00	0.00	
MNI	1	3	2		0.01	0.32	0.31	
<b>Research Oversight Units</b>								
BRCF Roll-Up	7	11	12		0.70	0.99	1.56	
Ctr for History of Medicine	0	0	0		0.00	0.00	0.00	
MI Nanotechnology Institute	0	0	0		0.00	0.00	0.00	
MICHR Roll-up	2	2	1		0.01	0.14	0.14	
ULAM	3	4	2		0.02	0.16	0.18	
<b>Med. Sch. Total (Incl. MSA, Other)</b>	<b>1,317</b>	<b>1,368</b>	<b>1,304</b>		<b>112.44</b>	<b>126.51</b>	<b>115.18</b>	

**Top 15 Industry Sponsors by Award \$**

**Top 15 Industry Sponsors (Directly from the Sponsor) - FY 2020**

Sponsor Name	Awarded Project \$	# of Awards	Average Bud \$ / Award
Apple, Inc.	\$ 4,983,455	3	\$ 1,661,152
Bristol-Myers Squibb Company	\$ 4,900,464	40	\$ 122,512
AbbVie, Inc.	\$ 4,838,049	35	\$ 138,230
Genentech, Inc.	\$ 4,766,150	41	\$ 116,248
Merck Sharp and Dohme Research Laboratories	\$ 3,788,220	21	\$ 180,391
Novartis AG	\$ 2,602,972	25	\$ 104,119
Ascentage Pharma Group Corporation, Ltd.	\$ 1,976,305	3	\$ 658,768
Novo Nordisk A/S	\$ 1,828,326	7	\$ 261,189
Incyte Corporation	\$ 1,815,549	24	\$ 75,648
Merck, Inc	\$ 1,703,578	13	\$ 131,044
MeiraGTx Limited	\$ 1,481,698	13	\$ 113,977
Chan Zuckerberg Initiative (CZI), LLC	\$ 1,471,279	5	\$ 294,256
Millennium Pharmaceuticals, Inc.	\$ 1,406,839	18	\$ 78,158
AstraZeneca PLC	\$ 1,379,400	19	\$ 72,600
AstraZeneca AB (subsidiary of AstraZeneca PLC)	\$ 1,323,127	7	\$ 189,018

**Top 15 Industry Sponsors (Intermediate Company) - FY 2020**

Sponsor Name	Awarded Project \$	# of Awards	Average Bud \$ / Award
Covance Inc.	\$ 3,475,503	25	\$ 139,020
PPD Investigator Services, LLC	\$ 2,023,604	25	\$ 80,944
INC Research	\$ 1,856,271	16	\$ 116,017
Pharmaceutical Research Associates, Inc.	\$ 1,850,729	13	\$ 142,364
IQVIA Holdings Inc.	\$ 1,196,480	9	\$ 132,942
Medpace, Inc	\$ 1,001,932	16	\$ 62,621
Quintiles, Inc	\$ 854,619	20	\$ 42,731
Parexel International, LLC	\$ 817,533	13	\$ 62,887
Chan Zuckerberg Foundation	\$ 800,219	1	\$ 800,219
inVentiv Health	\$ 587,934	7	\$ 83,991
Syneos Health, LLC	\$ 583,641	11	\$ 53,058
PRA Health Sciences	\$ 516,414	13	\$ 39,724
Hoosier Cancer Research Network (HCRN)	\$ 481,448	12	\$ 40,121
ICON Clinical Research, LLC	\$ 476,577	7	\$ 68,082
PPD Development, LP	\$ 415,805	9	\$ 46,201

**Technology Transfer Metrics**

**Technology Transfer Metrics (Medical School Only; Effective Preliminary FY 2020 Q4)**

	University Fiscal Year					
	2015*	2016**	2017	2018***	2019	2020 YTD
Royalties/Equity Sales (\$M)	74.8	19.4	9.2	7.0	11.1	10.8
Invention Reports	166	169	175	235	226	241
U.S. Patent Appl. (all-new)	52	47	51	67	79	95
U.S. Patents Issued	53	43	44	57	59	49
License/Option Agreements	74	82	84	112	114	161
Invention Reports in Agreements	75	84	92	142	137	171
New Business Startups	10	5	5	7	11	16

\*The increased Royalties/Equity Sales amount in FY 2015 is largely the result of the monetization agreement of the Genzyme license.

\*\*The increased FY2016 Royalties/Equity Sales is largely due to the receipt of a one-time St Jude settlement (about \$10M).

\*\*\*Beginning in FY2018, data is no longer counted only based on affiliation of "lead" inventor, but is counted more than once if U-M inventors are affiliated with different colleges.