

be made if the problems of human ulcer could be studied effectively on laboratory animals?

Why multiply illustrations? Our thesis is not a denial of the great good that can come from "human" physiology. The "clinical physiologist" deserves encouragement. We need more persons capable of applying physiological knowledge in the study of disease and its treatment. My plea is rather that distinguished devotees of practical medicine and surgery shall refrain from unwarranted derogatory attacks upon one of the best helps of their profession in the past. It is difficult enough to fight suffering, disease and death without being obliged to fight the ignorance and prejudices of those who would tie the arms of the laboratory worker. The ultimate objective of all methods of attack upon ignorance is the same.

In closing I can not do better than to quote from the significant words of the distinguished biochemist

and Nobel laureate, Sir Frederick Gowland Hopkins, president of the Royal Society of Great Britain:

While scientific advances of every kind tend to react upon and assist medicine it is certain that without experiments upon animals the subject can not properly advance. The necessity continually arises for performing preliminary experiments upon living animals before this or that new piece of knowledge can be applied to the relief of humanity. Much of the new knowledge can, indeed, only be won by means of such experiments. The alternatives are three: ignorance and lack of progress; experiments upon human beings; or experiments upon animals. It should not be difficult to choose among them. The emotions which have led many to reject the last alternative are among those deserving the highest respect. Such emotions, however, have too often been allowed to express themselves in combination with ignorance and with an absence of all sense of proportion. . . . The experimentalist has nothing to fear, but everything to gain, from the formation of an informed and healthy public opinion concerning his work.<sup>15</sup>

## OBITUARY

### K. K. GEDROIZ

THE staff of the Department of Soil Science of the New Jersey Agricultural Experiment Station and of the College of Agriculture of Rutgers University wish to place on record in SCIENCE their keen sorrow and regret at the death of Professor K. K. Gedroiz and, with their colleagues at other institutions and in other countries, to recognize his passing as a most serious loss to science and to agriculture. The young but rapidly growing science of the soils has lost in Professor Gedroiz an outstanding scholar whose contributions to our knowledge of the base exchange capacity and the colloidal properties of the soil have revolutionized our ideas concerning this important branch of soil science. As president of the second International Soil Science Congress that convened in Russia in 1930, he contributed materially by his great reputation toward making the congress a success, even though ill health prevented him from taking a part in its deliberations. Russia has given many great men to soil science, and the name of Gedroiz will be remembered, with those of Dokutschaiev, Sibirtzev, Kossowitch, Glinka and many others, as having laid the foundation of a new science, which is at the very base of agriculture. The director and the members of the staff of the New Jersey Agricultural Experiment Station and of the College of Agriculture of Rutgers University wish to convey to the Academy of Sciences of the Union of Socialist Soviet Republics and to their colleagues in the union and in other countries this message of sympathy and profound regret.

A. W. BLAIR  
SANTE MATTSON  
S. A. WAKSMAN

### RECENT DEATHS

DR. WILLIAM PATTEN, professor emeritus of zoology at Dartmouth College, died on October 27. He was seventy-one years old.

RUDOLPH FREDERICK SCHUCHARDT, chief electrical engineer of the Commonwealth Edison Company, Chicago, past president of the American Institute of Electrical Engineers and a member of the administration board of the American Engineers Council, died on October 26 at the age of fifty-six years.

CURTIS CLARK HOWARD, professor of toxicology at the Ohio State University for more than forty years, died on October 23. He was seventy-eight years old.

DR. ERNST HUBER, associate professor of anatomy at the Johns Hopkins Medical School, has committed suicide. He was forty years of age.

SIR EVERARD IM THURN, explorer, anthropologist and naturalist, died on October 8, at the age of eighty years. Sir Everard was formerly curator of the British Guiana Museum and in 1919-20 president of the Royal Anthropological Institute.

ALFRED CHASTON CHAPMAN, consulting research chemist, of London, England, died on October 17 in his sixty-third year.

DR. KARL E. RITTER VON GOEBEL, professor of botany in the University of Munich, and director of the Botanical Gardens, died on October 10, at the age of seventy-seven years.

### MEMORIALS

A MARBLE bust of Commodore Matthew C. Perry has been presented to the Navy Department by his  
15 "Science and the Nation," edited by A. C. Seward, Cambridge University Press, 1917.