



THE Physiologist

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April 2002

Barbara A. Horwitz 75th President of APS

I am greatly honored to serve as the 75th president of the American Physiological Society, and I thank you for the privilege and the challenge of doing so. As has been pointed out by previous presidents, each of us begins our presidential year with a written message to the membership. Recent presidents have discussed the strong financial state of the APS, the outstanding and dedicated staff of the society, the role that the APS has played in supporting its members with its publications, meetings, and public affairs, and a vision of where the discipline of physiology and the APS is (or should be) headed (1, 3-7). While I, too, will touch on some of these areas, I would like to focus on the latter because it is a major driver of the primary goal that I have as President—namely, to establish vehicles that will help attract the best students, teachers, and scientists to the physiological sciences and to the APS.



Today's physiology is not your father's physiology.

The tools that are available to study functional biology (physiology) today are beyond anything that many of us envisioned when we began our first experimental studies. Our ability to examine physiological processes has increased enormously with the development of powerful methodologies that span the levels of biological organization—from biochemical techniques that allow us to look at individual molecules to functional imaging which permits us to peek into the intact organism, to the use of transgenic/knockout animals as model systems. Yet the goals that underlie physiological approaches remain the understanding of how cells, organs, and organisms function in their “normal” environment, how they deal with environmental perturbations and stressors, and how homeostatic processes can go awry. The opportunities to understand the underlying mechanisms of these processes and how they are regulated have never been greater and, as a result, studying physiology has never been more exciting.

This view notwithstanding, many students and some of our scientific colleagues are unaware of the breadth of physiology and the significance of the research in which we are engaged. Newer disciplines have captured their attention and many, if they think of physiology at all, may think of it as stodgy. While we can argue that these perceptions are invalid, it is more useful to focus our energies on changing them. This is one of my key goals for the APS, and one that I hope will engage our Sections as well as our Committees.

The APS has already taken steps to increase public awareness of physiology, the significance of physiological research, and the Society itself. In 2001, we hired the Krupa group and an in-house Communications Specialist to help publicize reports from the Society's journals, APS conferences, and the Experimental Biology meeting; we have begun to provide news releases to local newspapers when area teachers, students, and researchers win APS awards, and we have established a Communications Committee to recommend other efforts to raise the visibility of physiology. While these actions may not make physiology a household word, they should help to increase awareness of the activities of the Society and its members.

Reaching students requires a different strategy. Our Education office, through its *Frontiers in Physiology* and *Explorations in Biomedicine* programs has, for a number of years, focused on K-12 science teachers, providing them with a summer research experience

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Association of Chairs of Departments of Physiology 2001 Survey Results

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The Association of Chairs of Departments of Physiology annual survey was mailed to 176 physiology departments throughout the US, Canada and Puerto Rico. A total of 97 surveys were returned, for a response rate of 55%. This rate is slightly higher than that of the 2000 survey (52%). Of the 97 surveys returned, there were 60 public and 37 private medical schools including 11 non-medical (which are public veterinarian or osteopathic schools).

The data provide the reader with general trends of faculty, salary, overall departmental budgets, and space available for research. Faculty salary information (Tables 1-3) is derived from the total compensation column, which

includes any supplementary income, but not fringe benefits. In addition to salary information, further data are provided on tenure, gender, ethnicity, and salary by number of years in rank.

The statistics are based on 97 responses (three from Canada) but the results of salary, tenure, gender, ethnicity, and number of years in rank are calculated on the number of respondents providing this information. However, two institutions did not provide any faculty salary information. In addition, results presented reflect responses from those institutions reporting, which may vary on a year-to-year basis.

Table 1. Faculty Salaries for Fiscal Year 2001

	Median	% Change From Previous Survey	Minimum	Maximum	No. of Faculty
Chairperson					
All Schools	\$166,532	1.9	\$ 66,660	\$300,000	87
Medical Public	175,344	4.9	66,660	280,000	44
Medical Private	173,656	2.7	113,236	300,000	31
Nonmedical	130,968	-4.0	70,561	178,389	12
Female	129,753	-8.1	120,840	170,000	6
Professor					
All Schools	112,500	0.4	34,883	306,400	667
Medical Public	112,528	2.7	34,883	267,800	327
Medical Private	114,566	-3.5	41,616	306,400	234
Nonmedical	106,074	0.5	57,069	181,167	106
Female	110,138	3.7	47,891	203,831	95
Associate Professor					
All Schools	81,081	1.2	36,904	150,000	402
Medical Public	81,300	3.2	36,904	129,889	195
Medical Private	80,000	-4.6	47,424	150,000	130
Nonmedical	85,252	9.0	48,630	134,540	77
Female	81,804	4.1	36,904	150,000	89
Assistant Professor					
All Schools	67,479	4.1	30,000	124,384	326
Medical Public	67,127	3.4	32,000	102,135	144
Medical Private	68,000	4.8	36,822	124,384	131
Nonmedical	66,793	4.1	30,000	106,333	51
Female	65,153	4.3	30,000	106,333	92
Instructor					
All Schools	47,000	4.9	30,900	87,100	63
Medical Public	44,892	7.4	32,640	87,100	31
Medical Private	48,000	1.8	30,900	70,000	27
Nonmedical	50,000	-2.5	42,642	74,400	5
Female	44,531	3.6	30,900	86,848	26

Student/trainee information is provided by ethnicity for predoctoral and postdoctoral categories, as well as predoctoral trainee completions, stipends provided, and type of support.

Departmental budget information (Table 4) shows type of support, faculty salaries derived from grants along with negotiated indirect costs to the departments. Table 5 ranks respond-

ing institutions according to their total dollars, research grant dollars, and departmental space. Space averages are presented as research, administration, teaching and other. ❖

Table 2. Average Salary by Number of Years in Rank

	Years					
	0-5	6-10	11-15	16-20	21-25	26+
Chairpersons						
Salary	\$150,052	170,286	192,023	179,965	172,229	192,901
# of Faculty	28	20	22	8	7	2
Professors						
Salary	110,338	113,711	117,649	117,555	126,860	127,587
# of Faculty	189	152	142	91	52	41
Assoc. Professors						
Salary	83,747	79,872	87,022	78,367	77,805	80,249
# of Faculty	205	87	58	22	17	13
Asst. Professors						
Salary	67,216	66,656	61,176	61,155	89,625	65,127
# of Faculty	267	46	8	3		
Instructors						
Salary	47,624	54,486	58,521		0	0
# of Faculty	56	4	3		0	0

Space Controlled by Department

Research	17,338
Administration	2,872
Teaching	2,830
Other	2,097
Total space	25,136

Type of Institution (n = 97)

Support		Teaching Interactions			
Public	60	MD/DO	88	Pharmacy	22
Private	37	DDS	30	Other biomedical	62
		DVM	8	Life science	41
		Allied health	45	Bioengineering	28
				Other	21

Tenure status in each department by degree

	Tenured	Not Tenured	Not Eligible	Total
MD	41	13	2	56
PhD	903	267	192	1,362
Both	68	27	11	106
Other	9	2	10	21

Faculty Summary (n = 1,522)

	Male	Female	Total
American Indian/ Alaskan Native	0	1	1
Asian/Pacific Islander	128	35	163
Black, not Hispanic origin	18	9	27
Hispanic	45	14	59
White, not of Hispanic origin	1,022	250	1,272
Foreign national	57	12	69
Total	1,202	296	1,498

Student/Trainee Summary

Total number of US citizen/resident alien pre- and postdoctoral students/trainees

Predocorral male	505	Postdoctoral male	243
Predocorral female	424	Postdoctoral female	162

Total number of foreign pre- and postdoctoral students/trainees

Predocorral male	287	Postdoctoral male	481
Predocorral female	253	Postdoctoral female	251

Ethnicity of each pre- and postdoctoral student/trainee

	Predocorral		Postdoctoral	
	Male	Female	Male	Female
American Indian/ Alaskan Native	5	3	0	2
Asian/Pacific Islander	51	32	66	39
Black, not Hispanic origin	33	55	10	10
Hispanic	31	21	3	9
White, not of Hispanic origin	385	313	164	102

Number of foreign pre- and postdoctoral students/trainees

	Predocorral		Postdoctoral	
	Male	Female	Male	Female
African	11	5	12	3
Asian/Pacific Islander	139	146	282	117
Central and South American	14	8	24	13
European, Canadian, Australian	73	62	108	89
Middle Eastern	35	19	29	12
Other	8	9	20	12

Number of foreign pre- or postdoctoral trainees whose primary source of support is:

	<i>Predoctoral</i>	<i>Postdoctoral</i>
Institutional	194	78
Research grants	267	567
Private foundations	10	38
Home (foreign) governments	20	18
Other	11	11

Foreign National predoctoral trainee completions:

	<i>Male</i>	<i>Female</i>
African	0	0
Asian or Pacific Islander	21	26
Central or South American	1	0
European, Canadian, Australian	15	11
Middle Eastern	4	5
Other	2	1

US citizen/resident alien predoctoral trainee completions:

	<i>Male</i>	<i>Female</i>
American Indian/Alaskan Native	1	2
Asian or Pacific Islander	12	6
Black, not of Hispanic origin	5	2
Hispanic	5	3
White, not of Hispanic origin	76	52

Predocotrinal Trainee Completions

Number of trainees who have completed doctoral work during the year ended June 30, 2001

<i>Predocotrinal male</i>	142	<i>Predocotrinal female</i>	108
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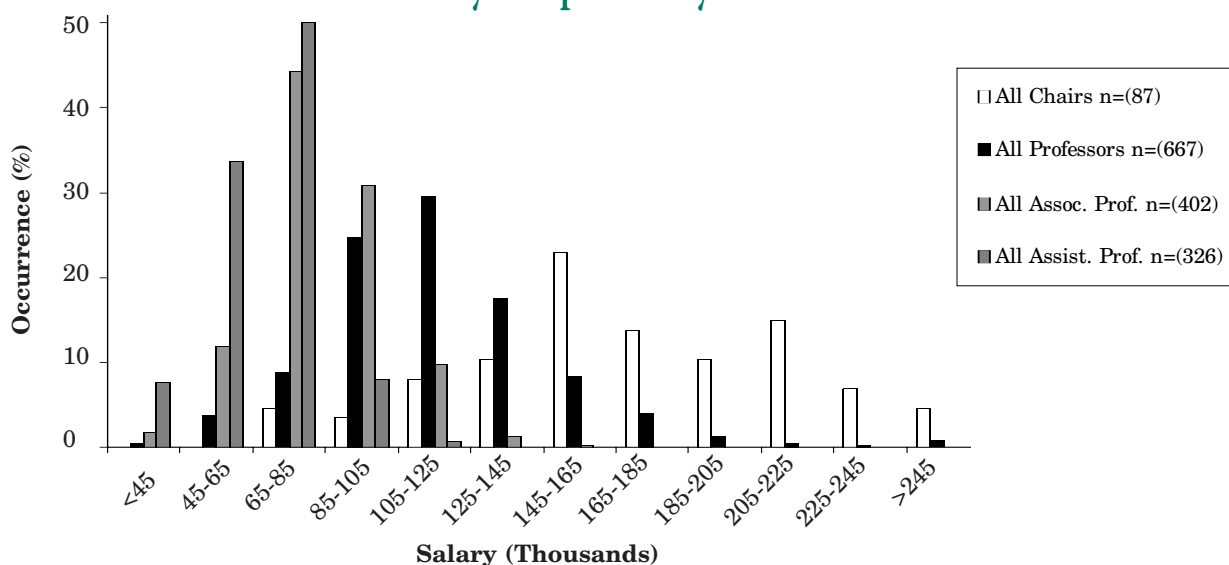
Average annual starting stipend (in US dollars) for trainees:

<i>Predocotrinal</i>	\$17,978	<i>Postdocotrinal</i>	\$30,369
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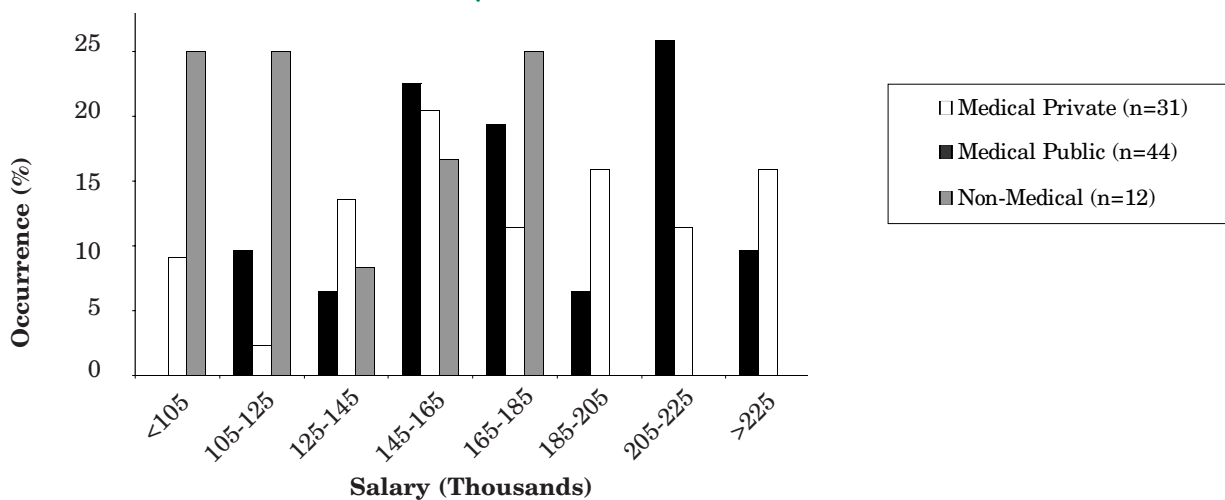
Table 3. Salaries by Region

Region	Average	Median	Minimum	Maximum	Total	
Chairperson						
Northeast	\$186,114	\$178,389	\$102,675	\$300,000	21	Northeast: ME, NH, VT, NY, MA, RI, CT, NJ, PA, MD, DE, DC
Midwest	182,917	177,190	99,019	280,000	21	
South	164,945	151,271	114,999	255,400	32	
West	173,435	174,183	103,223	223,602	9	
Canada/Puerto Rico	68,505	68,400	66,660	70,561	4	
Professor						
Northeast	114,893	112,790	41,616	212,892	154	Midwest: MI, OH, IN, IL, WI, IA, MO, KS, NE, ND, SD, MN
Midwest	122,859	118,401	48,591	247,105	173	
South	114,213	109,700	53,276	267,800	241	
West	126,420	121,500	49,250	306,400	75	
Canada/Puerto Rico	58,930	60,158.50	34,883	72,848	24	
Associate Professor						
Northeast	83,500	79,632	48,247	122,573	99	South: VA, WV, KY, TN, NC, SC, GA, FL, AL, MS, AR, LA, OK, TX
Midwest	87,364	86,894	53,088	150,000	112	
South	82,214	80,845	38,766	140,420	146	
West	84,197	81,417	59,088	116,835	28	
Canada/Puerto Rico	49,538	49,496	36,904	57,552	17	
Assistant Professor						
Northeast	65,559	67,000	32,398	101,070	99	West: AK, HI, MT, WY, CO, NM, AZ, ID, WA, OR, CA, UT
Midwest	70,369	70,000	30,000	124,384	78	
South	68,021	67,605	41,633	89,750	112	
West	66,961	64,577	43,697	94,008	29	
Canada/Puerto Rico	37,680	35,793	32,000	49,548	8	
Instructor						
Northeast	50,386	46,350	38,500	86,848	11	
Midwest	49,636	48,000	30,900	74,400	15	
South	46,164	46,359	32,640	61,880	31	
West	55,104	52,500	37,872	87,100	6	
Canada/Puerto Rico	0	0	0	0	2	

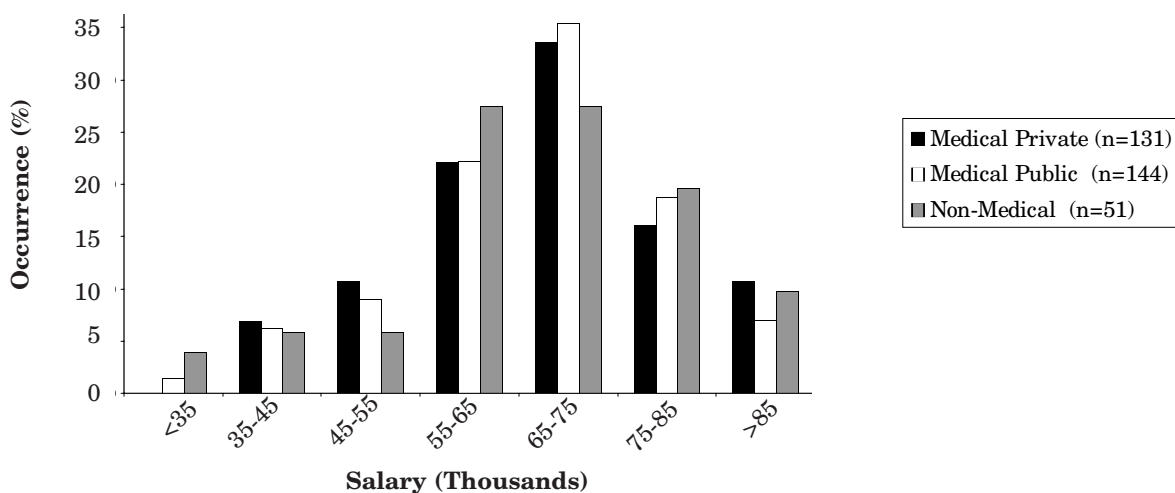
Salary Comparison by Title



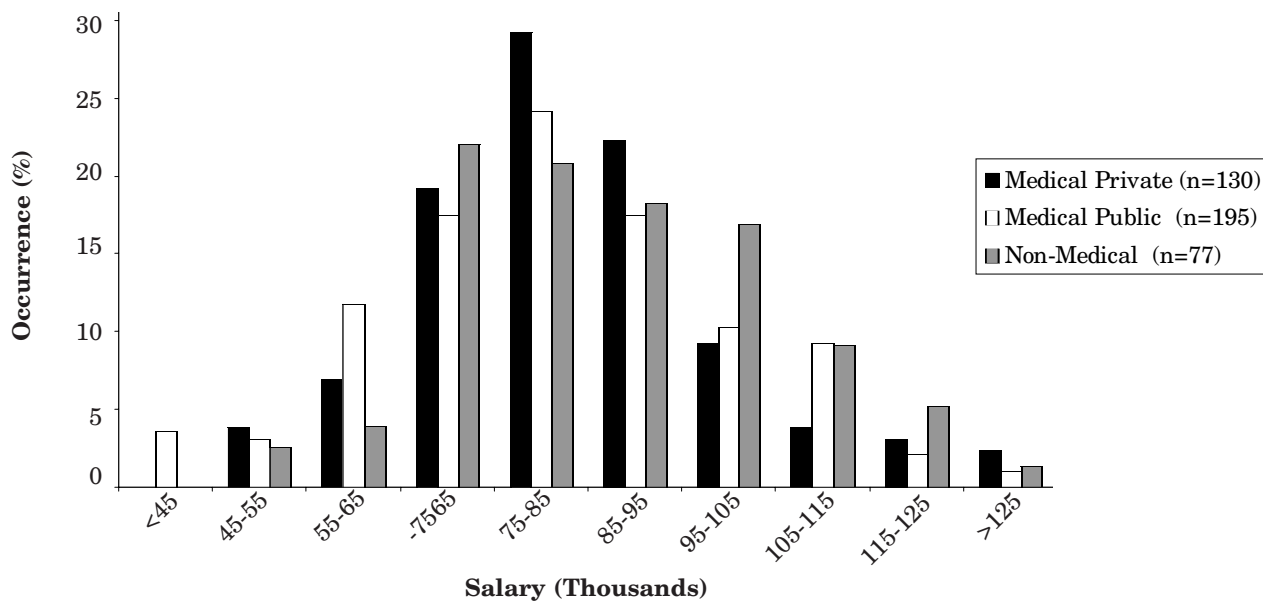
Chairs by Institution



Assistant Professors by Institution



Associate Professors by Institution



Professors by Institution



Table 4. Budgets by Institutions

	All Institutions	No.	Private Med.	No.	Public Med.	No.	Nonmed.	No.
Institutional	\$1,634,434	93	\$1,552,121	35	\$1,566,997	45	\$1,784,185	13
Outside Research Grants (direct costs)	3,375,346	90	4,336,913	35	3,182,566	43	2,606,560	12
Training Grants (direct costs only)	250,047	52	384,670	22	233,283	26	132,187	4
Endowments	186,895	45	203,056	15	120,309	24	237,320	6
Indirect Cost Recovery (amount to dept.)	245,459	52	457,825	10	183,021	34	95,532	8
Other Budget Support (identify)	315,895	66	580,314	22	282,282	35	85,088	9
Average Departmental Budget	1,001,346		1,252,483		928,076		823,479	
Standard Deviation	1,303,945		1,583,741		1,232,747		1,095,347	

Financial Information

Current fringe benefit rate most frequently used for Primary faculty	24.67	(n = 92)
Federally negotiated indirect cost rate for FY 01-02 off campus	26.65	(n = 66)
on campus	50.45	(n = 89)
Percentage of allocated faculty salary dollars raised from grants, etc., directly returned to your department	73.71	(n = 55)
Percentage of indirect costs returned to your department	17.04	(n = 49)
Percentage of total faculty salaries derived from research grants (do not include fringe benefits costs)	34.94	(n = 87)

Table 5. Complete Ranking According to Total Dollars

Rank	Total Dollars	Rank Research Grant Dollars	Research Grant Dollars	Rank Research Dollars/ Faculty	Research Dollars/ Faculty	Rank Total Research Space	Research Space (sq. ft.)	Rank Research Dollars/ sq. ft.	Research Dollars/ sq. ft.	No. of Faculty
1	\$18,638,347	1	\$16,029,926	2	\$667,914	6	43,616	7	\$387	24
2	18,630,853	3	13,920,327	1	928,022	18	33,178	3	447	15
3	16,361,233	2	14,033,250	4	501,188	1	52,506	8	368	28
4	13,800,705	7	6,747,882	24	259,534	43	23,019	11	335	26
5	12,372,266	4	9,309,958	10	310,332	3	47,162	9	354	30
6	12,141,506	6	6,945,120	31	231,504	21	31,286	16	301	30
7	11,510,819	13	6,065,743	8	356,808	53	19,476	2	478	17
8	10,824,566	8	6,745,956	9	321,236	5	44,293	39	200	21
9	10,591,413	10	6,626,807	16	288,122	23	31,106	30	242	23
10	10,108,284	16	5,529,348	23	263,302	22	31,272	35	218	21
11	9,909,081	9	6,663,187	17	277,633	7	42,770	44	188	24
12	9,318,106	5	7,056,000	13	294,000	16	34,606	27	250	24
13	9,308,041	71	1,707,255	80	68,290	2	51,300	83	64	25
14	9,272,202	11	6,249,690	6	390,606	38	26,114	13	316	16
15	8,830,568	19	5,154,307	20	271,279	10	42,427	62	143	19
16	8,828,745	20	5,112,369	21	269,072	8	42,641	56	157	19
17	8,785,446	18	5,412,452	41	193,302	14	35,752	42	192	28
18	8,717,074	15	5,744,867	42	191,496	17	34,142	26	252	30
19	8,635,194	14	5,966,989	12	298,349	36	26,773	19	280	20
20	8,533,320	27	4,619,925	32	230,996	46	21,726	18	285	20
21	8,451,036	24	4,839,771	7	372,290	9	42,490	66	135	13
22	8,035,169	21	5,009,691	27	250,485	27	30,310	49	182	20
23	7,584,000	17	5,500,000	5	392,857	19	33,000	43	190	14
24	7,394,109	12	6,243,435	3	624,343	51	19,542	5	391	10
25	7,338,555	30	4,073,726	39	193,987	28	29,371	36	207	21
26	7,025,845	25	4,748,001	28	249,895	35	26,989	20	272	19
27	6,912,601	29	4,100,195	14	292,871	30	28,599	46	186	14
28	6,740,227	23	4,918,753	43	189,183	32	28,259	38	204	26
29	6,633,870	22	4,992,290	34	208,012	25	30,560	41	193	24
30	6,622,849	33	3,800,000	54	158,333	4	45,363	57	155	24
31	6,326,856	39	3,105,321	47	182,666	42	23,729	60	151	17
32	6,310,020	28	4,107,024	45	186,683	20	32,276	50	172	22
33	6,307,012	53	2,433,874	79	81,129	40	24,860	64	137	30
34	6,298,862	26	4,715,665	30	235,783	39	25,936	22	262	20
35	6,265,140	34	3,565,092	58	155,004	26	30,480	65	136	23
36	5,814,495	40	3,093,591	59	154,680	50	19,627	28	250	20
37	5,552,315	66	1,987,000	68	116,882	61	15,100	6	390	17
38	5,461,549	67	1,982,842	81	66,095	11	38,497	81	82	30
39	5,338,035	45	2,619,612	73	109,151	12	37,879	75	110	24
40	5,290,281	48	2,558,636	63	142,146	37	26,336	70	127	18
41	5,253,519	42	3,000,000	19	272,727	81	10,314	1	555	11
42	5,074,916	36	3,314,272	11	301,297	58	17,245	31	231	11
43	5,042,342	32	4,039,839	33	224,436	48	21,468	32	227	18

Table 5. Complete Ranking According to Total Dollars

Rank	Total Dollars	Rank Research Grant Dollars	Research Grant Dollars	Rank Research Dollars/ Faculty	Research Dollars/ Faculty	Rank Total Research Space	Research Space (sq. ft.)	Rank Research Dollars/ sq. ft.	Research Dollars/ sq. ft.	No. of Faculty
44	\$5,021,007	44	\$2,693,017	61	\$149,612	54	19,437	52	\$165	18
45	5,002,565	37	3,224,492	22	268,708	56	17,576	21	269	12
46	4,998,517	51	2,452,165	53	163,478	55	17,715	17	292	15
47	4,824,874	43	2,769,308	26	251,755	59	16,778	33	223	11
48	4,694,794	31	4,044,895	35	202,245	15	35,687	48	183	20
49	4,621,439	54	2,373,908	64	139,642	24	30,574	71	116	17
50	4,570,184	56	2,322,902	40	193,575	73	12,152	24	255	12
51	4,532,686	59	2,200,850	65	137,553	44	22,729	73	112	16
52	4,427,103	52	2,446,906	44	188,224	29	28,759	54	160	13
53	4,421,348	38	3,122,788	29	240,214	71	12,839	14	314	13
54	4,149,130	46	2,605,447	15	289,494	75	11,482	10	343	9
55	4,065,745	47	2,583,573	46	184,541	69	13,127	25	252	14
56	3,948,702	64	1,994,417	66	124,651	34	27,364	80	83	16
57	3,888,862	73	1,610,031	36	201,254	63	14,505	68	131	8
58	3,864,687	69	1,836,869	70	114,804	76	11,473	34	220	16
59	3,804,595	49	2,524,647	72	109,767	13	37,849	79	83	23
60	3,795,406	50	2,503,497	57	156,469	60	15,638	47	183	16
61	3,771,702	55	2,368,824	55	157,922	68	13,425	23	261	15
62	3,657,010	41	3,052,685	18	277,517	45	21,887	37	205	11
63	3,648,171	65	1,991,165	48	181,015	64	14,126	55	159	11
64	3,574,715	35	3,344,403	38	196,730	78	11,018	4	407	17
65	3,566,477	57	2,315,698	51	165,407	57	17,464	53	164	14
66	3,520,515	60	2,147,790	74	102,276	49	21,110	69	129	21
67	3,330,766	75	1,497,311	69	115,177	70	12,908	45	187	13
68	3,281,017	58	2,312,695	52	165,193	80	10,526	12	319	14
69	3,260,787	70	1,780,809	67	118,721	65	14,067	51	165	15
70	3,232,517	72	1,622,555	76	95,444	41	23,758	58	154	17
71	3,173,427	61	2,041,729	50	170,144	33	27,458	76	107	12
72	3,161,747	63	2,005,000	37	200,500	52	19,540	67	135	10
73	3,130,430	68	1,931,789	62	148,599	84	8,437	29	248	13
74	3,128,765	62	2,015,716	25	251,965	82	9,512	15	307	8
75	2,791,046	74	1,510,110	60	151,011	47	21,572	59	153	10
76	2,767,411	82	734,951	83	45,934	83	9,004	77	106	16
77	2,646,119	76	1,443,102	49	180,388	79	10,907	61	147	8
78	2,640,856	83	671,950	85	31,998	31	28,400	86	45	21
79	2,600,337	80	1,019,000	78	92,636	74	11,702	74	112	11
80	2,573,369	81	899,021	82	56,189	77	11,198	78	92	16
81	2,485,345	78	1,306,826	75	100,525	72	12,679	63	141	13
82	2,173,200	85	350,000	86	29,167	85	8,400	84	64	12
83	2,131,781	79	1,125,000	71	112,500	62	15,079	82	80	10
84	2,088,033	77	1,418,550	56	157,617	66	13,787	72	114	9
85	1,280,710	84	659,960	77	94,280	87	6,240	40	194	7
86	1,013,350	86	216,067	84	43,213	88	5,698	85	58	5
87	1,000,478	87	114,541	87	19,090	67	13,696	89	14	6
88	815,926	88	81,000	88	13,500	90	2,850	87	31	6
89	481,259	89	60,411	89	12,082	89	3,949	88	17	5
90	89,354	90	0	90	0	86	6,986	90	0	10

AAMC Comparison

Each year the Association of American Medical Colleges (AAMC) publishes Faculty Salary Survey Reports based on information it has gathered from medical colleges across the US and Canada.

The data are divided into Basic Sciences Departments, which includes Departments of Physiology, and Clinical Science Departments.

In order to offer a comparison with the data collected by the Association of Chairs of Departments of Physiology in the accompanying article, below is a

table showing median salaries as reported by AAMC in their 2001 survey.

The complete 2001 AAMC Faculty Salary Survey Reports can be pur-

chased from the AAMC publications office (202-828-0416 or <http://www.aamc.org/publications/start.htm>). The cost for constituents is \$75, plus shipping. ❖

Table 1. Salary Data for Faculty in Departments of Physiology

	PhD Degrees		MD Degrees	
	Median salary	n	Median salary	n
Chair	\$166,000	74	\$200,000	20
Professor	108,000	616	131,000	68
Associate Professor	77,000	395	84,000	20
Assistant Professor	63,000	365	54,000	32
Instructor	42,000	65	51,000	9

75th APS President

(continued from page 87)

in active physiology laboratories, helping them develop classroom exercises for their students, and making available a variety of curricular resources for their use. Many of those who have participated are “master teachers” who return to their districts and “spread the word” to other teachers with whom they interact. Although we don’t know if this program has increased the number of students interested in studying physiology, it is likely to have had a positive effect of their view of physiology.

In concert with the 2000 Strategic Plan, we have also begun to reach out to undergraduates with the APS Undergraduate Summer Research Fellowships. This summer’s class of 12 will be the third to participate in this program which is designed to encourage talented undergraduates to pursue graduate training in the physiological sciences by introducing them to an exciting research experience.

But there is more that we can do. We can make the APS website the premier place to find out what’s new and exciting about physiology. Our Sections are an obvious resource, and I will be asking them to help provide content for a “What’s New in Physiology” site. In addition, the Careers Committee and the Education Office have begun to develop vignettes, member profiles, and case studies to illustrate the rich-

ness and excitement of research in physiology. These examples will be designed with input from the Sections and will have increasing complexity as they are directed to different audiences.

Another strategy for conveying the excitement and diversity of modern physiology that I intend to explore is the creation of a “Speakers Bureau” whose members would be willing to discuss their research with students/faculty at local undergraduate institutions. This would complement the web-based instructional resource site that the Education Committee is currently developing. We are already reaching out to teachers of undergraduate physiology courses via our interaction with members of the Human Anatomy and Physiology Society (HAPS) at their annual meeting where APS sponsors an update lecture. This year, I will be meeting with a focus group of these instructors to discuss ways to promote physiology and physiological research to their students.

While it is difficult to know how effective the above programs will be, they all hold a promise for increasing the appreciation of physiology in the eyes of students as well as the public.

The Translational Research Initiative

Our new initiative on Translational

Research, which was part of the 2000 Strategic Plan, should also enhance the visibility of physiology to students, colleagues, and the public as it reinvigorates the bi-directional transfer of ideas and information between the basic sciences and clinical medicine. Under the stewardship of President **John Hall**, we have established a Task Force with objectives that include highlighting translational research in our publications and our meetings, encouraging the development of interdisciplinary research teams that bridge molecular, cellular, and organ systems physiology with clinical research, promoting translational research as a viable career option for physiologists, and increasing the impact of physiology on medical and postgraduate medical education. We have already begun work on these objectives. Our journal editors have called for the submission of translational research manuscripts. APS is sponsoring symposia at the American Society of Nephrology and the American Gastroenterology Association. The Publications Committee has negotiated renewal of the “Physiology in Medicine” series in the *Annals of Internal Medicine*; the Program Committee continues to encourage and support cross-sectional, cross-society bench-to-bedside programming, and the Education Committee has initiated the development of a resource

repository that could facilitate the integration of physiology with clinical medicine teaching.

These actions represent a fine start, but successful implementation of our objectives will require a prolonged effort. As **John Hall** pointed out in his 2001 presidential message (5), the importance of translational research has been emphasized not only by the

National Institutes of Health, but by the American Cancer Society, the Burroughs Wellcome Fund, the Howard Hughes Medical Institute, and the American Heart Association.

Physiology has traditionally played a major role in translational research. The striking advances in both information and methodologies that are now available to physiologists open a

new level of exploration where interactions relevant to current clinical problems can be viewed from a totally new perspective. Armed with an understanding of both homeostasis and cutting-edge techniques, physiologists are well-positioned to bridge highly specialized reductionist and clinical disciplines. While the APS, with input from its Sections, has an

Introducing.....Barbara A. Horwitz

Barbara A. Horwitz is a professor of physiology in the section of Neurobiology, Physiology and Behavior, and Vice-Provost of Academic Personnel at the University of California, Davis. Horwitz received her doctorate in physiology from Emory University in Atlanta, GA, in 1966 and did her postdoctoral training at both the University of California Los Angeles and Davis locations. She became an assistant professor at UC Davis in 1972, an associate professor in 1975, and was appointed a full professor of physiology in 1978. Horwitz also served as the chair of the Department of Animal Physiology at UC Davis from 1991-93 and chair of the Section of Neurobiology, Physiology & Behavior at UC Davis from 1993-98.

Horwitz's research centers on the genetic, neural, and hormonal regulation of energy balance. Her current studies are focused on the underlying mechanisms associated with altered regulation of energy balance in genetic and diet-induced animal models of obesity, the cellular and molecular mechanisms underlying sympathetic stimulation of energy expenditure in brown adipocytes, the role of novel uncoupling proteins in energy balance and oxidative stress, and the physiological basis of altered metabolism and thermoregulation during aging. In addition to her research, Horwitz directs an NIH-funded Initiative for Minority Student Development which is designed to increase the number of underrepresented minorities in biomedical research careers.

Horwitz has authored/co-authored over 180 research papers, many of which have been published in the *American Journal of Physiology* and

the *Journal of Applied Physiology*. She has served on the editorial board of the *Journal of Applied Physiology* (1975-78), as a section editor for the *Handbook of Physiology—Adaptation to the Environment* (1991-92), and as an associate editor for *News in Physiological Sciences (NIPS)* (1994-96). She has been a grant proposal reviewer for the National Science Foundation [panel member for *Regulatory Biology* (1981-83); for the instrumentation program (1993); and for predoctoral fellowships (1994-96)]. She was a member of the NIH Respiratory and Applied Physiology Study Section (1995-99), and an hoc reviewer of grants for the Veterans Administration, the California Sea Grant College Program, Texas Tech University, the USDA, and the American Heart Association, as well as for numerous scientific journals, including the *American Journal of Physiology*, *Journal of Applied Physiology*, *Science*, *Journal of Physiology & Pharmacology*, *American Journal of Clinical Nutrition*, *European Journal of Pharmacology*; *Hormone and Metabolic Research*, *Journal of Nutrition*, *Journal of Comparative Physiology*, *Journal of Thermal Biology*, *Journal of Biological Chemistry*, *Endocrinology*, *Obesity Research*, *Physiology and Behavior*, and *Proceedings of Experimental Biology and Medicine*. Horwitz has served on the Executive Committee (1989-92) and as chair of the Finance Committee (1993-96) of the North American Association for the Study of Obesity. She has also served on the council for the Society for Experimental Biology and Medicine (1990-94) and is currently president of that Society.

Horwitz became a member of the APS in 1969. In addition to her editorial service for *NIPS* and the *Journal of Applied Physiology*, Horwitz has been active on a variety of APS committees, including the Public Affairs Committee (1977-79), the Women in Physiology Committee (1986-89), the Steering Committee for the Exercise and Environmental Physiology Section (1987-90), the Education Committee (1983-85, 1990-93), the APS Council (1993-96), the Committee on Committees (1994-96), and the Long Range Planning Committee (1997-2000). She has participated in the *Frontiers of Physiology* and *Explorations in Biomedicine* programs, hosting K-12 and community college science teachers (1995, 1998, 1999), and she is currently serving in the mentoring program (1993-present).

Horwitz has been the recipient of several awards. These include including the APS Arthur C. Guyton Physiology Teacher of the Year, the University of California Presidential Award for Excellence in Fostering Undergraduate Research, the UC Davis Prize for Teaching & Scholarly Achievement, the Distinguished Teaching Award from UC Davis, and an NIH MERIT Award. She is a Fellow of the American Association for Advancement of Science, vice president/member of the National Executive Council of the Phi Sigma Biological Sciences Honor Society, and a member of the North American Association for Study of Obesity, the New York Academy of Sciences, and the Society for Experimental Biology and Medicine. ❖

opportunity to provide a long-term blueprint for re-emphasizing the relationship between physiology and medicine, in the final analysis, our success will depend on efforts emanating, not from the top, but from our individual members.

Enhancing the excellence of our publications and our meetings

Providing a venue for scientific communication via meetings and publications is, for many, the *raison d'être* for a professional society. In this regard, the APS is fortunate. Our journals encompass the breadth of physiology, representing traditional and emerging fields of study, as well as pedagogical issues, and our meetings provide programming for both the generalist as well as the specialist. While all is not perfect, the trajectory is positive.

Publications. Our newest journal, *Physiological Genomics*, is launched and is finding its niche. Its establishment reflects the vision of Past President **Allen Cowley** (3) and its increasing stature owes much to the commitment of subsequent presidents and Councils, the members of the Publications Committee, and its editors. Our other journals are respected and faring well. Most have increased their impact factor since 1998 (the first year we had such data available), are publishing more articles, and have enhanced selectivity (as indexed by rejection rate). *Physiological Reviews* retains its place as an elite review journal, with the highest impact factor of all of our publications. Credit for these strengths can be attributed to many—our editors, our reviewers, and our outstanding APS staff. But most critical are those of you who send your best work to be published in APS journals.

Enhancing excellence in our journals requires continuous vigilance and effort and is more challenging than a cursory glance would suggest. Difficulties in establishing a financially responsible publication policy are exacerbated by uncertainties associated with the rapid growth of electronic publishing and the negative consequences of poor choices—a misstep is much more treacherous today than in

the past because consequences can occur so rapidly. Nonetheless, the APS has recognized the enormous advantages of electronic publishing and has been aggressively moving its journals online. Additionally, electronic submission and reviewing has expanded with the establishment of APS Central, making these processes more rapid and efficient. As soon as manuscripts are accepted, authors may authorize their appearance on-line as *Articles in PresS*, and there is now a mechanism whereby readers can browse reviews from a single APS journal or from within them all.

These advances, which are just a few examples of changes made possible by the foresight and efforts of the members of our Publications Committees and the APS staff, serve not only our members, but the greater scientific community by providing enhanced access to our studies and our ideas. To extend this accessibility to pre-1996 publications, the APS is embarking on a “legacy” project which will put back issues of all of the Society’s journals online. We are beginning with the 1986-96 volumes of the *American Journal of Physiology*, with plans to include all volumes back to Volume 1 (1898). This will dramatically increase the visibility of earlier work, especially for graduate and undergraduate students who have become used to electronic access to information.

Meetings. Just as the excellence of our journals depends on the quality of the published papers, the value of our meetings relies on the strength of programming. As the APS has grown in membership and in diversity of interests, structuring our meetings to meet the needs of this diversity has been a challenge. During the past few years, a series of recommendations that began with a Blue Ribbon Panel report commissioned by **Allen Cowley** have been implemented to improve our annual meeting (Experimental Biology) and membership attendance. Perhaps the major change has been to give direct control of the programming to Section representatives who now sit on the Joint Program Committee. These representatives bring their members’ proposals for symposia, lec-

tures, workshops, and focused topics to the table for discussion and programming. This shift to the grass-roots of the Society and the ability to submit late-breaking abstracts two months before the meeting has increased the timeliness and the vigor of Experimental Biology.

Another shift that has begun in the programming of Experimental Biology (APS’ annual meeting) is a greater emphasis on cross-sectional and cross-societal programs. One major advantage of a large meeting like Experimental Biology is its breadth. This provides an opportunity to learn from experts in fields that may be only peripherally related or even new to your own. For example, my research area deals with the regulation of energy balance and our current work focuses on mechanisms underlying the alterations in this regulation during the onset and progression of obesity, as well as during biological aging. The opportunity to interact with physiologists, pharmacologists, nutritionists, and biochemists working at different levels of biological organization and in such areas as diverse as neural control and mitochondrial oxidative damage has been immensely valuable to me. Attending a meeting such as Experimental Biology or its equivalent (which I have done each year since I was a graduate student) has made it easier to remain current in topics needed for a broad perspective.

Breadth, however, must be accompanied by depth, and the challenge is to construct a meeting program which offers both. The meetings-within-a-meeting concept attempts to do this, and I believe with a significant degree of success. Here the importance of member input in recommending topics for programming cannot be overemphasized. One of my goals as President is to promote greater participation within this framework.

Another mechanism whereby the Society has tried to foster depth is through the APS conferences. These conferences are focused on specific topics (the latest one being “Physiological Genomics of Cardiovascular Disease: From Technology to Physiology,” held in San Francisco).

Although the science at these conferences has been excellent, attendance at some has been disappointing. There are several reasons why this may be the case (e.g., cost, venue, timing), and I hope that during this next year we will identify these reasons and find ways to circumvent them.

Strategic Planning and Member Input

I have touched only briefly on various aspects of APS initiatives. The APS Strategic Planning Document (2) lays out an ambitious series of goals that relate to the role that the Society can play in strengthening the discipline of physiology. I, like previous presidents, believe that strategic planning is an ongoing exercise—one in

which we must continually assess what we have achieved and where we need to go. Goals change as opportunities and challenges arise. I am optimistic about the future of physiology and its importance for the discoveries and the applications that will be forthcoming in the life sciences. I am enthusiastic about the opportunity to work with you, and I invite you to send me your ideas and suggestions for improving Society activities, as well as for promoting physiology as an exciting scientific discipline that will have special relevance in the 21st century. ❖

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APS Election Results

The American Physiological Society announces the results of the election of officers for 2002.

John A. Williams, University of Michigan, Ann Arbor, is the new President-Elect.

The two newly elected Councillors taking office on April 24, 2002 are **Virginia M. Miller**, Mayo Clinic and

Foundation, Rochester, MN, and **Charles M. Tipton**, University of Arizona, Tucson. The Councillors will serve for three years. ❖

President-Elect



John A. Williams

Councillors



Virginia M. Miller



Charles M. Tipton

2001 IUPS Travel Award Program

The American Physiological Society once again administered a travel award program for attendees to the XXXIV IUPS Congress in Christchurch, New Zealand. The US National Committee (USNC) of the IUPS, an organization comprised of representatives from the APS, Society for Neurosciences, Society of General Physiologist, Biomedical Engineering Society, Microcirculatory Society, and the Society for Integrative and Comparative Biology, offered the travel program to US physiologists. Funds for the program were derived from an account established from the profits associated with the 1968 IUPS Congress held in Washington, DC. In addition, APS received \$31,000 from NIH and \$20,000 from NSF. APS members also contributed to the program through voluntary donations made while paying their dues.

A subcommittee of the USNC was charged with reviewing all the travel applications and selecting the awardees. A total of 142 applications were received and 90 awards were made. An additional 22 individuals were offered awards but because of personal reasons, the awards were rejected. Thirty-six applications (25.4%) were received from female scientists and 30 received awards. Applications were received from 14 scientists from underrepresented minority groups and 12 awards were made. The societal affiliations of the applicants and awardees are listed in Table 1.

The awardees were provided with a \$1,000 travel award to partially defray the expenses associated with their attendance at the Congress. Many of the awardees used the Christchurch

Congress as an opportunity to visit research laboratories and to develop collaborative research projects. Of those completing the travel award questionnaire, 84.4% (76 of 90) used the meeting as an opportunity to develop collaborative research projects with colleagues, 37.8% (34 of 90) recruited future graduate students or postdoctoral students, and 37.8% (34 of 90) visited research laboratories in conjunction with their visit to Christchurch. In addition, 64.4% (58 of 90) visited other countries in conjunction with the Congress, presumably to attend satellite meetings or to visit laboratories in Australia.

The median year for receipt of the doctorate for the awardees was 1992 (Table 2). The median year of birth for the awardees was 1964 and for the applicants it was 1959 (Table 3). The awardees were asked to rank the Congress (with 10 being best). More than 83.3% of the awardees gave the Congress a ranking of seven or higher (Table 4). Overall, the attendees were

supportive of the Congress, its scientific aspects, and the hospitality of the New Zealand organizing committee. ♦

Table 3. Applicant's and Awardee's Year of Birth

Year of Birth	Applicants	Awardees
1920-1924	2	0
1925-1929	4	1
1930-1934	5	2
1935-1939	4	0
1940-1944	8	5
1945-1949	14	7
1950-1954	15	6
1955-1959	20	13
1960-1964	16	9
1965-1969	30	22
1970-1974	21	19
1975-1979	3	2

Table 2. Awardee's Year of Doctoral Degree

Year	Number
1960-1964	1
1965-1969	3
1970-1974	4
1975-1979	5
1980-1984	10
1985-1989	12
1990-1994	11
1995-1999	17
2000-2001	17
Projected 2002	4
Projected 2003	1

Table 4 - Awardees Ranking of the IUPS Congress

Meeting Rank (10=best)	Number
1	0
2	0
3	2
4	3
5	3
6	7
7	24
8	34
9	15
10	2

Table 1. Societal Affiliations of Applicants and Attendees

Society	Applicants	Awardees
American Physiological Society	107	67
Society for General Physiologists	7	2
Society for Integrative & Comparative Biology	13	5
Society for Neuroscience	33	20
Biomedical Engineering Society	4	1
Microcirculatory Society	7	3
Other	49	25
Total	220	123

Introducing...Carole M. Liedtke

On January 1, 2002, **Carole M. Liedtke** succeeded **Susan M. Barman** as Chair of the APS Women in Physiology Committee. Liedtke has served on this Committee for two years before becoming Chair. As Chair of the Women in Physiology Committee, Liedtke will be an ex officio member of the APS Awards Committee and a member of the FASEB Excellence in Science Award Committee.

Liedtke is a Professor in the Department of Pediatrics at Rainbow Babies & Children's Hospital at Case Western Reserve University in Cleveland, OH. She received her doctoral degree in Anatomy from Case Western Reserve University in 1980. Her graduate work on mechanisms of chloride transport in the brush border membrane of intestinal epithelial cells was completed under the direction of Ulrich Hopfer. As a postdoctoral fellow in a pediatric pulmonary training program, she began her studies of regulation of electrolyte transporters in airway epithelium under Thomas Boat, Department of Pediatrics, and Stephen Rudolph, Department of Pharmacology, Case Western Reserve University. In 1982, Liedtke was awarded a NIH grant to continue these studies and joined the faculty of the Department of Pediatrics as an Instructor.

Liedtke's research centers on epithelial electrolyte transporters and their regulation by intracellular signaling events. Of particular interest are a Na-K-Cl cotransport which delivers Cl for secretion and CFTR, a Cl channel through which Cl exits from epithelial cells. The research focuses on acute events leading to rapid secretion of fluid and electrolytes in airway epithelial cells. Her work has revealed a critical role for

lipid mediators and protein kinase C acting through stimulation of hormone receptors or through hyperosmotic stress. She discovered the identity of specific protein kinase C isotypes involved in the regulation of the Cl transporters as well as the intracellular signalling mechanism linked to activity of protein kinase C. Recent exciting findings from her laboratory reveal distinct protein-protein interactions between the protein kinase C isotypes with Cl transporter and other associated proteins.

In addition to her research, Liedtke is an active participant in the Federal Demonstration Partnership, (FDP) having represented Case Western Reserve University for the past five years. The FDP brings together university and federal agency representatives as partners in an ongoing process to increase research productivity and decrease administrative burden.

One of the functions of the Women in Physiology Committee is to coordinate activities with other comparable committees within the FASEB organization. Liedtke plans to continue the interaction with the ASPET Committee on Women in Pharmacology that Barman established and is eager to interact with member societies, such as ASBMB. For the second year, the Women in Physiology Committee and the ASPET committee will jointly sponsor a session at Experimental Biology (EB). This year the topic deals with mentoring issues. Liedtke also looks forward to working with Melinda Lowy, the Higher Education Programs Coordinator for APS, on the Mentoring Program for junior physiologists. The Mentoring website has been revised and updated through the efforts of Lowy and the Women in Physiology Committee. A Mentoring Breakfast at EB meetings has been a

very successful forum for young scientists to meet established scientists to discuss education, employment, and professional opportunities for physiologists today. Liedtke will also work toward identifying new participants (both mentees and mentors) for the Mentoring Program that was developed to encourage and support women physiologists who are still in training or beginning new positions in academia or industry. Experienced mentors can provide valuable advice on how to make the most of graduate and professional experiences.

The Women in Physiology Committee is also responsible for selecting the recipients of the Carolinum Suden/Frances A. Hellebrandt Professional Opportunity Awards. Council has approved funding for 36 predoctoral students and postdoctoral fellows for participation at EB meetings. The selection process involves a critical review of the scientific merit of the abstracts and a supporting letter written by the applicant. In addition to serving as Chair of the Women in Physiology Committee, Liedtke also is a member of the Epithelial Transport Group Steering Committee. She has also served on the Editorial Boards of *AJP: Cell Physiology* and *AJP:Lung Cellular and Molecular Physiology* and she has frequently reviewed for other APS journals.

Anyone who is interested in assisting the Women in Physiology Committee in promoting the discipline of physiology as a rewarding career to young women and in encouraging their active participation in the society should contact Liedtke or any other member of the Committee. A list of members and their contact information can be found on the Web at <http://www.the-aps.org/committees/women.htm>. ♦

Moving?

If you have moved or changed your phone, fax, or email address, please notify the APS Membership Office at 301-530-7171 or fax to 301-571-8313. Your membership information

can also be changed by visiting the Members Only portion of the APS website at <http://www.the-aps.org>.

APS Archive of Teaching Resources

APS is pleased to announce the launch of the revised Archive of Teaching Resources (<http://www.apsarchive.org>) as a component of the National Science Foundation (NSF) Digital Library Program. Improvements include a unique web address, a new look, and extensive new options. The new Archive incorporates a fully searchable database of teaching resources, allowing the user to select resources by grade/age level, topic, format, resource type, and a dozen other characteristics. The Archive also provides a forum for sharing and discussing teaching resources developed by physiology and life science educators. Submission of material for sharing can be done online at the Archive website, and new submissions of material are now being accepted.

What kinds of materials ("objects") are appropriate for submission? The Archive welcomes all objects that enhance teaching and learning—everything from figures and illustrations to lecture/course PowerPoint presentations to simulations and animations. Material submitted must be the original work of the author. Copyright for any object submitted to the Archive will remain with the author. Not all objects must be downloaded to the Archive; materials such as simulations may reside at the author's website.

Materials submitted to the Archive will undergo review for scientific accuracy and to ensure that any use of animals or humans is according to the principles embodied in the Declaration of Helsinki and conducted

in conformity with the APS "Guiding Principles for Research Involving Animals and Human Beings" (<http://www.the-aps.org/publications/journals/guide.PDF>). Acceptance to the Archive will depend on these two criteria. Because the Archive is designed for colleague-to-colleague sharing, the initial review will not focus on the teaching usefulness of the item. Instead, each object accepted into the Archive will have a bulletin board associated with it on which educators who have used the material can engage in discussions on each object's quality and usefulness. The bulletin boards are designed to serve as discussion forums where authors can gain ideas on how to improve and/or expand their teaching resources.

The APS Archive of Teaching Resources was established as an initiative of the Education Committee and funded by the APS Council and by the NSF National Digital Library Program. The APS Archive will serve as a searchable repository of case histories, figures, lectures, animations, and links to physiology teaching resources on the web. It will contain not only items submitted by the membership but also material already developed by educational programs under the auspices of the Society as well as material published by the Society in its journal, *Advances in Physiology Education*. Where appropriate, teaching objects will be linked to APS online research and/or review articles. Links to valuable resource material on other web sites will also be contained within the Archives. The

Archive will include resources useful to teachers at all levels (K-12, undergraduate, graduate, and professional school) to enhance their teaching both in terms of content and effective teaching strategies (pedagogy).

The APS Archive is also an awardee of the NSF National Digital Library Program as a founding partner of the BiosciEd Net (BEN) project, a collaborative of the APS, American Association for the Advancement of Science (AAAS), American Society for Microbiology (ASM), and nine other professional societies and programs (NSF grant DUE-0085840). The APS Archive, as well as other professional society archives, will regularly share specific database information with the BEN database. As a result the BEN online portal (<http://www.bioscienet.org>) will allow users to search for educational materials over a wide range of scientific disciplines, such as microbiology, ecology, and signal transduction.

The APS invites you to join your many colleagues in submitting your teaching resources to the APS Archive of Teaching Resources and by joining in the bulletin board discussions. If you have any questions, please contact Robert Carroll, Chair of the APS Education Committee (carrollr@mail.ecu.edu), Melinda Lowy, APS Higher Education Programs Coordinator (mlowy@the-aps.org), or Marsha Matyas, APS Education Officer (mmatyas@the-aps.org). ❖

Robert G. Carroll
Chair, Education Committee



New Regular Members

*Transferred from Student Membership

Adwoa Dansoa Aduonum

Emory Univ. School of Medicine, GA

Lorraine M. Albritton

Univ. of Tennessee Health Sci. Ctr.

Nicholas Ashton

Univ. of Manchester, England

Anand R. Asthagiri

California Inst. of Technology

Anthony Auerbach

Univ. of Buffalo

Robert A. Augustyniak*

Univ. of Texas SW Medical Center

Mahmoud Bahmani

Int'l Surgeon Res. Inst, Iran

Ratan Kumar Banik

Riem Negoya Univ., Japan

Gary F. Baxter

Univ. of London, Royal Vet College, England

Carlos Raul Cassanello

Univ. of California, San Francisco

Paul Steven Cooke

Univ. of Illinois

Constance B. Corll

LSU Health Science Center

Maria J.A. Da Rocha

Univ. of Sao Paulo, Brazil

Alexandr M. Degtyarenko

Univ. of California, Davis

Barbara Driscoll

CHLA Research Inst, Los Angeles, CA

Dayue Duan

Univ. of Nevada, Reno

Brian Donovan Eads

Univ. of Wisconsin

Susan L. Edwards

Georgia Southern Univ., Statesboro

Zoltan H. Endre

Univ. of Queensland, Australia

Kathleen M. Eyster

Univ. of South Dakota

Robert A. Fenton

NIH, Bethesda, MD

Ryan Michael Fryer

Brigham Women's Hosp/HMS, MA

J. David Furlow

Univ. of California, Davis

Lara Renee Gawenis

Univ. of Missouri, Columbia

Peter L. Goldberg*

Brigham Women's Hosp/HMS, MA

Eileen Frances Grady

Univ. of California, San Francisco

Arie B.J. Groeneveld

VU Med Center, Netherlands

Theresa R. Grover

Univ. of Colorado

Kamalesh K. Gulia

All India Inst of Med Scis, New Delhi, India

Thomas Vincent Hancock

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Jeffrey R. Henegar*

Univ. of Mississippi Med Ctr

Merrill Burr Hille

Univ. of Washington

Serabi Hirasawa

Johns Hopkins Univ., MD

Paul A. Iaizzo

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Immaculata Ngozi Igbo

Prairie View A&M Univ., TX

Joanna B. Kitlinska

Georgetown Univ. Med. Ctr., DC

Patrick E. Kudlacek

Univ. of Nebraska Medical Center

Gerald D. Larson

Univ. of Missouri, Kansas City

Claude Leoty

Univ. of Nantes, France

Pin-Lan Li

Medical College of Wisconsin

Jiankang Liu

Univ. of Mississippi Medical Center

Milos Ljubisavljevic

United Arab Emirates Univ.

Luis A. Martinez-Lemus

Texas A&M Univ.

Donogh F. McKeogh

Oregon Health & Sciences Univ.

Sanjay Mehta

London Health Sciences Ctr, Canada

Igor B. Mekjavic

Inst. Jozef Stefan, Slovenia

Lizabeth M. Mino

Concordia Univ. of Wisconsin,

Mequon

Julia Ann Moffitt*

Wartburg Coll., IA

A P. Naren

Univ. of Tennessee Health Sci. Ctr.

Jenny Oldham

Agresearch, New Zealand

Sandrine V. Pierre

Texas Tech Univ. Health Sci. Ctr.

Philip Posner

Auburn Univ., AL

Helle A. Praetorius

Univ. of Aarhus, Denmark

Sasanka Ramanadham

Washington Univ. School of Medicine

Andrew F. Russo

Univ. of Iowa

Amal M. Saeed

Univ. of Khartoum, Sudan

Susumu Sakata

Nara Med Univ., Japan

Jun-ichi Satch

Case Western Univ. School of Med., OH

Kenneth A Schenkman

Univ. of Washington

Barry W. Scheuermann*

Texas Tech Univ.

Anne-Marie L. Seymour

Univ. of Hull, England

Vijay Prem Singh

Beth Israel Deaconess Medical Ctr.

Craig Smith

Univ. of Manchester, England

Arthur R. Strauch

Ohio State Univ. College of Medicine

Adam Parsons Summers

Univ. of California, Irvine

Qingmua Sun

Columbia Univ., NY

H. Lee Sweeney

Univ. of Pennsylvania School of Med.

Kirti P. Tewari

Univ. of Cincinnati College of Med.

Chinnaswamy Tiruppathi

Univ. of Illinois

David W. Towle

Mt Desert Island Biological Lab, Salsbury Cove, ME

Jeffrey Scott Upperman

Univ. of Pittsburgh

Ivana Vaneckova

Inst. for Clinical & Experimental Medicine, Czech Republic

Carlos G. Vanoye

Vanderbilt Univ. Medical Center, TN

Jacques Van Rooyen

Univ. of Stellenbosh, South Africa

Mitchel L. Villereal

Univ. of Chicago

Linda Vona-Davis

West Virginia Univ.

Anagela Wandinger-Ness

Univ. of New Mexico

Jun Wang

Univ. of California, Berkeley

Peipei Wang

Univ. of Alabama, Birmingham

Peiyi Wang

Johns Hopkins Univ., MD

Yungeng Wang

Inst. of Oceanology, P.R. China

Zhongbiao Wang

Mercer Univ. School of Medicine, GA

Christian Wegener

Stockholm Univ., Sweden

Hui Xu

Michigan State Univ.

Peixin Yang

Univ. of Nebraska Medical Center

Yan Yang

Univ. of Missouri

Dan Ye

Mayo Clinic, MN

Hironobu Yoshimatsu

School of Med. Oita Med Univ., Oita,
Japan

Yong Yuan

Univ. of Cincinnati, OH

Tania Zenteno-Savin*

Cibnor, Mexico

Xin-Zhou Zhang

Shenzhen Peoples Hosp-Jinan Univ.
Peoples Republic of China

Jia Zhuo

Henry Ford Health Sci. Ctr., MI

Yun-Ping Zhou

Metabolex Inc, Hayward, CA

Lea Ziskind-Conhaim

Univ. of Wisconsin Medical School

New Student Members

Misty M. Becerra

Florida Atlantic Univ.

Pamela Janet Boyd

York Univ., Ontario, Canada

Kenneth Joseph Cavanaugh

Univ. of Pennsylvania

Song Yang Chen

Albert Einstein College of Medicine, NY

Bill Drougas

Univ. of Ioannina, Greece

Joseph Gerald Duman

Univ. of California, Berkeley

Russ D. Ensign

Univ. of Akron, OH

Niels Hadrup

Univ. of Copenhagen, Denmark

Surovi Hazarika

East Carolina Univ., NC

Lisa Lesniewski

Texas A&M Univ.

Timothy Eric Lindley

Univ. of Iowa

James Joseph Mann

Michigan State Univ.

Fernando Luis Martin

Inst Privado Esp Med

Cordoba, Argentina

Liliana Martinez

Benemerita Univ.

Autoromade Puebla

Puebla, Mexico

Kellie A. Merrigan

Univ. of Nebraska

Aimee Jennifer Nelson

Univ. of Toronto Inst. Med. Sci.

Tung Hoang Ngo

Univ. of California, Los Angeles

Rebecca Lynn Nolan

East Carolina Univ., NC

Alexander V. Ovechkin

Univ. of Louisville, KY

Fredrik N.A. Palm

Uppsala Univ., Sweden

Amy M. Pastva

Univ. of Alabama, Birmingham

Todd Allan Ponzio

Univ. of California, Riverside

Sylvia Quant

Univ. of Toronto

Pascale M. Rabbah

Rutgers Univ.

Sripriya Raman

Louisiana State Univ. Health Sci. Ctr.

Stacy Richards

Florida Atlantic Univ.

Vandana Sarin

Texas A&M Univ. Health Science Ctr.

Christopher D. Sharp

Louisiana State Univ. Health Science

Ctr.

Kennie Raviie Shepherd

Florida A&M Univ.

Zohreh Nemati Sirous

Univ. of Mississippi Medical Center

James A. Supak

Univ. of Texas

Rebin Thomas Titus

Texas Tech Univ.

Nicole H. Urban

Eastern Virginia Medical School

Yan Wang

Kansas State Univ.

Michael L. Weldy

Univ. of Mississippi

Linda D. Wilkin

Ohio State Univ.

Kylie Ann Woods

Univ. of Nebraska Medical Center

Yi Xie

Univ. of Alabama At Birmingham

John K. Zehmer

Arizona State Univ.

FASEB Summer Research Conference on Lung Surfactant: Cellular and Molecular Biology

July 20-25, 2002
Saxtons River, VT

Organizers: Robert J. Mason, Carole Mendelson, Alan Jobe, Roger Spragg. Up to 30 Category I CME credits can be earned. The preliminary program can be found at <http://www.faseb.org/>

[meetings/src.](#)

An application will be on this same web site. For additional information contact ahewitt@faseb.org.

Total Membership 10,354
Distribution by Employment
(7,627 respondents)

	No.	%
Physiology depts.	2,373	31.1
College or university	1,560	20.5
Clinical	1,556	20.4
Other preclinical depts.	585	7.7
Government	329	4.3
Hospitals and clinics	311	4.1
Institutes and foundations	204	2.7
Commercial companies	187	2.5
Veterinary schools	163	2.1
Public health and graduate schools	131	1.7
Medical schools	63	0.8
Other, emeritus, inactive or unidentified:	63	0.8
Administration	36	0.5
Dental Schools	34	0.4
Private Practice	32	0.4

Distribution by Racial Background and Heritage (optional personal data)

	<i>Total respondents</i>	
	No.	%
White	1,202	31.3
Asian or Pacific Islander	313	7.2
Hispanic	72	3.3
Black	33	1.5
Other	8	0.4
American Indian	4	0.2
Multiracial	2	0.1

Distribution by Earned Degree
(7,366 respondents—includes 1,138 individuals with multiple doctorate degrees)

PhD	5,155
MD	2,847
DVM	226
ScD	141
Cand. Med	58
EDD	24
DDS	37
Other	9
Dr. Med.	4
Dr.Phil.	3

Distribution by Gender
(optional personal data)

Male	6,514
Female	1,619

Distribution by Age
(optional personal data)

70+	1,345
60-69	1,363
50-59	2,254
40-49	2,281
30-39	1,790
20-29	1,004

Principal Type of Work
(7,658 respondents)

	%
Research	78
Teaching	11
Clinical	6.5
Administration	4.2

Distribution by Primary Section Affiliation
(7,330 respondents)

	%
Cardiovascular	24.6
Cell & Molecular Physiology	12.3
Central Nervous System	8.1
Comparative Physiology	4.2
Endocrinology & Metabolism	9.2
Environmental & Exercise	8.1
Gastrointestinal	5.6
Neural Control & Autonomic Regu.	4.1
Renal	7.6
Respiration	10.9
Teaching of Physiology	2.8
Water & Electrolyte Homeostasis	2.4

Distribution by Group Affiliation
(3,393 respondents)

	%
Epithelial Transport Group	35.2
History of Physiology Group	20.5
Hypoxia Group	24.5
Muscle Biology (MyoBio) Group	38.2
Members in Industry Group	11.2
Physiological Genomics Group	2.5
Translational Research Group	1

Distribution by Primary Interest Area
(4,772 respondents)

	%
Anatomy and embryology	0.5
Biochemistry	2.0
Biophysics	0.1
Cardiovascular	35.1
Cellular and tissue	5.8
Comparative physiology	3.2
Electrolytes and water balance	3.6
Endocrines	8.8
Environment	2.6
Exercise	0.4
Gastrointestinal	2.8
Immunology	0.7
Lipids and steroids	1.1
Liver and bile	0.9
Minerals, bone and teeth	1.0
Muscle	13.7
Neural control and autonomic regu.	0.4
Neurosciences	4.8
Renal	1.0
Reproduction	1.8
Respiration	8.7
Teaching	0.1
Transport	0.1
Other	0.8

APS Membership in The Americas

US	8,259
Canada	483
Brazil	82
Mexico	25
Argentina	18
Chile	17
West Indies	5
Jamaica	4
Venezuela	4
Colombia	2
British West Indies	1
Costa Rica	1
Cuba	1
Dominican Republic	1
Honduras	1
Uruguay	1

US States with More than 100 Members

(50 states plus District of Columbia, Puerto Rico, Guam, and the Virgin Islands)	
California	899
New York	623
Texas	521
Pennsylvania	441
Florida	408
Massachusetts	389
Maryland	374
Illinois	361
Ohio	329
Michigan	240
North Carolina	212
Georgia	197
Wisconsin	196
Missouri	190
Connecticut	177
New Jersey	176
Virginia	171
Tennessee	156
Minnesota	149
Louisiana	148
Colorado	147
Alabama	146
Indiana	144
Iowa	142
Washington	133
Arizona	110
Kentucky	105

APS Membership Outside The Americas

(countries with five or more members)	
Japan	230
England	135
Germany	115
France	100
Australia	89
Italy	58
Denmark	56
Netherlands	49
South Korea	48

Sweden	43	Finland	8	<i>Macedonia, Romania, Saudi Arabia,</i>	
Switzerland	38	Poland	8	<i>Singapore, Slovakia, Slovenia, Sudan,</i>	
Taiwan	36	Portugal	8	<i>Tanzania, The Netherlands, Ukraine,</i>	
Belgium	33	Thailand	8	<i>United Arab Emirates, Yugoslavia.</i>	
Spain	32	Czech Republic	7		
New Zealand	31	Peru	7	Canadian Provinces with Five or	
Israel	27	Hungary	6	More Members	
Norway	25	China	5		
Scotland	22	Lebanon	5	Ontario	211
India	18	Russia	5	Quebec	101
Ireland	18	United Kingdom	5	Alberta	76
Greece	17	Wales	5	British Columbia	41
Peoples Republic of China	16			Manitoba	22
South Africa	15	<i>Other Countries Represented: Bahrain,</i>		Nova Scotia	14
Hong Kong	12	<i>Bangladesh, Belarus, Bosnia, Bulgaria,</i>		Saskatchewan	8
Democratic People's		<i>Croatia, Cyprus, Egypt, Herzegovina,</i>		Newfoundland	8
Republic of Korea	12	<i>Iceland, Indonesia, Iran, Luxembourg,,</i>		New Brunswick	2
Austria	11	<i>Mozambique, New Guinea, Nigeria,</i>			
Turkey	10	<i>Pakistan, Philippines, Qatar, Rep of</i>			

APS would like to offer its condolences to the families, friends and colleagues of the following Emeritus members whom we have lost over the past years.

Harry F. Adler	San Antonio, TX	Harry H. LeVeen	Camden, SC
Willard M. Allen	Baltimore, MD	Melvin Levitt	Winston-Salem, NC
Kenneth A. Arendt	Loma Linda, CA	John C. Lilly	Malibu, CA
William S. Battersby	East Northport, NY	Rafael Lorente De No	Tucson, AZ
Harry D. Bouman	Phoenix, AZ	Martin B. Macht	Cincinnati, OH
Ernest B. Brown	Lehigh Acres, FL	Emanuel E. Mandel	Great Neck, NY
Carl A. Bunde	Milford, OH	Frank J. McGuigan	San Diego, CA
Alfred H. Chambers	Jericho, VT	Jack Metcoff	N. Chicago, IL
Aurin M. Chase	Jamesburg, NJ	George W. Molnar	Little Rock, AR
Leon C. Chesley	Valley Stream, NY	Hurley L. Motley	Newport Beach, CA
Hugo P. Chiodi	Chatsworth, CA	Joseph J. Peters	Cincinnati, OH
Leon Churney	New Orleans, LA	Irwin J. Pincus	Beverly Hills, CA
Rollin H. Denniston	Laramie, WY	Gilbert D. Potter	Richmond, CA
John F. Dimmick	Winston-Salem, NC	Elmer B. Pratt	Denver, CO
Robert W. Dougherty	Ames, IA	Jonas E. Richmond	Munford, AL
Charles H. Ellis	Lynn, MA	Richard Lord Riley	Petersham, MA
Thomas E. Emerson, Jr.	Sacramento, CA	Guilford G. Rudolph	Shreveport, LA
B. Raymond Fink	Seattle, WA	Ernesto D. Salgado	Neward, NJ
Anthony P. Fletcher	St. Louis, MO	Bradley T. Scheer	Pacific Grove, CA
Gordon N. French	West Grove, PA	Otto H. Schmitt	Chester, IL
Dale P.J. Goldsmith	Omaha, NE	William W. Scott	Baltimore, MD
Helmut A. Gordon	San Diego, CA	Edwin L. Smith	Houston, Tx
Francisco Grande	Zaragoza, Spain	Falconer Smith	Charles Town, WV
Victor Guillemin	Kingston, MA	Maurice F. Sullivan	Richland, WA
Henry Haimovici	New York, NY	Theodore N. Tahmisian	Fresno, CA
Stephen Hajdu	Bethesda, MD	Isaac M. Taylor	Boston, MA
Franz X. Hausberger	Philadelphia, PA	Robert D. Teasdall	Detroit, MI
Russell A. Huggins	Houston, TX	Constantin V. Teodoru	Jackson Hts, NY
Robert A. Kehoe	Cincinnati, OH	Henry G. Wagner	Bethesda, MD
Daniel L. Kline	Cincinnati, OH	Sheppard M. Walker	Louisville, KY
Eszter B. Kokas	Chapel Hill, NC	Floyd J. Wiercinski	Woods Hole, MA
Charles E. Lane	Vero Beach, FL	Walter S. Wilde	Traverse City, MI
Stanley Lang	St. Louis, MO	Paul N. Yu	Rochester, NY
Paul S. Larson	Richmond, VA		

Congress Considers Permanent Exclusion of Rats, Mice, and Birds From the AWA

On February 12, 2002 the Senate adopted an amendment to the farm bill that would permanently exclude rats, mice, and birds from the regulatory provisions of the Animal Welfare Act (AWA). The amendment, offered by Sen. Jesse Helms (R-NC), would write into law the administrative exclusion of these species from the AWA that has been in place for 30 years. It was adopted by unanimous consent and is now part of the Senate version of the farm bill that is the subject of a House-Senate conference committee. The conference is expected to last for several weeks because of the major differences between the House and Senate versions of the farm aid legislation. The conferees must also decide whether to include numerous other provisions, including the Helms language, in the final version of the bill.

The Helms amendment is an effort to resolve once and for all the question of whether the USDA should regulate rats, mice, and birds under the AWA. If the legislation is not approved, the USDA is expected to issue a proposed rule later this year bringing these species under the AWA. The USDA is required to issue the proposed rule to comply with an agreement the agency reached with animal activist plaintiffs in September 2000 as part of an out-of-court settlement of a lawsuit over the USDA's past exclusion of rats, mice, and birds from the AWA. The USDA was prevented from issuing the proposed rule during fiscal year 2001 because Congress placed a temporary spending moratorium on making the change. However, Congress did not renew the ban for fiscal year 2002.

When the AWA was first adopted in 1966, it provided only for the welfare of dogs and cats in research. Other animal species were later added by law and by administrative action starting in 1970. However, purpose-bred rats and mice, as well as birds,

have been specifically excluded from the AWA since 1972. Nevertheless, animal activists have long sought to convince, pressure, or compel the USDA to extend the AWA regulations to these species.

Purpose-bred rats and mice represent some 95 percent of the animals used in research. The APS opposes USDA regulation of these species because the vast majority of the animals in question already fall under one or more of the other animal welfare oversight systems (PHS Policy, AAALAC accreditation, and the Good Laboratory Practices Act). USDA regulation would not improve the quality of care provided to these animals, but new record keeping and inspection requirements would be costly and burdensome to implement. ❖

President Bush Unveils FY 2003 Budget Proposal For Life Sciences and Biomedical Research

On February 4, 2002, President George W. Bush presented his budget proposals for fiscal year 2003. This year's budget, reflective of the events of September 11, 2001, places an emphasis on health science and biomedical research as tools to aid homeland security in the fight against bioterrorism. Below are selected highlights from the administration's proposals for selected government agencies that support biomedical and life sciences research.

National Institutes of Health

Under President Bush's FY 2003 budget request, the NIH budget would be \$27.3 billion. After figuring in \$1.5 billion for the FY 2002 Emergency Response Fund—funds set aside to combat bioterrorism—the NIH increase is \$3.7 billion or 15.7 percent over FY 2002. This increase would complete the NIH doubling that began in 1997 and is consistent with the

\$27.3 billion recommended by FASEB.

The President's budget request allows NIH to build on the scientific momentum of investigator-initiated research and provide new research opportunities. NIH would fund a total of 9,854 competing Research Project Grants (RPGs) in FY 2003. This represents an increase of 477 competing RPGs over the FY 2002 estimate of 9,377 awards. In FY 2003, total RPGs funded will be 38,038 awards, an increase of 1,408 awards over the FY 2002. In addition, President Bush's budget request will support 17,014 full-time training positions, an increase of 305 positions over FY 2002 estimates. An increase of four percent for pre- and postdoctoral stipends for NRSA trainees is also proposed.

NIH's priorities in this year's budget include bioterrorism research. In consultation with the Federal Office of Homeland Security and the HHS Office of Public Health Preparedness, NIH has developed a FY 2003 budget request that includes a total of \$1.7 billion for bioterrorism related research and infrastructure.

The goals of this expanded effort are to develop the countermeasures that will be needed to respond to and control the intentional or unintentional release of agents of bioterrorism. The plan consists of interconnected efforts, including basic research on the physiology and genetics of potential bioterrorism agents, immune system function, and response to each potential agent, and the pathogenesis of each disease.

Additional information on the NIH budget can be accessed online at <http://www.nih.gov/news/budget-fy2003/2003NIHpresbudget.htm>. This document highlights the President's FY 2003 budget request and NIH's priorities. More detailed information can be found on the NIH Budget Office website at: <http://www4.od.nih.gov/officeofbudget/index.html>.

National Science Foundation

Under President Bush's budget proposal, NSF would receive \$5.03 billion for FY 2003. This increase represents a five percent increase over the agency's FY 2002 budget of \$4.789 billion. FASEB recommended \$5.5 billion for

NSF in its Federal Funding For Biomedical and Related Life Sciences Research, FY 2003 report.

Under President Bush's initiative, both NSF research and education programs would rise. The agency's annual stipends for graduate students would rise to \$25,000 up from \$21,500, an increase of 16 percent. The new budget proposal would also increase the number and size of NSF grants. Under the President's budget, the average NSF grant would rise to \$120,000 in FY 2003, up from \$113,000 in the current year. The NSF also estimates that 6,580 research grants would be awarded in 2003, compared to 6,390 this year.

Department of Veterans Affairs

Under the President's proposed budget, VA Research would receive \$409 million for FY 2003. This represents a \$38 million increase, or 10.2 percent over FY 2002. FASEB recommends that this year's fiscal increase should be the beginning of a multi year investment that will expedite the application of new scientific advances in the treatment of diseases. According to this year's consensus conference "sustained investment in VA research will ensure that the highest quality research is conducted and that top scientists working in areas of particular interest to VA are recruited and retained within the VA system."

NASA

Under the President's proposed budget, the National Aeronautics and Space Administration's budget would grow to \$15 billion, including \$842 million for Biological and Physical Research (OBPR). This would be a \$28 million or 3.4 percent increase over FY 2002. Included in the OBPR budget is \$321 million for BPR programs and \$347.2 million for the International Space Station. FASEB recommends an annual increase of \$100 million for OBPR's biological research programs to be used to enhance investigator-initiated, peer reviewed life sciences research opportunities. ❖

Former Rep. Porter Calls On Congress To Keep Funding NIH at 10 Percent

As research advocates and policy makers find themselves in the final year of the campaign to double the National Institutes of Health (NIH) budget, questions arise as to what will happen once this goal is achieved. The research community will continue to advocate for future increases, but many are concerned that NIH may receive smaller increases once the doubling campaign ends.

One element of the problem is the fact that some policy makers may feel that NIH has received its fair share with its 15 percent increases over five years. According to this view, with the stagnant economy and budget deficits, a continuation of high dollar funds to NIH would be unrealistic. Still research advocates point out that maintaining the momentum of discovery is essential.

One of NIH's strongest advocates is John Porter, the former Chairman of the House Appropriations Subcommittee on Labor-HHS-Education. Speaking at a National Press Club forum on disease research funding in January, the former Illinois Congressman stated that Congress should increase funding for the agency at a level of 10 percent annually to continue to take advantage of biomedical research opportunities. "Without the suggested 10 percent annual funding increase, Porter stated, "we will lose the leadership and the momentum, and particularly, we will lose the scientific opportunities that lie out there and that are greater than they have ever been before."

This lost opportunity could be tremendous, given the rise in the number of new research project grants. According to NIH, the number of new research project grants started in 2000 was 5,919, the number for 2001 is 6,164 and the number projected for 2002 funding is 6,226. There will be approximately 3,000 competing for renewal each year. Meanwhile,

funding reserved for non-competing renewals has grown from \$6.7 billion in 2000 to \$9.2 billion (a 37 percent increase) in FY 2002.

Even as Congress focuses on the fifth year of the doubling, the research community must look for the best ways to ensure continued research progress. ❖

CSR Continues IRG Review

The APS provided comments in February to NIH's Center for Scientific Review (CSR) concerning the proposed guidelines for the reorganized Cardiovascular Sciences Integrated Review Groups (IRG) [See accompanying box.] The Cardiovascular Sciences proposal was part of CSR's continuing efforts to reorganize NIH peer review under the broad framework proposed in 1999 by the Panel on Scientific Boundaries for Review.

Despite a statement in the Phase 1 report of the boundaries panel that it wanted to provide "a home for the review of all science relevant to contemporary biomedical research," many physiologists have been concerned that the recommendations as a whole failed to provide sufficient emphasis on and review opportunities for integrative approaches to biomedical problems. "The proposed alignment shortchanges many areas of both basic and applied physiological research," the APS stated in comments provided to CSR in 1999 when the Phase 1 report was released. The proposal "appears to convey a bias toward reductionist approaches to the detriment of integrationist ones," the APS said.

The CSR is currently involved in the second phase of the boundaries project. This involves refining the parameters of each proposed integrated review group (IRGs) by listing what research topics will be reviewed by its study sections. Those IRG study section guidelines are then reviewed by a steering committee comprised of scientific experts and NIH staff. The steering committee develops criteria for the IRG's study sections, and the proposal is published for comments by

the research community.

Further explanation of the process and the schedule is available at <http://www.csr.nih.gov/PSBR/IRGComments.htm>. IRGs currently in various stages of consideration include Surgery, Applied Imaging and Applied

Bioengineering, Renal and Urological Sciences, Digestive Sciences, and Immunological Sciences. Scientists whose research falls within these areas are strongly urged to comment on the IRG proposals before they are finalized.

APS Comments on Cardiovascular Sciences IRG Reorganization

The American Physiological Society (APS) wishes to take this opportunity to congratulate the CSR for accomplishing the difficult task of restructuring the cardiovascular IRG into subject area study sections.

The APS recognizes that grants may fall into subject areas covered by many different study sections and indeed different IRGs. The major areas covering the important cardiovascular disease entities have been incorporated into these study sections. Nevertheless, I would like to express a continuing concern on behalf of the APS membership regarding adequate representation for integrative physiology on cardiovascular study sections. By and large, most of the whole animal and human physiology and pathophysiology will be reviewed by the Clinical and Integrative Cardiovascular Sciences (CICS) study section. It also appears that a good deal of whole animal, organ based or human research will be evaluated by the Hypertension and Microcirculation (HM) study section.

As you know, the genetic and molecular biological revolution of the past decade has placed a major emphasis on funding this type of research by the NIH. There is now an emphasis on proteomics and functional genomics. The next step will be, of course, to further our understanding of the regulatory functions of genes and proteins to affect a specific phenotype in normal and diseased organs and individuals, and to understand how organ systems interact under normal conditions and in pathological states. Who will carry out the research for this second, "new biological revolution"? It will undoubtedly be those scientists

trained to carry out integrative experiments using organs, whole animals and humans. Since scientific investigations incorporate a variety of techniques to solve biomedical problems it is necessary to review proposed research from different aspects.

The APS strongly believes and wishes to reaffirm that all study sections would benefit from representation of integrative scientists whose expertise spans the gamut from hemodynamic monitoring to autonomic function to exercise and environmental physiology. For instance, in addition to the hemodynamic changes, it is now clear that a full understanding of the cardiovascular adjustments to acute and chronic exercise must take into account genetics, molecular and cellular biology, metabolism, and neural and hormonal systems. This, by definition, is integrative physiology! In the final construction of study sections we feel it is critical that there be diverse representation in order to adequately evaluate molecular, cellular and integrative approaches. Finally, there needs to be a balance between basic scientists and clinical investigators. This is especially true in the CICS study section.

The APS appreciates that the CSR is sensitive to the above issues. However, the Society wishes to emphasize as strongly as possible that the pendulum is starting to swing back to a biology that is truly dependent upon our ability to "put it all together." Integrative biologists will play a critical role in this effort. The APS will be happy to provide whatever expertise you require to make the review process equitable and successful in the future. ❖

USDA Pressed to Reconsider FOIA Policies

On October 1, 2001, the USDA began posting to its website the annual inspection reports of animal research facilities required under the Animal Welfare Act. This practice focused renewed attention on USDA policies regarding the release of information that may endanger the safety of research personnel and facilities.

The Freedom of Information Act (FOIA) is a 1966 federal law requiring government agencies to disclose to the public many of their records unless the information falls within certain exempted categories. The list of exemptions from disclosure requirements includes security concerns, protecting personal privacy, and preserving the integrity of ongoing investigations.

The 1996 Electronic Freedom of Information Act (E-FOIA) Amendments took FOIA one step further by requiring government agencies to make some records available over the Internet. This included agency reports and materials frequently requested under FOIA. The USDA decided to post facility inspection reports to its website because they are considered to be frequently requested documents. Most of those requests come from animal activists seeking to obtain information about research facilities.

The APS has joined with others in research community in raising objections to the USDA's FOIA policies with respect to facility inspection reports. In a February 11, 2002 letter to Chester Gipson, the Acting Deputy Director of the USDA Animal and Plant Health Inspection Service's Animal Care division, APS President John Hall asked the agency to "reexamine what information is released under FOIA as well as the current practice of making these reports available over the Internet.

"FOIA release of facility inspection reports is problematic because some reports identify research personnel or where animals are kept in the facility," the APS letter stated. "This informa-

tion could lead to harassment of individuals and institutions and, in the most extreme cases, could endanger lives and property.”

The Animal Welfare Act requires the USDA to conduct an unannounced inspection of each registered research facility annually to determine whether it is in compliance with the AWA. Licensed animal dealers are also subject to inspections.

In meetings with representatives of the research community, USDA officials acknowledged the legitimate security concerns related to USDA release facility inspection reports. However, the officials insisted that the agency considers facility inspection reports as agency records and that under FOIA, such records must be released in their entirety. Efforts are now being made by a number of organizations within the research community to sensitize the USDA to encourage the agency to reexamine its procedures. ❖

House Resources Subcommittee Examines Domestic Terrorism

On February 12, 2002, Congressman Scott McInnis, Chairman of the House Forest and Forest Health Subcommittee held a hearing on Eco-Terrorism and Lawlessness in the National Forests. The purpose of this hearing was to examine the recent wave of violence committed by radical environmental and animal rights groups such as the Earth Liberation Front (ELF) and the Animal Liberation Front (ALF).

The FBI has identified these organizations as one of America's primary domestic terrorist threats. According to the FBI, ALF and ELF have committed more than 600 criminal acts in the United States since 1996, resulting in damages in excess of \$43 million. In a press release announcing the hearing McInnis stated: “We must strip away the Robin Hood mystique and perceived high ground that some

have given these radicals,” noting, “It is just a matter of time before a human life is taken.”

The Committee heard from a variety of witnesses, including an FBI Domestic Terrorism Section Chief, a logging company manager and three Members of Congress, but it was former ELF Press Officer Craig Rosebraugh who drew the most interest. While his presence fueled hope that the committee would gain insight into the inner workings of ELF, ultimately it did not receive any answers. Rosebraugh, who was subpoenaed by the committee, refused to answer questions. Over 50 times he replied to the subcommittee's questions—ranging from his involvement with criminal activity to his belief in the role of science in society—by invoking his Fifth Amendment right against self-incrimination.

Rosebraugh did issue an 11-page statement in which he described his transformation from patriotic supporter of the United States to his current belief that the government is misleading and self-interested. He pointed to the use of animals in biomedical research to support his claims. “While a great percentage of the public in the United States had been convinced that animal research progressed and continues to improve human health, I soon realized that this myth was not only untruthful and single sided, but the work of a slick public relations campaign by the pharmaceutical industry in coordination with federal agencies such as the National Institutes of Health. I also learned that just like the factory farm industry, the use of animals for human entertainment and for the fashion industry, animal experimentation was motivated first and foremost by profits. Furthermore, I learned how the government of the United States, not only economically supports these various institutions of exploitation and slaughter, but how it continues to perpetuate and politically support the dangerous lie that animal research saves human lives.”

McInnis informed Rosebraugh that invoking the Fifth Amendment in oral testimony did not mean he could

refuse to answer written questions. He told fellow committee members that the next step would be to submit written questions to Rosebraugh and that if he did not answer them, he could be held in contempt of Congress. On March 1, Rosebraugh's counsel received a copy of 54 questions with a request that they be answered by March 15, 2002. A list of these questions can be found online at: <http://www.protectcivil liberties.com/additionalquestions.html>.

While Rosebraugh's testimony did not provide any insight into this growing problem, another witness's did.

Richard Berman, Executive Director of the Center for Consumer Freedom, produced a tax return from the People for the Ethical Treatment of Animals (PETA), which showed that PETA has financially supported the ELF. On April 20, 2001, PETA donated \$1,500 to the North American Earth Liberation Front to “support their [sic] program activities.”

In addition to ELF, PETA has also supported radical animal rights groups. While viewing PETA's finances, Berman noted the following:

PETA donated \$70,200 to the defense of Rodney Coronado, an ALF member convicted of a firebombing at Michigan State University. He pleaded guilty to similar crimes at Oregon and Washington State Universities.

In 1999, PETA gave \$2,000 to David Wilson, an ALF activist who once bragged about the movement's expansion into “wildlife actions.”

In 2000, PETA gave \$5000 to the “Josh Harper Support Committee.” Harper is an ALF member arrested on numerous occasions.

On March 4, 2002 Chairman McInnis sent a letter to PETA President Ingrid Newkirk calling on the organization to explain its involvement in financially supporting ELF. “As a non-profit organization with tax-exempt privileges and the incumbent public policy obligations that status entails, PETA has the responsibility to explain the full extent of its involvement with and contributions to environmental terror groups like ELF and ALF.” McInnis asked for answers to a series of questions, including:

Does PETA condone the violent activities of organizations like ELF? Should PETA's contribution to ELF be seen as an endorsement?

What steps did PETA take to ensure that these funds would not be used for unlawful purposes?

Whose signature appeared on the returned check that PETA gave ELF?
❖

NIH Posts Grant Funding Tables

The National Institutes of Health Office of Extramural Research has posted new grant funding ranking tables for FY 2001. The tables are available online at <http://grants.nih.gov/grants/award/medschc.htm>.

These tables include rankings of medical schools and departments. NIH prepares these tables as a service to the community. A complete index of available grant award tables, charts, and lists is available at <http://grants.nih.gov/grants/award/index.htm>. ❖

Public Affairs Programs at EB 2002

The APS Animal Care and Experimentation Committee will sponsor a Public Affairs Symposium on Saturday, April 20 entitled "Everything You Ever Wanted to Know About the IACUC But Were Afraid to Ask." The program will take place from 1-5 pm in Room 213 of the Convention Center. This symposium will provide information about what the IACUC is required to do and how principal investigators are supposed to cope with these demands. This program is co-sponsored by NIH's Office of Laboratory Animal Welfare, FASEB, ASPET, AAI, ASNS, and AAA.

ASPET's Public Affairs and Education Committees will sponsor a workshop on Sunday, April 21 entitled "Incorporating Complementary and

Integrative Medicine into Basic Science Teaching: Why and Why Now?" The program will take place from 12:15-1:45 pm in Room 220 of the Convention Center. It will discuss educational initiatives underway in several medical schools to incorporate elements of Complementary and Alternative Medicine (CAM) into the medical curriculum.

FASEB's Office of Public Affairs will sponsor a Public Policy Symposium on Sunday, April 21 entitled "Bioterrorism: New Threats Facing the Nation, New Challenges for the Scientific Community." The program will take place from 1-2:30 pm in Rooms 252/254 of the Convention Center. Topics will include new challenges for the scientific community in responding to bioterrorism, as well as the changing climate of scientific research in the wake of the September 11 terrorist attacks and the discovery of anthrax spores sent by mail. Featured speakers include Tony Fauci, D.A. Henderson, and Julie Louise Gerberding.

The fourth annual Walter C. Randall Lecture in Biomedical Ethics will take place on Tuesday, April 23. Adrian R. Morrison is the featured speaker in this APS-sponsored lecture. His topic is "Developing an Ethical Position on the Use of Animals in Biomedical Research." The program will take place on Tuesday, April 23 from 2-3 pm in Room 208 of the Convention Center. ❖

Physiology Makes Headlines

The APS Communications program is now in full swing. This program publicizes APS initiatives and the science published in the APS journals and presented at APS meetings and conferences. To date, these efforts have spawned hundreds of mentions in various media outlets including: *The San Francisco Chronicle*, *The Pittsburgh Post Gazette*, *The Scientist*, *WebMD*, *CNNfn* and *BBC Online*.

Have you noticed more physiology in the news? Check out links to recent media coverage on the "Physiology in

the News" section of the APS Press Room (http://www.the-aps.org/press_room/). For more information on the APS Communications Office, go to our "Communications Guide for Members Only" page (http://www.the-aps.org/press_room/about.htm), also located in the Press Room. ❖

Bowditch Lecture Award

The annual Bowditch Lecture honoring the first elected President of the American Physiological Society, Henry Pickering Bowditch, has been given at the annual meeting since 1956. The first Bowditch Lecture, "Role of the Red Blood Corpuscles in the Regulation of Renal Blood Flow and Glomerular Filtration Rate," was presented by John R. Pappenheimer.

The lecturer is selected by the President with the consent of Council from among the regular members who have achieved outstanding work and are under 42 years of age at the time of presentation. The award is for original and outstanding accomplishments in the field of physiology. Originality of approach, clarity of data presentation, and the general significance of the results are important criteria. The award conveys an honorarium of \$2,500 plus travel and per diem expenses to attend the spring meeting, and the recipient is invited to submit a manuscript for publication in one of the Society's journals.

Nominations should be accompanied by letters from two nominators describing the importance of the candidate's work, a brief sketch of the nominee's professional history, papers or manuscripts that substantiate the excellence of the candidate, and a curriculum vitae. The nominators should clearly state the contributions of candidates to any jointly authored manuscripts and papers, documenting the independence of the nominee's work.

Nominations should be submitted by October 1 to: The APS Bowditch Lecture Award, 9650 Rockville Pike, Bethesda, MD 20814-3991.

Postdoctoral Positions

Postdoctoral Fellowship Position:

Postdoctoral research fellowship available in hypothalamic neurotransmitters and obesity. Candidates working in the area of hypothalamic neurotransmitters and gene regulation on vertebrate animals are encouraged to apply. Applicants must have experience with molecular biology techniques including westerns, northern, PCR and cell culture. The fellowship is two years and begins July 1, 2002. Please send CV and two letters of recommendation to: Dr. Michael Meguid Professor, Surgery and Neuroscience, Department of Surgery, SUNY Upstate, Medical University, 750 E. Adams Street, Syracuse, NY 13210.

Postdoctoral Researcher: University of California Davis, Division of Cardiovascular Medicine. Position open for a postdoctoral researcher to work on funded projects examining the regulation of mitochondrial calcium under conditions of oxidative stress. We use small animal (rat, mouse) models of ischemia/reperfusion to define alterations in the mitochondrial transition pore and other calcium transport proteins. Candidates must have a background in cellular physiology and/or biochemistry, the ability to learn new techniques (getting a new confocal microscope this month), and a willingness to focus energies on answering interesting questions. Salary dependent upon experience. Please submit a CV and names of three references. Candidates should contact: Saul Schaefer, MD, One Shields Ave, Division of Cardiovascular Medicine TB 172, Davis, CA 95616; Fax: 530-752-3264; Email: sschaefer@ucadvis.edu.

Postdoctoral positions: Postdoctoral positions are available, effective immediately, to study the effects of chronic hypoxia on the uterine/uteroplacental vasculature in experimental animal, cellular and human models within the context of a large, multidis-

ciplinary laboratory concerned with the effects of chronic hypoxia in various organ systems. Specific projects concern the effects of chronic hypoxia on uterine artery endothelial and vascular growth responses to increased flow and shear stress. A working knowledge of fluorescence video microscopy, cell culture, immunohistochemistry, and molecular biology, including western analysis, is an asset. Support is available for a minimum of two years. Postdoctoral fellows are mentored to maximize long-term career possibilities in basic science, as well as a range of clinical fields concerning maternal/fetal health and cardiovascular disease. Persons with PhD or MD with USA citizenship or resident alien status may apply by sending cover letter stating interests and names of at least three references to: LG Moore, Campus Box B133, University of Colorado Health Sciences Center, 4200 East 9th Avenue, Denver, CO 80262. Fax 303-315-4871. Email: Lorna.G.Moore@UCHSC.edu.

Postdoctoral Research Fellow: A research fellow to study electrophysiology of electrical coupling in gastrointestinal muscle between Intersitial Cells of Cajal and muscle will be appointed for up to four years in the laboratory of Dr. E.E. Daniel. Mouse knockout models of connexin genes will be used, as well as pharmacological tools. This position is funded by the Canadian Institutes of Health Research. It will be held in the Department of Pharmacology at the University of Alberta in Edmonton, Canada. Apply by **June 1, 2002** to Dr. E.E. Daniel, Department of Pharmacology, University of Alberta, 9-70 Med. Sci. Bldg., Edmonton, Alberta, Canada T6G 2H7. Tel: 1-780-492-2105. Email: edaniel@ualberta.ca.

Postdoctoral Fellows: As part of a major initiative by the National Institutes of Health to expand and strengthen Texas Southern University's biomedical research activities, the Center for Cardiovascular Diseases

invites applications for Postdoctoral Fellows at the Scientist level. Applications are encouraged from candidates with relevant training and experience in all areas of cardiovascular sciences, including, but not limited to, the areas of microcirculation, vascular reactivity, vascular biology, renal function, cell signaling, and gene therapy as applicable to hypertension, diabetes, atherosclerosis, and renal failure. At the Scientist level, the Center of Cardiovascular Diseases is seeking outstanding and independent researchers with not less than four years of post PhD experience. These individuals should be funded or have established fundable research programs. Attractive start up funds are available and excellent opportunities exist for collaboration with research partners at Baylor College of Medicine, the University of Houston, The University of Houston Health Science Center, and other area institutions. Applicants should send their curriculum vitae, a list of publications and a research proposal to Dr. A.O. Oyekan, Director, Center of Cardiovascular Diseases, College of Pharmacy and Health Sciences, Texas Southern University, 3100 Cleburne Avenue, Houston, TX 77004. Applicants should also arrange to have three letters of recommendation submitted on their behalf. [EOE]

Postdoctoral Research Fellowship: An NIH-funded postdoctoral research fellowship position is available at New Mexico Resonance to study human adjustment to low oxygen and the development of acute altitude sickness in young, healthy human volunteers. The applicant must have a PhD, MD, or comparable doctoral degree. The ideal candidate will have a strong publication record and excellent communication and laboratory skills. Responsibilities will include administration of exercise tests, physiological monitoring (blood pressure, Doppler blood flow, near infrared spectroscopy, blood sampling) and brain magnetic resonance imaging (MRI). Training in MRI will be possible as part of on-going research

activities. Salary is commensurate with experience according to NIH stipend levels. The fellow will be an employee of New Mexico Resonance and, thus, will receive excellent fringe benefits. Please send a statement of research interests, curriculum vitae, and three letters of reference by **May 15, 2002** to Robert Roach, PhD, NIH-AMS Project, New Mexico Resonance, 2301 Yale Blvd SE Suite C1, Albuquerque, NM 87106, Email: rroach@hypoxia.net. Early responses are encouraged.

Postdoctoral Research Fellow: As the nation's first hospital dedicated solely to pediatric care, The Children's Hospital of Philadelphia believes that exceptional team members, a supportive environment, state-of-the-art care, and well-defined goals are key to nurturing both patients and professionals. As a postdoctoral research fellow, you will work in the Division of Human Genetics and Molecular Biology. The focus of the research in the laboratory is on the genes involved in several pediatric diseases, birth defects, and comparative genomics. Some laboratory research experience is required. The position requires a PhD in Biology, Chemistry, or related. Knowledge of molecular biology techniques that may include DNA and RNA manipulation, PCR, Southern hybridization, etc. or techniques in cytogenetics and fluorescence in situ hybridization are desirable. Click on the following link for more information pertaining to the research being conducted: <http://stokes.chop.edu>. Apply online at <http://careers.chop.edu> or Fax your resume to 215-590-4644. Use reference ID 41 in your correspondence. [EOE]

Postdoctoral & Graduate Student Positions: An NIH-funded postdoctoral position is available immediately in Gastrointestinal Physiology/Neurobiology of Aging for participation in a study of age-related changes in the enteric nervous system. A neurobiologist is sought who has an interest in gastrointestinal physiology, and/or

aging research. Relevant experience should be in one or more of the following areas: intracellular and/or patch clamp recording, autonomic pharmacology, molecular biology, immunocytochemistry, neuroanatomical techniques, confocal and/or transmission electron microscopy. The positions are within a Center of Biomedical Research Excellence (COBRE), one of two COBREs recently funded by the NIH at The University of Wyoming. The positions advertised here would be within the 'NO COBRE': The Biology of Spatiotemporal Nitric Oxide Gradients. The NO COBRE includes a multidisciplinary team of scientists, postdoctoral fellows, and students interested in novel approaches to the study of NO signaling in biological systems. Graduate Students: Students interested in pursuing a graduate degree with this team would be admitted to either the Department of Zoology & Physiology (MS) or the Interdisciplinary Graduate Program in Neuroscience (PhD) at the University of Wyoming. For further information please contact: Dr. Paul R. Wade, Department of Zoology & Physiology, University of Wyoming, Laramie, WY 82071-4238; Email: prw1@uwoyo.edu; Tel: 307-766-2493; Fax: 307-766-2492.

Postdoctoral Position: A postdoctoral position is available in the laboratory of Jonathan D. Kaunitz, Professor of Medicine, Physiology, University of California, Los Angeles, School of Medicine. The focus of this NIH and VA-funded laboratory is to examine the mechanisms by which the epithelium of the upper gastrointestinal tract is protected from luminal acid, and also explore the pathogenesis of the genetic disease cystic fibrosis. Techniques that will be used by the successful candidate include measurements of duodenal bicarbonate secretion, mucosal blood flow, mucus gel thickness, and in particular epithelial cell intracellular pH in living rats and mice using our unique in vivo microscopy system. Applicants should hold a PhD and/or a MD degree and have experience with small animal

non-survival surgery and/or imaging techniques. Interested individuals should send their CV, recent publications and the names, addresses and phone numbers of three English-speaking references to: Jonathan D. Kaunitz, MD Professor, Department of Medicine, UCLA School of Medicine, West Los Angeles VAMC, Building 114, Room 217, 11301 Wilshire Blvd., Los Angeles, CA 90073. Email: jake@ucla.edu; Tel: 310-268-3879; Fax: 310-268-4811.

Postdoctoral Research Associate: Position available in NIH-funded program project to characterize a novel neuronal receptor during aging. Novel receptors for the excitatory amino acid glutamate were identified biochemically and cloned. The molecular structure and ion channel properties of these receptors will be investigated. Laboratory is equipped with patch clamp recording instrumentation and calcium ion fluorescence imaging, as well as all modern molecular biology instrumentation. Techniques for heterologous expression are well developed. Required: PhD in neuroscience, physiology, pharmacology or biochemistry and/or MD, experience in electrophysiology at a single cell level. For information contact: Elias K. Michaelis, MD, PhD at emichaelis@ku.edu. To apply: send letter of application, vitae, and contact information for three references to Lanaea Heine (lheine@ku.edu), University of Kansas, Higuchi Biosciences Center, 2099 Constant Ave., Lawrence, KS 66047.

Postdoctoral Fellowship Opportunity. Applications are invited for a postdoctoral research fellowship at the Noll Physiological Research Center, Penn State to work on projects related to aging and control of human skin blood flow. This project is currently in its 12th year of funding from the National Institute of Aging to Dr. W. Larry Kenney at Penn State. A minimum of two years of salary support from the grant is available. Scientists with a PhD or MD degree and back-

ground/interest in vascular physiology or dermatology who want to expand their research capabilities in the area of human thermoregulation and thermoregulatory control are especially invited to apply. Inquiries should be directed to Dr. Kenney at w7k@psu.edu with an attached vitae and statement of qualifications and expertise. [AA/EOE]

Postdoctoral Positions: Two postdoctoral positions are currently available for individuals interested in studying mitogenic signal transduction in vascular cells, and its role in vascular disease. One project investigates the role of Toll-like receptors in the regulation of smooth muscle cell growth. The second focuses on hypoxia-induced cell proliferation. PhD or MD and experience in cellular or molecular biology required. Research techniques used for these studies include molecular cloning, cell transfection with plasmid vectors, adenoviral transfer of genes, promoter activity assays, western blotting, immunofluorescence microscopy, and cell proliferation assays. Both positions are fully-funded, with the opportunity for self-motivated individuals to seek independent funding and advancement. Please send CV and summary of research interests to: Debbie Beasley, PhD, Tufts University School of Medicine, New England Medical Center, Box 172, 750 Washington Street, Boston, MA 02111; Tel: 617-636-8248; Fax: 617-636-1355; Email: DBeasley@Lifespan.org.

Postdoctoral Position: Ottawa Health Research Institute (OHRI), Cellular Neurophysiology. Our research at the OHRI, affiliated with the University of Ottawa, focuses on intrinsic and synaptic properties, transmitter-receptor interactions, ligand- and voltage-gated ion channels, second messengers and electrotonic coupling in mammalian hypothalamic and spinal cord neurons engaged in pathways regulating neuroendocrine, sympathetic and circadian functions. We use single and dual patch clamp

techniques assisted with near-infrared videomicroscopy, confocal and multiphoton imaging, intracellular and retrograde tracers in hypothalamic and spinal cord slices. For details, check our lab at <http://www.ohri.ca>. Requires MD or PhD degree, experience with *in vitro* slice and or dissociated cell preparations, current and patch clamp recording techniques. Salary commensuration will be dependent on experience. Email lprenaud@ohri.ca; Fax: 613-761-5360 cover letter, CV and names of three references to: Dr. Leo Renaud, Neurology/Neurosciences, Ottawa Hospital, Civic Campus, 1053 Carling Ave., Ottawa, Ontario, Canada K1Y 4E9.

Postdoctoral Research Associate or Research Assistant Professor

Position: A postdoctoral research associate or research assistant professor position is available starting immediately in the Cardiovascular Dynamics Laboratory at the University of Pittsburgh. We seek an outstanding candidate to study cardiac muscle mechanics and calcium handling, with a special emphasis on contractile and regulatory proteins and genetically engineered mouse models. A strong background in cardiac physiology, muscle mechanics, and related experimental procedures is required. Systems modeling experience and/or a knowledge of molecular biology is desirable. To apply send curriculum vitae and names of three references to (electronic submission preferred): Dr. Sanjeev G. Shroff, Departments of Bioengineering and Medicine, University of Pittsburgh, 749 Benedum Hall, Pittsburgh, PA 15261; Email: sshroff@pitt.edu. [EO/AA]

Postdoctoral Position: Postdoctoral position available to study alterations of bicarbonate transport in cystic fibrosis. Supported by NIDDK and CF Foundation grants. We have developed systems for comprehensive analysis of acid-base transport across intact gastrointestinal and airway epithelia from transgenic mice. Our laboratory is very productive and competitive to

research in this field. Requirements include a recent PhD with demonstrated experience in ion transport or molecular biology and excellent writing skills. Please contact: Lane L. Clarke, DVM, PhD, Associate Professor of Biomedical Sciences, Dalton Cardiovascular Research Center, 134 Research Park Dr., University of Missouri, Columbia, MO 65211-3300, Tel: 573-882-7049, Fax: 573-884-4232, Email: ClarkeL@missouri.edu.

Research Positions

In Vivo Specialists: The Merck Frosst Centre for Therapeutic Research (MFCTR) has achieved unparalleled success in the pharmaceutical industry as a result of our unwavering commitment to fundamental research. A list of MFCTR scientific publications can be viewed at <http://www.merckfrosstlab.ca>. The *in vivo* specialists we seek will participate in drug discovery programs at our state-of-the-art research facilities in Montréal, Québec, Canada. They will have the opportunity to participate in one of our ongoing programs in the areas of asthma, allergies and inflammation, endocrine disorders, or CNS biology. Merck Frosst has a particularly strong record of accomplishment in the area of respiratory disease, and this will remain a strong focus for the laboratory in the future. Applicants may be drawn from disciplines that include, but are not limited to Pharmacology, Physiology, Medicine and Veterinary Medicine, but must have significant expertise in *in vivo* techniques. Candidates should have postdoctoral experience, a superior record of accomplishment in biomedical research as evidenced by a strong publication record, and excellent communication skills. We seek individuals who share our core research values and vision in the development of innovative medicines for the treatment of disease. Merck Frosst is always interested in world-class scientists who wish to apply their talents to build on our legacy of success for a healthier

tomorrow. Our salaries, benefits and growth potential are excellent. Applicants interested should send electronic (MS Word document) versions of their CV (including names and addresses of three potential references) and a statement describing their research interests to Christian Riel (merckfrosstlab@merck.com), before **Monday, April 1, 2002**. Please reference ad MRL-7 in the subject line. Merck Frost Canada & Co. is an equal opportunity employer.

Associate Laboratory Director:

The Emory University School of Medicine, Department of Surgery (Cardiothoracic) and the Carlyle Fraser Heart Center are looking for a qualified cardiothoracic research investigator to join our faculty as an Associate Laboratory Director. Qualified applicants should have a PhD, MD, or equivalent with experience in cardiovascular physiology, pharmacology, vascular biology, or immunology-molecular biology. The candidate should be an established investigator in the areas of pathophysiology of surgical or non-surgical myocardial ischemia-reperfusion, cardioprotection, and cardiopulmonary bypass as confirmed by publication record. A track record in grant support is necessary; currently active grant/contract support is highly desirable. The candidate will work closely with cardiothoracic surgery program, and may have appropriate cross-appointment with physiology. Please send CV, selected reprints, and a letter describing future research interests to: J. Vinten-Johansen, PhD, Director, Cardiothoracic Research Laboratory, Emory/Crawford Long Hospital, Carlyle Fraser Heart Center, 550 Peachtree Street, NE, Atlanta, GA 30308-2225; Email jvinten@emory.edu. [AA/EOE]

Bioanalyst: The Metabolic Diagnostic Laboratory at the Children's Hospital of Philadelphia is seeking a Bioanalyst with a PhD degree in Biochemistry or Chemistry, preferably with two years of post-doctoral experi-

ence. Knowledge of biochemical techniques such as gas chromatography/mass spectrometry, tandem mass spectrometry, enzyme-substrate analysis and metabolite/analyte determinations and familiarity with mitochondrial procedures is emphasized. The Metabolic Diagnostic Laboratory serves as the reference laboratory in the Mid-Atlantic region for the diagnosis of inborn errors of metabolic/genetic diseases. These include inherited organic acid, amino acid and carbohydrate disorders as well as lysosomal storage diseases (lipidosis and mucopolysaccharidoses), peroxisomal diseases and mitochondrial abnormalities. The Children's Hospital of Philadelphia houses the Department of Pediatrics of the University of Pennsylvania Medical School and is located next to the Medical School and University Hospital on the Penn campus. Contact Michael J. Palmieri, PhD, Technical Director; Tel: 215-590-3394; Email: palmieri@email.chop.edu. [EOE]

Research Associate in Neuronal Imaging:

The Neurosciences Program at the Ottawa Health Research Institute (<http://www.ohri.ca/>) seeks a Research Associate to participate in experimental design, data acquisition and analysis of confocal and/or multiphoton neuronal images in brain slice and culture preparations. Facilities include a Zeiss 510 microscope, 10w laser and patch clamp setup. Requirements include advanced post-doctoral experience in imaging in the neurosciences. Salary in the range of 60,000 CAN plus benefits. Interested candidates should submit a curriculum vitae and names of two references by Fax: 613-761-5024 or by Email: confocal@OHRI.ca.

Faculty Positions

Assistant Professor: The Department of Physiology of Queen's University (<http://meds.queensu.ca/medicine/physiol/>) invites applications for a tenure-track faculty position at

the level of Assistant Professor. While the successful applicant will be appointed in the Department of Physiology, their research interests should align with the Interdisciplinary Cardiac, Circulatory, and Respiratory (CCR) Research Program which is an established research focus of the Faculty of Health Sciences at Queen's University. The researcher will be part of a vibrant group focused on cardiocirculatory respiratory (CCR) extending from molecular to epidemiological studies. The individual's research is to complement the current strengths in the Department of Physiology, which are cardiac and respiratory muscle proteomics, myocyte function and smooth muscle biology. Requirements include a PhD or MD degree, outstanding scholarship, a strong record of achievement and the potential to attract external funding. Queen's University is recognized nationally for the quality of its undergraduate and graduate programs, which attract outstanding students. Queen's University is an integral part of the vibrant Kingston community in the heart of the Thousand Islands region of southeastern Ontario. It has a community spirit and amenities unmatched by any other Canadian university. The University and the region offer an outstanding academic and community environment (<http://www.queensu.ca/>). All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority. Queen's University is committed to employment equity and welcomes applications from all qualified women and men, including visible minorities, aboriginal people, persons with disabilities, gay men and lesbians. The deadline for applications is **May 15, 2002**. Applicants should forward a copy of the curriculum vitae and names of three referees to Dr. A.V. Ferguson, Professor and Head, Department of Physiology, Queen's University, Kingston, Ontario, K7L 3N6, Canada.

Assistant Professor (Research); Research Associate; Postdoctoral Fellowship: The Obesity and Diabetes Research Center of the University of Maryland School of Medicine has a postdoctoral position available in the areas of mechanisms of obesity, diabetes and aging. NIH and industry funded projects include the early physiological/molecular development of diabetes and aging; metabolic, enzymatic, and insulin signaling alterations in calorie restriction and aging; prevention of diabetes and its complications, retinopathy, nephropathy, and dyslipidemia; pancreatic islet culture and transplant; and molecular aspects of aging, diabetes and obesity. Doctorate in physiology, molecular or cell biology, or biochemistry with interest in integrating in vivo and in vitro studies required. Start date is open. Send curriculum vitae, outline of research experience and interests and names, address and telephone numbers of three reference to B.C. Hansen, Director of Physiology,

University of Maryland School of Medicine, 10 South Pine Street, #6-00 MSTF, Baltimore, MD 21201. Fax: 410-706-7450; Email: bchansen@aol.com. [EOE]

Assistant Professor, Physiology of Marine Animals: The Department of Biological Sciences at the University of Rhode Island requests applications for a new position in Physiology of Marine Animals. Teaching responsibilities will include human physiology, courses in animal physiology, and upper division and graduate specialty classes with a marine focus. PhD in biological sciences or related discipline by August 2002 required. Postdoctoral and teaching experience preferred. Must demonstrate, by academic record and letters of recommendation, the academic background to teach undergraduate and graduate courses in animal and human physiology and area of specialization. Must demonstrate, by academic record and letters of rec-

ommendation, the background or potential to be an effective teacher of large classes in this area. Demonstrated ability to communicate and interact well with others required. Must demonstrate, through publications, letters of recommendation, and research plan, the ability to develop a high quality, externally-fundable research program in marine animal physiology. A comparative or evolutionary approach preferred. This is a full-time, academic year, tenure-track position beginning Fall 2002. For more information about the department, please visit our Web page at <http://www.uri.edu/artsci/bio>. Review of applications will begin **March 1, 2002**. Submit curriculum vitae, copies of up to three published papers, statements of research plans and teaching philosophy, and three letters of recommendation by **03-11-02** to: J. Stanley Cobb, Search Committee Chair, (Log # AP021438), University of Rhode Island, PO Box G, Kingston, RI 02881. [AA/EEO] ❖

Advertise your job vacancy to over 10,000 members and subscribers!

Ads are accepted for either positions available or positions wanted under all categories. The charge is only \$75. All ads are also posted on the APS Career Opportunity Web page immediately upon receipt until the deadline has past.

If you would like to have your ad listed in The Physiologist or on the APS Career Opportunities Web page

(http://www.the-aps.org/careers/car_pos_avail.htm), the following items are needed: a copy of the ad, the name of a contact person, and either a purchase order number, credit card number (with expiration date and name of cardholder) or billing address. Send the information to Linda Comley (Email: lcomley@the-aps.org; Tel: 301-530-7165; Fax: 301-571-8305).

APS Awards

The APS sponsored awards are plentiful, but in order to be considered, don't forget to submit the application information before the deadline!

Award

William T. Porter Fellowship Award
Research Career Enhancement Awards
Teaching Career Enhancement Awards
Shih-Chun Wang Young Investigator Award
Arthur C. Guyton Awards in Integrative Physiology
Giles F. Filley Memorial Awards for Excellence in
Respiratory Physiology and Medicine
Lazaro J. Mandel Young Investigator Award
Procter & Gamble Professional Opportunity Awards
Caroline tum Suden/Francis A. Hellebrandt
Professional Opportunity Awards

Next Deadline

July 15
October 15
October 15
November 1
November 1
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Letter to Novera Herbert Spector

Robert E. Nye, Jr., writes: "Many thanks for your letter of January 11, which arrived in this morning's mail, congratulating me on my eightieth birthday, which occurred last Wednesday.

"As I retired as Professor of Physiology at Dartmouth Medical School, on July 1, 1987, my intention had been to work on a definitive history of the school. Depending on whether you insist on continuous existence under the same institutional governance, it is either the third or the fourth oldest medical school in the country. I had spent a lot of time in the Dartmouth College archives digging up the elements of a fascinating story.

"However, shortly before my retirement my wife, Dr. Frances Nye, a psychiatrist at Dartmouth, who retired a couple of years before me, had made a couple of trips to Nicaragua. This was in the 1980s, when Reagan was doing his best to destroy the Sandinista government, even after it had been returned to power in the fair and open election of 1984. I got involved in this question, and made several trips to Managua under the aegis of the Committee for Health Rights in Central America, or CHRICA, a California-based medical group. So I lost my historical drive, and I haven't done anything with it since then.

"They let me keep an office, a telephone and a mail box in the department of physiology, however, and I go in regularly to the journal club meetings of the respiratory section of the physiology department. Let me confess it: I have a hard time keeping up. The main emphasis of research in my old part of the department is on the control of respiration. It involves single-cell recording of electrical activity in the brain stem; modification of this by drugs controlling ion channels in the cells of specific neural areas; correlation of this with neural discharge in phrenic, hypoglossal and other respiratory-related nerves and with respiratory movements and airway pressures. They also report on the effect of age, species, waking state versus

sleep, and REM vs. slow-wave sleep on all these variables. I always leave these meetings with a mixture of admiration for my younger, still active, colleagues, and relief that I don't have to be out in front in these areas, as they are.

"What else do I do? Like my wife, I keep up with the news, go to meetings, and write letters to the editor and to our legislators. We travel a bit and visit our grandchildren. We have a lovely time."

Letters to Felix Bronner

John Greenleaf writes: "I have been reading in *The Physiologist* the letters from senior physiologists for many years with great interest. It is impressive that many of the respondents are still pursuing scientific endeavors in their 70's and some even in their 80's. The interesting task is to ponder the relative causative proportions of heredity and environment responsible. One wonders whether knowing something about physiology engenders longer and more productive lives? I suspect so because of the accompanying self-discipline. But another factor would seem to be the pervasive joy of working in this profession. I have been fortunate to be able to acquire the joy of physiology during my graduate studies at Illinois, and to have been able to carry it over here at NASA, Ames Research Center for the past 40 years. A truly academic style research environment at a federal research center is rare. The trick to a joyous research career is to overcome those ever-present slings and arrows of outrageous fortune with dignity whenever possible. To that end I have found solace and guidance in reading the history of warfare and its leaders, especially Sun Tsu's *The Art of War* and Clausewitz's *On War*. I became eligible for retirement in 1993, but to insure domestic tranquility and also the joy of pursuing my research hobby have continued working in the laboratory on human research. It is troubling to see that funding for individual scientists conducting human research is declining rapidly, along with their new ideas; perhaps the old

ones are more comfortable. Hopefully I can provide a similar response when I'm 80! Thanks for your interest."

Robert Hill writes: "Thanks for your note on my 80th birthday.

"After 10 years of post-doc academic work and 40 years of applied research in the pharmaceutical industry it is time for me to change directions. So I have decided to switch gears and get involved in things not biologically related, such as learning Spanish, designing and building educational toys for youngsters, travel and playing farmer on our acreage in the Santa Cruz mountains.

"In my professional career, physiology, the basic science in mammalian biology, has served me in good stead, providing a healthy breadth of understanding of interrelationships of the body's mechanisms and responses. I have enjoyed my career."

Sheldon F. Gottlieb writes: "Thank you for your letter of February 4, 2002, congratulating me on having attained my 70th year. Also, thanks for your kind thoughts and the welcome invitation to tell you about my past and present activities.

"After obtaining the PhD from the University of Texas (1959), doing the dissertation research in the Physiology Department at the Medical Branch in Galveston under M. Mason Guest and Robert Celander, I went to work for what was then the Linde Division of the Union Carbide Corporation. Although my dissertation pertained to the relation between the clotting of blood and its subsequent lysis, I never again did anything in that area.

"While at Linde (1959-64), I became involved in studying the physiological and biochemical effects of oxygen and the helium xenon group of elements on living systems which brought me into the many facets of the physiology, biochemistry and pharmacology of diving and hyperbaric medicine. After four and a half years, I left for the then Jefferson Medical College in Philadelphia, where I had a joint appointment in the Departments of Physiology and Anesthesiology (1964-

68). After another four and a half years, 1968, we moved to Fort Wayne, IN, where I started as an associate professor and was promoted to full professor in the Biology Department of Purdue University at the combined Indiana University and Purdue University Campus in Fort Wayne. Twelve years later (1980) and in search of warmer climate, we moved to Mobile, AL, where I was Dean of the Graduate School and professor of biological sciences at the University of South Alabama (USA) for four and a half years and biology professor for the next 13 years.

"During our stay in Mobile, I also held the position as Director of Research at the Baromedical Research Institute (nee the Jo Ellen Smith Baromedical Research Institute) (BRI) in New Orleans (1984-98). Also, during most of these years in Mobile, 1988- 98, I had an adjunct professorship in the Department of Physiology in the College of Medicine at USA and, while associated with BRI, I held courtesy appointments in the Department of Physiology and in the Department of Medicine (Emergency Medicine Section), School of Medicine, Louisiana State University in New Orleans, 1990-98.

"I retired from USA on December 31, 1997—six months earlier than anticipated—the result of an MI in early October. We moved to Boynton Beach, June, 1998.

"While Eda and I are currently in the midst of having friends and relatives visiting South FL, some of whom are staying with us—tis the season, completing, at least temporarily, my phase of the landscaping, working on the book I am writing, maintaining an active Email correspondence, along with writing letters to editors of newspapers (some of which get published) on diverse subjects such as prayer in school, politics, hate with specific emphasis on all aspects of anti-Semitism and issues pertaining to science such as creationism vs. evolution in school curricula, science and religion and animal experimentation, visiting four children (three boys and a girl, she is second oldest) and ten grandchildren (in April it will be

eleven), trying to play tennis—had to give up four wall handball (the game the gods invented)—making new friends in a new community while maintaining old ones, being active on the Education Committee of the Undersea and Hyperbaric Medical Society and trying to keep my wife happy, I still am finding time to engage in what has become my favorite pastime, i.e. getting into trouble.

"It seems that I developed that somewhat unusual avocation while participating in community activities in the various areas of the country in which we lived. Most of the activities were designed to help promote inter-religious and interracial relations, advance environmental protection, and to educate the public with respect to a variety of philosophical and practical issues pertaining to science and medicine.

"I am not involved in any active physiological research. I do not have access to a lab. I do miss my interactions with my colleagues from different fields and universities—true scholars all—and the fun we had as we jointly produced three separate series of lectures designed to educate the people of "Lower Alabama" on issues pertaining to evolution, science and religion, and the great religions of the world.

"The aforementioned trouble pertains to a challenge to debate I made to someone and which he accepted. This debate, if the two society committees which are tangentially involved agree to cosponsor and produce it, should occur at a national meeting of the UHMS.

"The warm climate of South Florida, especially in the winter, has been beneficial for us. Admittedly, I would have preferred retiring to the mountainous region of the western or southwestern United States, places I came to love when we camped our way across the lower forty eight one month every summer during the decade of the 70s when the children were growing and developing—they ended up visiting 45 of the 48 contiguous states. Inevitably, these trips were tied in with scientific meetings at which I was presenting

some of our research. Flat South Florida is not without its beauty. Within five miles of our home there are two magnificently beautiful sites which I visit frequently—when we have guests and many times alone, while Eda is busy overseeing the care of her elderly parents (mid-nineties)—to renew my connection with nature; the Wakodahatchee Wetlands built and managed by the Palm Beach County Water District and the Arthur Marshall Loxahatchee Wildlife Preserve.

"For the future, other than spending time with family, finishing the book and landscaping, we have some trips planned to visit various foreign lands and places in the US that we missed in our first (pre-retirement) life.

"Thank you for this opportunity. Also, thank the APS for providing us with online opportunity to keep in touch with developments in physiology.

"Since our oldest son, who is currently stationed at the National Naval Medical Center, is living in Gaithersburg—close to Bethesda, I am looking forward to visiting the APS and Marty Frank when we are in the area."

Francis Haddy writes: "Thank you for your birthday wishes and for inviting me to communicate with the American Physiological Society's membership via *The Physiologist* under 'News from Senior Physiologists.' My wife of 55 years and I are healthy and still active, though not to the extent that we were a few years ago. After 25 years in the Washington, DC, area, we recently moved back to our home state of Minnesota and are now living in the Charter House, a retirement community operated by and connected by skyway and subway to the Mayo Clinic. This allows us to select from the Clinic's elaborate and complete seminar program, including that of the Department of Physiology and Biophysics in the Mayo Medical School. I attend about six basic science and clinical seminars (medical grand rounds, physiology and biomedical engineering, hypertension, cardiovascular, pulmonary, and renal) a week. I also function as an executive secretary for several life science study sections

(cardiopulmonary, integrative physiology, and clinical research) for the National Air and Space Administration (NASA), utilizing Email, fax, telephone, and trips back to NASA headquarters in Washington, DC. I consult on several hypertension research projects carried out in the research laboratories of the National Hypertension Association in New York City. About 12 years ago I started taking painting lessons and since then have been producing several acrylic landscapes each month. Believe it or not, I was president of the Montgomery County Art Association before leaving Washington and now have a number of my paintings on display in an art gallery here in Rochester.

“My wife, Terry, who is a pediatric hematologist-oncologist, continues to function as an academic advisory member of the staff of Children’s National Medical Center in DC. We have three children and seven grandchildren. Our son, Richard, is professor and vice chair for clinical affairs in the Department of Family and Community Medicine at the University of Louisville, Louisville, KY. Our daughter Carol has degrees in nursing and fine arts and is active in both areas in Plymouth, MN. Our daughter Alice is a tenured associate professor of chemistry at the University of North Carolina in Greensboro, NC. The grandchildren range in age from 8 to 17, and the oldest will enter college in the fall. One of the most satisfying things in life is to see your offspring grow up healthy and happy in their endeavors.

“The same is the case for students. In my years as a faculty member in physiology and sometimes internal medicine at Northwestern, Oklahoma, Michigan State (MSU), and the Uniformed Services Universities, the physiology departments invested much thought and effort in training pre- and postdoctoral fellows in the physiological sciences. The MSU department had over 50 graduate students at any one time and one year granted 11 PhD degrees in physiology. Almost all of the graduates pursue careers in teaching, research, and administration, and some of them are

now full professors, chairpersons, deans, and journal editors, and, indeed, one of them became president of APS. I also participated in teaching 42 classes of medical students and a variety of paramedical students, and almost all of them are in active practice in the medical sciences. Watching students develop into critical thinkers, teachers, and investigators in physiology, and dedicated practitioners of the art and science of medicine, is almost as rewarding as watching one’s own children succeed. I thank the discipline of physiology for allowing me to participate in this stimulating endeavor.

“Many of our accomplishments were possible because of a unique and favorable set of circumstances. The Flexner report of 1910 emphasized the importance of the basic medical sciences in educating physicians. By the time I joined the physiological sciences, medical schools were increasing in number and enlarging the size of their classes, research and training funds were plentiful, and physiology was viewed with respect within the medical school curriculum. Physiology was considered to be the basis of medicine because it fostered critical thinking on the function of the body in health and disease. It was, therefore, awarded resources and time in the curriculum commensurate with this important role. Physiology, along with the other basic medical sciences, was largely responsible for upgrading the quality of medical education during the first half of the last century, thus, satisfying one of the goals of the Flexner report.

“Unfortunately, we now see an erosion in the position of physiology in medical schools and an intrusion of non-science based practices into medicine. Physiology is now often taught in an integrated curriculum, which requires a large manpower, sometimes teaching outside areas of expertise, often in new and emerging subdisciplines that wax and wane in their relevance to medical practice. Physiological departments are often combined with other departments, thus, obscuring the discipline at the graduate and postdoctoral levels and

creating the potential for loss of control of the teaching content in the medical and paramedical physiology courses.

“There is an appalling intrusion of questionable and sometimes harmful practices into medicine. Alternative/complementary medicine is now accepted even by some of our most prestigious medical schools, even to the extent of piercing the ears of little children with acupuncture needles. The beneficial effects attributed to alternative/complementary medicine are, in fact, placebo effects, defined in Webster’s Dictionary as ‘improvement in the condition of a sick person that occurs in response to treatment but cannot be considered due to the specific treatment.’ To claim otherwise is immoral and unethical, particularly when dealing with a child in need of an honest role model, and particularly when sponsored by an established medical institution that is caving in to a money-generating fad. The motive here is greed. To justify alternative/complementary medicine by saying that it is safe, does no harm, and is relatively inexpensive is wrong. Alternative/complementary medicine is in fact harmful, by delaying proper treatment and sometimes by being directly toxic, and it is expensive, by superimposing its costs upon those of conventional medical care. It also causes false hopes, which can be psychologically damaging, especially to a child.

“There are other evidences of intrusion and greed. Health Maintenance Organizations (HMOs) and insurance companies claim cost savings, yet reap huge profits for chief executive officers (CEOs) and stock holders, while restricting laboratory tests and referrals to specialists for patients. One large Midwest health group’s two top officers each cashed out about 10% of their stock options in December, 2001. One CEO netted \$47.9 million from the sale of 920,000 shares. He had netted \$46.4 million from one million shares in the previous year. He still has 90% of his stock options. Between them, these two top guns realized about \$90 million from stock alone, in 2001. The chief executive’s total salary

in 2000 was in excess of \$54 million. The HMO reported a profit of almost one billion dollars in the year 2001. Yet the group increased the cost of insurance premiums by 13%, which is greater than the increase in the cost of medical care, while discouraging the use of laboratory tests, prescription drugs, and referrals to medical specialties such as cardiology, gastroenterology, and orthopedics. These administrative decisions contribute to the rising cost of health care and, at the same time, decrease the quality of care. We need to remove the profit motive from health care and seek a motive that puts the welfare of the patient first.

“Physicians, pharmaceutical firms, food supplement producers and retail-

ers, health maintenance organizations, and insurance companies advertise, showing further evidence of greed, and no one holds them accountable for their statements, some of which are patently false. Even scientists advertise these days. The hype surrounding stem cell research is an example. We have recently seen lead statements in newspapers and newsletters, such as ‘The ability to grow replacement body parts is rapidly approaching reality ...’ and ‘...a breakthrough in healing hearts.’ Such statements are premature and inappropriate since they raise false hopes in the minds of many patients ill with serious diseases. Let’s not repeat the mistakes made with gene therapy, where a similar hype promised cures

that are still to appear.

“Physiology is important because it fosters critical thinking about the function of the body in health and disease. It is still the basis of medicine, and the salvation of physiology and medicine is to keep it that way. The critical thinking fostered by physiology is crucial to medicine, and we must resell this message. If we don’t, both physiology and medicine will deteriorate and we’ll lose the best young minds to other disciplines. Perhaps it’s time for a new Flexner report. Clearly, physiology and medicine are in crisis and need a careful re-examination.” ♦

Books Received

Awareness Perceived: Biological Elements of Mind.

W. T. Lippincott.
Danbury, CT: Rutledge Books, Inc.,
2002, 321 pp., illus., index, \$22.95.
ISBN: 1-58244-171-5.

Carbon Monoxide and Cardiovascular Functions.

Rui Wang (Editor).
Boca Raton, FL: CRC, 2002, 320 pp.,
illus., index, \$129.95.
ISBN: 0-8493-1041-5.

Cerebral Vasospasm.

R. Loch Macdonald and Bryce Weir.
San Diego, CA: Academic, 2001,
518 pp., illus., index, \$149.95.
ISBN: 0-12-464161-X.

Methods in Cellular Imaging.

Ammasi Periasamy (Editor).
New York: Oxford Univ. Press, 2001,
433 pp., illus., index, \$99.50.
ISBN: 0-19-513936-4.

Modeling and Simulation in Medicine and the Life Sciences, 2nd Edition.

Frank C. Hoppensteadt and Charles S. Peskin.
New York: Springer-Verlag, 2002,
355 pp., illus., index, \$54.95.
ISBN: 0-387-95072-9.

Networking: Communicating with Bodies and Machines in the Nineteenth Century.

Studies in Literature and Science.
Laura Otis.
Ann Arbor, MI: The University of Michigan Press, 2002, 268 pp., illus.,
index, \$49.50.
ISBN: 0-472-11213-9.

Pavlov's Physiology Factor: Experiment, Interpretation, Laboratory Enterprise.

Daniel P. Todes.
Baltimore, MD: The Johns Hopkins Univ. Press, 2001, 504 pp., illus.,
index, \$58.00.
ISBN: 0-8018-6690-1.

Schuster Atlas of Gastrointestinal Motility in Health and Disease, 2nd Edition.

Marvin M. Schuster, Michael D. Crowell, and Kenneth L. Koch.
Hamilton, Ontario: B C Decker, Inc.,
2002, 472 pp., illus., index, \$149.00.
(CD-Rom Incl.).
ISBN: 1-55009-104-2

Why Animal Experimentation Matters: The Use of Animals in Medical Research.

Ellen Frankel Paul and Jeffrey Paul (Editors).
Somerset, NJ: Transaction Publishers,
2001, 224 pp., index, \$49.95.
ISBN: 0-7658-0025-X.

Attitudes on Altitude: Pioneers of Medical Research in Colorado's High Mountains

John T. Reeves and Robert F. Grover
Boulder, CO: Univ. Press of Colorado,
2001, 218 pp., illus., index, \$21.95.
ISBN: 0-87081-645-4

The quality of books on the history of physiology has improved dramatically in the last 10 years. Evolved from the impenetrable tomes of a few decades ago, current history books, especially those written contemporaneously and incorporating autobiographical chapters, have provided more enjoyable insight into the personalities of the scientists and the problems that confronted them. Reeves and Grover have filled an important historical gap in their book *Attitudes on Altitude*, which focuses on the pioneers of medical research conducted in the high mountains of Colorado prior to 1960. The editors were able to contact students and family, themselves now elderly, of the famous scientists who worked in the high country during the first half of the last century. Through extensive interviews and correspondence, they have preserved valuable information that would otherwise soon be irre-

trievably lost.

The editors did much more than the usual modern editing job ("type your manuscript, camera ready, within the blue borders and have it in my office in less than two weeks"). Throughout *Attitudes on Altitude*, the editors have either written the material themselves, or there is evidence of their literary touch. The result is a brilliant, insightful, entertaining book, so readable that it is a page turner. Glover and Newsom's early investigations of the mysterious development of pulmonary hypertension in cattle make for excellent reading. J.S. Haldane, who laid the complete foundations for our understanding of the control of breathing, is a fascinating and impressive figure. One of my favorite characters is Mabel FitzGerald. How a proper Victorian lady could travel to the rough and raucous high-altitude mining towns of Colorado packing delicate glass instruments on mule back to investigate the effect of carbon dioxide on the drive to breathe, leaves one's head spinning.

There are other wonderful chapters: on the Grollmans who measured cardiac output during acclimatization in detail that has never been matched, on the superb lifetime work of Bruce Dill, and on Jack Lichty's ground breaking work on small babies being born in Leadville. Lichty made a discovery—maternal hypoxia results in

full term small babies who get sick a lot—and for a time nobody grasped the significance, not just for high altitude, but also for any other circumstance that can cause maternal and fetal hypoxia such as carbon monoxide from cigarette smoking. In the final chapter, Bob Grover describes the work of Charlie Houston who pondered the case of Alex Drummond, a climber who got pneumonia when he went to altitude, a "pneumonia" that promptly cleared when he descended. Houston, a general practitioner in Aspen, showed the characteristics of all the pioneers featured in this book: perseverance, curiosity, and determination, in this case eventually leading to the description of high altitude pulmonary edema. Those same determined characteristics apply to the editors of *Attitudes on Altitude*, for this book had a ten-year-long gestation period. The result is a happy one that is readable not only by physiologists, but by the lay public as well. This slim volume belongs on the bookshelf of all who are intrigued by the process of science, who are curious about the kinds of people who become scientists, and who are interested by what happens to each of us when we ascend to high altitude. ❖

Wiltz W. Wagner, Jr., Ph.D.
Indiana University School of Medicine

Gift Planning Opportunities

The American Physiological Society is pleased to invite the membership to consider including the APS in their gift giving plans. Over the last several years, the Society has received donations of land and securities, all of which have been used to launch the Society's various young investigator award programs.

Many options exist if you are interested in including the APS and its Endowment Fund in your financial or estate planning. Some options include:

Immediate Gifts: Cash, gifts of appreciated securities, gifts of closely held stock, gifts of tangible personal property, retirement assets, charitable lead trusts and gifts of real estate.

Life Income Gifts: Gift annuities, deferred payment gift annuities, charitable remainder trusts, charitable remainder unitrusts, and charitable annuity trusts.

Gifts of Insurance: Ownership of life insurance policies can be donated, or the APS can become the beneficiary of policies owned by others.

Designated Gifts: Gifts given to

honor or memorialize an individual or an organization and can include scholarships, programs, etc., which are specified for support and named for individuals.

Gifts by Will: Bequests of a percentage of estate, stated dollar amount or specific property or assets.

For more information on gift giving to the APS, please contact Martin Frank, Executive Director (Tel.: 301-530-7118, Email: mfrank@the-aps.org), or Robert Price, Director of Finance (Tel.: 301-530-7160, Email: rprice@the-aps.org).

Intestinal Lipid Metabolism

Charles M. Mansbach II, Patrick Tso, Arnis Kuksis (Editors)
New York: Kluwer Academic/Plenum, 2001, 434 pp., index, \$135
ISBN: 0-306-46241-9

Since 1990, the Federation of American Societies for Experimental Biology (FASEB) has sponsored regular meetings in Saxon River, VT, on the intestinal processing of lipids. These meetings have attracted the leading scientists in lipid biology and their students, and have served as both stimulus for research and recruiting tool for encouraging younger investigators to enter the field. The current book is drawn from the same underlying inspiration: to draw together definitive information on how the intestine processes lipids, and to reach investigators with an interest in this area and their pre- and postdoctoral trainees. Considering that intestinal absorption of lipids is central to the pathophysiologic processes of atherosclerosis and obesity, there is much need for rigorous understanding of intestinal lipid physiology. The current book serves this purpose well.

The book is organized into chapters of 15 to 20 text pages in length, written by leading experts in intestinal lipid biology. The first chapter introduces the biophysics of intestinal luminal lipids, with discussion of lipid emulsification in the stomach and duodenum, the physicochemistry of lipolysis at the oil-water interface of emulsion droplets, and the physicochemistry of end-lipolysis in the aqueous phase and unstirred water layer of the mucosa. The next six chapters are definitive discussions of the following enzymes: preduodenal lipases; pancreatic lipase and colipase; pancreatic phospholipase A2, enterostatin/procolipase; and cholesterol esterase. These enzymes are discussed in the context of their gene and amino acid sequences and place in enzyme families; purification and characterization of the enzymes; biophysical prop-

erties; crystallographic structure and catalytic mechanisms. Attention also is given to the biophysics of the catalytic event, since interface physics is important for many of these enzymes. Chapter 8 addresses the intestinal unstirred water layer specifically, and Chapter 17 analyses the surfactant-like particles involved in absorption of triacylglycerols. Chapters 9 through 16 are devoted to the physiology of intestinal enterocyte lipid processing, organized along the following themes: fatty acid binding proteins; microsomal triglyceride transfer protein and its role in the assembly of intestinal lipoproteins; intestinal enterocyte synthesis and trafficking of triacylglycerols; intestinal cholesterol absorption and metabolism; intestinal apolipoprotein biosynthesis and lipoprotein assembly. In the last instance, specific attention is given to apolipoprotein B and apolipoprotein A-IV. Chapters 18 to 21 address broader issues of intestinal enterocyte lipid processing, including: inhibitors of chylomicron formation and secretion; absorption and metabolism of peroxidized lipids; absorption of fat-soluble vitamins; and metabolism of interesterified fats. The final chapter, 22, addresses clinical nutrition with special attention to structured triacylglycerols. The book is well-indexed, and chapters contain valuable introductory comments and concluding sections. There is a uniformity of presentation and editorial style which is very pleasing.

The field of lipid biology has a rich history, and the authors of each chapter do an excellent job of citing important scientific contributions of the last half-century as well as providing recent citations through the late 1990's. Lipid physiology cannot be understood without understanding the biophysics of the substrate molecules, and their assembly into the macroarchitecture of membranes, micelles, and lipid droplets. Both with the chapters specifically addressing lipid biophysics and the frequent reference to biophysics in other chapters, the reader is given an excellent sense of this elegant field. The physiological

significance of lipid transformations, both metabolic and architectural, are detailed. Each chapter imparts important insights into the physiology of intestinal lipid breakdown, absorption, metabolism, and reassembly into circulating lipoproteins, something which is exceedingly difficult to understand without a definitive text of this nature. The elegance of each metabolic enzyme is detailed, with extensive discussions of crystal structure, catalytic sites, and substrate catalysis.

Importantly, regulation of enzyme and apolipoprotein gene expression is discussed extensively, with references extending up until 1998. As regulation of gene expression is a very rapidly moving field, this is the one area where this book may not serve as a definitive reference source. Nevertheless, the principles established at the time of its writing remain, and these chapters will stand as a valuable reference point for work conducted 1998 and prior.

Taken collectively, this is an outstanding compendium of current knowledge on the biophysics, biochemistry, and physiology of lipid processing within the gut lumen and by intestinal enterocytes. The final chapter on the use of structured triacylglycerols points towards an area which is not emphasized in this book, which is intestinal pathophysiology in the clinical management of lipid disorders. There is also limited discussion of how the principles presented in this book translate into understanding of atherosclerotic vascular disease, a principal disorder related to intestinal lipid pathophysiology. This is not a deficiency of the book, simply an acknowledgement that these two vast fields of scientific endeavor must each have focussed textbooks. Rather, this current book provides a substantially up-to-date, and outstandingly thorough presentation of the physiologic interface between the lipids of our dietary world, and our inner corpus. ♦

James M. Crawford
University of Florida

Robert W. Berliner 1915-2002

Robert W. Berliner, former Dean of Yale University School of Medicine, Professor Emeritus of Cellular and Molecular Physiology and Professor Emeritus of Internal Medicine, and the APS President from 1967-1968, passed away on February 5 at the age of 86 of pulmonary complications after a severe episode of the flu. Robert remained active to the very end and had visited Washington, DC the day before he entered Yale-New Haven Hospital.

Born in New York City in 1915, Robert received his BS degree from Yale in 1936. He left Yale in his junior year to begin his medical education at the College of Physicians and Surgeons of Columbia University and received his MD degree in 1939. After completing his internship at the Presbyterian Hospital in New York City, he held positions at Goldwater Memorial Hospital and New York University School of Medicine. It was at these institutions that he collaborated with James A. Shannon who subsequently was appointed Director of Research at the National Heart Institute. Robert was one of the first investigators recruited by Shannon to join him at the NIH in 1950, at which time Robert was named Chief, Laboratory of Kidney and Electrolyte Metabolism at the National Heart Institute. He remained at NIH successively as Director of Intramural Research at the National Heart Institute and as Deputy Director for Science for the entire NIH facility.

Robert's earliest research was as a medical student in the laboratory of Robert F. Loeb. This period kindled an interest in problems of fluid and electrolyte metabolism that formed a thread through much of his subsequent work. His initial work with James Shannon was in the study of excretion of electrolytes. While he was working in Shannon's laboratory, the US became involved in World War II,



Robert Berliner

and Shannon then diverted the efforts of the research group to the study of malaria. During the next four years, this team was responsible for developing methods for the quantitative evaluation of new drugs for the treatment of malaria and became the main center for such evaluation. After the war, Robert returned to the investigation of renal function. During the next several years, Berliner and his associates carried out studies of the acidification of the urine and the regulation of acid-base balance. Studies in his laboratory helped establish early concepts of how potassium, sodium, hydrogen and water are transported by the kidney.

Robert Berliner served as president of the American Society for Clinical Investigation, the American Physiological Society and the American Society of Nephrology. He was a member of the National Academy of Sciences, the Institute of Medicine and the Association of American Physicians. He was a recipient of the Distinguished Service Award of the Department of HEW, the Homer Smith Award in Renal Physiology and the George M. Kober Medal from the Association of American Physicians.

In 1973 he was awarded the honorary degree of Doctor of Science by his alma mater, Yale University. His citation for the honorary Doctor of Science Degree read: "You have developed your own high technology (ingenious instrumentation), on the smallest scale, for observing the transport of chemical substances across the membranes of living cells. Thus, you have created elegant models, of great precision, which permit us to understand the mechanisms in kidney disease. For this outstanding contribution, and in appreciation of your role as the nation's leading statesman in biomedical science, Yale takes pride in conferring upon you the degree of Doctor of Science."

Robert became Dean of the Yale University School of Medicine in July 1973 and served with distinction for eleven years. Under his leadership, the School became one of the top two or three institutions in America in terms of hosting research supported by peer-reviewed grants. He oversaw the creation of outstanding teaching facilities in the Hope Building, the renewal of in-patient teaching facilities at Yale-New Haven Hospital, the development of the Faculty Practice Plan and the establishment of the first major fund-raising campaign in the history of the School of Medicine.

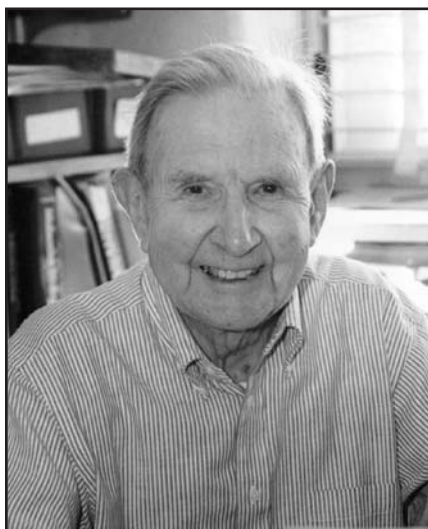
His trainees and students have gone on to lead some of the major nephrology and medical departments nationwide. These include Barry Brenner, John Dirks, Rex Jamison, Jared Grantham, Maurice Burg, Joseph Hoffman, Fred Wright, Joseph Handler, Norman Levinsky and Eugene Braunwald. His mentorship and his humility were trademarks of his character. He is survived by his wife, Lee, two daughters, Nancy (a Yale medical graduate and professor) and Alice and two sons, Robert W. Jr. and Henry John. ❖

Clifford Ladd Prosser

1907-2002

Clifford Ladd Prosser, Professor Emeritus of Physiology and Neuroscience at the University of Illinois at Urbana, Champaign, and the APS President from 1967-1968, passed away on Sunday, February 3, 2002, shortly before his 95th birthday. Known as "Ladd" to his friends and colleagues, he was the embodiment of a true scientist, devoting nearly seven decades to the pursuit of comparative animal physiology. He received a zoology degree from the University of Rochester in 1929. Enthusiastic to study experimental biology, he attended Johns Hopkins University, receiving a PhD in Biology (1932). Part of his doctoral studies, carried out under S.O. Mast, involved motor behavior of amoebae. This and his independent studies on the earthworm nervous system laid the foundation for his work in comparative animal physiology. A Parker Fellowship enabled him to carry out postdoctoral research at Harvard (1933) and England (1934). At Harvard, he worked with the auditory neurophysiologist Hallowell Davis where he sharpened his skills in electrophysiology and discovered the caudal photoreceptor of crayfish. He also associated with such founding figures of American physiology as Walter Cannon and Alexander Forbes. In 1934 he studied at Cambridge and Oxford with Edgar Adrian and John Eccles.

Ladd's first academic position was at Clark University in Worcester, MA in 1934. He spent the summers working at the Marine Biological Laboratory (MBL) in Woods Hole, MA, doing research in invertebrate neurophysiology, in part focusing on the role of acetylcholine in marine organisms. During this period he met Kenneth "Kacy" Cole and Howard "Bim" Curtis, American biophysicists who were working on the properties of nerve and muscle fibers, and with whom he developed a lifelong friendship. At MBL he also met Alan Hodgkin, Steve Kuffler and Albert Szent-Gyorgi, who were all to go on to make such major contributions to nerve and muscle



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physiology. For decades Ladd regularly attended the MBL to spend his summers in science there and became one of its Trustees. In 1939, in search of a larger and more research-oriented institution, Ladd accepted a faculty position at the University of Illinois at Urbana to teach Zoology. After the attack on Pearl Harbor in 1941, he was recruited by Cole to join a biomedical team in Chicago as part of the Manhattan Project to study the effects of high-level radiation on humans and other animals. These findings later formed part of the basis for post-war radiation safety standards.

After the war, Ladd returned to the University of Illinois and in 1949, helped form the Physiology Department. There he began a 50-year career of teaching and research that included the training of about 45 doctoral students and numerous research fellows and associates. Among these, scientists such as Lloyd Barr, Geoff Burnstock, Andy Cossins, Brian Curtis, Asit Das, Mike Friedlander, Jeff Hazel, Madhu Kanungo, M. Kobayashi, Nick Kotchabhakdi, Jane Liu, Richard Meiss, Toshio Nagai, T. Tamaik, Bruce Sidell, Nick Sperelakis, Joe Szurszewski, Victor Wilson, and Jackie Wood, became heads, chairs or directors of physiology, biochemistry, biophysics or neuroscience in various

states and countries.

During the 1960s, Prosser was Head of Physiology at the University of Illinois. In 1962 he brought Biophysics into the Department, renaming it Physiology and Biophysics, an excellent pairing which lasted for more than three decades. Among the new physiologists and biophysicists that he recruited, Bill Sleator, Jim Heath, and Dennis Buetow, in turn, became Head of the Department. In the late 1950s, Ladd was instrumental in the building of Burrill Hall, which served as the site of a joint meeting of the American Physiological Society and the Society of General Physiologists (Fall, 1960). In the 1970s, he established the Neural and Behavioral Biology Graduate Program, later renamed the Neuroscience Program, an active interdisciplinary program currently comprising 60 faculty and numerous graduate students.

In the words of a national colleague, Prosser was "A statesman of science," ever ready to serve and represent the needs of science and the scientists. He was the President of the Society of General Physiologists (1958), the American Society of Zoologists (1961), and the American Physiological Society (1969), and served as editor or on the editorial boards of such journals as *American Journal of Physiology*, *Comparative Physiology* and *Biochemistry* and *Physiological Zoology*.

From 1932 to 2002, Prosser produced seven books, over 50 reviews and monographs and nearly 150 research papers, exclusive of abstracts and reports. His most innovative book was "Adaptational Biology: From Molecules to Organisms" (Wiley, 1986) in which he tried to develop a unified theory of evolutionary adaptation by studying various levels of organismic complexity. Prosser's magnum opus was his massive textbook of "Comparative Animal Physiology" (Wiley), which underwent four editions from 1950 to 1991 and was translated into three languages, including Russian. Through its pages,

generations of students around the world were introduced to comparative physiology.

During his retirement he wrote, lectured and traveled widely, and continued to train PhDs. He came to his laboratory in until 1997 when, following a serious hip fracture, he became homebound. Nevertheless, he continued working on his two books, "Scientific Autobiography and Personal Memoir" (Stipes Publishing, Champaign, 2001) and a more massive undertaking, "A History of Nerve, Muscle and Synapse Physiology" (E. Meisami, ed., due summer 2002).

One of Prosser's seminal discoveries was his early demonstration of spontaneous activity in the isolated nervous system of invertebrates. This finding was contrary to the prevailing

views of the behaviorists, who thought that all behavior is stimulus-dependent, and led ultimately to modern-day views of central pattern generators in the nervous system. In the 1950s his research emphasis changed from nerve to muscle, particularly smooth muscle, its functional diversity and adaptation. In his words, "I decided that animal speed was due more to muscle than nervous system." This focus remained central through the rest of his career. Among his theoretical insights was the concept of a relationship between muscle fiber size (diameter) and its speed of contraction. He also found novel intestinal slow waves and studied the biochemical and physiological adaptation of fish and marine invertebrates to changes in environmental tempera-

ture both in vivo and in vitro. Prosser received numerous awards and honors including election to the National Academy of Sciences (1974). He was truly a giant of comparative physiology and will be dearly missed by the many whose lives he touched.

Ladd Prosser leaves two daughters, a son, six grandchildren and one great-grandchild. His older daughter, "Jane" Ellen Prosser Armstrong, lives in Woods Hole, his second daughter, Nancy Ladd Prosser Meinertzhagen, in Halifax, Nova Scotia, and his son, Loring Blanchard Prosser in Indianapolis. Ladd's wife, Hazel Blanchard Prosser, died in 1999 at the age of 92, following an earlier stroke.



Essie Meisami

Fourth Annual Johns Hopkins Orthopaedic Review Course June 22-28, 2002

This seven-day course, sponsored by the Departments of Pathology and Orthopaedic Surgery of Johns Hopkins University School of Medicine and Union Memorial Hospital, and designed for orthopaedic surgeons, will provide a comprehensive review of clinical Orthopaedic Surgery. It is designed to cover these topics through didactic lectures, a comprehensive syllabus, a set of practice questions and interactive sessions

with the faculty. The first day of the course will cover basic science topics including biomechanics, biomaterials and the basic tissues that orthopaedic surgeons must be familiar with. There will be a full day devoted to pediatric orthopaedic surgery, bone and soft tissue tumors and total joint replacement surgery. There will be half day reviews concentrated on the spine, foot and ankle, sports medicine and trauma.

Fee: Physicians: \$,1000; Residents: \$500.

Contact: Conference Coordinator, Johns Hopkins University School of Medicine, Office of Continuing Medical Education, Turner 20, 720 Rutland Ave., Baltimore, MD 21205-2195; Tel: 410-955-2959; Fax: 410-955-0807; Email: cmenet@jhmi.com; Internet: <http://www.med.jhu.edu/cme>.

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The Society gratefully acknowledges the contributions received from Sustaining Members in support of the Society's goals and objectives.



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Steven D. Brown has been appointed Vice President of Medical Affairs, Bakersfield Memorial Hospital, Bakersfield, CA. Formerly, Brown was associated with the University of Texas, Houston Medical School, Houston, TX.

Anthony John Bull has accepted a position with the Department of Exercise Sciences, Creighton University, Omaha, NE. Prior to his new position, Bull was affiliated with the Department of Exercise Biology, University of Nebraska, Lincoln, NE.

Jerod S. Denton recently affiliated with the Department of Anesthesiology Research Division, Vanderbilt University Medical Center, South Nashville, TN. Denton had moved from the Department of Physiology, Dartmouth Medical School, Lebanon, NH.

Robert Jason Durand is now associated with the Department of Physiology, Tulane University Health Science Center, New Orleans, LA. Previously, Durand was affiliated with the Department of Kinesiology and Health Studies, Southwestern Louisiana University, Hammond, LA.

Ellen Marie Evans has joined the Department of Kinesiology, University of Illinois, Urbana, IL. Evans was formerly with the Division of Geriatrics and Gerontology, Washington University School of Medicine, St. Louis, MO.

Jerome L. Fleg moved to the Division of Epidemiology and Clinical Applications, National Heart, Lung and Blood Institute, Bethesda, MD. Previously, Fleg was affiliated with the Gerontology Research Center, Laboratory of Cardiovascular Science, Baltimore, MD.

Masataka Fukue recently accepted a position with the Department of Surgery, Ryugasaki Saiseikai Hospital, Ibaraki, Japan. Fukue was previously associated with the Department of Surgery, Tsukuba Kinen Hospital, Ibaraki, Japan.

Adam Giangreco was formerly with the Department of Environmental Medicine, University of Rochester, Rochester, NY. Giangreco has moved to the Department of Cell Biology and Physiology, University of Pittsburgh, Pittsburgh, PA.

Peter Lyon Goldberg has accepted an appointment with the Department of Pathology, Vascular Research Division, Brigham Women's Hospital, Harvard Medical School, Longwood Medical Research Center, Boston, MA. Goldberg moved from the Center for Cardiovascular Sciences, Albany Medical College, Albany, NY.

Timothy M. Griffin affiliated with the Department of Biology, Anthropology, and Anatomy, Duke University Medical Center, Durham, NC. Griffin formerly was associated with the Department of Integrative Biology, University of California, Berkeley, CA.

Michael K. Hansen joined the Department of High Throughput Biology, Discovery Research Biology, GlaxoSmithKline, King of Prussia, PA. Previously, Hansen was associated with the Department of Psychology, University of Colorado, Boulder, CO.

Steven D. House has moved from the Department of Biology, Seton Hall University, South Orange, NJ. Currently, House is affiliated with the The College of Arts & Sciences, Elon University, Elon College, NC.

Daniela Negrini has accepted a position with the Biomedical, Experimental, and Clinical Sciences, University of Insubria, Varese, Italy. Negrini had been a Research Associate with 1st Fisiologia Umana I, Milano, Italy.

Sheri Blair Parker, a Navy Lieutenant, has been assigned to the Naval Health Research Center, Human Performances Program, San Diego, CA. Parker's previous position was with the Department of Environmental Physiology, Naval Medical Research Center, Silver Spring, MD.

Christopher Joseph Pemberton has moved to Christchurch Cardio-Endocrine Research Group, University of Otago, Christchurch, New Zealand. Pemberton had been affiliated with the Department of Pharmacology and Toxicology, University of Oulu, Finland.

Sandra J. Peters has accepted a position with the Department of Physical Education and Kinesiology, Faculty of Applied Health Sciences, Brock University, St. Catharines, Ontario, Canada. Formerly, Peters was with the Human Biology and Nutritional Sciences, Guelph, Ontario, Canada.

Melody D. Phillips has joined the Department of Health and Human Performance, School of Applied Health and Educational Psychology, Oklahoma State University, Stillwater, OK. Phillips was formerly affiliated with the Wastl Human Performance Laboratory, Purdue University, West Lafayette, IN.

Jesus Rico-Sanz has affiliated with the Department of Human Genomics Laboratory, Pennington Biomedical Research Center, Baton Rouge, LA. Rico-Sanz was formerly with the Department of Exercise Physiology, Research Exercise and Sport Science Technology Institute, Barcelona, Spain.

Richard Rivers recently accepted a position with the Department of Anesthesiology and Critical Care Medicine, Johns Hopkins University, Baltimore, MD. Before his new position, Rivers was with the Department of Anesthesiology, University of Rochester, Rochester, NY.

Harry Bartlett Rossiter recently associated with the Department of Medicine, Division of Physiology, University of California-San Diego, La Jolla, CA. Rossiter moved from the Department of Physiology, St. George Hospital Medical School, London, England.

Celia D. Sladek has moved to the Department of Physiology and

Biophysics, University of Colorado Health Science Center, Denver, CO. Prior to her new assignment, Sladek was with the Department of Physiology and Biophysics, Finch University Health Science, Chicago Medical School, North Chicago, IL.

Suwit Jack Somponpun accepted a position with the Department of Physiology and Biophysics, University of Colorado Health Sciences Center, Denver, CO. Somponpun had been affiliated with the Department of Physiology, Finch University Health Science, Chicago Medical School, North Chicago, IL.

Martin A. Turman affiliated with the Department of Pediatric Nephrology, Oklahoma University, Oklahoma City, OK. Turman had been a member of the Department of Pediatric Nephrology, Ohio State University Children's Hospital, Columbus, OH.

Arsenio Veicsteinas has moved from Instituto Di Fisiologia Umana, University of Brescia, Brescia, Italy to join the Faculty of Scienze Motorie, University of Milano, Milano, Italy.

Peter William Watt has joined the Sports and Exercise Department, Brighton University, Eastbourne, England. Watt was previously associated with the Department of Anatomy and Physiology, Dundee University, Dundee, Scotland.

L. Britt Wilson has affiliated with the Department of Pharmacology & Physiology, University of South Carolina School of Medicine, Columbia, SC. Wilson moved from the Department of Physiology, University of South Alabama School of Medicine, Mobile, AL.

Phyllis M. Wise has been appointed Dean, Division of Biological Sciences, University of California, Davis, CA. Prior to her new position, Wise was Chair of the Department of Physiology, University of Kentucky College of Medicine, Lexington, KY.

Chung-Ho Yeum is currently with the Department of Internal Medicine, Division of Nephrology, Cheju National University Hospital, Jeju, Korea. Formerly, Yeum was affiliated with the Department of Internal Medicine, Division of Nephrology, Seonam University College of Medicine, Gwangju, Korea.

C. Chris Yun accepted a position with the Division of Digestive Diseases, Emory University School of Medicine, Atlanta, GA. Prior to his new appointment, Yun was with the Department of Medicine, Johns Hopkins University School of Medicine GI Unit, Baltimore, MD.

Hengtao Zhang has affiliated with the Department of Pediatrics, Duke University Medical Center, Durham, NC. Zhang formerly was associated with the Department of Physiology & Biophysics, University of Alabama, Birmingham, AL.

Adrienne S. Zion recently joined the Spinal Cord Damage Research Department, Bronx VA Medical Center, Bronx, NY. Previously, Zion was with the Department of Rehabilitation Medicine, Columbia University College of Physicians and Surgeons, NY. ❖

Call for Nominations for the Editorship of *News In Physiological Sciences*

Nominations are invited for the editorship of *News in Physiological Sciences* to succeed S.G. Schultz, who will complete his term as Editor on June 30, 2003. The Publications Committee plans to interview candidates in October, 2002. Applications should be received before

August 15, 2002. Nominations, accompanied by a curriculum vitae, should be sent to the Chair of the Publications Committee: Dr. Dale J. Benos, Publications Department, American Physiological Society, 9650 Rockville Pike, Bethesda, MD 20814-3991.

Call for Nominations for the Editorship of *American Journal of Physiology-Gastrointestinal and Liver Physiology*

Nominations are invited for the editorship of *American Journal of Physiology-Gastrointestinal and Liver Physiology* to succeed M.F. Kagnoff, who will complete his term as Editor on June 30, 2003. The Publications Committee plans to interview candidates in October, 2002. Applications

should be received before **August 15, 2002.** Nominations, accompanied by a curriculum vitae, should be sent to the Chair of the Publications Committee: Dr. Dale J. Benos, Publications Department, American Physiological Society, 9650 Rockville Pike, Bethesda, MD 20814-3991.

Call for Nominations for the Editorship of *Physiological Genomics*

Nominations are invited for the editorship of *Physiological Genomics* to continue the tradition started by its Founding Editor, V.J. Dzau, who will complete his term as Editor on June 30, 2003. The Publications Committee plans to interview candidates in October, 2002.

Applications should be received before **August 15, 2002**. Nominations, accompanied by a curriculum vitae, should be sent to the Chair of the Publications Committee: Dr. Dale J. Benos, Publications Department, American Physiological Society, 9650 Rockville Pike, Bethesda, MD 20814-3991.

Physiology in Perspective Walter B. Cannon Memorial Lecture Award

The Cannon Memorial Lecture honors Walter B. Cannon, President of the Society from 1913-1916 and one of the century's most distinguished physiologists. The plenary lecture is presented annually by a distinguished physiologic scientist, domestic or foreign, at the spring meeting on a subject that addresses some aspect of the concept of homeostasis as enunciated in Cannon's classic work, *The Wisdom of the Body*. The lecture, sponsored by the Grass Foundation, is selected by the APS President with the consent of Council.

The recipient receives an honorarium of \$4,000 plus

travel and per diem expenses and is invited to submit a manuscript for consideration of publication in one of the Society's journals.

Nominations for the Cannon Lecture Award should be adequately documented to demonstrate the candidate's contributions to physiology. A curriculum vitae should accompany the letter of support describing the nominee's achievements. Submit nominations by **October 1** to: The APS Cannon Lecture Award, 9650 Rockville Pike, Bethesda, MD 20814-3991.

Association of American Medical Colleges Award Nominations Sought

The Association of American Medical Colleges (AAMC) invites APS members to submit nominations for the following awards.

Abraham Flexner Award for Distinguished Service to Medical Education: The highest honor that academic medicine presents for sustained contributions to American medical education. The award is a medal and a cash prize of \$10,000. (202-828-0472)

Deadline: May 10, 2002

Alpha Omega Alpha Robert J. Glaser Distinguished Teaching Award: Recognizes the significant contributions to medical education made by gifted teachers. Each winner receives \$10,000; the awardee's institution receives \$5,000; and the awardee's AOA chapter receives \$1,000. (202-828-0250)

Deadline: May 31, 2002

Award for Distinguished Research in the Biomedical Sciences: Recognizes exceptional research discoveries, and consists of a medal and a cash award of \$5,000. (202-828-0472)

Deadline: May 10, 2002

David E. Rogers Award: Granted annually to an individual who has made major contributions to improving the health and health care of the American people. The

Rogers Award is a prize of \$10,000 and a crystal presentation piece, and is supported by the Robert Wood Johnson Foundation. (202-828-0472)

Deadline: May 10, 2002

Herbert W. Nickens Award: Granted annually to an individual who has made outstanding contributions to promoting justice in medical education and health care. The recipient receives a \$10,000 award and gives the Nickens Memorial Lecture at the AAMC annual meeting. (202-828-0572)

Deadline: May 15, 2002

Humanism in Medicine Award: Recognizes a faculty member who exemplifies the qualities of a caring and compassionate mentor in the teaching and advising of medical students. The annual award is \$5,000, with an additional \$1,000 for support of OSR activities at the recipient's institution. (202-828-0682)

Deadline: April 5, 2002

Outstanding Community Service Award: Presented in recognition of longstanding, major institutional commitment to addressing community needs. The winner receives an engraved crystal presentation piece. (202-828-0472)

Deadline: April 12, 2002

For more information go to the AAMC web site at <http://www.aamc.org/about/awards/start.htm>.

May 5-10

The Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting, Fort Lauderdale, FL. *Information:* ARVO Offices, 12300 Twinbrook Parkway, Suite 250, Rockville, MD 20852-1606. Tel: 240-221-2900; Fax: 240-221-0370; Internet: <http://www.arvo.org>.

May 18-24

International Society for Magnetic Resonance in Medicine—Tenth Scientific Meeting and Exhibition, Honolulu, Hawaii. *Information:* International Society for Magnetic Resonance in Medicine, 2118 Milvia Street, Suite 201, Berkeley, CA 94704. Tel: 510-841-1899; Fax: 510-841-2340; Email: info@ismrm.org; Internet: <http://www.isrm.org>.

May 14-18

29th Annual Meeting of The International Society for the Study of the lumbar Spine, Cleveland, OH. *Information:* The International Society for the Study of the Lumbar Spine, 2075 Bayview Avenue, Room MG323, Toronto, Ontario, Canada, M4N 3M5. Tel: 416-480-4833; Fax: 416-480-6055; Email: shirley.fitzgerald@swchsc.on.ca

May 22

Annual Symposium on Biomedical Engineering—Support of the Failing Heart: From Devices to Molecules, Radisson Hotel Metrodome, Minneapolis, MN. Internet: <http://www.bmei.umn.edu>

May 27-June 7

International Course on Laboratory Animal Science, Utrecht, The Netherlands. *Information:* Prof. dr. L.F.M. van Zutphen or Mr. Stephan van Meulebrouck, Department of Laboratory Animal Science, Faculty of Veterinary Medicine, PO Box 80.166, 3508 TD Utrecht, The Netherlands. Tel: +31-30-2532033, Fax: +31-30-2537997; Email: pdk@las.vet.uu.nl

May 29-June 1

Xth International Conference on Myasthenia Gravis and Related Disorders, Key Biscayne, Florida. *Information:* New York Academy of Sciences, 2 East 63rd Street, New York, NY 10021. Tel: 212-838-0230 ext. 324; Fax: 212-838-5640; Email: conference@nyas.org; Internet: http://www.nyas.org/calendar/contents/cal_conf.cfm

May 31

Earl H. Morris Symposium - Stress: Adaptation vs. Disease, Dayton, OH. *Information:* Dr. Javier Stern, Wright State University School of Medicine, 3640 Colonel Glenn Highway, Dayton, OH 45435. Tel: 937-775-3305; Email: Javier.stern@wright.edu; Internet: <http://www.med.wright.edu/pharm/stresssymposium/>

June 2-7

European Life Sciences Symposium: Life in Space for Life on Earth, Stockholm, Sweden. *Information:* Benny Elmann-Larsen or Rebecca Forth, European Space Agency, ESTEC, MSM-GAL, 1 Keplerlaan, NL-2201 AZ, Noordwijk, The Netherlands. Tel: +31-71-565-3322; Fax: +31-71-565-3661; Email: bellman@estec.esa.nl or rebecca.forth@estec.esa.nl.

June 3-6

Critical Issues in Tumor Microcirculation, Angiogenesis and Metastasis: Biological Significance and Clinical Relevance, Boston, MA. Internet: <http://steele.mgh.harvard.edu>.

June 5-9

XXVII FIMS World Congress of Sports Medicine, Budapest, Hungary. *Information:* Hungarian Society of Sports Medicine, 1123 Budapest, Alkotás str. 48. HUNGARY. Tel: +36 1 4886 189, +36 1 4886 191; fax: +36 1 375 3292; email: mar12880@helka.iif.hu; Internet: <http://www.sportdoctor.org>.

June 13-15

New Technologies in Drug Discovery and Drug Development, Banff, Alberta, Canada. *Information:* Canadian Society for Pharmaceutical Sciences, 3118 Dentistry/Pharmacy Centre, University of Alberta Campus. Tel: 780-492-0950; Email: sandra.hutt@ualberta.ca; Internet: <http://www.ualberta.ca/~cpsp/>

June 16-18

Lake Cumberland Biological Transport Group Meeting, Jamestown, KY. *Information:* Eric Delpire, Associate Professor of Anesthesiology, Vanderbilt University Medical Center, 3640 Colonel Glenn Highway, B4202 Medical Center North, Nashville, TN 37232-2520. Tel: 615-343-7409; Fax: 615-343-3916; Email: eric.delpire@mcmail.vanderbilt.edu.

June 25-29

Fifth International Weber Symposium on Innovative Fluorescence Methodologies in Biochemistry and Medicine, Kauai, HI. *Information:* <http://lfd.uiuc.edu/Weber>.

June 29-July 5

4th International Congress of Pathophysiology, Budapest, Hungary. *Information:* Prof. Lajos G. Szollar, MD, DscMed, Secretary General of the Congress, Institute of Pathophysiology, Semmelweis University Medical School, H-1089 Budapest, Nagyvarad ter 4, Hungary. Tel/fax: +36-1-210-4409; Email: szollaj@net.sote.hu; Internet: <http://isp2002.sote.hu>

June 30-July 5

Sensory Coding and the Natural Environment: Probabilistic Models of Perception, Mount Holyoke College, MA. Internet: <http://www.klab.caltech.edu/~pam/NSS2002.htm>



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Dates*	Degree*	Institution	Major Field	Advisor
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LIST YOUR PUBLICATIONS FROM THE PAST 5 YEARS (List them in the same style as sample below).

Sample: Cheung, Stephen S., and Tom M. McLellan. Heat acclimation, aerobic fitness, and hydration effects on tolerance during uncompensable heat stress. *J. Appl. Physiol.* 84(5): 1731-1739, 1998.

IMPORTANT INFORMATION:

Do not include a curriculum vitae or reprints.

Mail your application to: Membership Services Department, The American Physiological Society
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Send no money now: You will receive a dues statement upon approval of membership.

Approval Deadlines: Regular membership applications are considered for approval by the Council three times per year. Student and Affiliate membership applications are accepted monthly upon approval of the Executive Director of the Society.

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