

Annual Surveys

Association of Chairs of Departments of Physiology 2016 Survey Results

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The Association of Chairs of Departments of Physiology annual survey was sent electronically to 204 physiology or physiology-related departments throughout the U.S., Canada, Mexico, and Puerto Rico. A total of 52 partial or complete surveys were returned, for a response rate of 25%. This rate is slightly lower than last year but more than in previous years. Of the 52 surveys received, there were 12 private and 40 public medical schools. We continue to encourage more of our colleagues to respond so that we can have more robust data that will benefit all.

The data provide the reader with general trends of faculty demographics and distribution, overall departmental budgets, and space available for research. As a reminder, beginning in 2004, ACDP decided not

to include faculty salary information in this report. AAMC salary data is more generally used, so the ACDP Council decided to no longer collect or report this data.

Data were collected on level, years in position, tenure status, gender, and ethnicity of faculty members (Table 1). Table 1 also includes information on the average number of student contact hours for faculty in the lab, classroom, and small discussion groups, and the type of teaching interactions for the department (MD/DO, DVM, allied health, etc.). Also included is information on the type of medical physiology course being taught (note that departments teach multiple class types, accounting for the fact that the numbers do not add up to the total respondents).

Table 1a.

Faculty Summary (n = 910)						
	Male		Female		Total Number	Total Average No. Years in Position
	No.	Average No. Years in Position	No.	Average No. Years in Position		
Chair	35	14	9	6.2	44	12.4
Professor	289	14.7	81	10.5	370	13.8
Associate professor	176	8.4	64	8.6	240	8.5
Assistant professor	124	5.1	65	4.1	189	4.8
Instructor	21	3.8	32	5.3	53	5.3
Rank not given	9	6.2	5	5.5	14	6
48 responses	654		256		910	

Table 2 focuses on student/trainee information. Information on the gender and number of U.S. citizen/resident alien vs. foreign pre- and postdoctoral students, gender and ethnicity of the U.S. citizen/resident alien predoctoral and postdoctoral fellows, and gender and country of origin of the foreign predoctoral and postdoctoral fellows is included. Also shown are the number of predoctoral trainee completions by gender, the number of U.S. citizen/resident alien postdoctoral completions by gender and ethnicity, and the number of foreign postdoctoral completions by gender and region of origin. The type of support that is used for foreign pre- and postdoctoral students is included, as are the average stipends paid to all pre- and postdoctoral students by the departments. For faculty reported ($n = 46$), an average of 55% (SD = 21%) of the faculty had either graduate students or postdoctoral fellows in their laboratories.

Institutional information is provided in Table 3 in terms of the type of institution (public or private) and

Table 1b.

Medical Physiology Course Type			
	Yes	No	Total Responded
Integrated disciplines	22	28	50
Traditional	38	12	50
Within traditional	38	12	50

Table 1c.

Tenure Status in each department by degree									
	Tenured		Not Tenured		Not Eligible		Not identified		Total
	No.	Years in position	No.	Years in position	No.	Years in position	No.	Years in position	
MD	12	10	9	4.9	10	11.2			31
PhD	528	12.5	151	3.6	130	5.3	5	3.2	814
2 Doctorates	37	9.3	5	4	17	6.9			59
Other	0		0		6	10.3			6
Total	577		165		163		5		910

the average square footage of space occupied by the departments for research, teaching, administration, and other purposes.

Departmental budget information (Table 4) shows average dollar amounts for type of support (institutional hard money, research grants, training grants, endowments, indirect cost recovery). Numbers for all institutions are reported, and the data are broken out by public medical, private medical, and non-medical. Financial information is also given, including fringe benefit rate, federally negotiated indirect cost rates for both on and off campus, allocated salary dollars from grants directly returned to the departments, percentage of indirect costs returned to the departments, percentage of total faculty salaries derived from research grants, and percentage of faculty having extramural research funding greater than \$100,000/yr.

Table 5 ranks responding Institutions according to their total dollars (institutional hard money, research grants, etc.), research grant dollars (direct or direct plus indirect, as appropriate), research dollars per faculty member, departmental research space, and research dollars per research space. Total number of faculty in each department is also shown.

For an update of AAMC salary data, please see the accompanying article (begins on p. 204). ●

Table 1d.

For your faculty, what is the average number of hours of student contact (per year) for:			
	Student Type	Average (hours)	Number (inst.)
Lab Hours	Graduate	546	29
	Medical	102	25
	Other	339	11
Lectures	Graduate	106	42
	Medical	53	42
	Other	159	24
Small Group	Graduate	69	27
	Medical	33	36
	Other	70	12

Table 1e.

Teaching Interactions (n = 52 departments)		
	No. of Depts.	%
MD/DO	47	90%
DDS	14	27%
DVM	7	13%
Allied health	23	44%
Pharmacy	10	19%
Other biomedical	37	71%
Life science	26	50%
Bioengineering	22	42%
Other*	16	31%

*Other includes pre-professional and graduate students (both MS and PhD)

Table 2a.

Student/Trainee Summary				
	Predoctoral		Postdoctoral	
	Male	Female	Male	Female
US Citizen/resident alien	283	274	121	108
Foreign	82	97	131	102
Total	365	371	252	210

Table 2d.

Number of Foreign Pre- and Postdoctoral Students/Trainees				
	Predoctoral		Postdoctoral	
	Male	Female	Male	Female
African	4	3	1	0
Asian/Pacific Islander	47	53	83	47
Central/South American	7	9	15	15
European/Canadian, etc.	10	11	25	30
Middle Eastern	14	21	4	5
Other	0	0	3	5
Total	82	97	131	102

Table 2b.

Race/Ethnicity of US Citizen/Resident alien Pre- and Postdoctoral Students/Trainees				
	Predoctoral		Postdoctoral	
	Male	Female	Male	Female
Native American	1	1	1	1
Asian/Pacific Islander	24	30	25	29
Black (not Hispanic)	11	21	6	9
Hispanic	12	21	10	8
White (not Hispanic)	235	201	79	61
Total	283	274	121	108

Table 2e.

Foreign National Predoctoral Trainee Completions		
	Male	Female
African	0	0
Asian/Pacific Islander	13	17
Central/South American	2	2
European/Canadian, etc.	1	0
Middle Eastern	0	6
Other	0	0
Total	16	25

Table 2c.

US Citizen/Resident Alien Predoctoral Trainee Completions		
	Male	Female
Native American	0	0
Asian/Pacific Islander	6	11
Black (not Hispanic)	4	2
Hispanic	4	5
White (not Hispanic)	54	31
Total	68	49

Table 2f.

Total Predoctoral Trainee Completions During the Year Ending June 30, 2016	
	Total
Female	74
Male	84
Total	158

Table 2g.

Number of Foreign Pre- and Postdoctoral Trainees Whose Primary Source of Support is:		
	Predoctoral	Postdoctoral
Institutional	67	15
Research grants	84	199
Private foundations	5	16
Home (foreign) government	10	7
Other	1	5
Total	167	242

Table 2h.

Average Annual Stipend (U.S. \$)		
	Average	No. of Institutions
Postdoctoral	\$44,265	43
Predoctoral	\$26,042	44

Table 4a.

	All Institutions	No. of Depts	Mean No. of Faculty	Private Medical	No. of Depts	Mean No. of Faculty	Public Medical	No. of Depts	Mean No. of Faculty
Institutional (Hard money, e.g., operating costs, state allocations)	2,377,484	48	19	2,061,967	11	17	2,471,286	37	20
Outside Research Grants and Contracts (direct costs only)	4,119,550	46	20	5,309,319	9	19	3,830,146	37	20
Training Grants (direct costs only)	345,735	18	21	407,765	4	21	328,013	14	21
Endowments	472,219	33	20	456,952	8	17	477,105	26	21
Indirect Cost Recovery (amount returned to your department)	360,398	37	20	1,639,823	4	22	205,316	33	20
Other Budget Support	497,016	30	20	494,528	4	17	497,399	26	20
Average Departmental Budget	7,368,129	48		7,662,689	11		7,280,633	37	
SD	5,204,006			8,185,156			4,088,055		
Total faculty			910			184			726

No non-medical departments reported

Table 4b.

Financial Information		
	Average %	No. of Depts.
Current fringe benefit rate most frequently used for primary faculty	30	47
Federally negotiated indirect cost rate for FY 13-14 off campus	28	42
Federally negotiated indirect cost rate for FY 13-14 on campus	52	46
Percentage of allocated salary dollars from grants directly returned to your department	67	30
Percentage of indirect costs returned to your department	19	34
Percentage of total faculty salaries derived from research grants (does not include fringe benefits costs)	33	43
Percentage of faculty having extramural research funding greater than \$100,000/year	55	46

Table 3a.

Type of Institution	
Private	12
Public	40
Total	52

Table 3b.

Space Controlled by Department		
	Average sq. ft.	No. of Depts
Research space	20,434	48
Administrative space	3,578	47
Teaching space	2,630	27
Other space*:	2,740	26
Total space	26,900	48

*Other includes common space, prep room, storage, core facilities, offices

Table 5. Student/Trainee Summary

Complete Ranking According to Total Dollars										
Rank Total Dollars	Total Dollars	Rank Research Grant Dollars	Research Grant Dollars	Rank Research Dollars/Faculty	Research Dollars/Faculty	Rank Research Space	Research Space	Rank Research Dollars/sq. ft.	Research Dollars/sq. ft.	No. of Faculty
1	30,019,623	1	16,515,455	1	718,063	2	45,845	5	360	23
2	16,457,392	6	8,952,572	2	497,365	5	36,042	11	248	18
3	16,376,642	2	10,282,568	13	277,907	7	34,591	9	297	37
4	15,213,838	4	9,117,270	10	294,106	12	26,020	6	351	31
5	14,392,142	3	9,805,733	7	316,314	3	40,945	14	239	31
6	14,259,215	9	6,200,191	16	248,008	20	19,877	7	312	25
7	12,385,791	5	9,032,008	4	392,696	4	36,048	10	251	23
8	11,612,920	7	7,500,000	23	178,571	42	10,414	1	720	42
9	11,519,081	10	5,887,582	5	346,328	6	35,313	27	167	17
10	10,797,896	11	5,887,369	6	346,316	11	29,133	21	202	17
11	10,669,041	15	4,621,336	37	107,473	8	33,170	30	139	43
12	9,548,877	12	5,721,514	17	238,396	37	12,048	3	475	24
13	9,068,241	14	4,655,756	19	232,788	21	19,053	13	244	20
14	8,384,623	13	5,039,282	8	314,955	15	23,377	19	216	16
15	7,955,357	24	3,240,050	34	124,617	19	20,220	28	160	26
16	7,643,743	8	6,790,464	12	282,936	10	31,313	18	217	24
17	7,028,858	19	3,724,738	24	177,368	17	21,450	25	174	21
18	6,947,493	23	3,290,561	25	173,187	9	31,563	37	104	19
19	6,836,723	28	2,643,535	21	203,349	16	22,095	32	120	13
20	6,821,365	27	2,863,585	38	95,453	1	49,427	45	58	30
21	6,765,658	18	3,963,808	3	396,381	26	16,729	15	237	10
22	6,757,660	20	3,594,347	14	276,488	25	17,000	20	211	13
23	6,715,000	17	4,200,000	9	300,000	40	11,427	4	368	14
24	6,163,209	16	4,545,096	15	267,359	28	15,065	8	302	17
25	6,006,594	26	3,197,136	33	127,885	30	14,492	17	221	25
26	5,741,857	37	1,636,910	44	58,461	14	24,166	43	68	28
27	5,547,586	21	3,559,440	18	237,296	46	5,640	2	631	15
28	5,513,075	29	2,326,344	29	145,397	34	12,484	22	186	16
29	5,505,313	35	1,905,143	27	158,762	23	18,355	38	104	12
30	5,214,146	25	3,218,022	28	146,274	13	25,000	31	129	22
31	4,968,429	22	3,457,868	11	288,156	31	14,000	12	247	12
32	4,683,737	31	2,291,652	30	143,228	18	21,368	34	107	16
33	4,605,535	46	385,535	46	18,359	22	18,500	46	21	21
34	4,551,072	32	2,286,877	26	163,348	35	12,455	23	184	14
35	4,170,608	39	1,257,984	40	83,866	24	18,216	42	69	15
36	3,865,988	34	2,023,450	35	119,026	36	12,048	26	168	17
37	3,859,541	42	1,129,388	42	75,293	32	12,914	40	87	15
38	3,797,659	41	1,146,133	45	45,845	41	10,555	33	109	25
39	3,784,049	33	2,279,513	22	189,959	33	12,507	24	182	12
40	3,642,599	43	1,072,124	41	76,580	29	14,774	41	73	14
41	3,587,264	38	1,625,640	36	108,376	39	11,623	29	140	15
42	3,350,595	30	2,305,003	20	230,500	43	10,334	16	223	10
43	3,004,849	40	1,237,397	31	137,489	38	11,671	35	106	9
44	2,926,552	36	1,648,214	32	137,351	27	15,766	36	105	12
45	2,015,427	44	834,695	39	92,744	45	8,289	39	101	9
46	1,220,000					48	2,975			7
47	959,600	45	600,000	43	66,667	44	10,100	44	59	9
48	807,721			40	51,928	47	3,088			6

AAMC Medical School Faculty Compensation Survey

Each year the American Association of Medical Colleges (AAMC) surveys all the U.S. medical schools as to faculty compensation. Because of this, the ACDP (see associated article on p. 199) decided to no longer collect the same data from its members.

As a supplement to the ACDP survey, the AAMC has agreed to allow the APS to publish selected results from their survey.

Table 1 shows the regional distribution of medical schools responding to the AAMC survey in terms of public medical and private medical. Also shown is the number of physiology departments in those regions that responded (with either PhD or MD Chairs). The number of departments responding to the AAMC survey is not the same as the ACDP survey, since AAMC usually receives over 99% response rate from institutions.

Summary statistics on faculty compensation in physiology departments for PhD and MD faculty are given in Table 2. Shown are 25th percentile, median, 75th percentile, and mean salaries for the given number of faculty. For any group that has less than five faculty, data are not reported.

Table 3 shows the changes in salary that have occurred over the past 3 years for both PhD and MD faculty, with the percent change over the past 2 years.

Summary salary statistics for separate regions of the country for both PhD and MD faculty are given in Table 4. Given again are 25th percentile, median, 75th percentile, and mean salaries for the given number of faculty.

Table 5 shows the salary comparison between PhD and MD faculty in all basic science departments vs. those specifically in physiology departments. ●

Table 1. Distribution of medical schools responding to AAMC medical school faculty compensation survey

		Northeast	Midwest	South	West	TOTAL
All	Private Medical	26	12	14	4	56
	Public Medical	13	22	38	15	88
Physiology	All Medical Schools	15	19	30	9	73

Table 2. Summary statistics on physiology department PhD and MD faculty compensation

PhD Faculty		25th	Median	75th	Mean	No. of Faculty
Chair	All schools	224,000	275,000	328,000	281,000	61
	Medical Public	225,000	271,000	319,000	268,800	42
	Medical Private	221,000	284,000	370,000	308,100	19
Professor	All schools	142,000	168,000	200,000	175,200	505
	Medical Public	143,000	167,000	195,000	175,600	329
	Medical Private	142,000	172,000	206,000	174,600	176
Assoc. prof.	All schools	105,000	119,000	132,000	121,400	305
	Medical Public	104,000	117,000	130,000	117,900	221
	Medical Private	108,000	121,000	152,000	130,700	84
Asst. prof.	All schools	71,000	90,000	104,000	89,400	325
	Medical Public	69,000	88,000	100,000	87,000	219
	Medical Private	72,000	95,000	111,000	94,300	106
Instructor	All schools	51,000	55,000	62,000	56,500	81
	Medical Public	50,000	55,000	60,000	54,900	52
	Medical Private	55,000	59,000	67,000	59,500	29

Table 2. Summary statistics on physiology department PhD and MD faculty compensation

MD Faculty		25th	Median	75th	Mean	No. of Faculty
Chair	All schools	284,000	379,000	431,000	369,000	12
	Medical Public	257,000	296,000	404,000	318,000	7
	Medical Private	350,000	452,000	525,000	440,400	5
Professor	All schools	161,000	191,000	231,000	197,300	76
	Medical Public	164,000	191,000	231,000	199,900	44
	Medical Private	154,000	186,000	230,000	193,700	32
Assoc. prof.	All schools	104,000	115,000	133,000	121,800	35
	Medical Public	102,000	111,000	131,000	119,300	20
	Medical Private	108,000	125,000	134,000	125,100	15
Asst. prof.	All schools	71,000	92,000	107,000	88,700	32
	Medical Public	66,000	81,000	101,000	84,700	20
	Medical Private	76,000	100,000	114,000	95,400	12
Instructor	All schools					4
	Medical Public					3
	Medical Private					1

For less than 5 faculty, data are not reported

Table 3. Change in total compensation for physiology department PhD and MD faculty

PhD Faculty							
2015 - 2016		2014 - 2015		2013 - 2014		% Change 2014 - 2015 to 2015 - 2016	
Mean	Median	Mean	Median	Mean	Median	Mean	Median
136,200	125,000	131,600	122,000	129,100	119,000	3.5	2.5

Mean and median values were combined for Assistant, Associate, and Professor

MD Faculty							
2015 - 2016		2014 - 2015		2013 - 2014		% Change 2014 - 2015 to 2015 - 2016	
Mean	Median	Mean	Median	Mean	Median	Mean	Median
154,500	147,000	149,500	143,000	149,900	134,000	3.3	2.8

Mean and median values were combined for Assistant, Associate, and Professor

Table 4. Summary statistics on physiology department PhD and MD faculty compensation by region

PhD Faculty		Northeast	Midwest	South	West
Chair	25th	237,000	222,000	211,000	271,000
	Median	282,000	271,000	261,000	299,000
	75th	321,000	341,000	325,000	346,000
	Mean	289,800	295,000	263,200	300,100
	Total faculty	13	14	26	8
Professor	25th	151,000	150,000	135,000	152,000
	Median	170,000	172,000	164,000	180,000
	75th	198,000	218,000	192,000	208,000
	Mean	170,200	180,600	166,000	194,400
	Total faculty	94	133	196	82
Assoc. Prof.	25th	114,000	102,000	101,000	111,000
	Median	125,000	117,000	114,000	120,000
	75th	141,000	128,000	131,000	142,000
	Mean	132,400	119,400	115,900	127,500
	Total faculty	59	90	123	33
Asst. Prof.	25th	75,000	69,000	69,000	75,000
	Median	100,000	90,000	87,000	96,000
	75th	116,000	102,000	100,000	111,000
	Mean	95,500	88,000	86,400	98,100
	Total faculty	56	97	145	27
Instructor	25th	50,000	44,000	51,000	52,000
	Median	56,000	55,000	55,000	60,000
	75th	67,000	62,000	60,000	62,000
	Mean	59,000	53,800	55,700	58,200
	Total faculty	14	11	39	17

MD Faculty		Northeast	Midwest	South	West
Chair	25th		240,000		
	Median		378,000		
	75th		442,000		
	Mean		348,200		
	Total faculty	2	5	4	1
Professor	25th	161,000	147,000	158,000	165,000
	Median	194,000	184,000	189,000	181,000
	75th	251,000	215,000	225,000	227,000
	Mean	201,300	181,200	196,700	206,100
	Total faculty	29	13	22	12
Assoc. Prof.	25th		105,000	97,000	
	Median		131,000	105,000	
	75th		165,000	124,000	
	Mean		136,500	107,800	
	Total faculty	3	15	14	3

Table 4. Summary statistics on physiology department PhD and MD faculty compensation by region (continued)

		Northeast	Midwest	South	West
Asst. Prof.	25th		86,000	58,000	
	Median		97,000	71,000	
	75th		111,000	83,000	
	Mean		98,700	73,700	
	Total faculty	3	13	15	1
Instructor	25th				
	Median				
	75th				
	Mean				
	Total faculty	0	2	0	2

For less than 5 faculty, data are not reported

Table 5. Salary comparison between all basic science departments and physiology departments for both PhD and MD faculty

		All Basic Science Depts-PhDs	Physiology PhDs	All Basic Science Dept. MDs	Physiology MDs
Chair	25th	234,000	224,000	293,000	284,000
	Median	288,000	275,000	379,000	379,000
	75th	342,000	328,000	468,000	431,000
	Mean	292,600	281,000	393,300	369,000
	Total faculty	519	61	114	12
Professor	25th	148,000	142,000	165,000	161,000
	Median	177,000	168,000	208,000	191,000
	75th	215,000	200,000	263,000	231,000
	Mean	188,300	175,200	225,900	197,300
	Total faculty	4,278	505	647	76
Assoc. prof.	25th	105,000	105,000	113,000	104,000
	Median	122,000	119,000	133,000	115,000
	75th	141,000	132,000	173,000	133,000
	Mean	125,700	121,400	150,900	121,800
	Total faculty	3,358	305	347	35
Asst. prof.	25th	80,000	71,000	80,000	71,000
	Median	96,000	90,000	102,000	92,000
	75th	112,000	104,000	138,000	107,000
	Mean	97,400	89,400	120,100	88,700
	Total faculty	3,973	325	403	32
Instructor	25th	54,000	51,000	57,000	
	Median	60,000	55,000	64,000	
	75th	72,000	62,000	79,000	
	Mean	66,700	56,500	73,900	
	Total faculty	641	81	61	4