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# The Physiologist

Volume 43, Number 2

April 2000

## Gerald F. DiBona 73rd President of APS

### Navigating in the 2000s

It is a great honor to have been elected as the 73rd President of the APS. However, it is a daunting task to put forth a President's Message to the membership during the first year of the 21st century. Having read the insightful and thoughtful writings of recent Presidents, I undertake this task with some misgivings. Their penetrating analyses and visionary constructs for the future of the Society have covered most of the important issues of concern to the members.

As a part-time sailor, let me take you on a cruise from one point with coordinates WHWB (Where Have We Been?) to another point with coordinates WAWB (Where Are We Bound?).

### Where Have We Been?

As I write this, the APS Council has recently revised the draft strategic planning document that emerged from a 2.5-day strategic planning retreat held in November 1999. The participants in the strategic planning retreat, under the capable leadership of President Walter Boron, included the APS Council, members of the APS Long-Range Planning Committee, Chairs of the APS sections, the APS Executive Director and key APS staff leaders. The 2000 strategic plan will serve as a course chart for the Society to successfully navigate through the untraveled waters of the next decade.

The importance of this 2000 strategic planning retreat takes on even greater significance when one considers the impact of the previous APS strategic planning retreat in 1992 on the growth and accomplishments of the APS over the intervening years. The 1992 strategic plan



set goals, objectives, and action items for the major areas of publications, meetings, education, public policy, membership, international physiology, governance, finance, awards and grants, and society organization. Since 1992, there has been regular review of progress toward meeting these goals, objectives, and actions in the form of an in-depth progress report in 1995, an APS Member Needs Assessment Survey in 1996-97 (4), and a detailed log of discussions by APS Council. When one reviews these materials, one is struck by the extraordinary high level of success the Society has achieved in meeting the goals, objectives, and action items set forth in the 1992 strategic plan.

Some examples are illuminating. In **membership**, an objective was to have at least 9,000 members by 2000 with 25% being under age 40

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# ACDP 1999 Survey Results

## Association of Chairs of Departments of Physiology 1999 Survey Results

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The Association of Chairs of Departments of Physiology annual survey was mailed to 157 physiology departments throughout the US, Canada, and Puerto Rico. A total of 99 surveys were returned, for a response rate of 63%. This rate is only slightly

higher than the 1998 survey (60%). Of the 99 surveys returned, there were 65 public and 34 private medical schools, including four non-medical (which are public veterinarian 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

*(continued on page 60)*

**Table 1. Faculty Salaries for Fiscal Year 1999**

	Mean	% Change From Previous Survey	Minimum	Maximum	No. of Faculty
<b>Chairmen</b>					
All schools	\$156,071	5.2	\$48,955	\$251,000	91
Medical public	153,760	4.4	48,955	251,000	58
Medical private	160,692	0.3	71,000	235,307	30
Nonmedical	112,775	-16.3	91,027	134,700	3
Female	132,523	1.6	102,443	162,603	2
<b>Professors</b>					
All schools	100,200	0.5	36,640	259,900	656
Medical public	101,622	3.8	36,640	259,900	443
Medical private	106,420	-3.0	38,000	250,000	176
Nonmedical	92,560	5.7	49,300	160,257	37
Female	100,146	1.8	54,486	179,885	90
<b>Associate Professors</b>					
All schools	74,201	2.7	36,986	121,445	398
Medical public	75,848	5.1	44,100	121,445	251
Medical private	74,587	1.4	36,986	108,000	126
Nonmedical	72,169	1.6	47,532	96,000	21
Female	75,207	3.5	48,613	108,000	51
<b>Assistant Professors</b>					
All schools	58,566	1.9	20,000	95,400	300
Medical public	59,571	0.4	20,000	91,152	162
Medical private	59,130	0.7	30,591	95,400	129
Nonmedical	56,997	-0.7	26,343	65,600	9
Female	56,991	5.2	20,000	84,420	68
<b>Instructors</b>					
All schools	38,478	-1.7	18,658	81,075	51
Medical public	39,029	19.2	18,658	81,075	39
Medical private	38,817	1.0	30,000	53,000	10
Nonmedical	37,589	25.5	33,000	42,179	2
Female	36,582	-11.0	18,658	81,075	16

# ACDP 1999 Survey Results

(continued from page 59)

information, further data are provided on tenure, gender, ethnicity, and salary by number of years in rank.

The statistics are based on 99 responses (6 from Canada) but salary, tenure, gender, ethnicity, and number of years in rank results are **calculated on the number of respondents providing this information**. However, six institu-

tions did not provide any faculty salary information and an additional two institutions omitted chair salaries only.

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 responding 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**

Chairpersons			Professors			Associate Professors			Assistant Professors			Instructors		
Years	Salary	No. of faculty	Years	Salary	No. of faculty	Years	Salary	No. of faculty	Years	Salary	No. of faculty	Years	Salary	No. of faculty
0-5	\$144,725	22	0-5	\$96,100	165	0-5	\$74,654	186	0-5	\$59,332	225	0-5	\$38,334	37
6-10	135,698	18	6-10	100,184	158	6-10	73,905	95	6-10	58,930	42	6-10	44,003	3
11-15	166,668	20	11-15	105,768	143	11-15	74,860	41	11-15	61,777	10	11-15	46,531	2
16-20	158,474	14	16-20	104,200	90	16-20	79,622	29	16-20	45,261	2	16-20	0	0
21-25	156,841	10	21-25	109,487	53	21-25	79,143	16	21-25	69,718	3	21-25	0	0
26+	166,893	4	26+	121,861	27	26+	77,957	11	26+	0	0	26+	27,329	2

**Type of Institution (n = 99)**

Support	Teaching Interactions
Public 65	MD/DO 86 Pharmacy 21
Private 34	DDS 26 Other biomedical 51 DVM 4 Life science 44 Allied health 47 Bioengineering 26

**Student/Trainee Summary**

Total number of pre- and postdoctoral students/trainees			
Predoc	Male	Female	Total
Predoc	Male	Female	Total
Total number of foreign pre- and postdoctoral students/trainees			
Predoc	Male	Female	Total
Predoc	Male	Female	Total

**Faculty Summary (n = 1,490)**

	Male	Female
American Indian/Alaskan Native	0	0
Asian/Pacific Islander	93	19
Black, not Hispanic origin	22	9
Hispanic	106	19
White, not of Hispanic origin	861	196
Foreign national	74	14

**Ethnicity of each pre- and postdoctoral student/trainee**

	Predoc		Postdoc	
	Male	Female	Male	Female
American Indian/Alaskan Native	15	4	8	3
Asian/Pacific Islander	69	48	49	40
Black, not Hispanic origin	34	49	6	6
Hispanic	20	18	13	9
White, not of Hispanic origin	426	332	175	130

**Tenure status in each department by degree (n = 1,572)**

	Tenure Status			Total
	Tenured	Not Tenured	Not Eligible	
MD	58	21	11	90
PhD	906	336	138	1,380
Both	38	19	11	68
Other	14	13	7	34

**Number of foreign pre- and postdoctoral students/trainees**

	Predoc		Postdoc	
	Male	Female	Male	Female
African	8	2	1	1
Asian/Pacific Islander	129	116	225	64
Central and South American	20	3	26	10
European, Canadian, Australian	91	71	116	76
Middle Eastern	23	15	33	18
Other	18	18	11	15

# ACDP 1999 Survey Results

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

	<i>Predocctoral</i>	<i>Postdoctoral</i>
Institutional	177	52
Research grants	240	450
Private foundations	10	56
Home (foreign) governments	19	32
Other	24	20

## Foreign National predoctoral trainee completions:

	<i>Male</i>	<i>Female</i>
African	1	0
Asian or Pacific Islander	25	12
Central or South American	0	1
European, Canadian, Australian	9	10
Middle Eastern	5	0
Other	0	3

## Predocctoral Trainee Completions

Number of trainees who have completed doctoral work during the year ended June 30, 1999 (*n* = 84)

<i>Predocctoral male</i>	139	<i>Predocctoral female</i>	101
--------------------------	-----	----------------------------	-----

## Average annual starting stipend (in US dollars) for trainees:

<i>Predocctoral (n = 87)</i>	<i>Postdoctoral (n = 81)</i>
\$15,567.44	\$27,178.89

## US citizen/resident alien predoctoral trainee completions:

	<i>Male</i>	<i>Female</i>
American Indian/Alaskan Native	3	1
Asian or Pacific Islander	19	8
Black, not of Hispanic origin	6	7
Hispanic	2	5
White, not of Hispanic origin	69	54

## Space Controlled by Department (*n* = 98)

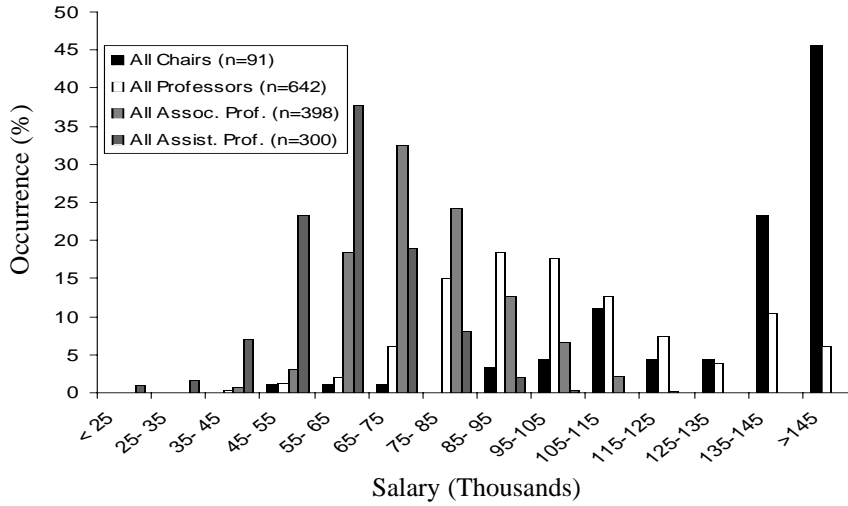
Research	16,869
Administration	2,726
Teaching	2,862
Other	2,859
Total space	23,198

**Table 3. Salaries by Region**

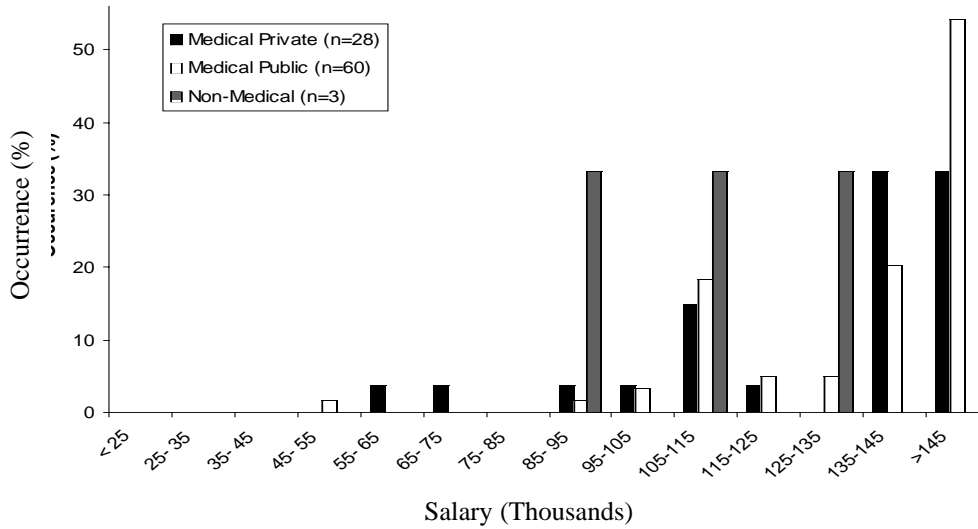
Region	Mean	Minimum	Maximum	Number	
<b>Chairmen</b>					
Northeast	\$163,582	\$105,300	\$218,300	22	Northeast: ME, NH, VT, NY, MA, RI, CT, NJ, PA, MD, DE, DC
Midwest	160,775	71,000	235,307	25	
South	151,096	48,955	247,000	30	
West	159,455	91,027	251,000	10	
Canada/Puerto Rico	106,514	89,188	125,000	6	
<b>Professors</b>					
Northeast	105,722	41,616	250,000	166	Midwest: MI, OH, IN, IL, WI, IA, MO, KS, NE, ND, SD, MN
Midwest	105,019	38,000	226,013	182	
South	96,371	36,640	182,519	168	
West	113,558	46,550	259,900	82	
Canada/Puerto Rico	85,232	45,570	138,000	60	
<b>Associate Professors</b>					
Northeast	77,976	47,769	106,610	101	South: VA, WV, KY, TN, NC, SC, GA, FL, AL, MS, AR, LA, OK, TX
Midwest	74,016	36,986	121,445	129	
South	74,170	44,215	112,711	105	
West	71,226	47,532	108,201	46	
Canada/Puerto Rico	65,480	54,718	78,980	19	
<b>Assistant Professors</b>					
Northeast	59,030	22,382	95,400	83	West: AK, HI, MT, WY, CO, NM, AZ, ID, WA, OR, CA, UT
Midwest	63,267	36,750	92,700	82	
South	56,574	25,579	76,342	92	
West	57,696	21,400	91,152	33	
Canada/Puerto Rico	50,767	20,000	59,000	12	
<b>Instructors</b>					
Northeast	45,043	30,000	81,075	8	
Midwest	36,449	19,200	49,822	12	
South	37,414	18,658	53,000	24	
West	37,758	33,000	42,179	5	
Canada/Puerto Rico	50,212	40,000	60,425	2	

# ACDP 1999 Survey Results

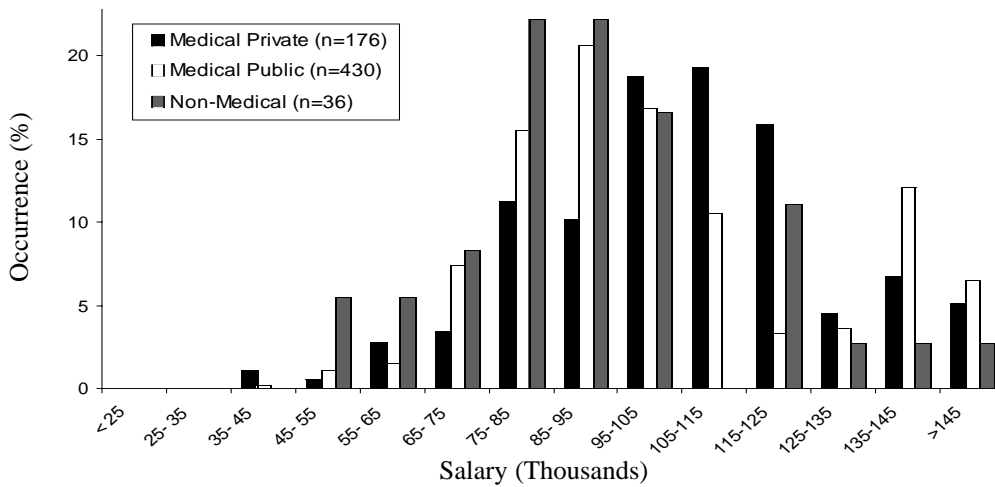
## Salary Comparison by Title



## Chairpersons by Institution

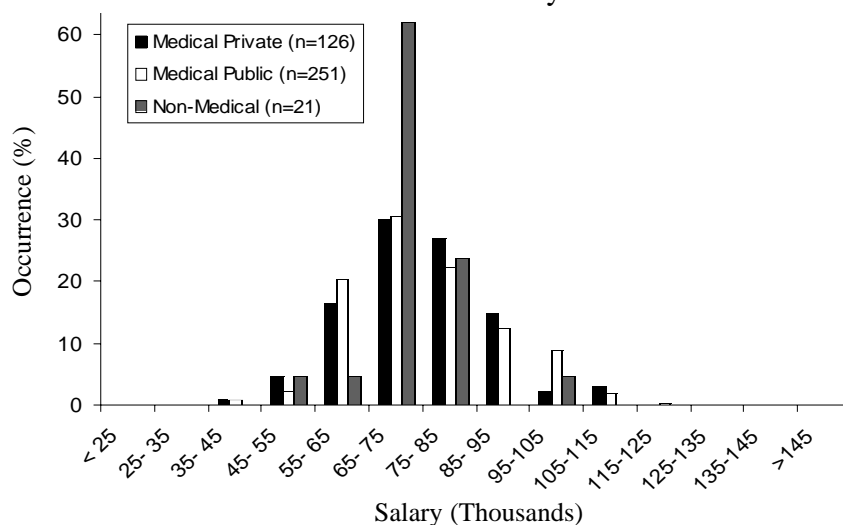


## Professors by Institution

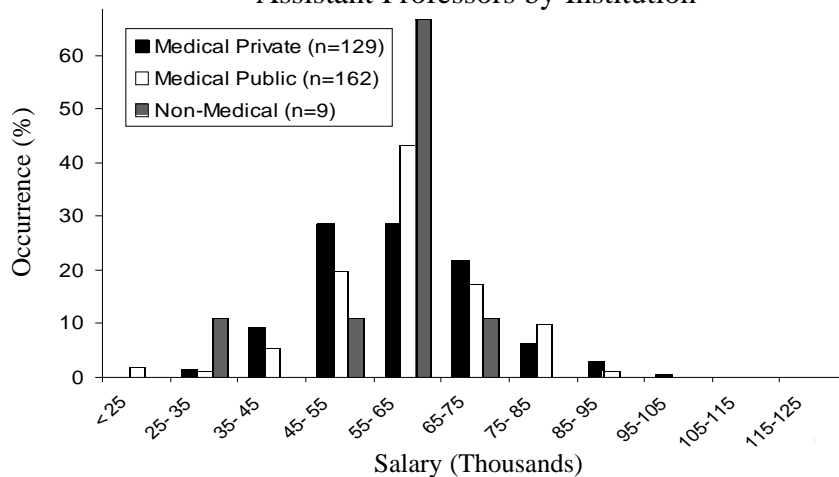


# ACDP 1999 Survey Results

## Associate Professors by Institution



## Assistant Professors by Institution



**Table 4. Budgets by Institutions**

	All Institutions	No.	Public Medical	No.	Private Medical	No.	Nonmedical	No.
Institutional	\$1,531,457	94	\$1,474,773	58	\$1,326,069	32	\$1,793,530	4
Outside research grants (direct costs only)	2,984,012	91	2,431,050	56	3,012,908	31	3,508,077	4
Training grants (direct costs only)	227,673	48	215,664	29	295,933	17	171,444	2
Endowments	159,140	45	155,898	31	121,524	13	200,000	1
Indirect recovery costs (amount to dept.)	143,612	47	187,784	35	113,805	8	129,247	4
Other budget support	408,305	45	451,475	30	385,671	12	387,769	3
Average Departmental Budget	4,780,865		4,481,466		4,917,312		4,879,951	
Standard deviation	2,769,474		2,520,437		3,275,624		719,370	

### Financial Information

Percentage of total faculty salaries derived from research grants (not including fringe benefit amounts):	30.7%	(n = 76)
Current fringe benefit rate most frequently used for primary faculty:	24.4%	(n = 89)
Percentage of allocated faculty salary dollars raised from grants, etc., directly returned to your department:	77.1%	(n = 48)
Federally negotiated indirect cost rate for FY 98-99 on campus:	50.6%	(n = 84)
off campus:	26.6%	(n = 61)
Percentage of indirect costs returned to your department:	17.5%	(n = 42)

# ACDP 1999 Survey Results

**Table 5. Complete Ranking According to Total Dollars**

Rank Total Dollars	Total Dollars	Rank Research Grant Dollars	Research Grant Dollars	Rank Research Dollars/ Faculty	Research Dollars/ Faculty	Rank Total Research Space	Research Space (sq. ft.)	Rank Research Dollars/ sq. ft.	Research Dollars/ sq. ft.	No. of Faculty
1	\$14,470,359	1	\$12,279,135	5	\$383,722	9	28,137	3	\$436	32
2	12,427,969	2	9,276,216	1	713,555	11	26,850	5	345	13
3	11,385,080	4	7,029,339	4	413,490	52	12,681	2	554	17
4	10,159,000	3	7,435,914	14	256,410	21	22,057	6	337	29
5	9,194,107	10	5,889,547	24	210,340	29	20,050	8	293	28
6	8,790,360	5	7,000,000	8	304,647	80	7,203	1	971	23
7	8,509,657	7	6,127,569	11	291,789	4	35,500	35	172	21
8	8,250,000	8	6,000,000	3	428,571	8	29,000	27	206	14
9	8,212,400	9	5,934,707	23	211,953	13	26,129	22	227	28
10	8,115,929	6	6,129,673	6	383,104	40	17,092	4	358	16
11	7,933,349	17	4,715,490	17	235,774	2	36,255	54	129	20
12	7,850,000	22	4,330,000	22	216,500	1	104,500	83	41	20
13	7,768,413	13	5,036,075	20	228,912	3	35,577	47	141	22
14	7,712,614	11	5,380,188	29	185,523	24	21,211	14	253	29
15	7,439,017	26	3,637,726	32	181,886	16	25,389	46	143	20
16	7,324,314	12	5,330,717	30	183,817	36	18,226	9	292	29
17	7,278,682	20	4,486,919	16	236,153	15	25,441	32	176	19
18	7,207,524	14	5,028,000	9	295,764	5	31,116	40	161	17
19	7,143,637	19	4,561,903	12	285,118	39	17,479	13	260	16
20	7,121,004	15	5,000,874	10	294,169	26	20,817	16	240	17
21	7,068,628	23	4,205,565	27	191,162	38	17,775	18	236	22
22	6,852,060	16	4,882,815	28	187,800	10	28,112	34	173	26
23	6,489,120	42	2,329,140	58	116,457	63	9,941	20	234	20
24	6,397,405	25	3,642,886	31	182,144	17	25,329	45	143	20
25	6,169,979	27	3,564,809	41	154,991	14	26,025	53	136	23
26	6,141,571	18	4,606,209	26	200,269	6	30,461	42	151	23
27	5,982,302	21	4,429,591	18	233,136	34	18,660	17	237	19
28	5,875,475	31	3,036,836	43	144,611	46	15,688	29	193	21
29	5,660,273	39	2,561,255	51	121,964	18	24,307	65	105	21
30	5,628,430	29	3,355,186	35	176,588	28	20,521	38	163	19
31	5,451,996	59	1,627,073	78	54,235	19	24,241	77	67	30
32	5,440,249	37	2,656,700	37	166,043	30	19,480	52	136	16
33	5,372,164	34	2,949,086	45	140,432	35	18,298	39	161	21
34	5,302,560	28	3,496,629	36	166,506	37	18,000	28	194	21
35	5,220,129	32	3,010,996	47	125,458	22	21,719	51	138	14
36	5,154,157	36	2,828,981	57	117,874	20	23,981	59	117	24
37	5,004,541	24	3,950,336	7	359,121	43	16,788	19	235	11
38	4,817,494	54	1,891,946	72	72,767	12	26,333	75	71	26
39	4,736,400	48	2,255,299	48	125,294	44	16,288	50	138	18
40	4,524,093	66	1,143,364	82	42,346	25	20,940	80	54	27
41	4,471,566	30	3,216,758	2	459,536	58	12,251	12	262	7
42	4,327,972	41	2,441,025	13	271,225	50	13,880	33	175	9
43	4,243,179	43	2,309,553	34	177,657	48	15,259	43	151	13
44	4,213,794	51	2,158,259	54	119,903	42	16,921	56	127	18



# ACDP 1999 Survey Results

Table 5. (continued)

Rank Total Dollars	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
45	4,203,678	35	2,834,295	85	18,022	53	12,667	23	223	13
46	4,201,772	38	2,611,049	15	237,368	59	12,248	24	213	11
47	4,178,833	44	2,308,802	52	121,515	7	29,872	71	77	19
48	3,973,356	40	2,480,000	56	118,095	41	17,050	44	145	21
49	3,942,709	45	2,297,810	46	135,165	27	20,598	64	111	17
50	3,887,000	53	2,000,000	60	111,111	23	21,309	68	93	18
51	3,843,637	33	3,000,000	19	230,769	62	10,000	7	300	13
52	3,809,480	49	2,220,190	25	201,835	73	8,038	10	276	11
53	3,284,514	46	2,281,855	21	228,185	49	14,881	41	153	10
54	3,243,521	63	1,360,104	66	90,673	33	18,732	73	72	15
55	3,198,472	52	2,028,396	40	156,030	78	7,379	11	274	13
56	3,172,157	47	2,273,050	55	119,634	54	12,650	31	179	19
57	3,154,732	56	1,745,717	39	158,701	68	9,253	30	188	11
58	3,134,128	50	2,180,488	33	181,707	60	10,458	25	208	12
59	3,118,799	60	1,551,353	44	141,032	56	12,500	57	124	11
60	3,090,284	69	1,103,791	65	91,982	65	9,809	63	112	12
61	3,011,953	64	1,353,659	64	104,127	81	6,566	26	206	13
62	2,895,770	57	1,728,355	50	123,453	61	10,257	37	168	14
63	2,835,609	58	1,690,143	53	120,724	79	7,352	21	229	14
64	2,767,545	75	946,192	80	45,056	77	7,596	58	124	21
65	2,759,470	77	875,279	83	41,679	45	15,792	79	55	21
66	2,520,425	55	1,753,937	38	159,448	47	15,363	61	114	11
67	2,420,466	71	1,093,215	71	72,881	67	9,357	60	116	15
68	2,364,107	67	1,124,582	59	112,458	64	9,882	67	113	10
69	2,355,947	80	768,253	75	59,145	66	9,558	70	80	13
70	2,336,002	79	852,540	76	56,836	70	8,526	66	99	15
71	2,254,494	82	574,624	81	44,201	72	8,264	76	69	13
72	2,226,608	70	1,098,000	61	109,800	75	7,874	48	139	10
73	2,217,034	73	1,033,985	70	79,537	74	8,023	55	128	14
74	2,201,277	62	1,408,429	62	108,340	71	8,350	36	168	13
75	2,161,639	78	875,074	73	67,313	51	13,648	78	64	13
76	2,004,783	72	1,068,594	42	152,656	76	7,680	49	139	7
77	1,988,984	61	1,540,969	67	90,645	32	18,971	69	81	17
78	1,956,387	76	903,450	74	60,230	55	12,640	74	71	15
79	1,939,584	74	1,015,299	68	84,608	31	19,030	82	53	12
80	1,779,994	65	1,235,494	49	123,549	57	12,470	67	99	10
81	1,772,525	83	500,000	77	55,555	69	9,131	81	54	9
82	1,439,708	85	246,666	84	24,666	82	6,190	85	39	10
83	1,318,996	81	746,492	63	106,641	87	3,070	15	243	7
84	893,265	68	1,124,582	79	50,747	85	3,741	84	41	3
85	552,802	84	332,506	69	83,126	84	4,480	72	74	4
86	534,853	87	43,200	87	8,640	86	3,527	87	12	5
87	149,000	86	90,000	86	11,250	83	5,500	86	16	8

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and 20% being female. In 1992, membership was 7,288 with 18% under age 40 and 13% being female; in 1999, membership was 9,133 with 23% under age 40 and 18% being female. Another objective was to admit as regular members applicants from outside The Americas. During President L. Gabriel Navar's tenure, the Bylaws were amended at the Experimental Biology '99 meeting to remove geographic restrictions on regular membership.

In **society organization**, the objectives were to establish both a marketing program and an education program, to

encourage formation of regional chapters, and to increase participation of women, under-represented minorities, and younger members on committees. Individuals were hired as the marketing manager and the education officer in 1993, and regional chapters have been established in Ohio, Iowa, Wisconsin, Nebraska, Oklahoma, and the Gulf Coast area. As a former chair of the Committee on Committees, I was impressed by the large number of highly qualified women, under-represented minorities, and younger candidates put forth by the sections for committee assignments; the problem was not to

identify such individuals but, rather, to find positions for all of them.

In **publications**, objectives included maintenance and promotion of excellence in the publication program, establishment of a long-term policy regarding self-sufficiency of individual journals, and exploration of electronic publication of APS journals. The excellence of the Society's journals is repeatedly emphasized in membership surveys as of great importance. The Society, through its Publications Committee, ably chaired by Dale Benos, and its new Publications Manager and Executive Editor, Margaret Reich, expends great

### Introducing...Gerald F. DiBona

Gerald F. DiBona will be installed as the 73rd President of The American Physiological Society at the Society's spring meeting this month in San Diego, California.

DiBona is Professor and Vice Chairman of the Department of Internal Medicine at the University of Iowa College of Medicine in Iowa City, IA, where he has served since his appointment in 1969. Born in Cambridge, Massachusetts, he attended Harvard College, earning the AB in mathematics in 1960, and Tufts University School of Medicine, earning the MD *cum laude* in 1964. He received his clinical training in internal medicine at the Hospital of the University of Pennsylvania, Philadelphia from 1964-67. He returned to Boston for clinical and research training in nephrology and renal physiology at the Peter Bent Brigham Hospital and Harvard Medical School with John Merrill and Donald Oken from 1967-69. In 1969, he moved to the Department of Internal Medicine at the University of Iowa College of Medicine where he was appointed Assistant Professor in 1969, Associate Professor in 1972, and Professor in

1975. In 1977, he was appointed and continues to serve as Vice Chairman of the Department of Internal Medicine and Chief of the Medical Service, Iowa City Veterans Administration Medical Center. In 1997, he was appointed Professor, Department of Physiology and Biophysics, University of Iowa College of Medicine. In 2000, he was appointed Foreign Adjunct Professor, Karolinska Institute, Stockholm, Sweden.

During his nephrology fellowship, DiBona's research focused on renal micropuncture studies of the pathogenesis and recovery from experimental acute renal failure. After moving to Iowa, his research centered on the neural control of renal function. DiBona's work demonstrated that the renal sympathetic nerves directly influence the function of each of the major renal effectors via direct and specific innervation. Intensities of renal sympathetic nerve stimulation that were subthreshold for effects on the renal vasculature or the juxtaglomerular apparatus directly increased renal tubular sodium and water reabsorption in multiple nephron segments without accompanying alterations in glomerular filtration

rate, renal blood flow or hormonal release. This effect was shown to be mediated by  $\alpha_1$ -adrenoceptors located on the basolateral membrane of renal tubular epithelial cells whose stimulation increased basolateral sodium pump activity. The importance of this concept of low-intensity renal sympathetic nerve activity was expanded by the demonstration that during clinical conditions of increased renal sympathetic nerve activity and renal sodium retention (e.g., congestive heart failure), a substantial portion, circa 40%, of the excess renal sodium retention in these conditions was dependent on intact renal sympathetic innervation. Additional studies using measurements of single renal nerve fiber activity, analysis in the frequency domain and mathematical modeling of synchronized renal sympathetic nerve discharge have provided further evidence for the existence of functionally specific subgroups of renal sympathetic nerve fibers that are selectively targeted to the vessels, tubules or the juxtaglomerular granular cells.

Following a sabbatical period at the University of Göteborg, Göteborg, Sweden, DiBona incorporated the

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effort and commits substantial resources to continuously improving the journal program. For want of a better system and for the important reason that they do permit comparison between journals (i.e., precisely what authors, subscribers, and readers do), impact factors have been relied on heavily for the assessment of quality of the journal program. *Physiological Reviews* is the leader among physiological journals while the *American Journal of Physiology (AJP)* (consolidated) ranks lower, beneath *Journal of Neurophysiology*, *Journal of Physiology*, and

*Journal of General Physiology*. However, this is unlikely to be a true representation of the impact factors for each of the individual *AJP* journals. Unfortunately, it has not been possible to assess the scientific impact for each of the individual *AJP* journals through the impact factor, because the Institute for Scientific Information (ISI) does not track citation information for each of the individual *AJP* journals. In general, authors cite articles from the individual *AJP* journals by using the volume and page numbers of the consolidated *AJP*; hence, over the years ISI has only pro-

vided impact factors for the consolidated *AJP*. To address this issue, the Society requested ISI to provide citation information on individual *AJP* journals in comparison with other journals in their scientific content area. Due to study design, this citation information was not in the form of the widely understood and recognized impact factors but rather the number of times an individual *AJP* journal bibliographic published item was cited in the ISI database of approximately 4,500 biomedical journals over the 10-year period 1987 to  
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technique of recording renal sympathetic nerve activity in conscious animals to explore the interaction between the environmental factors, dietary salt intake and environmental stress, and genetic hereditary predisposition to the development of hypertension in the borderline hypertensive rat, a genetic salt-sensitive model of hypertension. An important finding was that dietary salt loading increased the renal sympathoexcitatory response to environmental stress resulting in further increased renal sodium retention and hypertension. Using cosegregation analysis in backcross populations, DiBona has identified quantitative trait loci for several aspects of the phenotype of abnormal regulation of renal sympathetic nerve activity in this model of genetic salt-sensitive model of hypertension.

Most recently, during a sabbatical period at Karolinska Institute, Stockholm, Sweden, DiBona has used laser confocal immunofluorescence microscopy in individual renal tubular epithelial cells to demonstrate that effects on the dynamics of receptor recycling may be a common underlying mechanism for the synergistic interaction between catecholamines (dopamine, norepinephrine) and neuropeptides (atrial natriuretic peptide,

neuropeptide Y) that bind to G protein-coupled receptors.

DiBona has been an active member of APS since 1971, serving as Councillor for the Society for three years. He served as program representative for the Water & Electrolyte Homeostasis Section, as a member of the Publication Committee, and as Chair of the Committee on Committees. He has served on the editorial board of the *American Journal of Physiology: Renal, Fluid and Electrolyte Physiology*; *American Journal of Physiology: Regulatory, Integrative and Comparative Physiology*; and the *American Journal of Physiology: Endocrinology & Metabolism*. In addition to his service to APS, DiBona has served on scientific committees of FASEB, the American Society of Nephrology, the American Society of Hypertension, and the American Heart Association. He has served on scientific study sections for the VA, the American Heart Association, and the NIH, where he chaired the Cardiovascular and Renal Study Section. He served as founding Associate Editor for *Journal of the American Society of Nephrology* and Associate Editor and Editor-in-Chief for *Hypertension*. Currently, he is

International Receiving Editor for *Acta Physiologica Scandinavica* and *Clinical and Experimental Pharmacology and Physiology*.

DiBona served as President of the American Federation for Clinical (now Medical) Research in 1979. He has received several awards: the Lewis K. Dahl Award from the Council for High Blood Pressure Research of the American Heart Association (1988), an Honorary Doctor of Medicine, University of Göteborg, Göteborg, Sweden (1993); the International Research Award of the International Society of Hypertension (1994); William S. Middleton Award for Outstanding Achievement in Biomedical or Behavioral Research of the Veterans Administration (1995); the Nobel Foundation Fellowship, Nobel Foundation, Stockholm, Sweden (1997-99); University of Iowa Regents Award for Faculty Excellence (1998); and Ernest H. Starling Distinguished Lectureship, Water & Electrolyte Homeostasis Section, American Physiological Society (2000). DiBona's research has been continuously funded by the National Institutes of Health since 1972 and the Veterans Administration since 1969.



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1996 [mean citation score; see <http://www.faseb.org/aps/cstats.htm> for complete data; (5)]. However, these data allowed a comparison between individual *AJP* journals wherein *AJP:Renal Physiology* (20.55) and *AJP:Cell Physiology* (20.14) topped the list. In addition, comparisons between competitors were possible; e.g., *Journal of Biological Chemistry* (29.01), *Journal of Clinical Investigation* (38.44), and *Cell* (134.34). Recently, after extensive discussions with ISI, the Society successfully negotiated an arrangement whereby using a uniform single citation format for individual *AJP* journals, the usual, commonly recognized and understood impact factor will be calculated for the individual *AJP* journals (6). The ready availability and publication of impact factors for the individual *AJP* journals will be an important step in maintaining and promoting excellence for the Society's journals by providing authors, subscribers, and readers the same assess-

### **The 2000 strategic plan will serve as a course chart for the Society to successfully navigate through the untraveled waters of the next decade.**

ment of scientific impact they are using for other journals in the field.

Self-sufficiency of individual journals was achieved as a result of a broad-based program involving increased collection of page charges, fixed budgets for editorial office expenses including honoraria, change of printer with renegotiated printing costs, re-evaluation of subscription price structure, and obligatory editing on disk. Electronic publication was pursued vigorously and various members of the Society's journal program have appeared online: *APStracts* (1994), *Journal of Applied Physiology* (1996), *The Physiologist*

(1996), *Journal of Neurophysiology* (1997), individual and consolidated *American Journal of Physiology* (1998), *Physiological Reviews* (1998), *News in Physiological Sciences* (1999), and *Physiological Genomics* with online publication of articles prior to print publication (1999). More recently, APS Central, an electronic manuscript submission and review server (<http://www.apscentral.org>), was launched with *Physiological Genomics* and the *Journal of Applied Physiology*. Additional journals will be added during the coming year.

From the perspective of reviewing the Society's current status against the goals, objectives, and action items contained in the 1992 strategic plan, one can only be impressed at the extensive progress that has been made. Importantly, the 1992 strategic plan served as an extremely effective navigation chart to move the Society from where it was then to where it is now. Of course, this does not mean that everything has been accomplished and that further growth and development is not needed. The Society's vision for the future must be ever changing in adaptation to the changing world in which we live.

### **Where Are We Bound?**

During the recent 1999 strategic planning retreat, the current status of the Society, greatly influenced by the extensive progress made on the goals, objectives, and action items noted in the 1992 strategic plan, was examined as a basis for innovative planning for the future. Focus was again placed in the major areas—publications, meetings, education, public policy, membership, international physiology, governance, finance, awards and grants, and society organization—as they represent the breadth and scope of Society activities. The final version of the strategic plan, as approved by the APS Council, appears on pages 71 in this issue of *The*

*Physiologist* (2).

It must be realized that the 2000 strategic plan is a vision concerning the future of the Society. The realization of this vision will occur over time as the APS Council considers the recommendations of the various task forces charged with exploring the details, including financial, of implementation of the elements of the 2000 strategic plan. As with the 1992 strategic plan and its overall impact on the APS, these

### **The Society's vision for the future must be ever changing in adaptation to the changing world in which we live.**

events will play out over several Presidential terms. President Walter Boron has thoughtfully commented on the 2000 strategic plan (2). As the initial phases of implementation of the 2000 strategic plan will commence during my term as APS President, I wish to make some personal comments. The Society remains committed to leadership in integrated physiological sciences, with major expression of this through its journal program and meetings. As reflected by our newest journal, *Physiological Genomics*, the Society is committed to maintaining and expanding its role as a leader in this rapidly moving field by providing the important integrative coupling between a gene and its function within an intact organism. It is the intent to make *Physiological Genomics* a journal of very high impact and profile. Other considerations involve efforts to maximize the efficiency and the speed of the review and publication process (via expansion of APS Central), to reduce publication costs for members, and to develop a new paradigm for ensuring financial self-sufficiency of electronic and print publications. Meetings with newer innovative formats that will focus on physiological genomics (among other areas) are envi-

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sioned, in addition to other actions to increase attendance and participation of graduate students, postdoctoral fellows, and international scientists at the Society's meetings. To complement our successful participation in governmental affairs via FASEB, a Society office of public information and communications was proposed. It was suggested that physiological genomics and translational research be considered for status as interest groups or sections and that a graduate student-postdoctoral fellow association be formed. These are but a few of many excellent goals, objectives, and action items that are represented in the 2000 strategic plan.

Even if only a few of these visionary goals are eventually adopted by APS Council, there will be a clear need for commitment of additional Society resources if these goals are to be successfully achieved in a similar fashion to those put forth in the 1992 strategic plan. In this regard, a continued focus has been the creative and innovative use of the Society's fiscal resources to enhance benefits and services to members. With burgeoning growth in the Society's investment portfolio, the total assets of the Society have risen substantially over the 10-year period from 1989 to 1998. In 1995, the APS Council agreed to use 4% of its investments annually as operating income with the

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**The Society remains committed to leadership in integrated physiological sciences, with major expression of this through its journal program and meetings.**

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stipulation that only that amount required to balance the budget would be withdrawn with the remainder continuing in the actively managed investment accounts (4% spending rule). Yet only a small portion of this 4% spending rule

has been spent as operating income.

While the Society is fiscally sound and continues to enjoy substantial growth through prudent investment practices, it has been slow to develop new programs or greatly expand member benefits and services. Why is this? Is it because there are no programmatic initiatives or additional member benefits that have been deemed worthy of support? No! Certainly, the program of increased member benefits put forth by Walter Boron in his Presidential Message contains many elements worthy of support (3). In addition, the few preliminary examples from the 2000 strategic plan presented above are also worthy of support. Isn't there a pressing need to expand staff and resource commitment to existing programs, such as meetings, publications in the electronic age, education, marketing, and public affairs? Yes! Reducing high turnover with long-duration vacancies in the copy editing area of publications would contribute to decreasing time to publication. There appear to be several other possible explanations for this hesitancy in the development of new programs.

**First**, while the Society's assets give it a wealthy appearance, it is less appreciated that the Society's annual operating budget (1) is approximately \$14.2 million (\$107,571 from the 4% spending rule being required to balance the 1998 budget), with the journal program accounting for approximately 75-80% of this, showing annual income of \$11.1 million versus annual expenses of \$10.7 million. Thus, the perception by some that the Society is exceedingly wealthy by virtue of its rich profits derived from the journal program is not accurate. This perception may have become more acute with recent introduction of a manuscript processing fee. However, journal profits, including income from the manuscript processing fee, are used to support new publication initiatives and member benefits, such as the development of *Physiological Genomics*, APS Central, and free color publication to

members, in addition to supporting other Society programs. As noted by the Finance Committee (1), "journal publication is the major source of revenue for the Society and is key to our financial well-being." The strong financial position of the Society's journal program with its continued profitability is a major strength of the Society. However, the fact that it is the largest and only continuously reliable source of recurring revenue for the Society leads to a natural concern when its position is threatened by external forces.

**Second**, in my view, there seems to be the looming specter of the unknown: the threat of negative financial impact of electronic publication, including, but not limited to, PubMed Central, on the Society's journal program income. As the Society's journal program represents such a large portion of its annual operating budget and its profit margin is critically important to the support of other Society programs, there is evident concern over this issue. As noted by the Finance Committee (1) "members are charged (for the journals) at a reduced rate and most of the profitability is derived from sale of subscriptions to institutions." What are institutions going to do? At the outset, let it be said that definitive data that could be used to guide Society actions are not available. However, many simulations and projected scenarios tend to predict decreasing journal program income with reductions in subscriptions, both institutional and individual. Although reduced subscriptions lead to reduced costs by virtue of reduced paper, printing, and mailing costs, certain costs such as manuscript processing, peer review, redaction, etc. are predicted to decrease to a lesser extent as some of those services will still be required. At this juncture, a suitable journal pricing structure that will sustain journal profitability in the full electronic era has not been easy to define. Since journal profitability equates to support for other Society

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programs, a decline in journal profitability may lead to increasing use of the 4% spending rule funds. Since, for the 1999 budget year, the 4% spending rule yields \$1.2 million of which only \$82,076 is budgeted for use, why should this be a problem? The success of the annual investments (upon which the 4% spending rule is based) is dependent on the stock market where volatility is not unknown; this engenders a conservative posture.

**Third**, the majority of Society members (including APS Council and committee members) are, or have been, active investigators, largely dependent on obtaining competitive peer reviewed funding to sustain and expand their research programs. It would be very difficult for most of us, within our academic institutions, to expand an existing program or develop a new program in the absence of a ready source of continuous funding or prospects of the same that would appear convincing to a departmental chair or a dean. We function in an environment where most programs are expected to “sail on their own bottom,” if not immediately then within a relatively short period of time. This is not a conscience that fosters rampant and expansive growth and developmental activity.

One solution would be for the Society to emulate Christopher Columbus who, when he left, didn't know where he was bound; when he got there, didn't know where he was and when he returned, couldn't tell anybody where he had been.....but he did the whole thing on **somebody else's** money! In the case of the Society, the excellent application of the principles of strategic planning enables us to know where we have been, where we are now and how we got here, and where we are bound. However, the major difference is that the Society must “do the whole thing on **its own** money”—and some aspects of that are a bit unclear just now.

It will likely take some time until the full fiscal impact of electronic publica-

tion on the profitability of the Society's journal program and, thus, on the overall annual operating budget of the Society is known. This will permit the Society to carefully assess the situation and, with the support of its investment portfolio, make appropriate plans for the coming years. Thus, it appears that the Society will, perhaps not inappropriately, continue with a cautiously optimistic posture in regard to expan-

**... the 2000 strategic plan contains many excellent opportunities for improvement, growth, and development in several of the Society's core areas. These will require careful review and establishment of priorities to permit the Society to move forward in a fiscally responsible fashion over the next several years.**

sion of existing programs or development of new programs that largely depend on journal program revenue. Having said that, the 2000 strategic plan contains many excellent opportunities for improvement, growth, and development in several of the Society's core areas. These will require careful review and establishment of priorities to permit the Society to move forward in a fiscally responsible fashion over the next several years. For example, high-yield opportunities to improve the Society's meetings and journals and to increase benefits and services to members must not be overlooked during this period of projected change in the fiscal status of the Society's journal program.

Two other areas require special comment. With elimination of corresponding membership status and the opening of regular membership to all physiologists without geographic restriction,

the Society has become an international organization. Our newly enfranchised members from outside The Americas have access to a wide variety of growing member benefits and services and will hopefully turn in increasing numbers to the Society. It will be in the long-term interest of the Society to continue to expand its interaction with national physiological societies throughout the world via participation in joint meetings (e.g., South America, Scandinavia, etc). Having internationalized the Society, member benefits and services must be viewed in a broader perspective than previously.

Another practical issue regarding expansion and growth of Society programs is space. Society headquarters is located on the FASEB campus in Bethesda. There is limited opportunity for growth, and staff expansion beyond current levels would require off-campus location. This is an issue for all of the societies that are housed on the FASEB campus and a FASEB committee has been established to consider facility expansion.

The 2000 strategic plan will serve as a course chart for the APS to successfully navigate through the untraveled waters of the next decade. One part of the excitement of cruising is the opportunity to explore new areas. I look forward with great anticipation to participating in this voyage over the next year.

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# Strategic Plan

## The APS Strategic Plan – A Vision for the New Millennium

In June of 1992, APS published the Society's first Strategic Plan (2), a plan that the Council intended to follow until the year 2000. That Plan provided the blueprint for eight years of growth and development that has served to put APS in a very strong position. Membership in the Society has gone beyond our goal of 9,000 members by the year 2000; the APS journals have all been published online; and, thanks to the addition of a full-time Education Officer, our education efforts have expanded to encompass all levels of education from kindergarten to medical and graduate school. These represent several of the positive elements arising from the 1992 Strategic Plan.

When the APS Council met for its 1992 Strategic Planning Retreat, Council was spurred on by the words of Norman Alpert (then-Chair of the APS Finance Committee), who asked whether APS wished to be a rich society with no members or a Society that utilized its resources to benefit the membership and the discipline of physiology. Indeed, the Society has used its financial and staff resources to benefit physiology during the past eight years. Moreover, the stock market has provided the Society with an even larger endowment that we can use to benefit physiologists. In my April 1999 Presidential message (1), I discussed extensively the significance of the Society's financial resources.

In November 1999, the Society held a second Strategic Planning Meeting. We met in Kiawah Island, South Carolina, to develop a new plan to lead the Society for the next several years. To encourage input from a broad spectrum of the membership, the Council invited members of the Section Advisory Committee and Long-Range Planning Committee to participate in the meeting. Consequently, I asked Brian Duling (Chair, Long Range Planning Committee) and John Hall (Chair, Section Advisory Committee) to assist me in coordinating the meeting. We also benefited from the involvement of L. Gabriel Navar (APS Past-President), Gerald DiBona (APS President-elect), and Martin Frank (APS Executive Director). As was the case in 1992, the Society enlisted the expertise of James Whitehead, Executive Vice President of the American College of Sports Medicine, to serve as the meeting facilitator.

Having met in November to develop the 2000 Strategic Plan, the Council met again in February in Bethesda to finalize the goals and objectives of the Strategic Plan. Below, you will find the Plan that will guide the Society for the next five to eight years. Its implementation will not occur overnight but will require the efforts of the membership and the elected leadership. As a first step, we will institute a number of Task Forces to provide the Society with the input and advice needed to make the 2000 Strategic Plan as successful as the 1992 Plan.

You will note several new and exciting initiatives, including proposals to increase the benefits associated with APS membership, to develop and publish a "living/evolving" handbook of physiology, to develop recurring conferences on translational and physiological genomics research, to work to enhance the prestige of physiology in the academic environment, and to create a Communications/Media Office to enhance the public's image of physiology. I strongly urge you to review the plan and provide the elected leadership with your input. We cannot make the Plan or the Society a success without your input and participation. Please send your comments to Martin Frank ([mfrank@aps.faseb.org](mailto:mfrank@aps.faseb.org)), myself ([walter.boron@yale.edu](mailto:walter.boron@yale.edu)) or any member of Council.

Walter F. Boron, MD, PhD  
APS President

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### APS Mission Statement

The APS provides leadership in the life sciences by promoting excellence and innovation in physiological research and education and by providing information to the scientific community and to the public.

## 2000 Strategic Plan

Approved February 8, 2000 by Council

### Publications

**Goal:** To provide the highest quality publications with the greatest impact in the life sciences.

**Objectives:**

1. To make each individual APS journal the best in its field.
2. To make *Physiological Genomics* a high-impact, high-profile journal.
3. To maximize the efficiency and speed of the review and publication process.
4. To develop a new paradigm for ensuring financial stability and increased accessibility of electronic and print publications.

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# Strategic Plan

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5. To reduce publication costs in APS journals for members.
6. To develop and publish a “living/evolving” electronic handbook of physiology.
7. To make innovative use of electronic publications to expand content (e.g., data sets, multimedia, etc.).
8. To highlight translational research in APS journals.



Back (left to right): Robert Foreman, Brian Duling, Edward Blaine, Robert Price. Front: Phyllis Wise, David Evans, Jeff Sands, Margaret Reich.

## Meetings

**Goal:** To provide meetings of the highest quality and impact that integrate the life sciences.

**Objectives:**

1. To utilize APS meetings to seed new/exciting areas of research.
2. To make the APS meetings so outstanding that they are



Back (left to right): L. Gabriel Navar, Gregory Fink, Richard Traystman, Linda Allen. Front: Susan Barman, Celia Sladek, Frank Gordon.

essential for new investigators, scientific leaders, and those that integrate across the life sciences.

3. To determine the appropriateness and feasibility of developing an APS Conference Center.
4. To develop translational research meetings that bridge physiology with clinical medicine.

## Education

**Goal:** To promote awareness, understanding, and education in physiology at all levels.

**Objectives:**

1. To promote physiology education at all educational levels.
2. To provide effective continuing education opportunities for physiologists engaged in research and/or teaching.
3. To promote interest in and understanding of careers in the physiological sciences.
4. To enhance the prestige of physiology in schools, universities, and colleges.



Back (left to right): Barbara Horwitz, Usha Raj, Jo Rae Wright, John Williams, John Hall, Martin Frank. Front: David Wasserman, Marsha Matyas.

## Advocacy and Public Policy

**Goal:** To develop a dynamic advocacy program with strong member involvement to educate and inform the public, the government, and other key audiences about the importance of physiology and the critical role of animal research.

**Objectives**

1. To educate the public about the central role of physiology in health and disease.
2. To expand APS advocacy for federal research funding.



# Strategic Plan

3. To educate the public, government agencies, and legislators regarding the importance of animal research.
4. To increase opportunities for participation by APS members in public education, advocacy for research funding, and in support of animal research.
5. To expand the role of APS in responding to areas of controversy in science and medicine.
6. To enhance the prestige of physiology in schools, universities, and colleges.



(left to right): Will Bierwaltes, Hannah Carey, Walter Boron, Barbara Goodman, Dee Silverthorne, Alice Ra'anan, Charles Tipton, Kathleen Berecek.

## Membership

**Goal:** To increase the breadth and stature of membership in the APS and to improve membership benefits.

### Objectives:

1. To have 12,500 members by the year 2005.
2. To attract life scientists and educators to APS membership through targeted membership campaigns.



Back (left to right): William Chin, Gerald DiBona, Robert Gunn, Melinda Lowy, Ronald Freeman, Allen Cowley. Front (left to right) Helen Cooke, Helen Raybould.

3. To refine affiliate membership benefits to make them appropriate for the constituency.
4. To provide the membership with greater benefits.

## International Physiology

**Goal:** To promote global interaction in the physiological sciences.

### Objectives:

1. To increase the participation of international colleagues at APS meetings.
2. To increase the participation of international members in other APS activities (e.g., committees, sections, governance).
3. To assist in the emergence of physiology in developing countries, particularly in Latin America.

## Governance

**Goal:** To ensure that governance adequately represents the membership.

### Objectives:

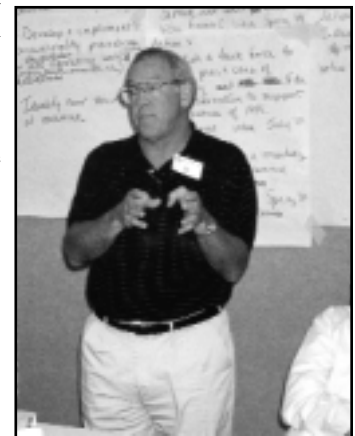
1. To ensure appropriate representation by all member constituencies.
2. To involve more students in the governance of APS.
3. To encourage the establishment of new interest groups and sections.
4. To improve communications among Council, Committees, and Sections.

## Finance

**Goal:** To develop and implement a dynamic plan for sustained fiscal health.

### Objectives:

1. To use operating revenue and gains from APS investments to fund APS general operations and new initiatives at a level sufficient to accomplish the objectives of the strategic plan.
2. To identify and develop new sources of revenue.
3. To determine the appropriateness and



Edward Blaine presenting Action Items from the Financial Group.

# Strategic Plan



**Bill Chin presenting Action Items from the International Physiology Group.**

feasibility of establishing an APS foundation.

4. To implement a process for proposing, authorizing, and measuring the goals and objectives of each APS operating unit (e.g., offices, committees, sections, etc.).

## Awards and Grants

**Goal:** To strengthen the discipline of physiology through awards that support, recognize, and publicize the scholarly and research activities of the membership.

### Objectives:

1. To attract the next generation of physiologists and foster their early career development.
2. To recognize excellence in scholarship and research of members at all career levels.
3. To establish a planned giving program to facilitate the expansion of the APS awards and grants program.



**Celia Sladek presenting Action Items from the Membership group.**

## Society Organization

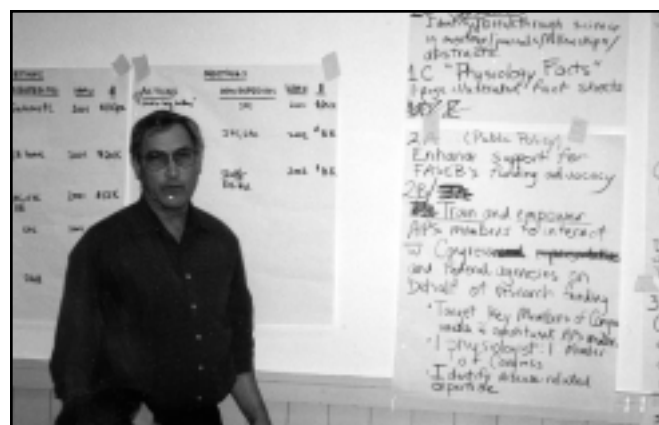
**Goal:** To expand and improve the APS organization to meet the growing needs of APS and its Strategic Plan.

### Objectives:

1. To create a communications/media office.
2. To divide the existing Membership Services Office into a meetings office and a membership office.
3. To increase opportunities for member involvement in the committees and organization of APS.
4. To encourage the affiliation of members with a section.
5. To encourage the formation of sections in emerging areas of physiology.
6. To continue to encourage the formation of local chapters.



**James Whitehead, facilitator of the Strategic Planning Retreat.**



**Brian Duling presenting Action Items from the Public Affairs group.**

## APS Election Results

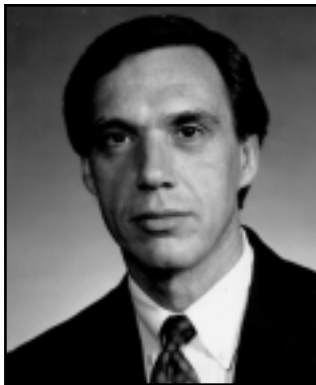
The American Physiological Society announces the results of the election of officers for 2000.

**John E. Hall**, Department of Physiology, University of Mississippi, is the new President-Elect.

The two newly elected Councillors taking office on April

18, 2000 are **Douglas C. Eaton**, Department of Physiology, Emory University, and **Steven C. Hebert**, Department of Medicine, Vanderbilt University. The Councillors will serve for three years. ❖

### President-Elect



**John E. Hall**

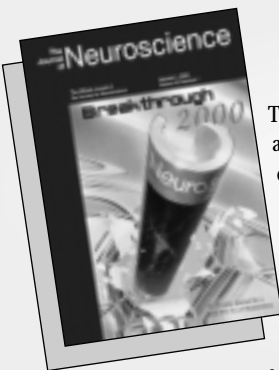
### Councillors



**Douglas C. Eaton**



**Steven C. Hebert**



## Now Available to APS Members

The American Physiological Society (APS) and Society For Neuroscience (SFN) are pleased to announce the following special offer to members from both Societies. As a mutually agreeable exchange, Members of APS can now receive the same special subscription rate to *The Journal of Neuroscience* as do the Members of SFN...and Members of SFN can receive the same special subscription rate to the *Journal of Neurophysiology* as do the Members of APS.

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## Introducing Susan Barman

On January 1, 2000, Susan M. Barman succeeded Kim E. Barrett as Chair of the APS Women in Physiology Committee. Barman has served on this Committee for three years before becoming Chair. As Chair of the Women in Physiology Committee, Barman will be an *ex officio* member of the APS Awards Committee and a member of the FASEB Excellence in Science Award Committee.

Barman is a Professor in the Department of Pharmacology & Toxicology at Michigan State University in East Lansing, MI. She received her doctoral degree in Physiology from Loyola University School of Medicine in Maywood, IL in February 1976. Her graduate work on spinal cord control of sympathetic nerve activity and regional blood flow was completed under the direction of Robert D. Wurster. It was during her graduate training that Barman became an APS member. Her postdoctoral work was completed at Michigan State University, Department of Pharmacology, in Gerard L. Gebber's laboratory. The collaborative work with Gebber on brainstem control of sympathetic outflow to cardiovascular targets has continued for almost 25 years.

Barman's primary research focus has been on identifying neurons in various brainstem regions (rostral and caudal ventrolateral medulla, caudal medullary raphe, medullary lateral tegmental field, caudal ventrolateral pons, and rostral dorsolateral pons) whose naturally occurring discharges are correlated to the cardiac-related and 10-Hz rhythmic discharges of sympathetic nerves. Her work has revealed that these two rhythms in sympathetic nerve discharge are generated by different groups of brainstem neurons, but the outputs of both generators converge onto a common pool of bulbospinal neurons that carry information to spinal preganglionic sympathetic neurons. Her research

has been rewarded with a National Institutes of Health Method to Extend Research in Time (MERIT) Award.

One of the functions of the Women in Physiology Committee is to coordinate



activities with other comparable committees within the FASEB organization. Barman is eager to work with the ASPET Committee on Women in Pharmacology. Because Barman also serves as a member of that committee, this should be quite easy. The ASPET committee typically sponsors a session at Experimental Biology (EB) dealing with issues of particular importance to women in science. One plan is to have the Women in Physiology Committee work with the ASPET committee in this activity at future EB meetings.

Barman is also looking forward to working with the Society's Education Office, notably Marsha Maytas, in continuing the very successful Mentoring Workshop/Luncheon at EB meetings that has been used as a forum to allow young scientists to meet with established scientists to discuss education, employment, and professional opportunities for physiologists today. Barman 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 Commit-

tee is also responsible for selecting the recipients of the Caroline tum Suden/Frances A. Hellebrandt Professional Opportunity Awards. Council has agreed to provide funds for 36 predoctoral students and postdoctoral fellows for participation at EB meetings. The selection process involves a critical review of abstracts and supporting letters from over 120 candidates.

As the APS representative on the FASEB Excellence in Science Award Committee Barman will make a major goal of her tenure as Chair of Women in Physiology to have an APS member become the recipient of this prestigious award. Although the Chair of the Women in Physiology Committee is precluded from coordinating a nomination because of the conflict of interest that this represents, efforts are underway to identify potential candidates. This prestigious award, funded by Eli Lilly and Company, is given annually to a woman who has made outstanding contributions to research in the biomedical sciences.

In addition to serving as Chair of the Women in Physiology Committee, Barman also is Chair of the Steering Committee of the Central Nervous System Section of the APS. She recently completed service on the Joint Program Committee of APS. She has also served on the Editorial Board of *AJP: Heart and Circulatory Physiology*, and she has frequently reviewed for other APS journals.

Anyone that 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 Barman or any other member of the Committee. A list of members and their contact information can be found on the Web at: <http://www.faseb.org/aps/committee/members/women.htm>. ❖

## Introducing Celia Sladek

Celia Sladek was elected by the members of the Section Advisory Committee (SAC) to succeed John Hall as Chair of SAC effective January 1, 2000. SAC is composed of the Heads of each of the APS sections, and the Chair serves as the Committee's representative to Council. Sladek has just completed a three-year term on Council and served on SAC from 1993-1996 as head of the CNS Section.

Sladek has been Professor of Physiology at the Chicago Medical School since 1991. Prior to that she was Professor of Neurology and Neurobiology and Anatomy at the University of Rochester where she was on the faculty for 18 years. She received her PhD in Physiology from Northwestern University and spent three years as Assistant Professor of Physiology at the University of Illinois (Chicago) before joining the Rochester faculty.

Sladek's primary research interests are the neural and endocrine mechanisms responsible for water and electrolyte homeostasis. In these endeavors she has focused on the osmotic and neurotransmitter regulation of vasopressin and oxytocin gene expression and secretion. Currently, the exciting find-

ings in the laboratory relate to interactions between ionotropic and metabotropic neurotransmitters and the effects of steroid hormones on the hypothalamus.



SAC represents a key and central component of the APS organization. With the changes in APS governance over the past 10 years, the sections have been given more and more responsibility for developing the scientific content of the Experimental Biology (EB) meeting and for involving the membership in all APS functions. Affiliating with one or more sections and actively participating in the activities of these sections represents a mechanism by which individual members can get involved in APS and have their ideas

heard. Each section has a Section Program Committee that is responsible for developing symposia, featured topics, and poster discussion sessions at EB. In addition, each year each section selects a Distinguished Lecturer. The chair of the Section Program Committee represents that section on the Joint Program Committee of APS. Thus, an effective mechanism for influencing the content of EB is by actively participating in the programming activities of the sections. Each section also sends a representative to the Committee on Committees and nominates individuals to serve on all the other APS committees. The SAC also serves as the nominating committee for the elected officers of APS (President and Councillors). Thus, section involvement represents the mechanism by which individuals can influence the full range of APS activities.

To affiliate with a section, contact Linda Allen, Membership Services Manager, [lallen@aps.faseb.org](mailto:lallen@aps.faseb.org), 301-530-7171. You can select a primary affiliation and as many secondary affiliations as fit your interests. For information on the Sections and their officers, check the APS home page (<http://www.faseb.org/aps>). ❖

## APS Sustaining Associate Members

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

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# Publications

## Publishing in the Journals of the APS: Why are Authors Charged Fees?

Why does APS charge its authors fees in the form of page charges and manuscript submission fees, especially in light of the considerable APS endowment? Because publishers of scientific journals recover their costs in various ways, this editorial will explain which costs those fees are designed to defray.

Basically, the large journal program of the APS has long been break-even, sometimes making and sometimes losing money in any given year. Some journals are more financially successful than others, but all serve the purposes of disseminating science and giving physiologists an appropriate venue for publishing their research. In 1995 the APS Council mandated that the publications program be self-sustaining and strive to achieve 10% revenue over expenses to help defray the cost of other member benefits. Since that time, the 10% goal has been achieved only in the last two years, but we must be alert to the uncertainties of publication revenues in future years.

APS's endowment has grown to its present size through wise investment of its funds, combined with stock market growth that probably will not continue at the same pace in future years. At a strategic planning retreat held in November 1999, new ways for APS members to benefit from this fund were discussed. The Council will vote on them and announce these innovations later this year. But even before the retreat was held, the endowment's existence allowed the Society to provide the following journal benefits in 1999: subsidizing scientifically warranted color and giving it free to first or last authors who are APS members, allowing free online access to all journal content 12 months after publication, giving free online access to the journals with the purchase of a print subscription (many publishers charge a separate subscription price for online access in addition to print), and offering the incredibly low

\$49.50 price for online access to the entire collection of journals to APS members. All of these benefits have affected journal income. Furthermore, the number of institutional subscriptions—the most important source of journal income—has fallen with the inception of online publishing. Nevertheless, it is essential for the society's publication program to remain fiscally sound.

It has been the philosophy of APS to keep subscription prices as low as possible to allow the broadest distribution among readers and not to burden libraries struggling to keep up with the price increases of some journals during these years of restricted budgets (even though APS journals are universally considered staples on the shelves of science and medical libraries). The data suggest that we are doing quite well in this regard. A recent study performed at the University of Wisconsin-Madison found that when journal subscription prices were examined in terms of cost to a subscriber per printed page and by impact factor, association (i.e., not-for-profit societies like the APS) publications were a much better value than those published by commercial publishers. Among the neuroscience journals, for instance, the range of subscription cost per impact factor was 0.14 to 61.32. The APS's *Journal of Neurophysiology* had a cost/impact factor of 0.298, or excellent value for the cost of a subscription. The study can be found on the Web at <http://www.library.wisc.edu/projects/glsdo/cost.htm>.

Like many other association publishers, APS is able to keep subscription prices low by sharing some of the cost of publishing the journals with the authors who submit manuscripts. Some societies minimize page and other charges and underwrite the expenses of the journal program by requiring members to subscribe to their journal as a part of membership dues. Many com-

mercial publishers do not charge authors for publication (ie, page charges) but have much higher subscription prices and are expected to generate profits for their shareholders. For the APS journals, the cost of quality control and production—copyediting, proofreading, typesetting, layout, printing, binding, and mailing—averages more than \$250 per printed page. We ask authors to contribute \$60 a page to offset part of these costs, and in the last 2 years, have made this charge mandatory. These charges are comparable to those of competing journals (e.g., *Endocrinology*, \$85/page; *JBC*, \$65/page; *JCI*, \$60/page, pages 1-8, \$500/page for 9 or more; *J Immunology*, \$60/page, pages 1-8, \$120/page, pages 9-12; \$180/page, more than 12 pages; *J Exp Med*, \$55/page; the journals of the American Heart Association, \$50/page; *J Gen Physiol*, \$40/page). It should be noted that this \$250 per page cost does not include the considerable costs of putting the journals online, which is another expense undertaken by APS to disseminate the science as widely as possible.

Recently, we have instituted a \$50 manuscript submission fee to help cover the cost of peer review. Again, other journals, such as *J Clin Invest*, *J Exp Med*, and *J Pharmacol Exp Therapeutics*, have manuscript handling fees. The rationale for instituting the manuscript submission fee was to effect a partial recovery of the costs of peer review of manuscripts, including rejected manuscripts (approximately 3,000 rejected manuscripts were processed in 1999). Despite the voluntary contribution of labor by reviewers and editors, the peer review costs for each manuscript is \$275. This figure includes the cost of operating editorial offices, paying staff assistants, purchasing or renting copiers, fax machines, computers, and all of the concomitant telephone and

## Publications

mail costs. All of this is necessary for peer review to be done well, so that no manuscript gets lost, authors' work is kept confidential, and reminders are sent to the volunteers who do the reviewing because authors rightly expect a quick turn around time for their work. The manuscript submission fee provides a means by which the costs of review can be shared by all contributors that make use of the system.

The implementation of APS's new web-based tracking system, APS Central (<http://www.apscentral.org/>), has been expensive, but was started in order to automate much of the process and to give editors, reviewers, and authors the opportunity to work from anywhere in the world with the most up-to-date tools. APSCentral is being implemented for some journals now, but within 18 months it will be operational for all the APS journals. We anticipate some reduction in the cost associated with the peer review process with APSCentral, particularly with mailing. However, even if the postage costs could be entirely eliminated, the costs for peer review processing of a single manuscript would still be \$240. Thus we expect the primary advantage of APSCentral will be expedited review and processing of manuscripts rather than significant cost savings.

We clearly depend on the contribu-

tions (both as submitters and reviewers) of physiologists throughout the world to maintain the high quality of the papers published in our journals, and we value the association of each author and reviewer with the journal and the society. We realize that it is in physiology's best interest, and in the best interest of the society, both from a scientific and a business perspective, to have strong journals. Every effort is being made to keep publication costs as low as possible, consistent with maintaining the requisite quality. We are proud to say that we are doing our part to avoid the trend of rising subscription costs by minimizing our increases in subscription rates. The scientific community has put pressure on publishers to make science free to all—unfortunately, not even Harold Varmus's E-Biomed proposal would have done that. In his proposal, it was intended for publishers to recover their costs by charging authors high submission fees and increased page charges in order to offer the content free to the scientific community and the public. It has been estimated that the costs to an author would be 2-3-fold higher than it is now for "free" publishing on E-Biomed, or PubMedCentral, as it is now called.

All of this being said, however, it is still disconcerting as an author to have to pay \$500-750 to publish a paper in

one of the APS journals. The Publications Committee and Council, scientists like you, recognize this because they have to pay the same bill you do. Many constructive suggestions to help defray some of the costs associated with publications have been proposed and are currently being considered. Additionally, a special task force is being assembled that will examine all aspects of our publications program, especially our pricing policy in light of the potential loss of income due to the impact of electronic posting of our journals. Rest assured that our guiding principle in the upcoming analysis will be to keep the cost to contributors and the consumer at a minimum, while at the same time enhancing the quality of the product. The APS publications program is a \$12 million/year operation, and it has only been in the last two years that income has exceeded expenses. This situation can change instantaneously in this age of electronic, web-based publishing. Our goal is to have APS publications properly poised to flourish under the prevailing changing and quite unpredictable conditions. ❖

*Dale J. Benos  
L. Gabriel Navar  
Margaret Reich*

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# Membership

## Accepted Affiliate Applicants

**Samuel F. Fancer**  
Defined Health

**Joseph G. Griswald**  
City College of New York

**Steven C. Mannebach**  
University of Utah

**Ramprasak Ramakrishna**  
Physiome Sciences

## Accepted Student Applicants

**Sandra Sheila Acquah**  
Howard University

**Mir Haroon Ali**  
University of Chicago

**Diego Alvarez**  
University of South Alabama

**Nazneen Arifa**  
Nagasaki University

**Claudio L.L.G. Battaglini**  
University of Northern Colorado

**Heidi Kay Baumgartner**  
Indiana University

**Robert Birmingham**  
University of Connecticut

**Jason Michael Blank**  
Stanford University

**Judith Ann Brandt**  
Washington State University

**Cristiane Del Corso**  
Faculty of Medicine of Ribeira Preto

**Christopher James Davidson**  
University of Texas, Austin

**Joseph Lawrence Earles**  
University of Otago

**Jamie Scott Falkowitz**  
SUNY-Stony Brook

**Carmina Acuna Flores**  
Meharry Medical College

**Christopher Neil Fortner**  
University of Cincinnati

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University of Southern California

**Edmond Joseph Furia**  
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**Monica L. Gardon**  
University of Florida

**Chris Michael Gregory**  
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**Emma Heart**  
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**Kathryn Louise Hesketh**  
University of Alberta

**Juanita Kylie Jellyman**  
University of Otago

**Scott Parker Kellie**  
University of Kentucky

**Amanda Ruth Lorier**  
University of Auckland

**Defeng Luo**  
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**Misha Derke Luyer**  
Mayo Clinic

**Safraaz Mahamed**  
University of Toronto

**Louis Nicholas Manganas**  
SUNY- Stony Brook

**Angus John Cathcart McMorland**  
University of Auckland

**Jennifer Ann Meier**  
Colorado State University

**Daniel L. Millrood**  
Columbia University

**Harshini Mukundan**  
University of New Mexico

**Erin Kathleen Pias**  
Louisiana State University

**Jeppe Praetorius**  
University of Southern Denmark

**Wei Qi**  
Institute of Internal Medicine

**Ulrika Raue**  
Ball State University

**Mike Remple**  
University of Lethbridge

**Scott Barry Robinson**  
US Army Research Institute

**George William Rodway**  
University of Pittsburgh

**Jose D. Rotjas**  
Texas Tech University

**Raudel Sandoval**  
University of Illinois

**Julio Alexandre Santos**  
Universidade Federal Rio Grande

**Subramaniam Raj Selvaratnam**  
University of Auckland

**Cecilia Louise Speyer**  
Wayne State University

**Brett Thomas Weinzapfel**  
Indiana University

**Dong-Mei Zhao**  
Hamamatsu University

**Qin Zhang**  
University of Louisville

**Hao Zhu**  
The First Military Medical University

## Deceased Members

**Robert L. Averill**  
Wellington, New Zealand

**Neal R. Bandick**  
Monmouth, OR

**Lyle V. Beck**  
Bloomington, IN

**Kent Chapman**  
Providence, RI

**Albert R. Dawe**  
Downers Grove, IL

**Thomas P. Dousa**  
Rochester, MN

**Bela Issekutz**  
Halifax, Canada

**John A. Jacquez**  
Ann Arbor, MI

**Herbert H. Jasper**  
Westmount, Canada

**Deepak M. Kaji**  
Bronx, NY

**Rachmiel Levine**  
Newton Lower Falls, MA

**Charles P. Lyman**  
Canton, MA



## Chapter News

### Inaugural Meeting of the Gulf Coast Physiological Society

The Gulf Coast Physiological Society held its inaugural meeting at the Health and Environmental Research Building at Tulane University School of Medicine on November 19 and 20. The meeting was co-sponsored by the Departments of Physiology at Tulane University School of Medicine and the Louisiana State University Health Science Center. This exciting event was attended by nearly 130 investigators and interested individuals from Tulane University, LSU New Orleans, LSU Shreveport, University of South Alabama, University of Mississippi Medical Center, Southern University of New Orleans, Xavier University, University of Louisiana at Monroe, Ochsner Medical Foundation, University of New Orleans, and Auburn University. The meeting began with introductory remarks from L. Gabriel Navar and John Spitzer. During these remarks, emphasis was placed on the primary focus of the society to foster greater interaction among the member institutions in the areas of teaching and research. Consistent with this teaching mission was the strong need to encour-

age and support the training of young graduate students toward careers in physiological investigation and to reach out to undergraduate students to expose them to the career opportunities that physiology can offer. These topics were followed by discussion and ratification of the bylaws and solicitation of nominations for society officers.

With the essential introductory and business matters completed, the group settled in to hear the keynote address delivered by Salvador Moncada, Director of the Wolfson Institute for Biomedical Research at the University College of London. Moncada graciously agreed to speak to the group and was the guest of *The Oxygen Society*. The title of the featured presentation was "Nitric oxide and the physiology and pathophysiology of cell respiration." His talk was enthusiastically received by a capacity crowd and was followed by many questions and points of discussion.

The afternoon was rounded out by a poster discussion session featuring the work of 45 presenters representing students and investigators from the attend-

ing institutions. Research presentations encompassed all organ systems, and experimental investigations ranged from whole animal studies to cell and molecular physiology. Attendance and discussions between meeting attendees and poster presenters were excellent and reinforced the positive aspects of fostering such an interaction among members of regional research and undergraduate institutions.

One of the highlights of the meeting were the short presentations given by representatives of the charter institutions. Individual presentations were presented by John Spitzer from the LSU Health Sciences Center, New Orleans; Aubrey Taylor, from the University of South Alabama; Joey Granger from the University of Mississippi Medical Center, Neil Granger from the LSU Medical School in Shreveport; L. Gabriel Navar from Tulane University School of Medicine, and Timothy Hammond from the Astro Biology Center at Tulane University School of Medicine. These presentations provided an overview of the research interests of

*(continued on page 82)*



Representatives from the Charter Institutions of the Gulf Coast Physiological Society. Aubrey Taylor, University of South Alabama; John Spitzer, LSU, New Orleans; Neil Granger, LSU Shreveport; Joey Granger, University of Mississippi Medical Center; L. Gabriel Navar, Tulane University School of Medicine.



L. Gabriel Navar with Salvador Moncada, who presented the keynote address, "Nitric oxide and the physiology and pathophysiology of cell respiration," and John Spitzer.

## Chapter News

*(continued from page 81)*

the faculty at the respective institutions and to expose regional investigators to the research opportunities that are available at these institutions.

The opening day of the meeting concluded with a reception and dinner at The City Energy Club of New Orleans. This reception was attended by the meeting registrants and was kindly sponsored by the Astra Zeneca Pharmaceutical Company. We gratefully acknowledge their generous support. Carlos Romero of the Department of Physiology at the Mayo Medical School closed the evening with a dinner presentation entitled, "The role of angiotensin II and oxidative stress in renovascular hypertension." In his talk Romero highlighted what is currently known about the multifaceted roles that oxidative stress and oxygen radicals play in influencing the cardiovascular and renal function during hypertension.

The Saturday schedule began with a short meeting to attend to the necessary business of the society. The primary item on the agenda was the election of officers. Joey Granger, Professor in the Department of Physiology and Biophysics at the University of

Mississippi Medical Center was elected to a two-year term as president of the GCPS. Edward Inscho, Associate Professor in the Department of Physiology at Tulane University School of Medicine was elected as Secretary/Treasurer. Neil Granger from LSU Shreveport, Kathleen McDonough from LSU New Orleans, Joey Benoit from the University of South Alabama, and Jane Reckelhoff from the University of Mississippi Medical Center will serve as councillors. L. Gabriel Navar and John D. Imig from Tulane University School of Medicine, Ron Korthuis from LSU Shreveport, Mike Levitzky from LSU New Orleans, Jim Downey from the University of South Alabama, and Robert Hester from the University of Mississippi Medical Center make up the nominating committee. Following election of officers, Martin Frank addressed the meeting attendees to provide a report on the activities of the American Physiological Society and the importance of developing strong, active regional physiological societies. In addition, he discussed new initiatives being undertaken by the American Physiological Society to provide a mechanism to support meaning-

ful research experiences for interested undergraduate students. Following the business meeting, our APS-sponsored speaker, Brian Duling, of the Department of Molecular Physiology and Biological Physiology, University of Virginia, Charlottesville, presented an exciting talk entitled "Gap junctions in the arteriolar wall integrate smooth muscle and endothelial cell function." He gave a unique glimpse into the mechanisms of endothelium-vascular smooth muscle interactions at the microvascular level.

This initial meeting of the GCPS was a tremendous success and bodes well for continued growth in the coming years. The site, meeting dates and program for the second annual meeting of the Gulf Coast Physiological Society remain to be determined. In the interim days, I encourage all members of the Gulf Coast region to contact any of the society officials to register your ideas for society programming, goals or methods to stimulate participation of all graduate and undergraduate institutions. Your contributions will be greatly appreciated. ❖

*Edward W. Inscho  
Tulane University School of Medicine*

### Ohio Physiological Society Holds Annual Meeting

The Ohio Physiological Society held its annual meeting at Miami University on November 12, 1999. Forty-seven individuals pre-registered for this meeting, and there were over 50 physiologists in attendance. Our keynote speaker and APS lecturer was Margarita Dubocovich from Northwestern University. Her presentation was "Expression, signaling and function of neuronal melatonin receptors." Other speakers were: Carole M. Liedtke and Amy L. Wilson, Case Western Reserve University; Nelson D. Horseman, University of Cincinnati; Lakshmi Pulakat, Bowling Green State University; Javier Stern and Norma Adragna, Wright State University; and Jack Rall, Ohio State University. In

addition, there were 20 poster presentations by graduate students and faculty from Bowling Green State University; Case Western Reserve University; Medical College of Ohio, Toledo; Miami University; Northeastern Ohio Universities College of Medicine; and Wright State University. The meeting was organized by Phyllis Callahan, President, along with Peter K. Lauf, Treasurer, and Norma Adragna, Past-President. Dee Childress (Wright State University) and Joni Robinson (Miami University) provided secretarial and administrative assistance. During the business meeting we discussed next year's meeting, which will be held at Ohio State University and will be coor-

dinated by Jack Rall.

The meeting at Miami University was supported by registration fees and membership dues, as well as financial support from the College of Arts and Sciences, The Office for the Advancement of Scholarship and Teaching, The Graduate School and the Department of Zoology at Miami University, the American Physiological Society, and Fisher Scientific. In part due to this support, we were able to offer free registration to 27 graduate students. ❖

*Phyllis Callahan  
Miami University*

### President Recommends Research Funding Increases

President Clinton recommended funding increases in key life sciences programs as part of his fiscal year (FY) 2001 budget proposal that was transmitted to Congress February 7. In his State of the Union speech, Clinton explained the rationale behind his emphasis on science and technology. "In the new century, innovations in science and technology will be the key not only to the health of the environment but to the miraculous improvements in the quality of our lives and advances in the economy," he said. Clinton also mentioned several specific areas of biomedical research, including the pending completion of the human genome project, the identification of genes responsible for Parkinson's disease, diabetes, and certain cancers, and promising efforts to develop targeted gene therapies for breast cancer and Alzheimer's disease.

**NIH:** The budget request is \$18.813 billion, an increase of \$1 billion or 5.6%

over FY 2000. The NIH request would fund a total of 31,287 Research Project Grants, but the number of new grants would be only 7,641, down 1,309 from the 8,950 RPGS that are expected to be funded in FY 2000. The explanation for this decrease is the large commitment base of continuing awards along with growth in grant sizes. The administration also proposes to keep cost increases for continuations at 2% over FY 2000 funding levels. *The FASEB Consensus Conference recommended a \$2.7 billion or 15% increase to keep NIH on the path to a 5-year doubling of its budget.*

**NSF:** The budget request is \$4.572 billion, a 17% increase over the FY 2000 level, including funds designated for specific areas. The total number of NSF grants will increase from 19,910 in FY 2000 to 21,200 in FY 2001, with an increase in new grants from 8,470 to 9,600. *FASEB recommended a 16%*

*increase in unrestricted research funds.*

**VA Medical Research:** The budget request is \$321 in FY 2001 for clinical, epidemiological, and behavioral studies. *FASEB recommended \$370 million.*

**NASA Life Sciences:** The budget request is for a \$21.4 million increase in three key programs in the Life Sciences Division. Increase information was not available for several other small programs involving life sciences research. *FASEB recommended a \$50 million increase in the three Life Sciences Division programs as well as the Exobiology program, the Astrobiology Institute, and National Space Biomedical Research Institute.*

**APHIS Animal Care:** The budget request is \$16 million in FY 2001 for Animal Welfare Act activities within USDA's Animal and Plant Health Inspection Service (APHIS). This is a \$5 million increase over the FY 2000 funding level. ❖

### Wise Spending a Congressional Concern

In the wake of two years of 15% increases in NIH funding, Members of Congress are asking whether NIH is putting the money to good use.

House Labor-HHS-Education Appropriations Subcommittee Chairman John Edward Porter (R-IL), one of NIH's staunchest champions, put the question directly to Acting NIH Director Ruth Kirschstein. At a February 15 committee hearing, Porter asked Kirschstein whether NIH was supporting good science. Porter indicated that he was still hopeful to be able to keep NIH on a five-year doubling path, but he was clearly looking for justification.

Other subcommittee members raised similar concerns. Ranking Democrat David Obey (D-WI) asked how NIH

would propose to spend not only the \$1 billion increase proposed by President Clinton for FY 2001, but also possible additional increments of \$1 billion. Rep. Steny Hoyer (D-MD) went further to ask Kirschstein to justify additional increases by increments of \$500 million, which she promised to do. Rep. Jay Dickey (R-AR) expressed concern about NIH's ability to continue to fund good science and manage an expanded grants portfolio, and Kirschstein assured him that NIH would not fund grants unless peer reviewers consider it worthwhile.

Other concerns raised in the hearing included the impact of some \$3 billion in delayed obligations as provided in NIH's FY 2000 appropriation. Dr.

Kirschstein said that NIH had an orderly plan to deal with the fact that these funds would not be available until the closing days of the fiscal year, and said that the number of awards would not be affected.

Rep. Obey also noted the smaller number of new and competing grants in FY 2001. The president's budget calls for 8,165 such grants next year, as compared with 9,171 in FY 2000. Kirschstein noted that NIH's total grant portfolio would reach an historic high. In addition, in response to complaints over the past few years about reductions in grant size, this year NIH is increasing the size of awards to provide grantees with budgets closer to what was recommended by peer reviewers. ❖

### APS Supports NIH Stem Cell Guidelines

The APS offered its support for NIH's "Guidelines for Research Involving Human Pluripotent Stem Cells." In a February 17 letter to NIH's Office of Science Policy, APS President Walter Boron described the research as "at once scientifically promising because of its potential and ethically challenging because it involves human embryos."

The draft guidelines were published in December with a comment period that originally was supposed to end on January 31, a deadline that was later extended until February 22. The draft guidelines are based upon a legal opinion issued by the Department of Health and Human Services. The opinion determined that stem cells are not covered by a ban on human embryo research because the cells themselves are not embryos.

The proposed guidelines would allow NIH to support experiments with stem cells but would not permit the use of

federal funds to derive such cells from early human embryos. Rather, NIH-funded researchers could obtain stem cells derived by private labs, but the researchers would be required to certify that the stem cells were derived from embryos originally created for fertility treatment and that the donors gave informed consent. The APS supported this approach. "While any use of embryonic cells has the potential to raise ethical concerns," Boron wrote, "the proposed approach does seem to provide an ethically acceptable course that parallels widely accepted policies governing the donation of organs and tissues."

The guidelines would also permit the use of stem cells from aborted fetuses. This has been subject to less controversy because fetal tissue research is already permitted under other federal research funding guidelines.

The APS letter concurred with the

aspects of the guidelines that would provide safeguards in terms of how stem cells may be collected, such as requiring informed consent from donors and making certain that decisions about fertility treatment are made separately from the decision to donate unneeded embryos for stem cell research. However, the APS urged changes in a requirement that researchers document that stem cells they acquire were derived in accordance with the guidelines. "Since researchers are required to remain at arm's length from the acquisition of stem cells, this requirement may be difficult or impossible to fulfill," Boron wrote. He suggested instead that NIH might recognize an independent certification that derivation standards had been met, and that researchers be permitted to rely upon a previous certification that a cell line had met the derivation standards. ❖

### NIH Publishes Latest Reinvention Report

NIH has published its most recent Reinvention Status Report, the seventh of its kind, highlighting electronic research administration (ERA) activities at the facility. The latest edition highlights modular research grant applications and awards, streamlined council reviews, a description of the current projects in the ERA, including a simplification of summary statements, updates the progress on continuing projects and concludes with milestone achievements made in the program.

The modular research grant application and awards were implemented in June, 1999, and were used by over 90% of applicants for both the first and second receipt dates. Investigators are

instructed to prepare the budget request in modules of \$25,000, and up to a maximum direct cost level of \$250,000. This type of application is meant to free up NIH administrative staff by eliminating much of the budget detail required previously.

The streamlined council reviews, which also debuted last year, allows the second level of peer review to be expedited for the applications deemed most meritorious by the initial review group. The expedited review occurs electronically prior to the actual council meeting, which allows for awards to be made sooner.

Grants applicants can also now receive essentially verbatim critiques

from reviewers, instead of a prepared document summarizing all of the reviewers' comments. The simplification of summary statements also improves NIH staff efficiency and the amount of information applicants receive about their applications.

The report lists among its milestone achievements the implementation of a simplified noncompeting award process (SNAP), a streamlined review, and the simplification of summary statements.

The full text of the NIH Reinvention Status Report is available at <http://grants.nih.gov/grants/reinvention/reinvention.htm>. ❖

## Public Affairs

### Two New Websites Offer Animal Research Information

The Foundation for Biomedical Research has completed an update design of its website at <http://www.fbr-search.org>. The pages provide on-line versions of valuable information resources that have been produced by the Foundation, which works closely with the National Association for Biomedical Research (NABR). Featured items include a news archive with information about crimes committed in the name of “animal rights”; answers to common questions about animal research; animal research facts on various topics and controversies, as

well as information about the use of certain species as models for particular diseases; information on ordering FBR publications, posters, and other materials; plus an extensive collection of links to other web sites with information about the benefits of animal research, animal care and use, science education resources, and health information on the net. Special pages for children are under construction.

The New Jersey Association for Biomedical Research has also recently updated its website at <http://www.njabr.org>. This site offers good educational

materials, including profiles of prominent New Jersey scientists in a “Science Superstars” section and a “Thank You, Research” lesson plan intended to introduce students to the “extensive medical and scientific research taking place in New Jersey.” In conjunction with a program called Animals, Science, and Know-How (ASK) that provides assistance to New Jersey teachers wishing to keep animals in their classrooms, the website provides useful information about how teachers can select and care for such animals. ❖

### NIH Launches Clinical Trials Database on the Web

The National Institutes of Health has launched the first phase of its congressionally mandated clinical research trial database. The service, <http://clinicaltrials.gov>, is an Internet-based service that currently contains information on more than 4,000 federal and private trials at more than 47,000 locations.

NIH funds most of the 4,000 clinical trials now in the database. The next

phase of the project will be the inclusion of non-NIH sponsored trials from other federal agencies and private industry into the database.

The National Library of Medicine (NLM) spearheaded the creation of the site. In addition to the trials database, extensive links are available to the NLM's consumer health information service, MEDLINEplus.

[ClinicalTrials.gov](http://ClinicalTrials.gov) grew out of the Food and Drug Administration Modernization Act of 1997 (Public Law 105-115). NIH is stressing to the public that the site is completely confidential and no registration or personal identification of any kind is required to access information on specific trials. ❖

### 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@aps.faseb.org](mailto:mfrank@aps.faseb.org)), or Robert Price, Director of Finance (Tel. 301-530-7160, Email: [rprice@aps.faseb.org](mailto:rprice@aps.faseb.org)).



# TRAVEL AWARD APPLICATION

**XXXIV IUPS Congress**  
**Christchurch, New Zealand**  
**August 26-31, 2001**

Application Deadline: December 1, 2000



The U.S. National Committee for the International Union of Physiological Sciences is seeking **applications for travel awards for the XXXIV IUPS Congress in Christchurch, New Zealand, August 26-31, 2001.** Information about the Congress is available at <http://www.iups2001.org.nz>.

The Committee will screen the applications, and the awards will be made by The American Physiological Society (APS), which is raising funds for the travel. **The travel awards will be approximately \$1,000 to help cover the majority of the airfare to New Zealand.**

The awards are intended for individuals resident to the United States who have no other source of funds to attend the Congress. Federal employees are eligible. It is anticipated that more applications will be received than can be funded. **To achieve as high a rank as possible, the following factors should be considered:**

- complete all questions on the application
- provide copies of letters of invitation if you have been invited to the Congress to make a presentation
- provide an indication of participation in the Congress, including presentations and attendance for most or all sessions
- have travel plans that include other professional visits or work

The deadline for submissions of applications for travel awards is **December 1, 2000.** The application is on the following two pages. **All applicants must submit six copies of the application to USNC/IUPS, National Academy of Sciences, Attn: Paul Turner, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.**



# APPLICATION FORM

Surname \_\_\_\_\_

## XXXIV IUPS CONGRESS TRAVEL GRANT PROGRAM

Christchurch, New Zealand; August 26 - 31, 2001

1. Name and Degree: \_\_\_\_\_ Year of highest degree: \_\_\_\_\_
2. Position or employment title: \_\_\_\_\_ Year of Birth: \_\_\_\_\_
3. Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. Phone number: \_\_\_\_\_ Fax number: \_\_\_\_\_
5. E-mail address: \_\_\_\_\_
6. Country of citizenship: \_\_\_\_\_ Visa status if not U.S. citizen: \_\_\_\_\_
7. Underrepresented Minority Applicants: Please circle ethnic group to which you belong:  
African American    Hispanic    Native American    Pacific Islander
- 8a. Gender:    Male \_\_\_\_\_    Female \_\_\_\_\_
- 8b. Do you need special assistance or accommodations? \_\_\_\_\_
9. Attending entire Congress? Yes \_\_\_\_\_ No \_\_\_\_\_ If not, which days will you attend? \_\_\_\_\_  
Will you present an invited paper or poster at the Congress? Yes \_\_\_\_\_ No \_\_\_\_\_  
If so, please indicate the sessions you will address. If invited, attach letter of invitation.  
Invited to give public lecture (give title): \_\_\_\_\_  
\_\_\_\_\_  
Invited to Congress symposium (give title; indicate chairman): \_\_\_\_\_  
\_\_\_\_\_
10. Do you intend to submit a poster? (If yes, please give title): \_\_\_\_\_  
\_\_\_\_\_
11. Please describe your area of specialty (e.g. cell physiology, neurophysiology, etc.):  
\_\_\_\_\_
12. Member of: APS \_\_\_\_\_ SGP \_\_\_\_\_ SICB \_\_\_\_\_ Soc. Neurosci. \_\_\_\_\_ BMES \_\_\_\_\_ Microcirc. Soc. \_\_\_\_\_ Other \_\_\_\_\_
13. Are you employed by the federal government more than half-time? Yes \_\_\_\_\_ No \_\_\_\_\_
14. Travel: a. City of departure \_\_\_\_\_ b. Support requested \_\_\_\_\_  
c. Amount of other support available (excluding personal) \_\_\_\_\_
15. Recent publications (not more than 5 titles, giving full refs). If listing abstracts or manuscripts in press, please indicate.

Deadline for postmark of applications: December 1, 2000  
Submit six (6) copies to USNC/IUPS, National Academy of Sciences,  
2101 Constitution Avenue, N.W., Washington, D.C. 20418. Attn: Paul Turner

Continued next  
page



Surname \_\_\_\_\_

16. Anticipated abstract (Not more than 250 words on paper or poster you plan to present at the Congress, including names of author and coauthors and indicate presenter. If none, abstract of current work.)

17. Give a brief resume of the scientific purposes and goals of your trip in addition to attending the Congress, including other meetings: satellite symposia, laboratories you plan to visit, work on collaborations, etc.





2000 AMERICAN PHYSIOLOGICAL SOCIETY CONFERENCE

# BARORECEPTOR AND CARDIOPULMONARY RECEPTOR REFLEXES

Date: August 23-27, 2000

Place: Sheraton Iowa City Plaza Hotel, Iowa City, Iowa

Abstracts Deadline: May 19, 2000

Advance Registration Deadline: June 30, 2000

## Purpose of Meeting:

This meeting will focus on baroreceptor and cardiopulmonary reflexes.

A wide range of scientific questions will be covered ranging from studies of cellular and molecular mechanisms of mechano-electrical trans-

duction to studies of baroreflex control in humans. Multidisciplinary approaches will be emphasized ranging from molecular studies to systems physiology. Major investigators active in this area of research will participate in this conference with emphasis on young investigators and students. A substantial international attendance is anticipated.

## Organizers

Mark Chappleau (Chair)

Francois Abboud

Gerald DiBona

Robert Felder

A. Kim Johnson

Allyn Mark

William Talman

## Steering Committee

Michael Andresen

Vernon Bishop

Jeanne Seagard

Virend Somers

Irving Zucker

## Sessions & Speakers:

### Cardiovascular Sensory Afferents--Physiology

Francois Abboud, John Longhurst, Kenji Sunagawa, Helio Salgado, Harold Schultz

### Molecular Mechanisms of Sensory Transduction

Owen Hamill, Monica Driscoll, Heather Drummond, Christopher Benson

### Molecular/Cellular Mechanisms Modulating Afferent Activity

Holly Middlekauff, Daniel Weinreich, Ellis Cooper, Meredith Hay

### NTS--Afferent Processing and Integration

Michael Andresen, Steven Mifflin, Robert Rogers, K. Michael Spyer

### NTS--Neurotransmitters and Modulators

Jeanne Seagard, William Talman, Benedito Machado, Lisete Michelini

### Central Baroreflex Mechanisms

Sue Aicher, Alan Sved, Patrice Guyenet, David Mendelowitz, Donald Reis

### Differential Regulation of Sympathetic Nerve Activity

Shaun Morrison, Robert Felder, Cheryl Heesch

### Transgenic and Knock-out Animal Models and Gene Transfer

Gerald DiBona, Julian Paton, Mark Chappleau, Akira Takeshita

### Baroreflex Control During Exercise

Allyn Mark, Vernon Bishop, Jeffrey Potts, Donal O'Leary, Eduardo Kreiger

### Rhythmic Oscillations in Cardiovascular Control

Susan Barman, Phyllis Gootman, Alberto Malliani, Nicola Montano, Pontus Persson

### Integrative Regulation of Arterial Pressure and Circulation

Virginia Brooks, Geoffrey Head, John Osborn

### Integrative Regulation of Circulation in Humans

Gianfranco Parati, Virend Somers,

### Myocardial Ischemia and Heart Failure

Mark Dunlap, John Floras, Steven Hull, Marc Thames, Irving Zucker

### Orthostatic Intolerance

A. Kim Johnson, David Robertson, Ronald Shondorf, Dwain Eckberg, Eileen Hasser

PLEASE SEND ME FURTHER INFORMATION ABOUT THIS APS CONFERENCE:

Tphys

Baroreceptor and Cardiopulmonary Receptor Reflexes - August 23-27, 2000 - Sheraton Iowa City Plaza Hotel, Iowa City, Iowa

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State/Province \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_ Email \_\_\_\_\_

The American Physiological Society

9650 Rockville Pike, Bethesda, Maryland 20814-3991 (USA)

Phone: 301-530-7171 • Fax: 301-571-8313 • Email: [meetings@aps.faseb.org](mailto:meetings@aps.faseb.org) • Web: [www.faseb.org/aps](http://www.faseb.org/aps)



# THE INTEGRATIVE BIOLOGY OF EXERCISE

## 2000 American Physiological Society Conference

Dates: **September 21-23, 2000**

Place: **Portland, Maine**

Abstracts Deadline: **June 1, 2000**

Advance Registration Deadline: **August 1, 2000**

### Purpose of Meeting:

This meeting will provide a forum for research presentation and discussion through which there will be a critical mass for poster presentations of primary research. The symposia and other invited sessions have been constructed so as to provide younger investigators an opportunity to present their research. Broad interdisciplinary areas of interest such as gender, aging and obesity will be included along with updates in the now "standard" areas of addressing the molecular basis of adaptation to exercise in the muscles and cardiovascular system. Student awards will be presented. **Substantial time will be devoted to poster presentations**

### Organizer:

Peter Wagner

### Steering Committee:

Kenneth Baldwin  
Albert Bennett  
George Brooks  
Carl Gisolfi  
M. Harold Laughlin  
Ronald Meyer  
Brenda Russell  
David Wasserman

### Sessions & Speakers:

#### Exercise-Induced Cardioprotection:

**Cellular Aspects**  
Douglas Bowles (Chair)  
Donna Korzick (Chair)  
Colin Bloor  
Marvin Boluyt  
Edward Lokatta

#### Exercise and Aging: Challenge, Resiliency and Function

Carl Gisolfi (Chair)  
Loretta DiPietro  
Karl Insogna  
Wendy Kohrt  
Kevin Kregel  
Maria Singh

#### How Does Skeletal Muscle Adapt to Exercise?

Brenda Russell (Chair)  
Karyn Esser  
Marc Hamilton  
Charlotte Peterson  
Steven Swoap

#### The Role of Physical Activity in the Prevention of Obesity and Management of Body Weight

Claude Bouchard (Chair)  
Michael Goran  
Tuomo Rankinen  
Eric Ravussin  
Dale Schoeller  
David York

#### Gender-Dependent Responses to Exercise

George Brooks (Chair)  
Stephen Davis  
Anne Friedlander  
Susan Hopkins  
M. Harold Laughlin  
Anne Loucks  
Robert Marcus

#### Impact of Transgenic Manipulations on Integrated Exercise Performance

H. Lee Sweeney (Chair)  
Elizabeth Barton-Davis  
Evangelia Kranias  
Leslie Leinwand  
Jeffery Robbins  
Brian Roman

**PLEASE SEND ME FURTHER INFORMATION ABOUT THIS APS CONFERENCE:**

**The Integrative Biology of Exercise - September 21-23, 2000 - Portland, Maine**

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State/Province \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

E-mail \_\_\_\_\_

**The American Physiological Society**

9650 Rockville Pike, Bethesda, Maryland 20814-3991 (USA)

Phone: 301-530-7171 • Fax: 301-571-8313 • Email: [meetings@aps.faseb.org](mailto:meetings@aps.faseb.org) • Web: [www.faseb.org/aps](http://www.faseb.org/aps)

**Tphys**

# Conferences

## Joint Congress of the Scandinavian Physiological Society and the American Physiological Society

Uppsala University and Karolinska Institutet  
Stockholm, Sweden  
August 16-19, 2000

Welcome to Stockholm!

A joint meeting of the Scandinavian Physiological Society and the American Physiological Society will be held in Stockholm. The meeting is intended to be informal and lively with invited lectures, 20 forefront symposia and poster presentations, all attempting to cover the "hottest" topics in Physiology. There will also be ample time for informal discussions and casual conversations. In addition to the scientific program, highlights of the Congress include a get together evening (August 16) at the Stockholm City Hall (the place where the Nobel Dinner is held) and a steamboat excursion with dinner in the Stockholm archipelago (August 18). We wish you a very pleasant stay!

For the organizers,  
A. Erik G. Persson

### PROGRAM

#### Wednesday, August 16

**4:30 PM:** Opening of the Congress

**4:45-5:45 PM:** Invited lecture: **G. Giebisch**

*Renal potassium channels: function, regulation and structure*

**6:30 PM:** Reception: Stockholm City Hall

#### Thursday, August 17

**8:30-9:30 AM:** Invited lecture: **J.G. Forte**

*Gastric H,K-ATPase and acid resistant surface proteins*

**10:00 AM-12:00 PM:**

**Symposium I:** *Signalling from gut to integrate the digestive response*

(Organizers: J. Williams, J. Holst)

**Symposium II:** *Paracrine mediators and signalling in the TGF*

(Organizers: N-H. Holstein-Rathlou, G. Navar)

**Symposium III:** *Physiology and biophysics of the interstitium. Fluid mechanisms and solute transport*

(Organizers: A. Taylor, R. Reed)

**1:00-3:00 PM:**

**Symposium IV:** *Control of sodium balance*

(Organizers: P. Bie, J. Granger)

**Symposium V:** *Gene therapy*

(Organizers: M. Raizada, C. Wahlestedt)

**Symposium VI:** *Molecular mechanisms in exercise physiology*

(Organizers: R.S. Williams, J. Henriksson)

**3:30-6:00 PM:**

**Symposium VII:** *Gastrointestinal mucosal barrier*

(Organizers: G. Flemstrom, K. Kaunitz)

**Symposium VIII:** *Renin-angiotensin system*

(Organizers: O. Skott, R. Carey)

#### Friday, August 18

**8:30-9:30 AM:** Invited lecture: **M. Mulvany**

*Vascular control of blood pressure*

**10:00 AM-12:00 PM**

**Symposium IX:** *New concepts in pulmonary ventilation and perfusion distribution*

(Organizers: R. Glenny, D. Linnarsson)

**Symposium X:** *Neurohormonal regulation of arterial pressure and body fluid volume*

(Organizers: A. Aperia, G. DiBona)

**Symposium XI:** *Aquaporins*

(Organizers: S. Nielsen, M. Knepper)

**3:00-5:30 PM**

**Symposium XII:** *NO and hypertension*

(Organizers: C. Wilcox, AEG. Persson)

**Symposium XIII:** *Development of synaptic plasticity*

(Organizer: B. Gustafsson)

**Symposium XIV:** *Microvascular responses to acute and chronic inflammation*

(Organizers: L. Holm, N. Granger)

#### Saturday, August 19

**8:30-9:30 AM:** Invited lecture: **P. Andersen**

*Biology of memory systems*

**10:00 AM-12:00 PM**

**Symposium XV:** *Sensory motor integration in the control of movement B from ion channels to behaviour*

(Organizers: H. Hultborn, A. Schwartz)

**Symposium XVI:** *Capillary permeability and mechanisms of glomerular ultrafiltration*

(Organizers: K. Tryggvason, B. Hudson)

**Symposium XVII:** *Cell pH regulation*

(Organizers: W. Boron, M. Nikinmaa)

## Conferences

**3:00-5:30 PM**

**Symposium XVIII: Molecular mechanisms in exo- and endocytosis**

(Organizers: L. Brodin, H. Bellen)

**Symposium XIX: Matrix and receptors**

(Organizers: P. Ekblom, P. Yurchenco)

**Symposium XX: Future drug discovery**

(Organizers: J. Tornell J.M Lundberg)

### POSTER SESSIONS

**Friday, August 18 and Saturday, August 19, 1:00-2:30 PM**

Posters will be selected from the submitted abstracts and grouped together thematically.

### SATELLITE SYMPOSIUM 1

**Functional Genomics: A New Approach to Understanding Cardiovascular and Renal Dysfunction**

**August 19-20, 2000**

**Stockholm University**

Organizers: Peter Thorén, Stockholm, D. Neil Granger, Shreveport

*An Acta Physiologica Scandinavia Symposium in connection with the SPS/APS meeting in Stockholm August 17-19, 2000*

*Registered participants of the main meeting may attend this Acta Physiologica Scandinavia symposium free of charge. The venue of this symposium will also be at the campus of Stockholm University, very close to the main meeting.*

PROGRAM:

**Saturday, August 19, 2000**

**Session 1: Technical aspects of models used in functional genomics**

**Session 2: Myocardial function**

**Session 3: Kidney Function**

**Sunday, August 20, 2000**

**Session 4: Regulation of blood pressure and vascular tone**

**Session 5: Hypoxic and Ischemic Tissue Injury**

**Session 6: Vascular function and pathology**

**Session 7: Inflammation**

**For further information, please contact Professor Peter Thorén (peter.thoren@fyfa.ki.se)**

### SATELLITE SYMPOSIUM 2:

**Physiological Mechanisms in Diabetes**

A Satellite Symposium of the Joint American and Scandinavian Physiological Societies' Meeting in August 2000

**August 12-13, 2000**

**Reykjavik, Iceland**

Organized by the Icelandic Physiological Society and the Icelandic Endocrine Club

Organizers: Rafn Benediktsson (rafnbe@shr.is), Thor Eysteinnsson (thoreys@hi.is), Logi Jonsson (logi@hi.is)

### PROGRAM

**Session topics and speakers:**

**Vascular biology:** Karl Tryggvason (SVE), Einar Stefansson (IS), John E. Tooke (UK), Billy G. Hudson (USA).

**Genetics:** Karl Tryggvason (SVE), Ake Lernmark (USA), Kari Stefansson (IS).

**Pathophysiology:** Peter C. Butler (USA), J.R. Seckl (UK), Ole Schmitz (DK), Richard Bergman (USA).

**Abstracts should be submitted no later than April 15, 2000.**

## GENERAL INFORMATION

For all other information, such as more details of the above program, poster-instructions, location of events, and tourist information, kindly see the homepage of the Scandinavian Physiological Society (<http://www.scandphys.org>). There you will also find the forms for registration and hotel reservations, as well as for submitting abstracts. Information is also available at <http://www.faseb.org/aps/sps-apsmeeting.html>.

## DEADLINES

Receipt of abstracts: **May 3**

Registration and room reservation: **May 15**

Surname \_\_\_\_\_

**JOINT SPS/APS MEETING TRAVEL GRANT PROGRAM**

**Stockholm, Sweden**

**August 16-19, 2000**

1. Name and Degree: \_\_\_\_\_ Year of highest degree: \_\_\_\_\_  
2. Position or employment title: \_\_\_\_\_ Year of Birth: \_\_\_\_\_  
3. Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
4. Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_  
5. Email Address: \_\_\_\_\_  
6. Country of citizenship: \_\_\_\_\_ Visa status if not US citizen: \_\_\_\_\_  
7. Underrepresented Minority Applicants: Please circle ethnic group to which you belong:  
African American    Hispanic    Native American    Pacific Islander  
8a. Gender: Male \_\_\_\_\_ Female \_\_\_\_\_  
8b. Do you need special assistance or accommodations? \_\_\_\_\_  
9. Attending entire Joint Meeting? Yes \_\_\_\_\_ No \_\_\_\_\_ If not, which days will you attend? \_\_\_\_\_  
Will you present an invited paper or poster at the Meeting? Yes \_\_\_\_\_ No \_\_\_\_\_  
If so, please indicate the session(s) you will address. If invited, attach letter of invitation.  
\_\_\_\_\_  
10. Do you intend to submit a poster? (If yes, please give title): \_\_\_\_\_  
\_\_\_\_\_  
11. Please describe your area of specialty (e.g. cell physiology, neurophysiology, etc.):  
\_\_\_\_\_  
12. Travel:    a. City of departure \_\_\_\_\_    b. Support requested \_\_\_\_\_  
                  c. Amount of other support available (excluding personal) \_\_\_\_\_  
13. Recent publications (not more than 5 titles, giving full refs). If listing abstracts or manuscripts in press, please indicate.

**Deadline for postmark of applications: May 3, 2000**

**Submit six (6) copies to Martin Frank, Ph.D., Executive Director, American Physiological Society, 9650 Rockville Pike, Bethesda, MD 20814. Fax: 301-571-8305.**

Surname \_\_\_\_\_

14. Anticipated abstract (Not more than 250 words on paper or poster you plan to present at the Joint Meeting, including names of author and coauthors and indicate presenter. If none, abstract of current work.)

15. Give a brief resume of the scientific purposes and goals of your trip in addition to attending the Joint Meeting, including other meetings, satellite symposia, laboratories you plan to visit, work on collaborations, etc.

## Education

### Education Office Launches Online Newsletter for Summer Programs

The APS Education Office recently introduced a new addition to the APS website, *The Teacher/Researcher Connection*. This quarterly online newsletter targets middle/high school science teachers from the APS *Frontiers in Physiology* and *Explorations in Biomedicine* summer research programs, the APS researchers who sponsored their work in the lab for a summer, members of APS Local Outreach Teams, and all APS members interested in K-12 outreach.

Newsletter topics cover many areas of interest to K-12 teachers and APS researchers who participate in K-12 outreach. The **Teaching Resources** section includes links to science websites, and information on publications, activities, and equipment for science teaching. **Recent News** highlights Summer Research Program information and updates on APS Education Office activities. **Meet a Colleague** presents articles on program participants and their involvement in interesting projects and research. Specific articles on each program are also included in the **Frontiers**, **Explorations**, and **Local Outreach Team** sections.

To view the newsletter online, go to <http://www.faseb.org/aps/educatn/connectionsweb/home.htm>. Please direct any suggestions or questions to the APS Education Office at (301) 530-7132 or [educatio@aps.faseb.org](mailto:educatio@aps.faseb.org).



## Program Announcement Porter Physiology Fellowships for Minorities

Closing Date for New Applications: June 15, 2000  
Announcement of Awards: August 20, 2000

Annual Stipend: \$15,000

Duration of Fellowship: 1 year with possibility of 2nd year of support

The Porter Physiology Fellowships for Minorities are open to underrepresented ethnic minority applicants (African Americans, Hispanics, Native Americans, Native Alaskans, or Pacific Islanders) who are citizens or permanent residents of the United States or its territories. Applicants must have been accepted into or currently be enrolled in a graduate program pursuing an advanced degree in the physiological sciences.

FOR AN APPLICATION  
CONTACT:



The American Physiological Society  
Education Office  
9650 Rockville Pike  
Bethesda, MD 20814-3991  
(301) 530-7132  
fax (301) 571-8305  
[educatio@aps.faseb.org](mailto:educatio@aps.faseb.org)  
<http://www.faseb.org/aps/educatn/porter1.htm>

Sponsored by: APS Porter Physiology Development Committee

### Frontiers in Physiology 2000 - Teacher and Research Host Awards

The Education Office is pleased to announce the 2000 Awardees of the **Frontiers in Physiology** summer research program for teachers. This program allows middle and high school life science teachers an opportunity to work in the laboratories of APS members during the summer, attend a one-week retreat to explore inquiry-based teaching, develop an inquiry-based lab activity, and attend Experimental Biology 2001.

More information about the program is available at:  
<http://www.faseb.org/aps/educatn/frontiers.htm>.

#### Frontiers in Physiology 2000 Teacher/APS Host Awards:

- Yeevernett Anderson, **Norman W. Weisbrodt**,  
University of Texas-Houston Medical School
- Jonathan Borne, **Mary D. S. Frame**,  
University of Rochester
- Kris P. Clements, **D. Neil Granger**,  
Louisiana State University Health Science Center
- Sue Diggs, **Thomas A. Pressley**,  
Texas Tech University Health Sciences Center
- Jocelyn Eckerman, **Roger McCarter**,  
University of Texas Health Science Center
- Lissette Gonzalez Perez, **Jason H. Mateika**,  
Teachers College, Columbia University
- Mildred A. Hoover, **Nancy J. Pelaez**,  
California State University, Fullerton
- Bruce V. Howe, **Robert D. Foreman**,  
University of Oklahoma Health Science Center
- Carolyn Martin, **David S. Roane**,  
University of Louisiana, Monroe
- Christy Menard, **Vernon S. Bishop**,  
University of Texas Health Science Center
- Margaret E. Shain, **Jeff C. Falcone**,  
University of Louisville
- Cory Sliftein, **Cheryl L. Watson**,  
Central Connecticut State University
- Douglas A. Tyson, **Susan E. Mulroney**,  
Georgetown University School of Medicine
- Younging Wang, **Jeffrey W. Holmes**,  
Columbia University
- William A. White, **C. Subah Packer**,  
Indiana University

### APS Participates in Planning for Undergraduate Digital Library

In March 2000, the American Association for the Advancement of Science (AAAS), in conjunction with the APS, the American Society for Microbiology, the Ecological Society, the National Association of Biology Teachers, and other professional societies, developed and coordinated a meeting to plan an electronic library of learning resources for undergraduate biology education. Support for the planning process was provided by the NSF's National Science, Mathematics, Engineering, and Technology Education Digital Library (NSDL) program.

The purpose of the meeting was to develop an initial plan of action for creating and implementing the electronic library. Participants first heard from experts in the development of digital libraries on lessons learned in the development and implementation of these important, but complex resource databases. Next, perspectives on the importance of an electronic library for undergraduate biology education were provided by NSF program officers, undergraduate educators, and representatives from scientific and teaching societies.

During the perspectives session, APS Education Officer Marsha Lakes Matyas provided an overview of the new APS Archives, its goals, history, and future directions. In response, APS member **David Bruce**, Wheaton College, offered perspectives from undergraduate educators, including the results of an informal email survey of APS Teaching Section members and HAPS members.

For the remainder of the three-day meeting, participants met in working groups to develop initial plans of action in five areas: organization and management; collection development and acquisition; attracting and developing library users; technical aspects; and research and evaluation. APS member and AAAS Board of Directors member, Nina B. Schwartz, Northwestern University, participated as a member of the organization and management team. Marsha Matyas led the research and evaluation team and presented the team's plan for process and summative evaluation of the library project.

For more information on the digital library project, including the presentations made by Matyas and Bruce and future updates on the digital library project, visit the APS Archives site at <http://www.faseb.org/aps/educatn/Archive/Archive.html>.



## Education

### Medical Physiology Curriculum Objectives - UPDATE

The Medical Physiology Curriculum Objectives Project, headed by **Robert G. Carroll**, Department of Physiology, East Carolina University School of Medicine, **L. Gabriel Navar**, Department of Physiology, Tulane University School of Medicine, and **Mordecai P. Blaustein**, University of Maryland School of Medicine, presents core competency physiology criteria considered essential for all medical and health professional students pursuing further studies in pharmacology, pathology, pathophysiology, and medicine.

The purpose of developing these criteria is to provide guidelines for the breadth and depth of knowledge in the physiological principles and concepts that are considered minimal and essential for further progress in understanding mechanisms of disease and body defenses. Regardless of the specific didactic or educational approach used by any given institution, that institution must develop mechanisms to

assure that the students are being inculcated with these basic principles and concepts at an appropriate depth of understanding. The development of these core learning objectives will allow all programs to determine if their students are achieving at least this basic level of understanding.

A joint project by The American Physiological Society and the Association of Chairs of Departments of Physiology, the project began in 1998. Section co-coordinators and participants were recruited, section objectives compiled, drafted, and edited. The draft objectives were posted on the APS website, distributed to physiology department chairs and course directors, and presented to members at Experimental Biology'99. Final revisions will be distributed in April 2000. A draft is available on the APS website at: <http://www.faseb.org/aps/educatn/MedPhysObj/medcor.htm>.

### Women Life Scientists: Past, Present, and Future



APS  
member  
price: \$15.00  
•••  
20 modules  
•••  
338 pages

**Increase students' exposure both to female science role models and to hands-on, inquiry approach, and problem-solving science activities, as recommended by the National Science Education Standards.**

Modules drop easily into middle and high school life sciences curricula — not an “add-on.”

Each module contains a biography of a female science role model and related life sciences activities with a multidisciplinary focus.

Activity format includes suggestions for teachers, assessment ideas, and handouts for students.

### The Science of Life

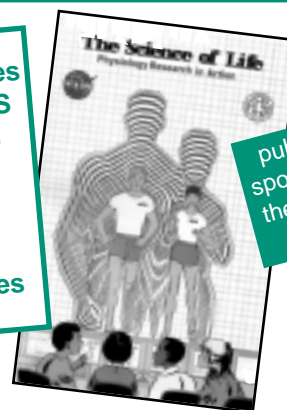
a comic book to  
use in the grade 6-12 classroom!

**Here's a fun and interesting way  
to introduce students to physiology!**

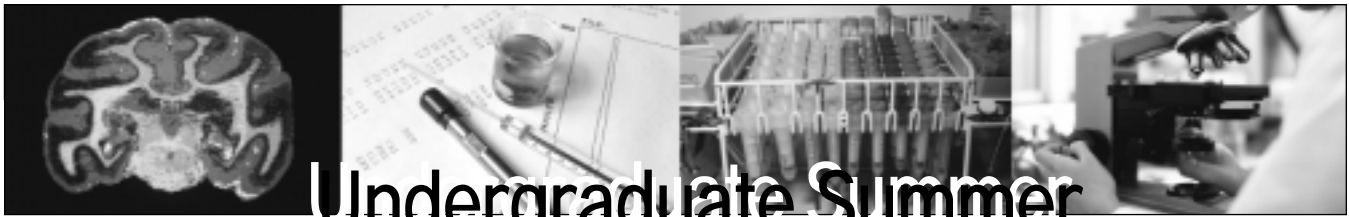
- What is physiology?
- What do physiologists do?
- What kinds of discoveries do physiologists make?
  - How does the work of a physiologist benefit humans and animals?

Research shows that students will read comic books over and over again, making the comic book a great science resource!

1st 30 copies  
free to APS  
members  
•••  
in color  
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call for  
bulk prices



publication  
sponsored by  
the APS and  
NASA



# Undergraduate Summer Research Fellowship Awards

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In 1999, the APS established a new program to fund four Undergraduate Summer Research Fellowships during the summer of 2000. Because of the number of outstanding applicants, APS has increased the number of awardees from four to 12 for the 2000 program. Selection of awardees was based upon academic merit and availability of appropriate faculty mentors. Special considerations were given to applicants whose socioeconomic background, access to educational opportunities, and other life experiences indicated that they would especially benefit from this program. All applications were reviewed, evaluated, and ranked by the the APS Career Opportunities in Physiology Committee.

The award provides a \$2,000 stipend to the student (10 weeks support) and an unrestricted \$500 grant to the faculty sponsor/advisor. Student awardees are eligible for a travel grant (\$800 maximum) to allow them to present their research data at EB 2001. More information about the fellowship is available at: <http://www.faseb.org/aps/education/Careers/UndSumFell.html>.

## Student/Research Hosts Awards:

Jonathan Hernandez, Host: **Susan C. Frost**, University of Florida

Nicole Silva, Host: **Joseph R. Haywood**, University of Texas Health Science Center

Rebecca Stein, Host: **Dorothy Hanck**, University of Chicago

Katharine R. Jenkins, Host: **David Robertshaw**, Cornell University

Cara Weisbrod, Host: **Michael J. Joyner**, Mayo Clinic

Lindsey Glickfield, Host: **Richard W. Tsien**, Stanford Medical School

Jarrad Scarlett, Host: **Robert Steiner**, University of Washington

Kadon Hintz, Host: **Amy J. Davidoff**, University of New England

William Fannon, Host: **Ronald N. Cortright**, East Carolina University

Jane Healy, Host: **Lawrence Espey**, Trinity University

Christopher Ortiz, Host: **V. Reggie Edgerton**, UCLA

Christin Spahn, Host: **Daniel Ely**, University of Akron



APS Education Office  
The American Physiological Society  
9650 Rockville Pike, Bethesda, MD 20814  
Phone: (301) 530-7132, Fax: (301) 571-8305  
Email: [archive@aps.faseb.org](mailto:archive@aps.faseb.org)

## Online Teaching Resources for Physiology Educators

- ◆ Case Histories
- ◆ Lecture Slides
- ◆ Links to Course Syllabi
- ◆ Links to Animations and other Resources
- ◆ Meetings and Reports on the Teaching of Physiology

## Positions Available

**Graduate Programs in Neuroscience:** The Department of Physiology and Neuroscience at the Medical University of South Carolina in Charleston announces graduate programs with a focus on neuroscience leading to the Master of Science and Doctor of Philosophy degrees. Faculty members have research expertise in the cellular and molecular biology of substance abuse, neurodegenerative and psychiatric disorders, as well as expertise in animal models pertaining to these disorders. For correspondence or more information, please contact Dr. George E. Tempel, Graduate Program Director, Medical University of South Carolina, 167 Ashley Avenue, Suite 607, Charleston, SC 29425. Tel: 843-792-2977; fax: 843-792-4423; email: tempelge@musc.edu.

**Postdoctoral Position:** A postdoctoral position in the Department of Physiology, The University of Tennessee, Memphis, is immediately available to study local and global calcium signaling in arterial smooth muscle: modulation of sarcolemmal ion channels and regulation of cellular contractility (for review see Jaggar et al., *Am. J. Physiol.* 278: C235-C256, 2000). Qualifications: PhD in physiology or related field. Experience with patch-clamp, confocal microscopy, or calcium fluorescence is beneficial. Please send curriculum vitae and three letters of reference to: Jonathan H. Jaggar, PhD, Department of Physiology, University of Tennessee, Memphis, 894 Union Avenue, Suite 426, Memphis, TN 38163. Fax: 901-448-7126; email: jjaggar@physiol.utm.edu. The University of Tennessee is an EEO/AA/Title VI/Title IX/Section 504/ADA/ADEA employer.

**Postdoctoral Fellows/Research Associates:** The Department of Physiology and Biophysics and the Center for Excellence in Cardiovascular-Renal Research of The University of Mississippi Medical Center invite applications for postdoctoral fellows/research associates to train in cardiovascular and renal research. Candidates must have a PhD or MD degree with an interest in cellular/molecular research, as well as integrative physiology. Postdoctoral fellows will have the opportunity to learn a broad range of methods and research strategies, including genetics, molecular, biochemical, cellular, whole organ, and integrative biological approaches. Some of the current research areas in the Center include vascular biology, hypertension, diabetes and obesity, heart failure, kidney disease, atherosclerosis, and pre-eclampsia. Applicants should send a curriculum vitae, a statement of research interests and career goals, a graduate transcript and the names of three references to: Dr. John E. Hall, Department of Physiology and Biophysics, University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216-4505. EOE

**Senior Scientist:** Allergan, Inc., an international specialty health care company, has an immediate opening for a Senior Scientist in its biological research division, located in Irvine, CA. Responsibilities will be to conceive, design, propose, conduct, and possibly supervise theoretical and experimental studies aimed at identifying drug targets and mechanisms of drug action in order to drive the nomination of new drugs for human testing in the area of photo dynamic therapy. This research position requires a strong scientific background with demonstrated performance in initiating and solving complex research questions. In addition, a pragmatic and strong technical ability and expertise in scientific disciplines are important for this position. Education and experience required include a PhD level education with at least two years specific academic or industrial experience. Desired fields of expertise include photo dynamic therapy research, ophthalmology research, biochemistry, and pharmacology. Allergan offers a competitive compensation package based on experience, as well as excellent benefits. For more information, please see our website at [allergan.com](http://allergan.com). If interested in applying, please email your resume to [recruiter@allergan.com](mailto:recruiter@allergan.com), or you may mail it to Recruiter - T1-1B/CM, 2525 Dupont Drive, Irvine, CA 92713. [EOE]

**Assistant Professorships:** Applications are invited for three tenure-track positions as Assistant Professor of Molecular Physiology & Biophysics. Applications for senior faculty positions from individuals with outstanding credentials also will be considered. The Department has an active PhD program and a strong emphasis on basic research as detailed on our website (<http://www.bcm.tmc.edu/physio/>). Research is facilitated by excellent core facilities and a longstanding tradition of collaborative interaction. We are particularly interested in recruiting individuals who work in the fields of physiological genomics, molecular motors, signal transduction, and biophysical approaches to ion transport and homeostasis. However, other areas of physiologic expertise also will be considered. Successful candidates must hold a PhD, MD, or equivalent degree, must have a clear record of scientific excellence, and must hold or be competitive for external research funding. Individuals will be expected to establish an independent research program and to participate in teaching of graduate and medical students. Salaries and start-up packages are highly competitive. Send curriculum vitae, a description of research plans, and three letters of reference to: Ms. Lynda Attaway, Dept. of Molecular Physiology & Biophysics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030. Baylor College of Medicine is an Equal Opportunity Employer. Underrepresented minorities and women are encouraged to apply.

## Positions Available

**Visiting Instructor in Human Physiology:** The University of Oregon invites applications for one visiting instructor in Human Physiology. The position requires experience teaching undergraduate and graduate students in human physiology and related areas at the university level, advising undergraduate/graduate students, and participating in departmental committees. Salary is \$26,000 for a 0.75 FTE. Send letter of application, curriculum vitae, samples of scholarly work if available, and 3 letters of reference to Human Physiology Position Search, 1240 University of Oregon, Eugene, OR 97403-1240. Tel: 541-346-4144; email: mwool@oregon.uoregon.edu. Deadline: **April 15, 2000**, or until filled.

**Scientist:** The Department of Physiology & Biophysics at the UMDNJ-Robert Wood Johnson Medical School is seeking a scientist with training in cardiovascular pathophysiology. The candidate is expected to participate in an ongoing NIH-funded research project in the field of local myocardial ischemia and reperfusion. Duties include surgery, physiological measurements, data analysis, and preparation of manuscripts for publication. This position is available immediately. Please contact: Joseph Kedem, PhD, Professor, Dept. of Physiology & Biophysics, UMDNJ, Robert Wood Johnson Medical School, 675 Hoes Lane, Piscataway, NJ 08854. Phone: 732-235-8923, Fax: 732-235-8346; email: [Kedem@umdnj.edu](mailto:Kedem@umdnj.edu).

**Life Scientist:** Entelos has an opening for life scientists for Systems Biologist positions on our Diabetes PhysioLab Development Staff. The systems biologist works with biologic modelers and systems biologists to develop and assess our mathematical models. The ideal candidate would have a PhD in physiology, metabolism, diabetes, nutrition, or endocrinology; two to three years of experience in a pharmaceutical, biopharmaceutical, government, or academic research setting; experience in integrating multidisciplinary research with perspectives ranging from clinical medicine to molecular biology; an understanding of experimental protocols, methods, and designs; strong oral and written communication skills, including technical writing and presentation; ability to work in diverse, cross-functional team environment; strong interest in working on ready-to-market products for pharmaceutical companies; comfort with college mathematics and literature search engines; interest in teaching with significant experience in academic or professional settings; experience in managing a team, outside consultants, or academic collaborations; interest in pursuing a technical career path outside a wet laboratory environment; and

**Assistant/Associate Professor of Physiology:** The Department of Physiology at West Virginia University School of Medicine is seeking a cardiovascular or renal physiologist for a tenure-track appointment at the Assistant/Associate Professor level. Preference will be given to vascular biologists using modern cellular/molecular techniques to study regulation or adaptation of the circulation. We seek outstanding candidates with a PhD degree and post-doctoral experience who will establish and maintain a vigorous, externally funded research program and who are enthusiastic about collaborating with existing faculty in physiology and other departments. The successful applicant will join a department of 14 full-time faculty with expertise in cardiovascular, renal, endocrine, neural, and pulmonary physiology and will have access to modern core facilities for transgenic rodent production, recombinant DNA technology, cell/tissue culture, and image analysis. The appointee will also be expected to contribute to departmental missions, including active participation in teaching and graduate education. A competitive salary and start-up package are available. Interested individuals should submit a complete curriculum vitae, a brief description of research interests and career goals, and the names and addresses (including e-mail) of three qualified references to: Matthew A. Boegehold, Search Committee Chairman, Department of Physiology, PO Box 9229, West Virginia University, Morgantown, WV 26505-9229. Review of applications will begin **April 28, 2000** and will continue until position is filled. Women and minorities are encouraged to apply. [AA/EOE]

strong leadership, communication, facilitation, and presentation skills and enjoyment of understanding key details while thinking broadly about whole systems. Particular qualifications for the Diabetes Life Scientist include a deep understanding of normal, whole body metabolism; knowledge of the metabolic and endocrine derangements that occur in type 2 diabetes, particularly with respect to pathogenesis; deep knowledge of the insulin signaling pathway and mechanisms of peripheral insulin resistance and pharmacologic sensitization; knowledge of the biochemical signaling involved in pancreatic beta cell insulin secretion; and extensive familiarity with the biochemistry of the adipocyte. Entelos provides a new class of research tools for the biopharmaceutical industry—computer-based disease simulation models. For more information, please contact: Ms. Zarin E. Randeria, Director, Human Resources, Entelos, Inc., 4040 Campbell Avenue, Suite 200, Menlo Park, CA 94025. Tel: 650-330-5215; fax: 650-330-5252; email: [randeria@entelos.com](mailto:randeria@entelos.com); Internet: <http://www.entelos.com>. Upon hiring, proof of eligibility to work in the US is required. [EOE]

## Positions Available



**Junior & Senior Faculty:** The Department of Physiology, the Cardiovascular Research Center and the Human and Molecular Genetics Center invites applicants for both Junior and Senior Faculty Positions. Suitable areas of research include, but are not limited to, functional genomics using cellular, molecular and/or genetic approaches (including SNP and sequence based biology) to study integrated physiology, with emphasis on cardiac, vascular, renal, and pulmonary systems. These positions can be filled immediately. Appointment requires a PhD or MD/PhD degree post-doctoral experience, and evidence of outstanding independent research potential. Faculty appointments will be through the Department of Physiology with joint appointments in the respective Centers as appropriate. We offer a highly competitive compensation package, ample start-up funds and state-of-the-art research facilities. All candidates are asked to provide a CV including research funding and research interests; teaching experience; a list of publications; an outline describing a proposed program of research; three representative reprints; and names, addresses and phone numbers of four references to: Medical College of Wisconsin, ATTN: J. Schimke, Department of Physiology, 8701 Watertown Plank Road, PO Box 26509, Milwaukee, WI 53226-0509. EOE M/F/D/V

**Associate Research Scientist:** The University of Iowa College of Medicine, Department of Internal Medicine, Cardiovascular Diseases Division, Transgenic Animal Facility, is seeking an Associate Research Scientist to perform basic or applied research on problems which present critical or unusually difficult obstacles to understanding and which involve the development of new theories or methodologies with complete responsibility for all aspects of the research project. To develop and integrate new state-of-the-art methodologies to the application of transgenic animals and to implement development of those methods in the Transgenic Animal Facility. Requires a person in this classification have the academic knowledge of a discipline generally associated with a Doctoral degree, or an equivalent professional degree, i.e., MD, DDS, or DVM. In addition, such a person will normally have accumulated several years of progressively responsible independent research work. This work will be evidenced by publications, inventions and the like, which have had considerable impact and value to the person's field or discipline. Requires experience with the production and analysis of transgenic mice and an understanding of basic mouse genetics. Desires previous experience with the characterization of knockout mice and the use of recombinase based systems. Please send resume and cover letter indicating #39383 to: Carol Wehby, Human Resources, Internal Medicine, E400 GH, 200 Hawkins Drive, Iowa City, Iowa, 52242-1081. The University of Iowa is an Equal Opportunity and Affirmative Action employer. Women and minorities are strongly encouraged to apply.

## Position Wanted

**Animal Study Proposal Writing and Animal Study Design:** 12-years experienced laboratory animal research support veterinarian starting small business as an outsource for animal study design and writing. Specializing in difficult animal models, analgesics, anesthetics, and peri-procedural care. Will work with scientists and their program veterinary staff. Please contact Victoria Hampshire, VMD, Advanced Veterinary Applications. Tel: 301-320-6082; email: vet-care@msn.com.

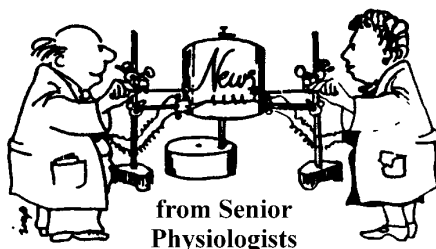
## News From Sr. Physiologists

### Letters to Gene Renkin

**Kate Bárány writes:** “Thank you for your birthday greetings. It is a much appreciated tradition of APS to stay in contact with Senior Physiologists. As I browsed through the “News from Senior Physiologists,” I noted that most were written by males, who basically continued their professional activities. I myself did not plan to retire but recently became visually handicapped and could not continue my research and teaching. Therefore, as Professor Emerita I am focusing my efforts on service, in particular, women’s issues.

“I am a member of the Chancellor’s Committee on the Status of Women (CCSW) at the University of Illinois at Chicago since 1976. The CCSW is committed to enhancing the opportunities of women in academia and mentioned below are some of the issues we have addressed: A university-specific problem is that the tenure clock and biological clock are running simultaneously. The need for childcare centers on campus is paramount for working mothers especially. A crucial task is to balance work and home: though dedicated to work, women are often derailed by child-bearing and child-rearing responsibilities. In recent times, men are sharing more of the care-giving at home; still, in general, the women provide the bulk of it. To help women to focus and be efficient, the CCSW has organized workshops for tenure and promotion and for mentoring, has established special services (e.g. for returning women students), and has supported training for leadership. An important issue is to have a family-friendly environment. This ranges from provision of adequate women’s washroom facilities to flexible time schedules. There are surveys demonstrating salary inequities between males and females; to remedy them it is important that a separate pool of money should be earmarked to equalize salaries.

“I advocate that starting faculty



should concentrate on excellence in research and teaching and should choose committees that are less time consuming (e.g., seminar committee that also provides good opportunities for networking). Before tenure, one should avoid controversial projects. One should be goal oriented and plan publications in a way that no calendar year is missing from the list.

“In closing, I would like to add some autobiographical data: Michael, my husband, and I were born in Hungary, we both are Holocaust survivors. We are happily married for over 50 years, raised two children, who became successful scientists, and have four grandchildren. Michael and I have been collaborating in muscle research. I won several teaching awards and was named The Woman of the Year in 1996 at the University of Illinois at Chicago.

“If you have any questions or comments, please send me an e-mail: kbarany@uic.edu.”

**J.G. Llauro writes:** “When I entered the research arena in the fifties the ‘hot’ issues were steroids and antibiotics. I participated in the discovery of aldosteronism while at Hammersmith Hospital in London, UK, characterized postoperative transient aldosteronism while at Otago University in Dunedin, New Zealand, and wrote a dissertation on anabolic steroids while at MD Anderson Hospital in Houston, TX, never thinking that this expression would become a household term, or should I say a ‘sportshold’ term?

“My perennial curiosity for mathematics and engineering was, to a large extent, satisfied in the early 60’s when I obtained a Master’s in Biomedical

Engineering. Then, for a decade we had extreme difficulties to have research papers on extrarenal effects of aldosterone using computer simulation and analysis accepted in biological journals. The ‘old guard’ in the editorial boards thought the computer was encroaching on their domain. I must give credit to Eugene F. Yates, editor of *Journal of Applied Physiology*, for being one of the few understanding editors at that time.

“When difficult times for obtaining monies for research came, I moved to the clinical specialty of Nuclear Medicine where I am still practicing as I hold the title of Professor of Radiation Sciences at Loma Linda University School of Medicine. I continue working because I enjoy it. If one day the powers that be try to make life difficult for me, I shall retire and concentrate on my hobbies, i.e., teaching mathematics and perfecting my Russian, a fascinating language that I have been learning throughout the years.

“The fifties and sixties were two glorious decades for research. When one had an idea to carry out an experiment, one could go straight to the animal room, select a few rats and treat them accordingly. It would have been unthinkable that one’s notion had to be put in writing, formalized, and distributed to several institutional committees, manned by persons who knew little or nothing about the topic, for approval. And yet great discoveries were made at that time. Nobody remotely thought of forging results or adulterating experiments. Honesty prevailed. I find it extremely sad to see nowadays all the bureaucratic paperwork that must be attached to a scientific manuscript submitted for publication. Even more distressing is the detailed account each author must give on what he/she has done in the paper submitted to certain journals.

“On the family aspect I am very proud to be the father of four sons and two daughters all gainfully employed in

## News From Sr. Physiologists

socially relevant occupations, and have thus far eight grandchildren. I thank you for noting my 70th birthday and giving me the opportunity to write this letter.”

### Letters to Michael Bárány

**David K. Detweiler writes:** “Many thanks for your letter congratulating me on my 80th birthday. I was on the faculty of the School of Veterinary Medicine, University of Pennsylvania from 1942 to 1990. During this time I taught physiology, pharmacology, and cardiology.

“In retrospect, that period of university service whizzed by so quickly that when I recollect unlocking my office door in 1942 and then locking it in 1990, I can’t believe there were 48 years between these two events.

“It was an exciting and rewarding period. During the 1940s and early 1950s the younger academic physicians (called the Young Turks) and veterinarians wanted to increase the application of basic medical science to clinical medicine. In my case this resulted in getting trained in cardiology at the Philadelphia General Hospital under the gracious tutelage of Martin Wendkos and applying the then current diagnostic methods (electrocardiography, fluoroscopy, radiology, and physical diagnostics) to animals in our hospital. This led to establishing a heart station for our animal patients, publishing the diagnostic criteria for specific cardiac diseases in animals, and an epidemiologic study of heart diseases found in approximately 5,000 canine patients brought to our clinic. The latter study was supported by NIH grants. Later the NIH awarded a generous umbrella grant for the establishment and maintenance of The Comparative Cardiovascular Studies Unit, an educational, training, and research organization, covering a period of 14 years (1960 to 1974). In 1974 the umbrella grant was canceled in favor of having the unit members file individual research grant applications in the fields of congenital heart disease genetics, electrophysiology, comparative cardiology, and comparative electrocardiography.

“In 1974, the American College of Veterinary Internal Medicine (ACVIM) was established, a culminating result of the early activities of the veterinary ‘Young Turks.’ Diplomats must meet certain training and experience requirements, pass a general examination, and a specialty examination in any of 4 specialties (cardiology, internal medicine, neurology, and oncology) to become board certified. Currently, there are some 95 board certified veterinary cardiologists in the ACVIM.

“Another field of interest developed in the 1950s after the first tranquilizer, chlorpromazine, was introduced into clinical use. Unexpected sudden deaths occurred in some patients, requiring design of an electrocardiographic study in dogs. It was found that chlorpromazine prolonged the QT interval, blunted or reversed the T waves, and altered the form of the ST segment. These changes could be either antiarrhythmic or arrhythmogenic. These and later findings gradually led to the universal application of electrocardiography in preclinical experimental animal studies before testing drugs in man. This opened a fascinating field for the application of comparative electrocardiography and cardiology.

“In 1990, I retired at the age of 70 from the faculty of the University of Pennsylvania, School of Veterinary Medicine, in accordance with my belief that older faculty members should become emeritus to open positions for younger faculty members and to maintain a proper faculty age balance.

“Since retiring from the University, I have become a full-time consultant to the drug industry in the field of cardiovascular toxicology. This involves reading and reporting on thousands of rat, monkey, and dog electrocardiograms together with other toxicologic data yearly, a fascinating full-time occupation.

“Thus, emeritus status does not mean that one need stop working or contributing to one’s field.”

### Kenneth D. Gardner, Jr., writes:

“Thank you for your letter of October 3, 1999, congratulating me on my 70th birthday. Your letter reached me in the Sierras of California where, as a retiree, I spent the summer horseback riding, cattle-pushing, and cowboying. Back to the University for the winter months, I relish my participation on the Medical Center’s Institutional Review Board. Its bimonthly meetings are laced with contemporary scientific and bioethical issues. I also serve on two medical society and state health department committees in a personal effort to bridge community and medical school.

“What did I learn from 40 years in academe? 1) Anticipate change. While the world may look to the scientist to discover, analyze, transmit, and evaluate new medical knowledge, the university employer looks to the economic value of the scientist. The scientist’s value changes with time, as the public’s perception of research and science evolve. In response, employment opportunities, available funds, and the career goals of students also mutate. 2) Be a ‘turn on.’ Make like you are in an elevator. The first floor door is shutting. You must get off at the second floor. A carefully constructed, brisk thirty-second account of your research that leaves the listener tantalized, informed, and thinking, ‘I want to hear more.’ 3) Don’t be side tracked. Be a good teacher, serve on your share of committees, but do not sacrifice research time!”

### Letters to Ken Zierler

**Robert L. Vick writes:** “Thank you for your letter on the occasion of my 70th birthday. I have been retired for five years, and I enjoy it immensely; however, I have been surprised at how little time I seem to have to get done the things that I want to do.

“Before I retired from Baylor College of Medicine, I had thought that I would have more time to play golf and sail, but I have been too busy with other things to do either of those at all. I have com-

*(continued on page 104)*

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(continued from page 103)

pleted several building projects, the largest of which were a concrete bulkhead and a 200 foot pier at our second home, on Galveston Bay. I have enjoyed improving and maintaining our homes and several rental properties that my wife, Rose, and I have acquired in Houston, Dallas, and Oxford, MS. I have adjusted my priorities to get the heavy work done first, before I get 'old.' This has meant limiting the time devoted to my principal interest, which I will call genealogical history, which deals not just with who people's ancestors were, but where and how they lived and what they did. Nevertheless, I have found enough time to extend my field of study from my own family to many others who lived in the rural county in Mississippi in which I was born and reared. Since Anglo settlement in that area began only in 1836, when the Chickasaw Indians were removed, records from the very beginning of the present culture are available. As a result of spending many happy hours in libraries, courthouses, cemeteries, and archives, and in correspondence with others, I probably have become the foremost authority on the personal history of that region!

"Although I am no longer associated with the laboratory and the classroom, I keep up with what is going on in Medicine and Physiology through *The New England Journal of Medicine* and the publications of the APS. My training in physiological research has benefited me enormously in my historical research. I still obtain and analyze data and still construct and test hypotheses, and what I find when the data come in can be just as surprising and delightful in the archives as in the laboratory!

"On the personal side, Rose and I both are in good health and can remember things reasonably well. We enjoy visiting with family and friends and traveling a bit, but our greatest joy is being there as our young grandson grows up."

**M. Elizabeth Tidball** writes: "Your letter of almost a year ago has languished too long on my desk, not from lack of interest, but rather from a wonderfully full plate of opportunities and responsibilities. I hope you have read Marie Cassidy's review of our book, *Taking Women Seriously: Lessons and Legacies for Educating the Majority* (American Council on Education/Oryx Press, 1999), which will make clear part of what I have been doing most recently and what has been keeping me from your letter.

"Rather than detailing recent or remote happenings in my life, I would share with you an important relationship with another senior physiologist, William B. Youmans, who was my major professor at the University of Wisconsin-Madison for both my MS and PhD degrees when he chaired that physiology department.

"I went to Madison in the fall of 1952 with two half-time jobs in hand—both teaching assistantships—in the Department of Physiology in the Medical School where I hoped some day to become a graduate student. At the end of the year, which had also been Youmans' first at Madison, he told me that he now had an abundance of applications for graduate fellowships and could offer me only one assistantship, but he would like me to consider starting graduate school. I told him there was no way my husband Charlie and I could afford two kids in school (us!). Then I went home for lunch, and there I found a letter from Good Housekeeping magazine offering me \$500.00 for an article I had sent them rebutting an earlier piece on the disadvantages of being married. (Charlie and I were married in Madison on October 25, 1952, so I was an expert!) Well, I virtually ran back to school with letter in hand, knocked on Youmans' door, and breathlessly handed him the letter. Not only did I begin my formal graduate studies at Madison forthwith, but Youmans and I became great friends over the next seven years

when I was his student for my MS (1955) and then, after a detour to the University of Chicago for Charlie to complete his MD, for my PhD (1959).

"All the while Bill Youmans was convinced of my writing abilities as well as my scientific acumen—confidence that was to see me through the next many years when I eventually became the first woman full professor of physiology at the George Washington University Medical Center in Washington, DC, in 1970. Spouse Charlie had earlier become chair of the Department of Physiology at GWU but then had to resign that post in order for me to continue my academic career there.

"I do not recall exactly when Youmans retired, but eventually he and his wife Cynthia, who had also become our friend, moved to the Olympic Peninsula in Washington state, living near Port Angeles. We visited them there on several occasions, always laughing over the times we had shared so many years before, and telling them again how important they had both been to each of us in our personal and professional development.

"Now you are wondering why I am telling you all these things. It is because Bill Youmans, in an era when most men were especially harsh on women students—and bright women beware—was enormously supportive of both my scientific and creative capabilities. And while I made my way reasonably well as a physiologist, I recognized that the way for other women in graduate and medical education did not regularly have the kind of assistance and support Bill had given me when I was a student. As a result, I spent many hours working to establish opportunities for women—from co-founding a Women's Studies Master's Degree Program at GW, to serving on the Medical School admissions committee for many years, to founding the Task Force on Women for the American Physiological Society and the Committee on Committees, to establishing the Committee on the



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Education and Employment of Women in Science and Engineering at the National Research Council/National Academy of Sciences, and so on and on. Further, my research took a turn in the same direction when I began to apply my natural science capabilities to research on environments for the education of women. *Taking Women Seriously* is another result of my ways of combining scientific research and writing understandably—abilities nurtured by Bill Youmans from the beginning and continuing to the present time. It is also noteworthy that Charlie is a coauthor of this book, attesting to the durability of our team research also first encouraged by Bill Youmans in the physiology lab.

“There is mutuality here as well. Bill is still doing some writing himself, mostly in the area of medical/physiology history. When he has found himself too far removed from library resources with easy accessibility, Charlie and I have been able to fulfill his need through searching at the National Library of Medicine and sending off photocopies whenever that made a contribution to his efforts. We also serve as ‘pre-editors’ when he prepares articles for journals.

“I have thought you would be intrigued by this small bit of our story because it tells of some 48 years of relationships—personal and professional—that have nourished us all and which continue to this day. Bill and Cynthia now live near their son Gilbert who is a professor at the University of Missouri-Columbia.

“They will always serve as important role models for us as well as special friends.

“Thank you so very much for writing. It has always been very important to me to acknowledge and celebrate my intellectual upbringing as a physiologist, even though it has often been difficult for me to find a straightforward path to its expression. I retired from GWU in 1994 and was named Professor Emeritus of Physiology, and I now serve as Distinguished Research

Scholar and Co-director, with Charlie, of the Tidball Center for the Study of Educational Environments at Hood College in Frederick, MD.”

**Allen Weisse** writes: “Please forgive the long delay in my reply to your letter on the occasion of my 70th, birthday. Actually, your note was several months early, so I have waited a bit after my birthday (December) to give you a status report in the ‘wake’ of my having achieved three score and ten. You ask for ‘words of wisdom.’ Words I have aplenty; wise or not is for others to judge.

“I have always been a little leery of those cheerful reports of retired scientists appearing in *The Physiologist*. I am convinced, based upon my own experience and that of colleagues, that such correspondents are deluding themselves, as well as those who, one day, will be following them into retirement. It is not ‘a bowl of cherries!’

“If you hated your job, or your boss, or both, it is easy to leave it all behind. If, on the other hand, you have enjoyed your work over the years, leaving it can be somewhat traumatic. There is a large gap that appears in your persona when you are no longer ‘the professor of —’ or director of a laboratory. Even when you leave without having been asked, and are in good health, financially secure, and with many other interests to pursue (as has been my fortunate case), this pain of separation is real. I suspect it is more or less so for all of us who retire. The good news is that this passes off in time as you progress further into your new interests in the decades ahead. Although I still have a few obligations to perform at my medical school and hospital in the capacity of clinical professor, I no longer look forward, as I once did, to traveling into Newark, unless it is to utilize the excellent library facilities in my new life as full-time medical historian.

“A major decision is whether to retire in a stepwise manner or all in one fell swoop. Although unplanned, my own

separation came in steps as a replacement was sought to fill my position. The gradualness eased the process in one sense, but my continued presence as one on his way out subjected me to a number of slights, real and/or imagined to which such individuals may fall prey. John Lancaster of *The New Yorker* has written of the business world, ‘Never fall in love with a company, because, however well you think you’re being treated, the company never falls in love with you.’ I believe the same holds true in academia. With this in mind, perhaps, others headed for retirement do so abruptly and completely. If there are other interests awaiting you that you wish to pursue, this may be the wisest course. If not, I recommend plugging along in your present job as long as they let you and as long as you are having fun.

“Forgive me if I have rambled on too much, but I now have become a full-time writer; that is what I do. In any event, best wishes to all in the new year and the new millennium.” ❖



## Book Review

### Nutritional and Environmental Influences on the Eye

Allen Taylor (Editor)  
CRC Series in Modern Nutrition  
Boca Raton, FL: CRC, 1999, 285 pp.,  
illus., index, \$129.95  
ISBN: 0-387-98381-3

This book is the first of its kind in the field on contributions of nutritional and environmental factors in degenerative eye diseases. It is edited by Allen Taylor and authored by a group of experienced scientists who are leaders in their own subspecialty in eye research. The studies reviewed in this book present no doubt that sunlight, ultraviolet light, and oxygen-derived and other forms of free radical species derived from organic compounds are the agents causing oxidative stress which is involved in, at least, two blinding diseases that inflict the majority of people at old age, worldwide.

This book, compiled in 13 chapters, 285 pages, with experimental data in illustrations and tables contributed by several investigators, does an excellent job in explaining the hypotheses and the roles of various antioxidant nutrients in prevention and, possibly, treatment of cataract and age-related macular degeneration (AMD). In almost all the chapters, the authors have emphasized the significance of various commonly used nutrients. In addition, some important scientific areas, not popularly known by everyone, are brought to light. For example, a systematic and accurate method of cataract classification useful for epidemiological studies on environmental and nutritional influences in age-related cataract in the human to make the data comparable and improved is described in Chapter 3. Likewise, phase separation in cataract formation, and its application in testing

of candidate anticataract compounds as described in Chapter 7, could be of importance.

A few typographical and printing errors, although present, should not affect the quality of the overall material presented by Allen Taylor, who is one of the leaders in the field of vision research. In Chapter 1, the editor introduces the overall subject matter of the book and layout of the 13 chapters. Chapter 2 is on oxygen free radicals in the pathogenesis of cataract and possibilities for therapeutic interventions by ascorbate and pyruvate in experimental cataracts. The ocular effects of deficiency of these compounds, will be of significance. Chapter 3 is on the function of the lens and development of modern methods for quantifying cataracts. Chapter 4 is an elaborate review of nutritional and environmental influences on risks for cataract, based on the studies on lens in vitro and in animal models for cataract. Chapter 5 is on evaluation of the epidemiological studies of nutrition and cataract. Chapter 6 is a brief review of several nutrients such as carbohydrates, proteins and amino acids, and micronutrients such as vitamins and minerals, linked to cataracts in animals. Chapter 7 addresses the theory and mechanistic information about phase separation and its application in the study of mechanisms of cataract and evaluation of anti-cataract efficacy of test compounds. In Chapter 8, the role of sunlight and ultraviolet light (UVB) as risk factors for cataract, pterygium, and AMD and epidemiological studies are elegantly summarized. Chapter 9 highlights tobacco smoking as a possible risk factor for cataract and AMD, similar to other ailments such as pulmonary and heart diseases, stroke and cancer. Hard evidence is needed for this new area of scientific endeavor. Chapter 10 includes a concise and simplified introduction of AMD

with its pathology and classification based on the available knowledge and also gives details about drusens. Chapter 11 is on the history and etiology of AMD relating to oxidative stress, impairment of choroidal circulation, and degradation of Bruch's membrane. This chapter ends with a description of the epidemiological studies on the effects of antioxidant nutrients on macular degeneration. Chapter 12 gives a description of the macula and carotenoids with functional and nutritional roles and some epidemiological studies. It also includes information about the formation of lipofuscin granules in the retina. In the last, but not the least, Chapter 13, the authors describe a new technique for in vivo psychophysical assessment of lens optical density, an area that is not familiar to the researchers in the area of lens and cataract. There is no question that this technique could measure the extent of AMD. Whether the measurement of optical density of the lens could be applied to evaluate the risk factors for cataract is questionable. This noninvasive technique might be useful for epidemiological studies.

In conclusion, this book as one of the important and informative CRC Series in Modern Nutrition is related to the eye diseases of the elderly, such as cataract and AMD and is a timely and leading contribution for the twenty-first century. It is informative and important in planning future approaches for prevention and treatment of the degenerative eye diseases. Thus, this book will be valuable for a broad group of readers, including medical students, ophthalmologists, nutritionists, epidemiologists, pharmacologists, and basic scientists. ❖

*Durga K. Bhuyan  
Kailash C. Bhuyan  
Columbia University  
in the City of New York*

### Ernest Henry Starling (1866-1927), Physician and Physiologist - A Short Biography

Henriksen, Jens H.

Copenhagen, Denmark:

Lægeforeningens Forlag, 2000, 140 pp., illus., index, \$20.00.

ISBN: 87-7891-010-2.

This small volume provides interesting insights into the life and accomplishments of Ernest Henry Starling. It begins with a concise presentation of the historical, social and cultural context of the times in which Starling lived and worked, beginning in the late Victorian era, continuing through the Edwardian era, and extending into post-World War I Britain. Following a brief overview of his life, the next three chapters emphasize Starling's major contributions: the filtration theory of transcapillary fluid transport ('Starling forces'), the discovery (together with his brother-in-law Bayliss) of secretin, and the law of the heart ('Starling curves').

There is a clear exposition of Starling's primacy in fully appreciating the importance of the oncotic pressure of the plasma proteins and its role in balancing capillary hydrostatic pressure, subsequently confirmed with more elegant technical methods by Landis and Pappenheimer & Soto-Rivera. In connection with his discovery of secretin, Starling introduced the term *hormone* and the *hormone concept* in his Croonian Lectures of 1905. In 1914, Starling first used the term, *law of the heart*, which he explained as follows: "The mechanical energy set free on passage from the resting to the contracted state depends on the area of chemically active surfaces, i.e., on the lengths of the muscle fibers." From this, it is evident that the dependent variable is cardiac output and the independent variable is left ventricular end-diastolic pressure. However, it is of interest that

the accompanying illustration shows left ventricular end-diastolic pressure plotted on the vertical axis (the dependent variable by today's custom) and cardiac output plotted on the horizontal axis (the independent variable by today's custom). Throughout these chapters there is appropriate discussion of subsequent work up to and including the modern era, which places Starling's contributions in the proper historical context.

The next chapters deal with phases of Starling's career. Although Starling began his career as a medical student at Guy's Hospital in London in 1882, his request in 1899 for a more secure post as head of the department of physiology ('tenure') and greater research time went unanswered by the administration. Not unlike today's negotiating patterns, the administration was possibly thinking that the recent construction of a new and modern physiological laboratory would keep Starling at Guy's. Prior to receiving a response, he chose to accept the appointment as Jodrell Professor of Physiology at University College London where there was both greater job security and salary. It would appear that little is new in the world of university academic medical center life!

The chronology of his years at University College London, including activities related to the attendance of women at meetings of The Physiological Society and chairmanship of the 'Research Defence Society' to counter the anti-vivisectionist movement, provide detailed insight into the life of a physiology department chairman in the 1900s. The description of his participation in World War I reflects the predictable difficulty that research based analytical scientists often have with the decisions of government and military officials (i.e., politicians, bureaucrats, methods); Starling described them as "*kindly gentlemanly stupidity*". The closing chapter, dealing with the impact of Starling as a person, covers multiple topics: interactions with

domestic and international scientific colleagues (including Germans in the period surrounding the war) and Nobel Prize winners; his personal health and life style including his many living places in London and his wife, Florence Amelia Wooldridge, the daughter of a physiologist.

As is customary with historical works, much importance lies with the cast of characters and this book makes liberal and successful use of footnotes about each new person on the page where they are introduced. There are abundant photographs, figures, tables, hand written correspondence and other graphic material, much of it reproduced in its originally published form, which add significantly to the clarity of the exposition. Starling's bibliography is set out in 5-year epochs, loosely coupled to his career milestones. There are approximately 100 other citations which relate to Starling, his life and accomplishments. The index is detailed and thorough, largely consisting of the persons referred to throughout the book.

I liked this book. It is concise, clearly focused, insightful and informative. It has escaped the turgid prose of much that is offered as biography but is really history in disguise. As a clinical physiologist, Professor Henriksen has done us all a service by inviting us to know more about the man whose several scientific accomplishments contributed so much to the body of knowledge used in the care of patients, i.e., clinical physiology. ❖

Gerald F. DiBona  
University of Iowa

### ACDP Presents Distinguished Service Award to Norman Briggs

At its 1999 Winter Retreat in Palm Springs, The Association of Chairs of Departments of Physiology honored F. Norman Briggs with the ACDP Distinguished Service Award. Briggs is the former Chairman of the Department of Physiology at the Medical College of Virginia and Past-President of ACDP. He is currently an Emeritus Distinguished Professor.

The award was presented to Briggs by his PhD student, John Solaro, now Head of Physiology at University of Illinois at Chicago, and by Ernst Knobil, who was Chairman of the Department of Physiology at



F. Norman Briggs accepts the ACDP Distinguished Service Award from Ernst Knobil and R. John Solaro.

University of Pittsburgh, when both Briggs and Solaro were there. Knobil's presence was special in that Briggs had presented Knobil the Distinguished Service Award in 1983. Three other students in the Pitt department at the time were also at the ceremony: Richard Bergman, Chair of Physiology of University of Southern California, who trained with John Urquhart; Raymond Frizzell, Chair of Physiology at University of Pittsburgh, who trained with Stanley Schultz; and Earl Homsher, former Acting Chair at UCLA, who trained with Briggs. ❖

### R. Clinton Webb Selected MCG Chairman of Physiology and Endocrinology

R. Clinton Webb, a professor and researcher in the University of Michigan Department of Physiology, has been named Greenblatt Professor of Endocrinology and chairman of the Medical College of Georgia Department of Physiology and Endocrinology.

Webb also was named professor in the MCG School of Graduate Studies. "We are fortunate to have an individual of Dr. Webb's qualifications to lead the academic and research efforts of the Department of Physiology and Endocrinology," Darrell G. Kirch, dean of the MCG School of Medicine and senior vice president for clinical activities, said in recommending the new chairman.

"He is an outstanding scientist held in high regard by his colleagues, both nationally and internationally." Webb earned a doctorate in anatomy from the

University of Iowa in 1976. He completed postdoctoral work at the University of Michigan and the Universitaire Instelling Antwerpen Department of Medicine in Belgium. He joined the University of Michigan faculty in 1979 as an assistant research scientist, was named assistant professor the next year, associate professor in 1983 and professor in 1986.

In 1996, he was a visiting professor at the University of New Mexico Department of Physiology and visiting research scientist at the Lovelace Institutes in Albuquerque. He is a member of the editorial board of the *American Journal of Physiology: Endocrinology and Metabolism*; *Hypertension*; *Journal of Hypertension*; *Circulation Research*; *General Pharmacology: The Vascular System*; *Biological Research for Nursing*; and the *Journal of Biomedical Science*.

Webb is a fellow of the American Heart Association's Council on Circulation and Council for High Blood Pressure Research.

He is a member of the American Physiological Society's Cardiovascular and Cell and Molecular Physiology Sections, the Society for Experimental Biology and Medicine, the Inter-American Society of Hypertension, The American Society of Hypertension, the International Society of Hypertension, the American Society of Pharmacology and Experimental Therapeutics and the North American Vascular Biology Organization.

He served as president and vice president of the Michigan Heart Association. His research on the mechanisms of vascular change in hypertension is currently funded by a \$1.5 million grant from the National Institutes of Health. ❖

## People & Places

Recently, **Banji Joseph Adegunloye** moved from the School of Biochemical/Molecular Biology, University of Leeds, Leeds England to the Department of Pharmacology & Physiology, MCP Hahnemann University, Philadelphia, PA.

Now a Research Fellow in the Department of Physiology, College of Medicine, Chung Ang University, Seoul, Korea, **Hyoweon Bang** was formerly with the Department of Physiology and Biophysics, Finch University Health Science, North Chicago, IL.

Originally with the Department of Pharmacology and Physiology, University of Rochester School of Medicine, Rochester, NY, **Kenneth D. Cohen** is now with the Department of Biological Sciences, Western Michigan University, Kalamazoo, MI.

**Charles W. Cortes** has joined the Department of Preventive Cardiology, Hartford Hospital, CT. Cortes was previously with the Department of Rehabilitation Medicine, University of Medicine & Dentistry of New Jersey, Stratford, NJ.

Formerly with the Physiology Program, Harvard School of Public Health, Boston MA, **Claire M. Doerschuk** has recently relocated to Rainbow Babies, Children's Hospital, Cleveland, OH.

**Dariush Elahi** was affiliated with the Geriatrics Laboratory, Massachusetts General Hospital, Boston, MA. Presently, Elahi is associated with the Department of Medicine, Division of Gerontology, Baltimore, MD.

Affiliating with the Department of Physiology, University of Kentucky, Lexington, KY, **Ming Cui Gong** has moved from the Department of Physiology, University of Virginia Medical Center, Charlottesville, VA.

Currently with the Department of Anesthesiology, The Norwegian Radium Hospital, Oslo, Norway, **Elin Helset** has left the Department of Anesthesiology, The National Hospital, Oslo, Norway.

Having affiliated with the Department of Physiology and Biophysics, University of California, Irvine, CA, **Kimberly Huey** has left the Department of Medicine, University of California, San Diego, La Jolla, CA.

**Hans G. Folkesson** has left the Department of Animal Physiology, University of Lund, Lund, Sweden, to join the Department of Physiology, Northeastern Ohio Universities College of Medicine, Rootstown, OH.

**Wieslaw Kozak** has recently affiliated with the Department of Physiology, Medical College of Georgia, Augusta, GA. Previously, Kozak was associated with the Pathophysiology Division, Lovelace Respiratory Research Institute, Albuquerque, NM.

Affiliating with the Department of Pharmacology, University of Pittsburgh, Pittsburgh, PA, **Clara E. Magyar** is no longer with the Department of Physiology, University of Southern California School of Medicine, Los Angeles, CA.

**Diane Eilene McClure** is now associated with the Department of Animal Resources, University of California, Santa Barbara, CA. McClure was formerly with the Department of Veterinary Preventive Medicine, Ohio State University, Columbus, OH.

Recently affiliating with the Center for Cardiovascular Research, University of Rochester Medical Center, Rochester, NY, **Joseph M. Miano** has left the Department of Physiology, Medical College of Wisconsin, Milwaukee, WI.

**Karen Alice Munger** has moved from the Renal Division, VA Medical Center Research Office, Atlanta, GA. Munger has recently affiliated with the Department of Nephrology & Hypertension, VAMC and University of California, San Diego, CA.

Formerly, **James Lee Park** was with the Department of Physiology, University of Michigan, Ann Arbor, MI. Recently, Park joined Diabetes and Metabolic Diseases, Parke-Davis Pharmaceutical Research, Ann Arbor, MI.

Associating with the Department of Pharmacology and Toxicology, University of Oulu, Oulu, Finland, **Christopher Joseph Pemberton** has left the Department of Christchurch School of Medicine, University of Otago, Christchurch, New Zealand.

**Sidney K. Pierce** is currently the Professor and Chair, Department of Biology, University of South Florida, Tampa, FL. Pierce had been with the Department of Biology, University of Maryland, College Park, MD.

Having accepted a position with the Department of Medicine, University of Louisville, Louisville, KY, **Sumanth D. Prabhu** has moved from the Department of Medicine, University of Texas Health Science Center, San Antonio, TX.

Recently, **Michael A. Reutter** has joined the faculty of Century College White Bear, Minnesota. Reuter was previously with the Department of Cell Biology and Neuroanatomy, University of Minnesota, Minneapolis, MN.

Formerly the Director of Thermoregulation Lab, Legacy Health System, Portland, OR, **Andrej A. Romanovsky** is now the Director of Trauma Research, St. Joseph's Hospital, Phoenix, AZ.

## People & Places

**Kathy L. Ryan**, a Research Physiologist, is now affiliated with the Institute of Surgical Research, Ft. Sam Houston, TX. Ryan's previous affiliation was with the Department of Biology, Trinity University, San Antonio, TX.

Presently, **Christine G. Schnackenberg** is with the Renal Pharmacology Division, SmithKline Beecham Pharmaceuticals, King of Prussia, PA. Schnackenberg was formerly with the division of Nephrology and Hypertension, Georgetown University Medical Center, Washington, DC.

**Louis Simchowitz** has affiliated with the Office of Grant and Education Program as a Senior Program Officer, Howard Hughes Medical Institute, Chevy Chase, MD. Simchowitz was formerly with the Department of Internal Medicine, Washington University School of Medicine, St. Louis, MO.

**Virend K. Somers** has joined the Divisions of Hypertension and

Cardiovascular Diseases, Mayo Clinic, Rochester, MN. Prior to his new position, Somers was with the Department of Internal Medicine, University of Iowa College of Medicine, Iowa City, IA.

Having associated with Safety Pharmacology, Battelle Memorial Institute, Columbus, OH, **Michael James Stonerook** has moved from Parke-Davis Pharmaceutical Research Ann Arbor, MI.

**Sonya R. Summerour Clemmons** recently affiliated with the Department of Medicine and Bioengineering, University of Pennsylvania, Philadelphia, PA. Previously, Summerour Clemmons was with the Department of Bioengineering, University of California, San Diego, CA.

**Biao B. Sun** has affiliated with the Department of Genetics, Harvard Medical School, Boston, MA. Previously, Sun was with the Department of Physiology, University of Wisconsin,

Madison, WI.

Having moved from the Department of Physiology, University of Michigan, Ann Arbor, MI, **David S. Weber** has joined the Department of Physiology, Medical College of Georgia, Augusta, GA.

**Richard E. White** is presently with the Department of Pharmacology and Toxicology, Medical College of Georgia, Augusta, GA. Prior to his new position, White was associated with the Department of Physiology and Biophysics, Wright State University, School of Medicine, Dayton, OH.

Having affiliated with the Department of Life Sciences, University of Texas, San Antonio, TX, **Charles J. Wilson** has moved from the Department of Anatomy and Neurobiology, University of Tennessee, Memphis, TN. ❖

## Books Received

*Development of the Gastrointestinal Tract.*  
Ian R. Sanderson and W. Allan Walker.  
Hamilton, Ontario: B.C. Decker Inc., 1999, 324 pp., illus., index, \$129.00.  
ISBN: 1-55009-081-X.

*Endogenous and Exogenous Regulation and Control of Physiological Systems.*  
Robert B. Northrop.  
The Biomedical Engineering Series.  
Boca Raton, FL: Chapman & Hall/CRC, 2000, 452 pp., illus., index, \$79.95.  
ISBN: 0-8493-9694-8.

*Nutritional and Environmental Influences on the Eye.*  
Allen Taylor (Editor).  
Boca Raton, FL: CRC Press, 1999, 285 pp., illus., index, \$99.95.  
ISBN: 0-8493-8565-2.

*Sound.*  
Patricia Kruth and Henry Stobart.  
New York: Cambridge University Press, 2000, 235 pp., illus., index, \$34.95.  
ISBN: 0-521-57209-6.

*Symmorphosis: On Form and Function in Shaping Life.*  
Ewald R. Weibel.  
Cambridge, MA: Harvard University Press, 2000, 263 pp., illus., index, \$45.00.  
ISBN: 0-674-00068-4.

# Announcements

## Lake Cumberland Biological Transport Group Meeting

It is time to plan for the 2000 Lake Cumberland Biological Transport Meeting (affiliated with APS). The central theme of the meeting is biological transport, but presentations in other areas are welcome. This is an excellent forum for principal investigators, postdoctoral fellows, and graduate students alike to present their data and receive feedback.

The scientific sessions will be held in the mornings and evenings on **Sunday, June 11 to Tuesday, June 13**. Afternoons are free to enjoy swimming, fishing, golfing, riding, hiking, or any of the other activities available at the site of the meeting, Lake Cumberland State Resort Park, Jamestown, KY. ❖

### For more information, contact:

<b>Roger Worrell</b> Instructor Emory Univ. Medical School 1648 Pierce Drive Atlanta, GA 30322 Tel: 404-727-9141 Fax: 404-727-0329 E-mail: rworrell@CCMS-renal. physio.emory.edu	<b>Ann Sherry</b> Postdoctoral Assistant Univ. of Cincinnati PO Box 670576 Cincinnati, OH 45267 513-558-3021 513-558-5738 ann.sherry@uc.edu
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or visit the Web site at:  
<http://iupucbio1.iupui.edu/cumberland/>

## USDA Adopts Guides in Handling, Treatment and Care of Farm Animals

The USDA-APHIS has just recently announced adoption of two Guides, Titled *Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching*, published by the Federation of Animal Science Societies (FASS), and the *Guide for the Care and Use of Laboratory Animals*, published by the Institute of Laboratory Animal Resources. APHIS is adopting

these guides to assist regulated entities in meeting the standards in the regulations as they apply to the handling, care, treatment, and transportation of farm animals used for nonagricultural purposes (primarily research and exhibition).

Copies of the Ag Guide are available through the Federation of Animal Science Societies.

To order, go to [http://www.fass.org/fass\\_publications.html](http://www.fass.org/fass_publications.html)

Each copy is \$10.00 and there is an order form for purchasing with credit card. If you would like information regarding a bulk rate, contact Chuck Sapp, EVP-Administration, FASS, [chucks@assochq.org](mailto:chucks@assochq.org), 217-356-3182.

## Fulbright Offers Lecturing/Research Grants in 130 Countries

The Fulbright Scholar Program's annual competition opened March 1 for lecturing and research grants in 130 countries.

Opportunities are open not only to college and university faculty and administrators, but also to professionals from the business community and government, as well as to artists, journalists, lawyers, independent scholars and many others.

Grants are available to faculty and administrators from two-year, four-year and graduate institutions.

Fulbright awards vary in duration from two months to an academic year or longer. While foreign language skills are needed in some countries, most lecturing assignments are in English. Approximately 80% of the awards are for lecturing.

Application deadlines for 2001-2002 grants are:  
**May 1, 2000**-Fulbright distinguished chairs awards in

Europe, Canada, and Russia

**August 1, 2000**-Fulbright lecturing and research grants worldwide

**November 1, 2000**-Spring/summer seminars in Germany, Korea, and Japan for international education and academic administrators, as well as for the summer German studies seminar

For information, contact the Council for International Exchange of Scholars (CIES) at 3007 Tilden Street, NW, Suite 5L, Washington, DC 20008-3009. Telephone: 202-686-7877; Email: [apprequest@cies.iie.org](mailto:apprequest@cies.iie.org). Information and an application are also available on the web at <http://www.cies.org>. ❖

## Announcements

### FASEB Physician-Scientist Report Released

The FASEB report, "The Physician-Scientist: Career Issues and Challenges at the Year 2000" is available through the FASEB Home Page at <http://www.faseb.org/>.

The report has been published in the February issue of the FASEB Journal

and if you have an on-line subscription, it can be accessed directly at <http://www.fasebj.org/cgi/content/full/14/2/221>

If you would like to request reprints, Tamara Zemlo, PhD, MPH, Policy Analyst, Office of Public Affairs,

Federation of American Societies for Experimental Biology, 9650 Rockville Pike, Bethesda, MD 20814-3998

Voice: (301) 571-0658

Fax: (301) 571-0686

[tzemlo@opa.faseb.org](mailto:tzemlo@opa.faseb.org)

### Pain, Distress and Stress in Research Animals: Current Standards and IACUC Responsibility

The Scientists Center for Animal Welfare (SCAW) is presenting a conference on Pain, Distress and Stress in Research Animals: Current Standards and IACUC Responsibility.

The conference will be held May 18-19, 2000 in Baltimore, MD. For registration information, please visit SCAW's website at <http://www.scaw.com>.

Topics of discussion include:

Proposed Changes: Effect on the Animal Research

Community

Current Interpretation of the Three R's and Comparison with US Government Principles

IACUC Responsibility for Pain Procedures

Humane Endpoints for Research Animals

Pain and Stress in Behavioral Research

Post Operative care for Rodents

### Deadlines! Deadlines!

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

#### Award

Teaching Career Enhancement Awards  
John F. Perkins, Jr., Memorial Fellowships  
William T. Porter Fellowship Award  
NIDDK Minority Travel Fellowships for APS Conference  
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  
John F. Perkins, Jr., Memorial Fellowships  
Liaison With Industry Award for Novel Disease Models  
NIDDK Travel Fellowships for Minority Physiologists for EB Meeting

#### Next Deadline

April 15  
May 15  
June 15  
July 16  
August 15  
October 15  
November 1  
November 1  
November 1  
November 8  
November 8  
November 8  
November 15  
November 16  
November 23





# MEMBERSHIP APPLICATION FORM

## THE AMERICAN PHYSIOLOGICAL SOCIETY

### Tphys4.00

Check membership category you are applying for:  Regular  Affiliate  Student

Do you currently hold membership in the APS?  Yes  No

If you answered yes to above, what is your category of Membership? \_\_\_\_\_ Year elected? \_\_\_\_\_

Name of Applicant: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
Last Name or Family Name First Name Middle Name

Date of Birth \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Optional: Male  Female   
Month Day Year

Institution Name \_\_\_\_\_ Department \_\_\_\_\_

Institution Street Address \_\_\_\_\_

City/State/Zip/Country \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

E-mail \_\_\_\_\_

### EDUCATIONAL STATUS \*(Important: if you are enrolled as a student, include the degree and pending date of completion)

Dates*	Degree*	Institution	Major Field	Advisor
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DOCTORAL DISSERTATION TITLE (if applicable): \_\_\_\_\_

POSTDOCTORAL RESEARCH TOPIC (if applicable): \_\_\_\_\_

**SPONSORS** (Sponsors must be APS Members. If you are unable to find sponsors, mail or fax this form to the address on the back of this form and we will locate them for you.)

Check this box if applicable:  Please locate sponsors on my behalf.

#1 Sponsor Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

Sponsor Signature\* \_\_\_\_\_

#2 Sponsor Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

Sponsor Signature\* \_\_\_\_\_

*\*signature indicates that sponsor attests applicant is qualified for membership.*

▶ Please turn over for 2 more questions...and mailing instructions.

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**Membership Application** (Continued...) **Applicant Last Name** (please print) \_\_\_\_\_

**OCCUPATIONAL HISTORY** [ Check if student  ]

**Current Position:**

Dates	Title	Institution	Department	Supervisor
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**Prior Positions:**

Dates	Title	Institution	Department	Supervisor
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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  
9650 Rockville Pike, Bethesda, Maryland 20814-3991 (U.S.A.)

**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.

**Questions? Call: 301-530-7171 ■ Fax: 301-571-8313 ■ E-mail: [members@aps.faseb.org](mailto:members@aps.faseb.org) ■ Web: [www.faseb.org/aps](http://www.faseb.org/aps)**

## Scientific Meetings and Congresses

*April 3-4*

**HDL Cholesterol: Metabolic Pathways and Drug Development, Boston, MA.** *Information:* Richard Farniglietti, The Knowledge Foundation, Inc., 18 Webster Street, Brookline, MA 02446-4938. Tel: 617-232-7400; fax: 617-232-9171; email: custserv@knowledgefoundation.com; Internet: <http://www.knowledgefoundation.com/hdl2000.html>.

*April 3-8*

**21st Annual Gravitational Physiology Meeting of the International Society for Gravitational Physiology, Nagoya, Japan.** *Information:* Tadaaki Mano, MD, PhD, Dept. of Autonomic Neuroscience, Research Institute of Environmental Medicine, Nagoya University, Furo-cho, Chikusa-ku, Nagoya 464-8601, Japan. Tel: +81-52-789-3881; fax: +81-52-789-3885; email: mano@riem.nagoya-u.ac.jp; Internet: <http://www.isgp.org>.

*April 5-8*

**American College of Sports Medicine Health and Fitness Summit and Exposition, San Diego, CA.** *Information:* Gail N. Hunt or Amy Trobec, Public Information Department, American College of Sports Medicine, PO Box 1440, Indianapolis, IN 46206-1440. Tel: 317-637-9200; fax: 317-634-7817; email: atrobec@acsm.org.

*April 10-11*

**Stem Cells and Pancreatic Development, Bethesda, MD.** *Information:* ComputerCraft Corporation. Tel: 301-493-9674; fax: 301-530-0634; email: warner@computercraft-usa.com; Internet: <http://www.ep.niddk.nih.gov/epconferences.htm>.

*April 30-May 5*

**2000 Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting, Ft. Lauderdale, FL.** *Information:* ARVO, 9650 Rockville Pike, Bethesda, MD 20814. Tel: 301-571-1844; fax: 301-571-8311; email: pubs@arvo.arvo.org; Internet: <http://www.arvo.org/arvo>.

*May 11-13*

**Conquering Lymphatic Disease: Setting the Research Agenda, Bethesda, MD.** *Information:* Marlys Witte, MD, Department of Surgery (GS&T), University of Arizona, PO Box 245063, Tucson, AZ 85724-5063. Tel: 520-626-6118; fax: 520-626-0822; email: lymph@u.arizona.edu.

*May 12*

**PRIM&R/AAMC Regional Workshops on "Effective IRBs: The Fundamentals," San Diego, CA.** *Information:* Meetings Registrar, Association of American Medical Colleges, 2450 N Street, NW, Washington, DC 20037-1126.

Tel: 202-828-0892; fax: 202-862-6160; email: srobinson@aamc.org; Internet: <http://www.aamc.org>.

*May 13-16*

**Pediatric Academic Societies and American Academy of Pediatrics Joint Annual Meeting, Boston, MA.** *Information:* Debbie Anagnostelis, APS-SPR Central Office, 3400 Research Forest Drive, Suite B-7, The Woodlands, TX 77381. Tel: 281-419-0052; fax: 281-419-0082; email: info@aps-spr.org

*May 15-26*

**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 18-20*

**The Developing Heart, Prague, Czech Republic.** *Information:* Czech Medical Association, J. E. Purkyne, Sokolska 31, 120 26 Prague 2, Czech Republic. Tel: +420-2-297271, 2491 3308; fax: +420-2-294610, 2421 6836; email: senderova@cls.cz.

*May 25-29*

**Fourth International Conference on Nutrition and Fitness: Plan of Action for the 21st Century, Ancient Olympia, Greece.** *Information:* The Center for Genetics, Nutrition and Health, 2001 S Street, NW, Suite 530, Washington, DC 20009, Attn: Artemis P. Simopoulos, MD. Fax: 202-462-5241; email: cgnh@bellatlantic.net.

*June 4-7*

**11th International Conference on the Biochemistry of Exercise—Molecular Aspects of Physical Activity and Aging, Little Rock, AR.** *Information:* William J. Evans, PhD, 11th International Conference on the Biochemistry of Exercise, University of Arkansas for Medical Sciences, Office of Continuing Education, 4301 West Markham Slot 525, Little Rock, AR 72205. Email: evanswilliamj@exchange.uams.edu; Internet: <http://www.uams.edu/biochem2000/>.

*June 5-8*

**Critical Issues in Tumor Microcirculation, Angiogenesis and Metastasis: Biological Significance and Clinical Relevance (15th Annual Course Offering), Boston, MA.** *Information:* Carol Lyons, Administrator, Radiation Oncology, Massachusetts General Hospital, Boston, MA 02114. Tel: 617-726-4083; fax: 617-726-4172.