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EDITORIAL

Setting the Agenda

With the passing of the presidential campaign of 1988, the American public and the Bush administration have come to the realization that the country has major problems. The agenda for addressing these problems will be set during the first few months of 1989. Will the Bush administration or Congress set the agenda for the coming year? This question will be addressed as we watch the play of personalities on Capitol Hill.

For the scientific community, a major agenda item is funding for biomedical research and President Bush's pledge to become an education president. As expressed by Education Secretary Lauro Cavazos, a physiologist, deficiencies in the science and math education of our students can be blamed in part on inadequate instructional time, poor textbooks, and improperly trained teachers. In addition, he has indicated that students do not receive enough hands-on laboratory experience.

The agenda to be set for science cannot only be restricted to the education of students in grades K through 12. The agenda must also address the issue of predoctoral and postdoctoral training through the support of federal agencies.

Future biomedical scientists receive training support either as National Institutes of Health (NIH) Research Fellows or as staff on research grants. Unfortunately, neither 1989 nor 1990,

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A Physiologist in Africa: Lending a Hand in Developing Countries

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The purpose of my talk today is to acquaint you with the role that American physiologists can play in the developing world. I am doing this with the hope that some of you may choose to give your time and energies to help in a developing country. I know that few of us are looking for an additional obligation or opportunity. Our own research interests capture our imaginations and energy. There is fierce competition for funds to keep those interest viable. In addition we are obligated to our own studies and institutions. The rest of our professional time is easily absorbed in teaching and administrative tasks. Our personal time is needed by our families and local communities. It is obvious that I will have to be very persuasive if I am to convince you to look up from the very legitimate concerns that occupy you and turn your attention to the developing world.

Let me begin by pointing our some facts and opinions that I find to be very compelling. The *Christian Science Monitor* recently assembled the thoughts of a number of world leaders concerning an agenda for the twenty-first century. This group arrived at six "high-leverage" issues to which "humanity must devote its full attention and its unstinting resources" (1). These vital issues are

- The danger of overpopulation
- The degradation of the global environment
- The gap between the developing and the industrial worlds
- The threat of nuclear annihilation
- The need for fundamental restructuring of educational systems
- The breakdown in public and private morality

At least the first three of these issues are related to the subject at hand: the role of American physiologists in the developing world.

I will not repeat the mind numbing statistics regarding population growth, hunger and starvation, loss of rain forest, the greenhouse effect, soil erosion, desertification, the extinction of plant and animal species, and so on. Nor do I need to belabor the point that all of these phenomena are closely related to the problems of developing nations.

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based on the Reagan budget, bodes well for the training of new scientists. In FY 1989, the NIH appropriation will only be sufficient to support 5,300 new and competing renewal applications. Indeed, the Reagan budget for FY 1990 is even worse with funds being available to support only 4,400 awards. Both of these numbers are a far cry from the FY 1988 level of 6,052 awards. Of equal concern is the reduction of NIH training positions in 1989 to 10,331 as a result of the NIH decision to increase the stipends paid to the Fellows at a time when sufficient funds to cover the increased stipends had not been included in the appropriation.

The administration's agenda should include adequate resources to not only maintain increased stipends for Fellows but to also increase the number of positions to 11,000 or more to meet the needs of society. Additional funds are also desperately needed to support more than the present 24% of approved proposals. Many excellent proposals with high priority scores are going unfunded because of the lack of adequate funding for NIH. It is imperative that the biomedical community be actively involved in setting the agenda in this area.

While a major focus for the biomedical community remains NIH funding, there are many other relevant items on the agenda of the 101st Congress. Efforts by antivivisectionists will continue as they attempt to limit access to research animals. In addition, Congress and the biomedical community will need to address the issues of ethics and scientific fraud in the near future. The events of the past several months suggest that concerns about scientific misconduct will be reconsidered in the 101st Congress.

While these and many more issues are being deliberated by Congress and the Bush administration, it is important for the entire physiological community to participate in the discussion that will set the agenda for scientific opportunities in the future. Through the efforts of the Council and the APS staff, the Society will assist the membership with its discussions with the administration.

You can help set the agenda during the coming year by writing and visiting your elected representatives on a regular basis. They will not appreciate the problem unless you tell them how the problem is impacting their district.

The time is ripe for the biomedical community to set the agenda to ensure scientific progress in this country for the future. It is imperative that physiologists be players in the process.

Martin Frank

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THE AMERICAN PHYSIOLOGICAL SOCIETY

DEVELOPING COUNTRIES (*Continued from p. 1*)

I *will* point out that the planet is too small to take the view that if Africans want to turn their continent into a desert and starve to death, we should let them. We cannot afford to ignore the plight of that continent, nor indeed many parts of South America and Asia, because the futures of the Northern and Southern hemispheres are intertwined.

The interdependence of the industrialized and developing worlds is the result of two factors. First, we share the same ecosystem. The ripple effects of destruction of one part of the ecosystem on the remaining parts has been well documented. The second is political. If the developing world continues to lag behind the developed world in virtually every category that is important for human well-being, there will be little basis for political stability. Developing nations do have guns and some are on the verge of having nuclear weapons. Does it make sense to stand by and do nothing while poverty and hopelessness breed political instability and disregard for democratic principles, which in turn, leads to mismanagement and a further downward spiral?

Because our futures are intertwined, we owe it to ourselves to do what we can to promote the development of the Third World. We and our children stand to gain a great deal.

One last point. Some would say that the need to argue that we should offer help to the developing world because it is in our own self-interest is a sad commentary on the moral state of the times. One expert in this area said that "most people are not very much concerned, seriously, with other people's suffering. By and large it seems to me that the whole of society is geared to domination and manipulation—rather than compassion" (1).

Bob Geldof put it another way. He is the British rock musician who organized Band Aid, which grew into Live Aid. This movement collected $130 million for food relief in Africa. However, the public's interest was brief. A year later, the collective consciousness of the industrialized world had moved on to something else. In Ethiopia, those who had been saved from starvation needed help to become self-sufficient. Bob Geldof told *Earthlife News* (cited in ref. 2), "Development is boring. I find it boring. How do you make a compressor pump interesting? I can't go on television and talk about deficits and surpluses and irrigation. People would turn off."

I think we scientists are unusual and it is possible to appeal to both our practical and ethical sides. Both teaching and research accustom us to the idea of delayed gratification, sometimes beyond our lifetimes. We have also already decided that materialism in its most virulent form is not the central issue of our lives. There are easier ways to make a living. For this reason I think we may be a little more willing to take a long view of the process of international development. If I correct in thinking that scientists are special, perhaps I can interest you in considering development of physiology in the Third World.

I would like to tell you some of what I have learned since 1985 when I first became interested in physiology in developing countries. I will relate my experiences in two countries. One, Zimbabwe, has been under majority rule for just 8 years. European settlers governed for 100 years, but it was the site of a major Bantu civilization 300 years before that (3). The other country, Ethiopia, was never colonized and has a written history that goes back thousands of years to Abyssinian times (4). These countries, at the southern and northern extremes of East Africa, have both reached out for help in strengthening their universities. They are both committing a significant fraction of their scarce resources to their university system. Their assumption is that education of their people is a crucial step in being able to solve their own problems.

I would like to acquaint you with some of the hard facts concerning Zimbabwe and Ethiopia. In doing so, I have two purposes. First, the facts will allow you to put these two countries in perspective. Second, given these facts I think you may be surprised by the reality I found when I visited.

First, let's consider the populations of these countries (5). At present, Ethiopia has ~46 million people, 19% of the population of the United States. By 2020, at the present rate of growth of the population, it will have 110 million people, which will be 38% of the US population. Zimbabwe has 9.4 million people and will have 29 million by 2020, more than a three-fold increase and equal to the expected population of Canada. Thus for both countries, serving the needs of rapidly increasing populations is a major challenge. Putting it another way, to provide the same level of nutrition or of health care will require 2.5 times the resources for Ethiopia and 3 times the resources for Zimbabwe 32 years from now.

Next, let us consider some very rough indices of health care. Infant mortality is 152 per 1,000 births in Ethiopia and 76 in Zimbabwe. These numbers are far above the norm for industrialized countries. For example, infant mortality is 8 per 1,000 in Canada and 11 per 1,000 in the United States. The much higher numbers in the African countries are largely the result of poor nutrition, unsafe water, parasites, and bacterial and viral infections. For many of the same reasons, life expectancy is much lower in these developing countries. Women are especially vulnerable during the child-bearing years, which begin early and can last until the mid-thirties. Maternal mortality rate in Southern Africa is 6 deaths per 1,000 live births.

Finally, we can look at per capita income as a measure of the economic strength of these countries. Per capita income in Ethiopia is 0.7% and in Zimbabwe is 3.9% of that of the United States. The low income is partially a reflection of the large numbers of subsistence farmers, who have virtually no earnings. It also reflects the much lower earnings of urban workers. For example an untrained hospital worker in Zimbabwe earns about US $1,440 per year.

These numbers convey the size of the gap between these developing nations and the United States. There are other more qualitative issues, including reports of AIDS, the Ethio-

An adaptation of the Past President's address given at the APS Fall Meeting, October 11, 1988, Montreal, Canada.

pian famine of 1984/85, and the wars in Eritrea and Mocambique, which drain resources and destabilize regions of Ethiopia and Zimbabwe. Given these kinds of numbers and the daily press accounts of the troubles of the African continent, I did not know what to expect when I visited these countries. I must say that I questioned whether these countries were in a position to benefit from our tender mercies.

The capital of Zimbabwe is Harare, a city of ~1 million people. The city center is modern. People dress pretty much as they do in the United States. Expatriates, government officials, university professors, and senior-level technicians live in lovely houses, with large yards, swimming pools, and so on. Domestic servants live on the grounds of many of these homes. Other workers live in so-called high-density housing areas surrounding the city where the government is attempting to prevent the development of shanty towns by building ambitious housing developments. Of course there are stages in between with many people living in apartments in the city.

There are a number of other urban centers in Zimbabwe, but 75% of the people live in rural settings. Many live on large communal lands where they combine subsistence farming with enough cash crops to buy clothing, pay school fees for their children, and buy a few essentials such as pots and pans. In the most remote areas, their life is quite untouched by industrialization.

Harvey V. Sparks, Jr., receives commemorative presidential plaque from Aubrey E. Taylor.

The University of Zimbabwe has expanded rapidly since majority rule and now takes ~2,000 students per year, with a total enrollment of 7,000–8,000. The competition for admission is fierce. The main campus is spacious and subarban in character. The Physiology Department is on the main campus with Biochemistry and Anatomy. It has adequate research and office facilities for the staff and a large teaching laboratory. The academic staff of 10 does a lot of teaching of medical students, pharmacists, nurses, and rehabilitation majors. The University is generous in its support of research, although Zimbabwean dollars are not easily converted to the foreign exchange needed to buy equipment and supplies from overseas.

The other medical school departments are located adjacent to a modern teaching hospital ~1 mile from the main campus. Although the physical facility is excellent, there are deficiencies in staffing and in supplies and equipment, even in this, the flagship of the Zimbabwe health care delivery system. For example, there is no cardiothoracic surgeon in the country. At times, essential drugs are simply not available. However, the members of the clinical departments are devoted to medical student training and many departments have active research programs.

I have reported earlier on my experiences in research and teaching in Zimbabwe (6, 7) and will not repeat those comments here. In summary, those articles state that contrary to the prediction one might make from the raw statistics, I was able to accomplish quite a bit with the help of my collaborators during my year in Zimbabwe. Furthermore my living and working conditions were more than adequate. It was a rich experience, culturally and professionally.

Next I will say a few words about Ethiopia. The major university is named for the capital city of Addis Ababa. Although it has broad avenues, busy streets, and large hotels and office buildings, the similarity ends there. Scattered among the modern buildings are large neighborhoods of houses made of stick and mud and covered with corrugated metal roofs. Donkeys are still used for commercial transport to the largest open market in Africa, located in the center of the city. Dress in Addis Ababa reflects an African culture much more than it does in Zimbabwe.

The University, like many urban universities, has several campuses embedded in the city. The medical campus includes Black Lion Hospital and the basic science facilities. Physiology has a beautiful teaching laboratory, but research space is in short supply and doubles as offices. There are four members of the academic staff, including two Ethiopians and two expatriates. Two other Ethiopians are finishing their training and are expected to join the Department soon. The faculty members have a fairly heavy teaching load and at present there is little research going on in the Department. However, they are eager to initiate research projects. A major reason for this is that they are planning to start a graduate program with all that implies in terms of research by a graduate faculty. There is an urgent need to train addtional physiologists prepared to teach and do research in Ethiopia. The two other medical schools have no trained Ethiopian physiologists and the same is true of the veterinary college and other programs training health professionals.

The Ethiopians have worked out a new strategy to train basic medical scientists in reaction to two problems with the previous practice of sending individuals abroad for all of their training. First, many of these individuals have chosen not to return to Ethiopia, contributing to a brain drain no developing country can afford. Second, the training of many of those who have returned has not prepared them to initiate a productive research program in Ethiopia, because *1)* of a lack of availability of the technology required to continue the theme of their research, started in a Western country, and *2)* they are not prepared to study problems of special relevance to the Ethiopian situation. When they try to continue the line of research they learned during their training,

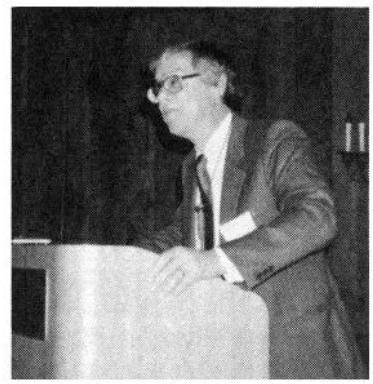
they find that they cannot keep up with progress in laboratories in industrialized nations and give up in frustration.

The Department in Addis Ababa has recently signed linkage agreements with two departments, one in Sweden and the other the United States, to help it increase the number of appropriately trained physiologists. Under the terms of the new agreements, Ethiopian graduate students will begin their studies in Addis Ababa, where they will take introductory courses. They will also take advanced courses taught in Addis Ababa by visitors from the North American and Swedish departments, who will come for relatively short periods of time, e.g., a month. After finishing the required course work at home, the student will go to one of the foreign departments and begin thesis research. In the final phase the student will return to Addis Ababa, where a portion of thesis work will be performed. The thesis will be defended in Addis Ababa and the degree awarded by the University of Addis Ababa. This scheme would appear to enhance the likelihood that the student will return home, learn skills appropriate to the locally available technology, and pick an area of research with local relevance. I will return to the question of the training of physiologists from developing countries later.

I visited Addis Ababa to serve as an external examiner in physiology for the medical class. Judging from my experience at my own medical school and as a former member of the National Board of Medical Examiners, I would say that the content and the degree of rigor of the physiology examination is comparable to that of North American universities.

I also visited a new health sciences school 6 hours drive over rough road from Addis Ababa, in the town of Jima. On the way, I was given a glimpse of rural Ethiopia. The area to the Southwest of Addis Ababa is hilly, green, and fertile. The peasants in this region are said to be able to not only feed themselves but also those in regions with less fertile land and less water. It is all a matter of roads, trucks, organization, and most important, absence of war.

The Health Sciences Institute of Jima was founded in 1984 and is in a period of rapid expansion of the physical facilities. There is a new building with lecture halls and another with teaching laboratories. There is a new building with lecture halls and another with teaching laboratories. The laboratories are very nice, although there is not enough equipment at present. There is a library but few books. Students are allowed to check out a textbook for only an hour at a time. Then it must be given up if another student needs it. There are only a few well-worn copies of texts by Ganong, Guyton, and Vander on the shelves. However daunting, this is not the main problem. There are no Ethiopians with training in the basic sciences in Jima. Cuba sends two basic scientists for each discipline. They stay for two years. The first year they have difficulty communicating in English. The second year things go better, but then they leave and a new contingent arrives. Thus, despite the generous help from Cuba, the Director of the Institute wants help in training Ethiopian basic scientists. In the meantime he would welcome a senior American physiologist to come to Jima and give 5 years of his or her life to build a Department of Physiology. He appealed to me to help find ways to recruit American physiologists to help even for a period of months and to help train the Ethiopians to take over in the long run.



Harvey V. Sparks, Jr.

The Ethiopian Ministry of Health is taking a long look at the training of doctors. I saw why when I had a chance to visit health care facilities in the rural area around Jima. The two-room Health Station in the nearby village of Yebu serves 52,000 people. It is run by a physician's assistant, with less training than a nurse, and 3 health assistants. He also has trained and supervises 53 traditional birth attendants as well as 20 community health agents.

A referral clinic for Yebu located in nearby Agaro is responsible for 250,000 people. It has two physicians who have no radiological equipment, no surgical facilities, only two inpatient beds, and a very limited laboratory. In summary the do not have the tools that would allow them to practice on a more sophisticated level than a nurse. Thus, although their medical school training was similar to that of US physicians, their practice is quite different. This raises the question of whether Ethiopia should be training physicians for this role. Allied health personnel can be trained in a much shorter time and at much less cost. The Ministry of Health has decided to cut the production of physicians in half until the government can build more facilities that allow them to fulfill their potential.

In summary, in Ethiopia I saw a health education system struggling to bootstrap itself into a better position. This is being done by a cadre of well-trained and highly dedicated people. The physical facilities for teaching physiology are good, but there is a severe shortage of trained Ethiopian manpower and teaching materials. However, the Ethiopians have a plan to produce their own manpower and to do more of the research needed to solve their own health problems.

What generalizations can I draw from these experiences? First, our African colleagues are making progress but want help in the following areas (8):

- Books and journals
- Visiting professors
- Research collaborations
- Research equipment
- Help in training indigenous physiologists

Departments in developing countries do not have enough books, journals, and audiovisual teaching aids. The American Physiological Society has already begun to help by initiating a program to supply universities in developing countries with our books and journals. The APS arranged with Project HOPE to distribute excess copies of our books that are in storage and are unlikely to be sold. These books will go to institutions that already have an ongoing educational

relationship with Project HOPE. In addition, we are printing extra copies of the *American Journal of Physiology* and *Journal of Applied Physiology* at a nominal cost (given our large initial runs). These will be distributed in developing countries by the American Association for the Advancement of Science and the Third World Academy of Science. Furthermore the International Union of Physiological Sciences has arranged to send *News in Physiological Sciences* to scientists in developing countries free of charge.

However, there is much left to be done. Teaching aids and texts are needed and yet there is no mechanism to assure distribution of excess materials from developed countries. Texts that are out of date by one edition would be welcomed. Many copies of weekly journals, e.g., *Nature, Science,* and the *New England Journal of Medicine* are read and thrown away. There should be a way of arranging for shipment of these to developing countries. These are some of the things the Society is working on at the present time.

Many African departments would be interested in hosting visiting professors from North America. The visiting professor can at the least fill a gap in the teaching schedule. Visitors can have a longer lasting effect if they work with the indigenous staff to improve their teaching and research skills. This will work if the visitor is part of an ongoing linkage between institutions. In this way he or she can build on previous experience. There is also more likelihood of ongoing research collaborations.

These departments also desire access to training programs for potential faculty members from their countries. At present, many departments in developed countries welcome trainees from developing countries on an individual basis. However, more formal programs could address some of the main problems with the present approach. The first problem to be addressed is the tendency of newly trained scientists to stay in the United States or Europe rather than to return home. Given the disparity in resources this is an understandable inclination but defeats the purpose of supporting the training. A second problem is that the newly trained individual may have little idea how to tackle the pressing problems that his/her native country faces. This is both a matter of appropriate technology and of training in areas relevant to the country's needs.

As an international community of physiologists we have only begun to face the problem of training physiologists to meet the needs of developing countries. It seems worth while to question the assumption that the patterns of training we are using at the present are the best ones. For example, we (i.e., physiologists in developed and developing countries) need to consider whether the concept of intermediate or appropriate technology should be applied more vigorously to basic medical science education and research in the Third World.

Let me expand for a moment on intermediate technology. This idea comes from a book *Small is Beautiful* by the British economist E. F. Schumacher (9). He points out the need for technology that is appropriate to the capability and resources of Third World countries. For example, there is no point of introducing technology that requires maintenance by large numbers of highly skilled technicians if such technicians are not available. There is no point in devices whose only attribute is that they save labor when labor is the cheapest and most plentiful resource of a country. Intermediate technology has the following characteristics. First, it is relatively inexpensive, although it may be much more expensive than the indigenous technology it replaces. For example, in the area of primary health care, an antibiotic may be much more expensive than the traditional herb used to treat an infection but still within the reach of a developing country. Second, it is more effective than the indigenous technology. That should be the case for the antibiotic. Third, it is appropriate to the education, aptitude, and organizing skill of the culture into which it is introduced. Safe antibiotics, which have a good shelf life without refrigeration, can be used to save many lives by that physician's assistant in Yebu.

This concept has been applied successfully in the area of primary health care (10), but there has been relatively little extension to the basic sciences (see ref. 11 for a contrary view of the success of this concept). It is important to emphasize that adoption of this approach does not imply that the technology would necessarily be less modern than that available in industrialized countries. For example, some of the techniques of molecular biology rely on very sophisticated concepts but require relatively inexpensive equipment that is relatively easy to maintain as compared say to nuclear magnetic resonance at the other extreme. It makes much more sense for a basic science department in a developing country to initiate a project involving gel electrophoresis than nuclear magnetic resonance, because the initial cost is relatively modest and the use and maintenance of the equipment is more appropriate to a developing country's infrastructure. This example is obvious, but the principle can be to much more difficult choices.

To go in this direction will require more communication between universities in developed and developing countries. Physiologists in developing countries would take the lead in defining what is needed and what is feasible. Physiologists in developed countries could respond by helping to develop new intermediate technology and by helping to train physiologist oriented toward the use of intermediate technology to solve locally relevant problems.

The thesis research topic should also be appropriate to the solution of local problems for three reasons. *1)* Local scientists can make unique and valuable contributions to the international community when they take advantage of locally available resources. *2)* Local support for research in a developing country is more likely to be forthcoming if it has a local application. *3)* International support is more likely to be attracted by a unique project that cannot be done elsewhere.

There are many potential research areas, including the physiology and pharmacology of traditional medicines, nutrition, reproductive physiology, tropical diseases including diarrhea and physiologic effects of parasites, as well as the diseases of urbanization and westernization. Of course there is also the chance to work with unusual species. Working in these areas might even open up previously untapped

funding sources for collaborators from American laboratories. In addition, collaborative work with physiologists in developing countries can serve our needs by bringing fascinating questions to our attention and providing us with eager and energetic students.

These are my observations, experiences, and conclusions based on the past three years of work in Africa. I hope I have convinced you that there is a need for us to become involved in the development of the Third World. I hope that I have also convinced you that work in developing countries is stimulating and rewarding.

In our youth, we have a dream. We imagine making a major breakthrough and changing our field in the manner of the giants before us. As we mature, most of us adjust to a new reality. We have not been first with a spectacular finding. In fact, we begin to wonder if it would have mattered even if that had happened. We begin to look in new directions for the meaning of our lives. I would suggest ever so humbly that some of us may find that meaning by reaching out to others. We may not have achieved all that we had hoped, but we can be of great help to those who have much less. Perhaps in reaching out we can find ourselves.

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PUBLIC AFFAIRS

So They Say . . .

On occasion, both animal rights and animal welfare advocates have claimed that computer modeling could replace the use of animals in research. This view is clearly mistaken. It confuses the role of computer modeling science, where the goal is to obtain facts to be understood, and the role of modeling in technology, where the goal is to develop the implications of facts and relationships that are already understood.

Computers are used in science to explore the implications of theories. Animals are studied to obtain facts. The two efforts complement each other, but one cannot be substituted for another. With the possible exception of exobiology, no science can long maintain itself on theoretical analysis alone. **Earl Hunt,** University of Washington, from a speech at the American Psychological Association meeting

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Other persons believe that computers can replace animals in all medical testing. This opinion reflects a distorted knowledge of medical matters as well as computer affairs. Scientists who have been fortunate enough to receive formal training in both branches of science can assert that computer models cannot and will never replace animal testing.

Computer simulation is not the same thing as reality: A computer operator involved in weather forecasting does not expect to get wet when simulating a storm. **Josep G. Llaurado, Jerry L. Pettis,** Memorial Veterans Administration Hospital and Loma Linda University, from article in *VA Practitioner*

Whenever I conduct an experiment using animals I must justify (ethically) their use by the potential benefit of alleviating pain and suffering in mankind. I see human lives as precious gifts and people as far more valuable than mice, cats, or dogs. The quality of health care of Oklahomans is excellent, partly because of research being conducted on animals at our medical institutions. **Kenneth Dormer,** University of Oklahoma, in *Animal Rights/Human Needs—THE FACTS,* a University Health Sciences Center brochure

Ohio Conducts Nine Workshops For Teachers Using Animals

The Ohio Academy of Science and Ohio State University conducted nine workshops for the state's secondary school science teachers on the issues surrounding the use of laboratory animals in education and research.

A growing concern over the controversy of using live animal models in laboratories in secondary schools prompted the program, which was funded by a $110,000 grant to the university by the Ohio Board of Regents.

The purpose of the program was not to tell teachers how to use animals in their classrooms, but rather to present a broad picture of the issues and social concerns. The goal of the workshops is to help teachers to better understand the issues and to stand up to the pressures of animal activists or to seek appropriate alternatives.

Lynn E. Elfner, executive officer of the Academy, said that the more than 200 teachers who participated in the workshops would be interviewed in the spring to determine the program's effectiveness. Elfner also said that the project has led to an interest in both Kentucky and Missouri for conducting similar workshop programs.

Year Ends on Somber Notes: Assassination Attempt, Two Research Programs Halted

The year 1988 came to a disturbing end as animal activists escalated their attacks on laboratory animal programs by an assassination attempt on the head of a surgical materials company and by the harassment of two medical schools that led to the voluntary closing of federal research projects involving cats.

Arrested by Norwalk, CT, police in the assassination attempt was animal rights activist Fran Stephanie Trutt, 33, of New York City, who is accused of attempting to use a radio-controlled bomb to kill Leon Hirsch, founder and chairman of the US Surgical Corporation. The company has been the target of animal activists for several years because of its use of dogs to test synthetic sutures.

Acting on a tip, police staked out the company's headquarters and spotted Trutt entering the heavily guarded facility and planting a pipe bomb near Hirsch's parking space. Police described the bomb as a sophisticated device about 18 inches long and 4–5 inches in diameter and designed to blow up and scatter roofing nails at its victim. Police said the bomb's destructive force was enough to kill anyone within 10 or 15 feet of it.

Trutt has been charged by Connecticut police with attempted murder, possession of explosives, and manufacturing a bomb. Bail was set at $500,000.

New York police in a search of Trutt's apartment in Queens found two other pipe bombs, a sawed-off shotgun, and a homemade weapon described as a cross between a bazooka and a shotgun. It is unclear what charges, if any, would be filed by New York police.

Trutt claims to be a member of several animal rights organizations including Trans-Species Unlimited, which she joined in 1987.

Cornell Turns Down Grant

Trans-Species Unlimited is the group whose more than a year-long protest caused Cornell University's medical school administrators to force a prominent drug abuse researcher to give up a $720,000 federal grant for studies involving experiments on cats.

In a letter cosigned by a Cornell dean, Michiko Okamoto, a professor of pharmacology, informed the National Institute on Drug Abuse (NIDA) that she had reluctantly decided to turn down the three-year grant for her ongoing research using cats to study barbiturate addiction. Cornell administrators reportedly told Okamoto to refuse the grant because the university had made a promise in a letter to the protesters that the cat research would be phased out.

Okamoto's studies on cats has advanced scientific understanding of drug addiction, according to NIDA officials who view Cornell's action as a capitulation to an animal rights group and claim that the university's action could endanger the freedom of other scientists to do animal research.

George P. Cave, president of Trans-Species, said the group protested the research because the studies "were simply of no benefit for human barbiturate addicts." He added that the success in halting the research was significant in that the organization challenged the need for the research rather than contending the animals were being mistreated.

Of Trans-Species' decision to challenge the scientific need, Cave said, "We deliberately chose a tactic that had never before been taken. We didn't even raise the question of laboratory conditions. We have no reason to believe anything was wrong with the caging or veterinary care at Cornell."

Research Stopped at Cincinnati

The treatment of animals was a cause of concern cited by an animal rights group that led to the closing of a head trauma research project involving cat experiments at the University of Cincinnati.

The study involved delivering blows to the head of anesthetized cats in effort to simulate human head trauma. The experiments were placed under scrutiny last summer when it was publicly criticized by the Physicians Committee for Responsible Research. In September, in response to the negative publicity, the univesity defended the cat experiments as offering "hope for limiting destructive effects of head trauma and for restoring injured citizens to productive lives." Less than two months later the university stopped the experiments.

William M. Samuels

PETA Liberates Seven Restaurant Lobsters

Seven Maine lobsters were liberated by PETA (People for the Ethical Treatment of Animals) from a lobster tank at a Rockville, MD, restaurant and flown to Maine where they were returned to the Atlantic Ocean.

The animal activists spent $240 to return the lobsters to their native waters: $40 to purchase the lobsters and $200 round trip airfare. The lobsters were escorted by a PETA member and traveled in Styrofoam boxes in an overhead bin on the commercial airliner to Portland, ME.

In Portland the lobsters and their escort were met by the US Coast Guard who took them about 15 miles out to sea where the ship's sonar found a rocky area that lobsters like.

American Physiological Society — 140th Business Meeting

Time: 5:30 P.M., Wednesday, October 12, 1988
Place: Convention Center, Room 408A, Montreal, Canada

I. Call to Order

President Aubrey E. Taylor called the meeting to order and welcomed the members to the 140th Business Meeting of the Society and announced that Peter Wagner would serve as parlimentarian. The agenda and ballot for the election of New Members were distributed to the members along with a list of future Society meetings.

II. Report on Membership

President-Elect Vernon S. Bishop presented a report on the status of the Society membership since the spring meeting.

A. Summary of Membership Status

Society membership has increased slightly bringing the total to 6,567 of which there are 4,745 regular members, 22 Honorary, 199 Corresponding, 775 Associate, 646 Emeritus, and 180 Student members.

B. Deaths Reported Since the Fall Meeting

The names of twenty-four deceased members were read and the members stood for a moment of silence in tribute to these dedicated physiologists (see page 13).

III. Election of Members

A. Appointment of Tellers

Tellers appointed by the President were Thomas Adair, University of Mississippi; Ronald Korthius, Louisiana State University; and Henry Stinnet, University of North Dakota. The members were asked to strike from the ballot the names of those candidates for whom they did not wish to vote.

B. Election of New Members

Dr. Taylor announced that all candidates on the ballot, nominated by the Membership Committee and Council, were elected to membership (see page 12).

IV. State of the Society

Dr. Taylor said that the format of the APS Fall Meeting has changed with a jointly sponsored meeting by the APS and the American Society of Pharmacology and Experimental Therapeutics. Carl Gisolfi and Richard Weinshilboum, chairmen of the two program committees, and Martin Frank and Kay Croker are to be congratulated for designing an excellent Fall Meeting.

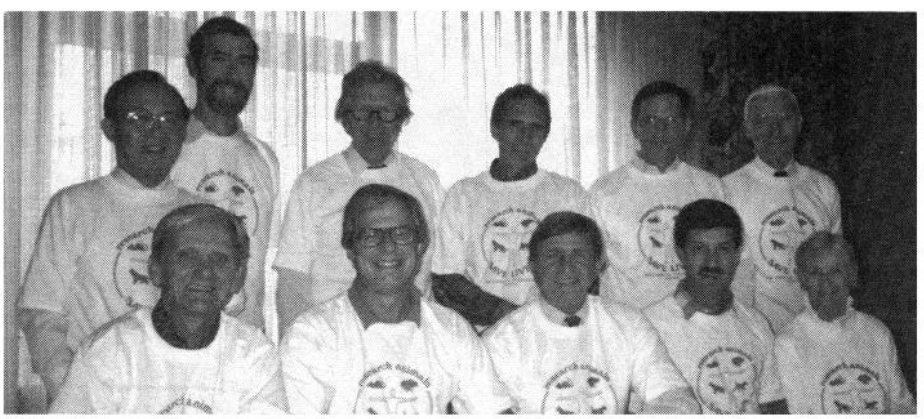
For the first time since the old Atlantic City days, the members of APS and ASPET have been able to easily interact in both formal and informal fashions. The discussions in the hallways indicate that members of both societies were able to attend scientific sessions of both APS and ASPET.

Dr. Taylor introduced William Dewey, President of ASPET, and expressed the Society's desire that similar scientific arrangements be continued into the future. Dr. Dewey thanked Dr. Taylor and said that the pharmacologists are very happy meeting with the physiologists. There has been and will continue to be much interaction between the two groups. The pharmacologists and physiologists share a common interest in other areas, one of which, the animal issue, is of great importance to research. Dr. Dewey said he, too, looks forward to future joint meetings of APS and ASPET.

Returning to the state of the Society, Dr. Taylor stated that APS is now moving at a very fast pace.

Blake Reeves in his report to Council on **section** activities said that sectionalization of our Society has been accomplished on paper. Dr. Taylor commented that it is now up to each member of the sections, their steering committees, the sections' leadership, and the APS Council to interact. It is important that the sections move to greater membership participation in all Society affairs, to greater input into program design, to seek new ways to attract young scientists into the discipline of physiology, and to promote the growth potential and stature of physiology as our discipline moves into the twenty-first century.

Our **publications** have changed greatly over the last five years. Under the capable guidance of Paul C. Johnson, Brenda Rauner, Martin Frank, the APS editorial staff, and the many physiologists who serve as editors, sections editors, and reviewers, the Society journals have grown to twice their size. Two new journals will appear in 1989. One new journal is *AJP: Lung Cellular and Molecular Physiology* with Donald J. Massaro as editor. The second new journal is entitled *Advances in Physiology Education,* with Harold Modell as editor. In addition, Neil Cherniack will replace Alfred P. Fishman as editor of the *Journal of Applied Physiology.* New editors will be appointed to *AJP: Renal* and the



APS Council. *Second row, left to right:* S. Chien, D. Wagner, C. Johnson, C. V. Gisolfi, A. W. Cowley, Jr., and R. B. Reeves. *First row, left to right:* V. S. Bishop, H. V. Sparks, Jr., A. E. Taylor, M. Frank, and B. Bishop.

Journal of Neurophysiology as the present editors step down. The search is now close to completion.

Relative to **finances,** Francis J. Haddy, James Liakos, and Martin Frank have presented the financial picture to Council and the Society is financially healthy. The APS reserves have continued to build to levels that will protect against financial collapse in the future. Society funds are now conservatively invested in such a fashion to ensure a maximum gain.

The **meeting program** is now set for the March New Orleans meeting with a major theme on "The Mechanisms of Adaptation to the Environment." In New Orleans the Society will have several new types of meeting formats such as debates. An example is a debate between Solbert Permutt and John West on "Mechanisms Associated With Increased Pulmonary Blood Flow: Vascular Recruitment or Distensibility." Blows below the belt are not only allowed but encouraged.

The **1989 Fall Meeting** will be held in conjunction with the American Thoracic Society in Rochester, MN, October 15–18. Carl Gisolfi and the Program Advisory Committee members, who represent the sections, have worked very diligently to design this meeting. It will be a different meeting centered around the theme, "Smooth Muscle and Imaging Techniques," which will be a huge success. Franklyn Knox assured Dr. Taylor that any of us who get stuck in ice will be freed using the Mayo recipe!

Dr. Gisolfi announced that the Program Committee is very excited about the 1989 Fall Meeting. It will truly be the first attempt to have a specialty meeting. The first day will be devoted to a plenary lecture, "Mechanisms of Smooth Muscle Function," in the morning and "Whole Body Imaging for Quantitation of Physiological Parameters in Intact Individual" in the afternoon. Symposia on smooth muscle and imaging will be held on the three succeeding days along with debates, "how-to" sessions, and visits to the Mayo Laboratory. All volunteer papers will be poster presentations. The Bowditch Lecture will be held on Wednesday afternoon followed by the Society Business Meeting.

Norman Staub reorganized the Society's **committee structure** during the last year, and Dr. Taylor expressed thanks to the many members who have helped in this task. Committees are very important to the proper functioning of APS, and the Society is indebted to members who spend their valuable time working on these various committees. Norman Staub has better defined committee charges and their impact on the Society will increase more in the future because of this effort in streamlining and directing committees.

The **Membership Committee,** under the guidance of Charles Levinson and Linda Buckler, has recommended that the Society develop an Associate Corresponding Membership category, which will be voted on at the New Orleans Meeting. The proposed amendment will be published in the December issue of *The Physiologist.*

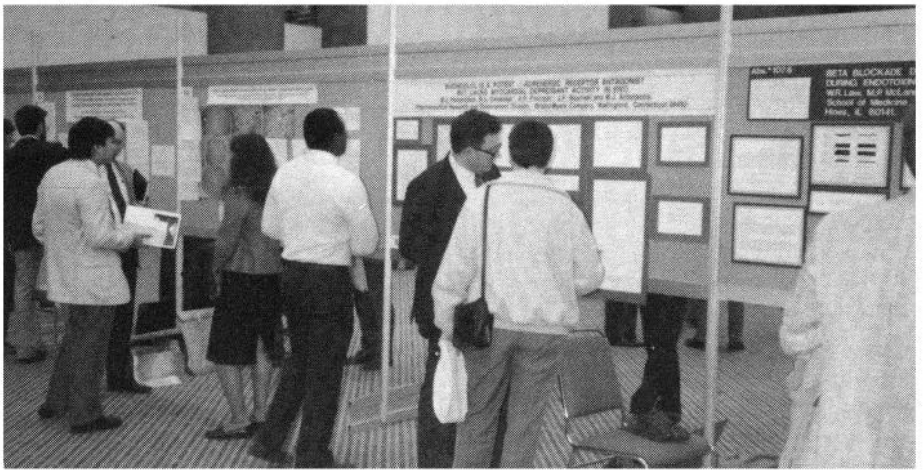
The **Long-Range Planning Committee,** chaired by Ernst Knobil, has begun the development of a position paper on the future of physiology as a science, as a discipline, as departments, and as future homes for the new cell scientists. This work began with a basic definition of physiology, and Stanley Schultz has provided Council with a first draft. This report will be beneficial to members to discuss with their deans and future students of where physiology is today and where it is expected to be in the future.

Bill Samuels and several outstanding members of the physiological community have worked very hard to assure that physiologists can continue to use

Aubrey E. Taylor

animals in research and teaching programs through a newly formed committee called GRIP (Government Relations Initiative Programs). Statewide networks are being set up to fight the continuing battle against the antivivisectionists. We are now winning some of these battles, thanks to the efforts of Bill Samuels and this committee. Dr. Taylor stressed that each member's input into this important committee's work is necessary for its success. Involvement at the local level will strengthen our ability to oppose the antivivisectionists as they try to halt animal experimentation in this country.

In presenting testimony on an animal rights bill before Congress, the thinking of the antivivisectionists became quite clear to Dr. Taylor. One person testified that someone with a fatal disease refused medical help because the cure had been developed in animal experimentations. He reiterated that you, as a physiologist, must help to hold the line at your school, your city, your county, your state, and your federal government since they will determine the final laws concerning animal use in research.



Poster exhibit at APS Fall Meeting.

The Council, working with the **Education Committee,** has been exploring ways to strengthen recruitment efforts by developing programs that bring teachers and students at both high school and college levels into physiology laboratories and departments. The input of physiologists is required since their local experience can be incorporated into the plans for attracting graduate students into physiology. Dr. Taylor urged members to contact Martin Frank about this exciting program.

Dr. Taylor stated, "Physiology is obviously well and alive in 1988. However, we are, like the universe, constantly expanding. The Society is addressing the problems which have been identified. With your help, with the coordination of Society affairs by Martin Frank, with the able assistance of Lorraine Tucker, and the dedicated help of our other excellent staff at the APS office in Bethesda, we will continue to grow and become an even better Society and scientific discipline in the years ahead."

V. New Business

A. IUPS

Martin Frank announced that there will be a Travel Award Program for the XXXI IUPS Congress in Helsinki, Finland, July 9–14, 1989. The Society is attempting to obtain travel funds for young scientists to attend the Congress. The deadline for receipt of grant applications is December 15, 1988. Applications may be obtained from the APS Headquarters office in Bethesda, MD. Members of the Society were mailed Congress material and abstract forms with the August issue of *The Physiologist.* The deadline for Congress registration and submission of abstracts is February 15, 1989. For information related to satellite symposium, members should contact the local committee in Helsinki. Chevy Chase Travel, which will serve as the official travel agent, has negotiated very favorable airline fares from the east coast with Pan Am Airlines and Finnair.

With no other business, the meeting was adjourned at 6:15 P.M., October 12, 1988.

Vernon S. Bishop
President-Elect

Sections

SPECIAL FUNCTIONS

FASEB Spring Meeting, March 19–23, 1989

Cardiovascular Dinner
Tuesday, 6:30 PM
Grand Ballroom B

Cell and General Physiology
Banquet and Lecture
Wednesday, 6:30 PM
Chez Helene Restaurant

Comparative Physiology
Social
Tuesday, 5:30 PM
Room 13, Convention Center

Endocrine and Metabolism
Cocktail Hour
Tuesday, 5:30 PM
Cambridge Room

Environmental and Exercise Physiology
Business Meeting
Tuesday, 5:30 PM
Belle Chase Room

Environmental and Exercise Physiology
Dinner
Tuesday, 7:00 PM
Grand Ballroom A

Epithelial Transport
Group Meeting
Tuesday, 8:00 PM
Grand Ballroom D

Gastrointestinal Physiology
Reception and Award Lecture
Tuesday, 5:30 PM
Rosedown Room

History Luncheon
Wednesday, 12:00 Noon
Holiday Inn Crowne Plaza

Nervous System
Steering Committee Meeting
Tuesday, 5:00 PM
Warick Room

Regulation Dinner
Tuesday, 6:30 PM
Jasperwood Room

Renal Dinner
Wednesday, 6:30 PM
Grand Ballroom A

Teaching of Physiology
Business Meeting
Tuesday, 8:00 AM
Belle Chase Room

Water and Electrolyte Homeostasis
Business Meeting
Tuesday, 5:00 PM
Room 17, Convention Center

(New Orleans Hilton Hotel, unless otherwise indicated)

Special Air Fares for FASEB Annual Meeting

Delta Air Lines is offering special rates for travel to the FASEB Annual Meeting March 19–23, 1989, in New Orleans, LA. The rates afford a 5% discount off Delta's published round-trip fares (applicable restrictions must be met) including supersaver and other promotional air fares. For those not qualifying for any published discounts, a 40% discount will be offered on Delta's domestic system for travel to the meeting. This discount will be based on the published round-trip coach rates. Seven days advance reservations and ticketing will be required on this fare.

To take advantage of these special fares:

1. Call Delta, or have your travel agent call **1-800-241-6760** for your reservations 8:00 AM–8:00 PM Eastern Time - Daily.
2. Refer to **FASEB File Number R0361.**
3. Valid travel dates are March 13–29, 1989.
4. These discounts are available only through Delta's toll free number, so call today!

You may use your own travel agent or call Delta direct. However, if you need assistance you may call Chevy Chase Travel, 301/657-3700.

Membership Status

(September 1988)

Regular	4,745
Emeritus	646
Honorary	22
Corresponding	199
Associate	775
Student	180
Total	6,467

Newly Elected Members

The following, nominated by Council, were elected to membership in the Society at the Fall Business Meeting, 1988, Montreal, Canada.

Regular

Naji N. Abumrad
Vanderbilt Univ. Med. Ctr.

William M. Armstead
Univ. of Tennessee, Memphis

Barbara J. Ballerman
Brigham and Women's Hosp.

George M. Barnas
Univ. of Maryland, Baltimore

Timothy J. Bartness
Worcester Fndn. for Experimental Biology

Michael J. Belman
Cedars-Sinai Med. Ctr., Los Angeles

Joseph N. Benoit
LSU Med. Ctr., Shreveport

C. Gunnar Blomqvist
Southwestern Med. Ctr., Dallas

Claude Bouchard
Laval Univ., Ste-Foy, Quebec

Allan D. Callow
New England Med. Ctr.

Allen Costoff
Med. Clg. of Georgia

Laurel A. Fisher
Univ. of Arizona Hlth. Sci. Ctr.

Emily S. Foster
Michael Reese Hosp. Med. Ctr.

Timothy S. Gaginella
Ohio State Univ. Hosp.

Charles G. Gallagher
Univ. Hosp., Saskatoon, Saskatchewan

Mark W. Gunion
Univ. of California, Los Angeles

Mark Haas
Yale Univ. Sch. of Med.

Andrew M. Havill
Sandoz Res. Inst., East Hanover

Thomas A. Heming
Univ. of Texas Med. Branch, Galveston

David S. Hinds
California State Univ., Bakersfield

Philippe R. Housmans
Mayo Fndn.

Jan D. Huizinga
McMaster Univ., Hamilton, Ontario

Laryssa N. Kaufman
Michigan State Univ.

Michael S. Kilberg
Univ. of Florida

Joseph R. Koke
Southwest Texas State Univ., San Marcos

Samuel T. Kuna
Univ. of Texas Med. Branch, Galveston

Ricky D. Latham
Brooke Army Med. Ctr., Brooks AFB

Michael I. Lindinger
Univ. of Geulph, Ontario

Kenneth R. Lutchen
Boston Univ.

Gary M. Malvin
Lovelace Med. Fndn.

Sharon E. Martin
Emory Univ. Sch. of Med.

Joseph P. McCann
Oklahoma State Univ.

Robert A. McCrea
Univ. of Chicago, Illinois

Robert W. McPherson
Johns Hopkins Hosp.

William J. Mehm
Armed Forces Inst. of Pathology

Joseph E. Melton
Robert Wood Johnson Med. Sch., New Brunswick

Robert Mirro
Univ. of Tennessee, Memphis

Shmuel Muallem
Cedars-Sinai Med. Ctr., Los Angeles

Chung Owyang
Univ. of Michigan Med. Ctr.

Charles F. Pilati
Northeastern Ohio Univ. Clg. of Med.

James M. Pivarnik
Univ. of Houston, Texas

Mrinalini C. Rao
Univ. of Illinois, Chicago

Diane Rouse
Baylor Clg. of Med.

Helio C. Salgado
Sch. of Med. of Riberao Preto, Sao Paulo, Brazil

Paul W. Sanders
Univ. of Alabama

Clark T. Sawin
VA Med. Ctr., Boston

Peter W. Scherer
Univ. of Pennsylvania

Charles H. Sloop
LSU Med. Ctr., New Orleans

John N. Stallone
Northeastern Ohio Univ.

Robert B. Tallitsch
Augustana Clg., Rock Island, IL

Theodore J. Torphy
Smith Kline and French Labs

Peter C. Tullson
SUNY Hlth. Sci. Ctr., Syracuse

Jeffrey S. Turner
Univ. of Capetown, South Africa

Roberto Valle
Univ. of Autonoma de, San Luis Potosi, Mexico

David G. L. Van Wylen
SUNY at Buffalo, New York

Marian R. Walters
Tulane Med. Sch.

David Warburton
Children's Hosp., Los Angeles

Debra E. Weese-Mayer
Children's Memorial Hosp., Chicago

Steven R. White
Univ. of Chicago, Illinois

William A. Whitelaw
Univ. of Calgary

Jeffrey J. Wine
Stanford Univ.

Michael F. Zanakis
American BioInterface Corp., New York

Corresponding Members

Michio Arakawa
Gifu Univ. Sch. of Med., Japan

Edward Hitchock
Midland Ctr. for Neurosurgery, United Kingdom

Thomas F. Luscher
Univ. Hosp., Switzerland

Robert Naeije
Erasmus Univ. Hosp., Belgium

Eric A. Newsholme
Merton Clg., England

Frederik W. Prinzen
Univ. of Limburg, The Netherlands

Michael J. Rennie
Univ. of Dundee, United Kingdom

Hiroaki Shimokawa
Mayo Clinic and Fndn.

Geert J. Tangelder
Univ. of Limburg, The Netherlands

Kazuhiro Yamaguchi
Keio Univ., Japan

Associate Members

Margaret Anderson Olivio
Smith Clg., Northampton

Lois J. Arend
Michigan State Univ.

William R. Belzer
Clarion Univ., Oil City

Sue Bodine-Fowler
Univ. of California, Los Angeles

David R. Brown
Univ. of Kentucky, Lexington

Marguerite M. Engler
Univ. of California, San Francisco

Mary B. Engler
Univ. of California, San Francisco

Douglas E. Fitzovich
Univ. of Mississippi Sch. of Med.

Susan A. Goldstein
Montefiore Med. Ctr., Bronx

Kevin J. Greenlees
Virginia Polytech, Blacksburg

Diane M. Hargrove
LSU Med. Ctr., New Orleans

Lucrecia A. Hernandez
Univ. of South Alabama

Omar D. Hottenstein
Univ. of Colorado, Denver

Alice Hsi Huang
Georgetown Univ. Med. Ctr.

Michael J. Kenney
Michigan State Univ.

Leslie J. Kohman
SUNY Hlth. Sci. Ctr., Syracuse

Krzysztof A. Kostrzewski
Med. Clg. of Ohio

J. Antonio Lopez
Univ. of Iowa Hosp.

James M. Overton
Univ. of Arizona Hlth. Sci. Ctr.

David C. Poole
Univ. of California, San Diego

Darlene K. Racker
Columbia Univ. Clg. of P&S, New York

Susan Redline
Roger Williams General Hosp., Providence

Christopher M. Rembold
Univ. of Virginia Sch. of Med., Charlottesville

Christopher A. Richard
Univ. of California, Los Angeles

Jeffrey B. Tatro
New England Med. Ctr.

Connie R. Vader-Lindholm
Colorado State Univ., Fort Collins

Margaret R. Warner
Mt. Sinai Med. Ctr., Cleveland

John P. Williams
Univ. of Texas, Houston

Wesley M. Williams
Univ. of Rochester

Gayle E. Woodson
VA Med. Ctr., San Diego

Charles J. Woody
Southeastern Clg. of Osteopathology Med., Miami

Billy J. Yates
The Rockefeller Univ.

Student Members

Georges C. Awah
Univ. of South Dakota

Marvin O. Boluyt
Univ. of Michigan

Barbara L. Brizzee
Univ. of New Mexico Sch. of Med.

Jacquelynn J. Cook
Temple Univ. Sch. of Med.

William Durante
Univ. of Toronto

Jodi L. Ensunsa
Cornell Univ., Ithaca

Brian D. Feige
Univ. of California, Davis

Nicholas S. Gantenberg
Univ. of Alabama

Joseph M. Gonzalez-Campoy
Mayo Clinic

Lisa M. Harrison-Bernard
Tulane Univ. Med. Ctr.

Cynthia A. Jackson
Univ. of California, Davis

Renato A. Lobo
Univ. of Sao Paulo, Brazil

Lucie Martineau
Univ. of Toronto, Ontario

Paul S. Matsumoto
Emory Univ. Sch. of Med.

Jeffrey Paul
Univ. of Med. and Dent. of New Jersey

Alfredo Rego
Georgetown Univ. Med. Ctr.

Annabell C. Segarra
New York Univ., New York City

Hal A. Skopicki
Chicago Med. Sch., North Chicago

Christopher F. Toombs
Bowman Gray Sch. of Med.

Mark A. Waldron
Queen's Univ., Ontario

Ian G. Welsford
Northern Arizona Univ.

Roger T. Worrell
Univ. of Alabama

Deceased Members

Guido Ascanio, Laurel, DE (01-07-88)
S. Howard Bartley, Memphis, TN (06-01-88)
Gerhard A. Brecher, Atlanta, GA (02-25-88)
Landry E. Burgess, Nashville, TN (Notified 7-88)
John L. Chapin, Wheaton, MD (10-23-86)
J. Kapp Clark, Gladwyne, PA (06-23-88)
Ruth E. Conklin, Poughkeepsie, NY (March 1988)
Wilburn J. Eversole, Terre Houte, IN (Notified 4-88)
Ronald Grant, Menlo Park, CA (12-21-87)
George A. Hallenbeck, Rancho Santa Fe, CA (01-19-88)
Carolyn M. Hardin, Bettendorf, IA (05-25-88)
Geoffrey L. Keighley, Toronto, Ontario (03-24-88)
Wayne H. Linkenheimer, Kansas City, MO (02-27-88)
Aldo A. Luisada, Oak Forrest, IL (Nov. 1987)
Jane D. McCarrell, Sykesville, MD (08-26-87)
W. C. McNelly, Oxford, OH (Notified 8-88)
William G. Myers, Columbus, OH (06-17-88)
Ernest W. Page, Chico, CA (08-31-88)
Bertram Sacktor, Baltimore, MD (07-08-88)
Carl F. Schmidt, Radnor, PA (04-14-88)
Alfred J. Szumski, Richmond, VA (03-06-88)
Gennaro M. Tisi, San Diego, CA (02-18-88)
Walter L. Wilson, Rochester Hills, MI (03-08-88)
Sabbo Woldring, Schenectady, NY (March 1988)

APS member **Barbara C. Hansen,** Ph.D., has been elected the first president of the International Association for the Study of Obesity, the association of 16 countries and 2,000 members. Dr. Hansen is a former president of the North American Association for the Study of Obesity. She is vice president for Graduate Studies and Research at the University of Maryland, Baltimore and professor of physiology in the Medical School.

Martin J. Kusmerick, M.D., Ph.D., professor of radiology, has moved to the University of Washington, Department of Radiology. Dr. Kushmerick was formerly in Boston at the Brigham and Women's Hospital.

In September 1988 the University di Bologna conferred to **Alan F. Hofmann,** M.D., University of California at San Diego, the honorary degree in medicine and surgery. The oldest university in Europe, the Universita di Bologna celebrated its 900th anniversary. The occasion was held in conjunction with the National Congress of Gastroenterology held in Rome.

The APS members who have recently become members to the Association of Chairmen of Department of Physiology (ACDP) are

Salvatore J. Fidone, (Acting) University of Utah School of Medicine

Richard A. Hawkins, University of Health Sciences, Chicago Medical School

L. Gabriel Navar, Tulane University Medical School

D. Fred Peterson, Oral Roberts University

Richard C. Rose, University of North Dakota School of Medicine

Edward G. Schneider, (Acting) University of Tennessee

Andrew Somlyo, University of Virginia

John E. Zehr, University of Illinois, Urbana-Champaign

Formation of Hypoxic Interest Group

The APS is in the process of formally establishing a multidisciplinary **Hypoxic Interest Group** and invites any member of the APS who is interested in any aspect of the physiology of low oxygen to join. We have been meeting informally at lunch time at the last two FASEB meetings with great success. Speakers have discussed diverse subjects such as control of erythropoietin, fluid balance, and cardiovascular adaptation to hypoxia. The main speaker at the 1989 FASEB Spring meeting will be Dr. **Andrew Greene.** The title of his talk is "Modelling of Microcirculatory Oxygen Delivery and Utilization."

You can join the Hypoxic Interest Group without affecting your affilization with an APS section. Reed Hoyt and Hershel Raff are the organizers of the Interest Group. If you are interested in joining, please write to Dr. Hershel Raff, St. Luke's Medical Center, Medical College of Wisconsin, 2900 W. Oklahoma Avenue, Milwaukee, WI 53215.

Fellowship for Allan Hemingway

A fellowship has been established in honor and memory of Dr. Allan Hemingway, former professor of physiology at the University of Minnesota Medical School.

The purpose of the fellowship is to provide an annual award to one or more graduate assistants with the result that their graduate education will benefit future generations. The awards are to be based on merit, potential, and need.

The fellowship has been established by Dr. Hemingway's daughter and son-in-law, Eleanor and James Spicola of Mineapolis, Minnesota, and his widow, Claire Hemingway of Kernville, California.

Dr. Hemingway's work gave rise to some 120 papers covering a wide range of subjects. His main interests were temperature regulation and respiration. In addition to his active research pursuits, he was a devoted and conscientious teacher.

Additions to this fellowship may be made by sending a tax-exempt contribution to the Minnesota Medical Foundation, Allan Hemingway Fellowship Fund, Box 193 UMHC, University of Minnesota, Minneapolis, MN 55455.

News From Senior Physiologists

Letters to Roy O. Greep

Laurence E. Morehouse, recently celebrating his 75th birthday, writes, "While retiring at UCLA I concluded my physiological studies of men flying into space. Now with more time at home I am studying ways active people in private homes enjoy good friends in their updated houses and yards. Best wishes to Robert Berliner, John Brobeck, Horace Davenport, and Robert Johnson."

Charles O. Lyman, who moved to the Concord Field Station in Bedford after his grants ran out at the Harvard Medical School, completed his studying of hibernation last summer and now is leading the life of an amateur farmer. "I no longer do anything scientific and spend a lot of time hunting and fishing. My closest endeavors for useful work is being a trustee of the Massachusetts Society for Promoting Agriculture.

"This ancient organization was founded in 1792 and we have a letter from George Washington congratulating us for the founding. We are planning a big bash in 1992 to celebrate our second century. At the present time I am president of the organization."

Professor and Chairperson, Department of Physiology. The St. Louis University School of Medicine invites applications for the position of Professor and Chairperson of the Department of Physiology, St. Louis University School of Medicine. We are particularly looking for a scientist with an outstanding record of accomplishment in research and a clear commitment to medical, allied health professions and graduate education. Curriculum vitae and names and addresses of three references should be submitted to Dr. Thomas C. Westfall, Chairman, Search Committee for Physiology, Department of Pharmacology, St. Louis University School of Medicine, 1402 South Grand Boulevard, St. Louis, MO 63104. Application deadline is March 15, 1989. [EOE]

Faculty Positions in Physiology—Tulane. Applications are invited for tenure-track appointments at all ranks. Candidates should hold the Ph.D. or M.D. degree, have a record of excellence in research, and be committed to teaching of medical and graduate students. Research areas marked for expansion include, but are not limited to, cardiovascular-renal, cellular/molecular, and membrane transport physiology. Send a resumé, description of research program, reprints, and four letters of recommendation to Dr. L. Gabriel Navar, Chairman, Department of Physiology, Tulane University School of Medicine, 1430 Tulane Avenue, New Orleans, LA 70112. [EOAAE]

Head, Department of Physiology. The School of Medicine, University of Minnesota, Duluth, is seeking applications and nominations for the position of Head of the Department of Physiology. The appointment is tenured at the Associate or Full Professor level, depending on the candidate's qualifications. The candidate should have a doctoral degree in a basic medical science (preferably, but not limited to physiology), minimum of five years experience, an active research program including grant support and a record of publications in peer-reviewed journals, and experience teaching physiology to medical and graduate students. Demonstrated evidence of effective teaching and communication skills appropriate to a faculty position is required. National recognition for scholarly achievements, administrative capabilities at the University level, and teaching proficiency, are considered desirable qualifications. Letters of nomination and applications (including a curriculum vitae) should be sent to Gary Davis, Ph.D., Chair, Physiology Search Committee, School of Medicine, University of Minnesota, Duluth, 10 University Drive, Duluth, MN 55812. Application deadline is March 31, 19898. [EOAAE]

Positions Available

There is a $25 charge per issue for each position listed. A check or money order payable to the American Physiological Society must accompany the copy. Purchase orders will not be accepted unless accompanied by payment. Ads not prepaid will not be printed. Copy must be typed double-spaced and limited to 150 words. All copy is subject to the editorial policy of *The Physiologist*. EOAAE indicates Equal Opportunity/Affirmative Action Employer and appears only where given on original copy. Copy deadline: copy must reach the APS office before the 15th of the month, 2 months preceding the month of issue (e.g., before February 15 for the April issue). Mail copy to APS, 9650 Rockville Pike, Bethesda, MD 20814.

NIDDK Travel Fellowships for Minority Students

NIDDK Fellowship Program.

The APS/NIDDK-sponsored travel fellowship program provided an opportunity for 9 highly qualified minority students and scientists to attend the 1988 Fall Meeting in Montreal, Canada. The fellows were introduced to mentors at an orientation preceding the scientific sessions. Throughout the week, the mentors assisted the fellows in selecting the appropriate scientific sessions. At a luncheon sponsored by American Cyanamid Company, **Reynaldo Elizondo** addressed the group, and there was an enthusiastic exchange of experiences. The program, which has been extremely well received, will be providing funds for approximately 15 fellows to participate in the FASEB Spring Meeting in New Orleans.

Recipients of the fall 1988 fellowship awards were Adamu Alemayehu (Michigan State University), Phillip Archer (Howard University), Marisela Bonilla (University of Puerto Rico), Rogelio Mosqiueda-Garcia (Vanderbilt University), Patricia Nez (University of Arizona), Alfredo Rego (Georgetown University), Daniel Robleto (University of California, Santa Cruz), Annabel Segarra (New York University), and Amilicar Toro (University of Puerto Rico).

APS Sustaining Associate Members

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"The Law and Animal Care and Use Committees"

Moderator: Fred W. Zechman, Ph.D.
University of Kentucky

The American Physiological Society is presenting a program on "The Law and Animal Care and Use Committees" for those attending the FASEB meeting in New Orleans. The two-hour program is at 2 P.M. Sunday, March 19, at the New Orleans Hilton Hotel Grand Salon A.

This special program will explore what is now happening in many states, the decisions by the courts, and the effects of such decisions upon institutions, committee members, and researchers. Registration fee is $35.00.

The program:

Barbara Rich, Assistant Executive Director, National Association for Biomedical Research.

- An overview as to the status of current challenges by animal activists to void animal care and use committee exemptions from state open-meeting/open-records laws.

Gay Elste, University of Kentucky, and **Mel Beal,** University of California.

- Case histories, strategies, results, recommendations.

Wayne E. Crill, M.D., University of Washington; **Thomas Burks,** Ph.D., University of Arizona; and **Farol Tomson,** D.V.M., University of Florida.

- Impact of open-meeting/open-records laws on protocol application format and committee review process; handling of confidential/proprietary information; quality, thoroughness, and timeliness of committee reviews; public access to agenda and application materials; attendance and actions of animal activists; meeting security; media coverage; faculty and institutional intimidation; willingness of faculty to serve on committees; and institutional proactive initiatives.

REGISTRATION:

Name _____

Address _____

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Mail with registration fee of $35.00 to Bill Samuels, American Physiological Society
9650 Rockville Pike, Bethesda, MD 20814