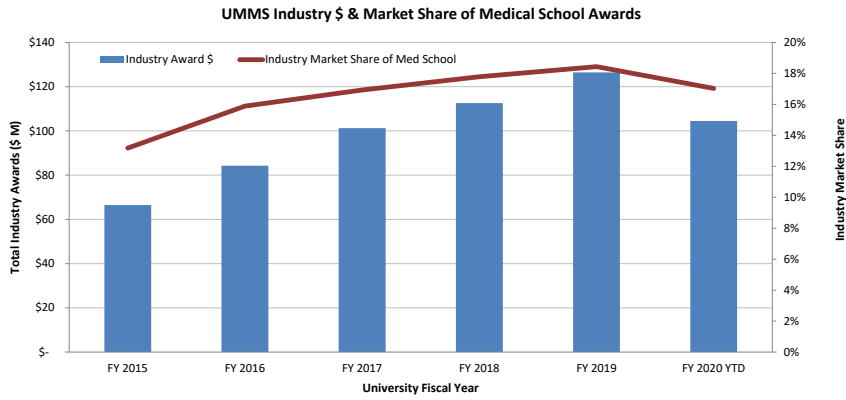


Fast Forward Medical Innovation Metrics

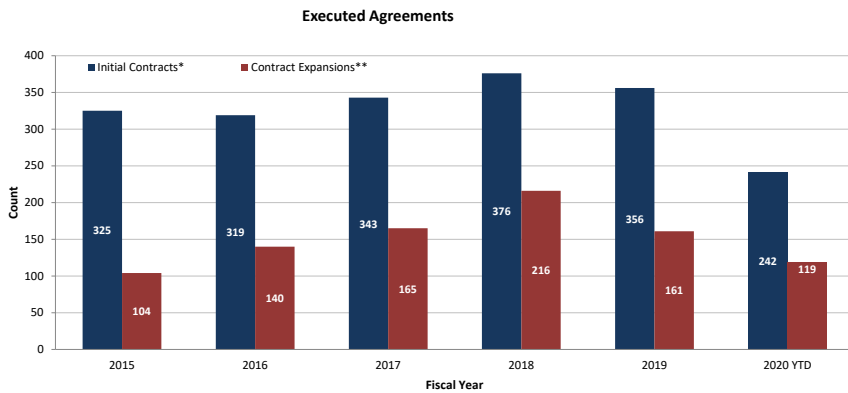
Industry Sponsor Awards & Market Share of UMMS Awards



	University Fiscal Year					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020 YTD
Med School Total Award \$	\$ 504,406,608	\$ 530,127,122	\$ 598,150,116	\$ 633,228,082	\$ 685,887,827	\$ 613,682,862
Industry Award \$	\$ 66,464,393	\$ 84,243,318	\$ 101,242,773	\$ 112,606,656	\$ 126,460,995	\$ 104,502,616
Industry Award Count	869	1030	1198	1319	1356	1192
Industry Market Share of Med School	13.18%	15.89%	16.93%	17.78%	18.44%	17.03%

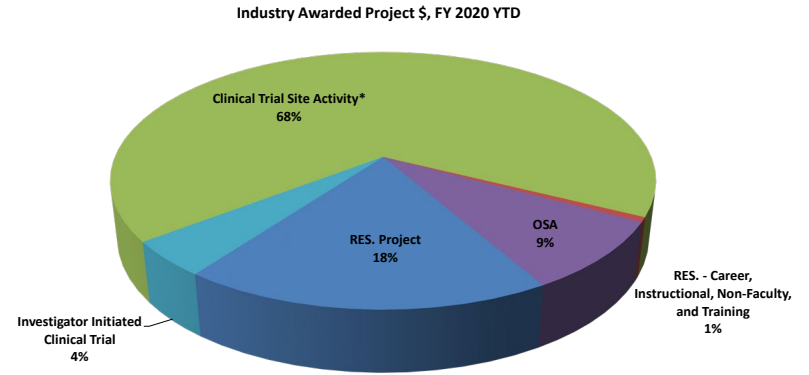
	University Fiscal Year					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020 YTD
# of Unique Sponsors*	274	319	352	372	411	392
# of Unique PIs Awarded	279	305	320	335	337	307

Executed Agreements with Industry Sponsors



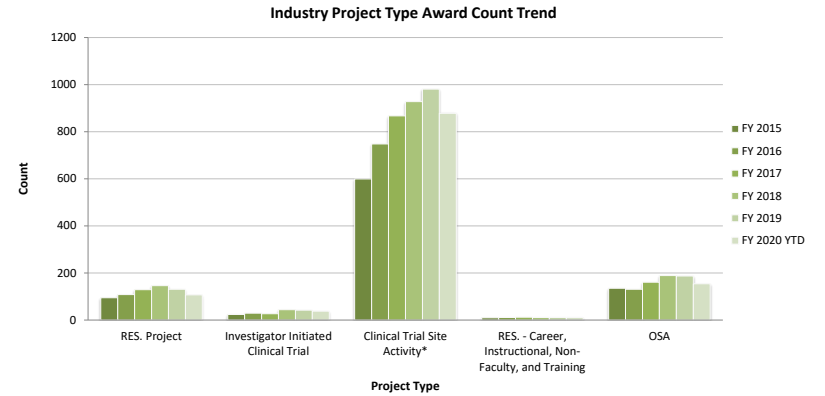
*Initial Contracts are newly negotiated agreements that are for a new project or a distinct new phase of a project that require a set of new terms.
 **Contract Expansions are incremental agreements which provide additional funds for ongoing project activities.

Industry Projects Award \$ by Project Type



	University Fiscal Year					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020 YTD
RES. Project	\$ 17,091,965	\$ 16,717,823	\$ 21,986,762	\$ 23,102,722	\$ 35,816,952	\$ 19,293,360
Investigator Initiated Clinical Trial	\$ 3,289,118	\$ 4,923,887	\$ 4,333,686	\$ 7,268,106	\$ 4,312,487	\$ 4,632,771
Clinical Trial Site Activity*	\$ 39,353,148	\$ 54,155,616	\$ 63,956,726	\$ 70,765,203	\$ 74,335,077	\$ 70,606,069
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	\$ 11,250,896	\$ 9,123,655

Industry Projects Award Count by Project Type



	University Fiscal Year					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020 YTD
RES. Project	95	108	129	146	131	107
Investigator Initiated Clinical Trial	24	29	27	44	42	38
Clinical Trial Site Activity*	599	748	867	928	981	878
RES. - Career, Instructional, Non-Faculty, and Training	10	11	12	11	11	11
OSA	135	131	161	189	187	154

Industry Awards by Department

	Award Count				Awards (\$ Millions)			
	2018	2019	2020 YTD	2015-2019	2018	2019	2020 YTD	2015-2019
Basic Science Departments								
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	1		0.23	0.00	0.01	
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	
Clinical Departments								
Anesthesiology	3	4	3		0.12	15.01	4.55	
Cardiac Surgery	46	49	39		2.84	2.64	1.98	
Dermatology	14	24	19		0.89	1.99	1.13	
Emergency Medicine	3	1	8		0.18	0.00	0.23	
Family Medicine	1	1	2		0.09	0.08	0.53	
Internal Medicine	848	828	745		76.49	73.67	68.52	
Neurology	42	49	42		3.61	5.40	3.40	
Neurosurgery	6	6	8		0.09	0.06	0.17	
Obstetrics/Gynecology	4	7	6		0.29	1.21	0.75	
Ophthalmology	44	53	47		3.55	3.64	3.04	
Orthopaedics	15	19	18		0.80	0.95	0.96	
Otolaryngology	15	10	5		1.25	0.39	0.40	
Pathology	11	9	6		1.64	1.10	0.84	
Pediatrics	147	146	136		7.87	7.26	5.19	
Physical Medicine and Rehab	0	1	1		0.00	0.01	0.08	
Psychiatry	3	7	2		0.50	0.36	0.01	
Radiation Oncology	9	16	19		0.41	1.13	1.76	
Radiology	16	28	18		1.68	2.24	3.00	
Surgery	39	42	25		3.81	4.24	2.80	
Urology	16	15	7		1.16	1.26	0.83	
Other Med School Departments								
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	
Research Oversight Units								
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	
Med. Sch. Total (Incl. MSA, Other)	1,319	1,356	1,192		112.61	126.46	104.50	

Top 15 Industry Sponsors by Award \$

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

Sponsor Name	Awarded Project \$	# of Awards	Average Bud \$ / Award
Genentech, Inc.	\$ 4,790,754	41	\$ 116,848
Apple, Inc.	\$ 4,525,087	2	\$ 2,262,544
Bristol-Myers Squibb Company	\$ 4,221,875	38	\$ 111,102
AbbVie, Inc.	\$ 4,185,983	31	\$ 135,032
Merck Sharp and Dohme Research Laboratories	\$ 3,593,945	20	\$ 179,697
Incyte Corporation	\$ 1,812,347	23	\$ 78,798
Merck, Inc	\$ 1,703,578	13	\$ 131,044
Ascentage Pharma Group Corporation, Ltd.	\$ 1,656,422	2	\$ 828,211
Janssen Research and Development, LLC	\$ 1,569,151	20	\$ 78,458
Chan Zuckerberg Initiative (CZI), LLC	\$ 1,471,279	5	\$ 294,256
MeiraGTx Limited	\$ 1,394,699	12	\$ 116,225
AstraZeneca PLC	\$ 1,390,156	19	\$ 73,166
AstraZeneca AB (subsidiary of AstraZeneca PLC)	\$ 1,323,127	7	\$ 189,018
Celgene Corporation	\$ 1,315,320	15	\$ 87,688
Novo Nordisk A/S	\$ 1,299,768	4	\$ 324,942

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

Sponsor Name	Awarded Project \$	# of Awards	Average Bud \$ / Award
Covance Inc.	\$ 3,465,237	22	\$ 157,511
Pharmaceutical Research Associates, Inc.	\$ 1,850,729	13	\$ 142,364
PPD Investigator Services, LLC	\$ 1,446,157	20	\$ 72,308
INC Research	\$ 1,442,314	14	\$ 103,022
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	\$ 614,214	8	\$ 76,777
PRA Health Sciences	\$ 509,445	11	\$ 46,313
ICON Clinical Research, LLC	\$ 494,478	7	\$ 70,640
Hoosier Cancer Research Network (HCRN)	\$ 481,448	12	\$ 40,121
Syneos Health, LLC	\$ 465,259	9	\$ 51,695
PPD Development, LP	\$ 441,241	10	\$ 44,124

Technology Transfer Metrics

Technology Transfer Metrics (Medical School Only; Effective Preliminary FY 2020 Q3)

	University Fiscal Year					
	2015*	2016**	2017	2018***	2019	2020 YTD
Royalties/Equity Sales (\$M)	74.8	19.4	9.2	7.0	11.1	TBD
Invention Reports	166	169	175	235	226	179
U.S. Patent Appl. (all-new)	52	47	51	67	79	TBD
U.S. Patents Issued	53	43	44	57	59	TBD
License/Option Agreements	74	82	84	112	114	148
Invention Reports in Agreements	75	84	92	142	137	TBD
New Business Startups	10	5	5	7	11	TBD

*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.