

# SCIENCE

VOL. LVII MARCH 30, 1923 No. 1474

## RESEARCH IN THE MEDICAL SCIENCES<sup>1</sup>

<i>Research in the Medical Sciences:</i> DR. FRED- ERICK P. GAY.....	365
<i>"The Friendly Arctic":</i> DR. VILHJALMUR STEFANSSON, BURT M. McCONNELL, HAR- OLD NOICE .....	368
<i>National Research Fellowships in the Biologi- cal Sciences:</i> DR. VERNON KELLOGG.....	373
<i>Scientific Events:</i>	
<i>Population of the United States; The Faunthorpe Indian Expedition; The Eye- sight Conservation Council of America; The Charleston Meeting of the American Association of Museums; Colloid Chemis- try Symposium.....</i>	375
<i>Scientific Notes and News.....</i>	378
<i>University and Educational Notes.....</i>	383
<i>Discussion and Correspondence:</i>	
<i>Rock-boring Mollusks in Concrete: PRO- FESSOR CHARLES A. KOFOID AND ROBERT C. MILLER. An Interesting Liverwort: PROFESSOR DOUGLAS HOUGHTON CAMP- BELL. Coal Balls: DR. A. C. NOÉ. A Fund for Austrian and German Labora- tories: PROFESSOR GRAHAM LUSK.....</i>	383
<i>Quotations:</i>	
<i>Science and the Pacific.....</i>	385
<i>Scientific Books:</i>	
<i>Three of a Kind: DR. W. J. HUMPHREYS</i>	386
<i>Special Articles:</i>	
<i>The Initial Energy of Thermionic Elec- trons: L. H. GERMER.....</i>	392
<i>The American Physiological Society: PROFES- SOR CHARLES W. GREENE.....</i>	393

SCIENCE: A Weekly Journal devoted to the Advancement of Science, publishing the official notices and proceedings of the American Association for the Advancement of Science, edited by J. McKeen Cattell and published every Friday by

### THE SCIENCE PRESS

100 Liberty St., Utica, N. Y. Garrison, N. Y.  
New York City: Grand Central Terminal

Annual Subscription, \$6.00.

Single Copies, 15 Cts.

Entered as second-class matter January 21, 1922, at the Post Office at Utica, N. Y., Under the Act of March 3, 1879.

THE medical sciences may be defined as including those secondary sciences which contribute directly or indirectly to preventive and curative medicine and to public health. In common with other sciences the medical sciences have both theoretical and applied aspects, and research is the underlying principle of all knowledge and advance in both. Research and theory are interdependent, theory underlies practice, and practice at its best continues to utilize and to stimulate and accomplish research. Research after all simply reflects a state of mind; that state of mind that is not satisfied with the acceptance and application of an alleged group of facts but that insists on personal verification and extension thereof. This questioning and itching type of mind is in its highest reaches inborn, but its cultivation is not only possible in normally equipped individuals, but would seem essential for the proper fulfillment of a life on the level of a profession.

#### THE FIELD

The medical sciences afford fields of research which yield results comparable to those that accrue from the other sciences—happiness through intellectual gratification, opportunity for human service and a livelihood. It is true that the secondary sciences that are grouped as medical are less exact than the older fundamental sciences in the sense that they are younger, less fully formulated and more complex. The last feature alone suffices to assure an even wider range of intellectual gratification than do those sciences that enjoy greater technical accuracy. To many the prolongation of life and the mitigation and prevention of physical suffering is the highest form of human service. A livelihood is now

<sup>1</sup>This article is one of a series on "Opportunities for a career in science" that is being prepared for the Division of Educational Relations of the National Research Council.

## Cornell University Medical College

First Avenue and Twenty-eighth St.  
NEW YORK CITY

The first year of the course is also  
offered at Ithaca, N. Y., subsequent  
years at New York City only.

For Information Address  
THE SECRETARY

## Johns Hopkins University Medical School

The Medical School is an Integral Part of the University  
and is in the Closest Affiliation with the Johns Hopkins  
Hospital.

### ADMISSION

Candidates for admission must be graduates of approved colleges or scientific schools with at least two years' instruction, including laboratory work in chemistry, and one year each in physics and biology, together with evidence of a reading knowledge of French and German.

Each class is limited to 75 students, men and women being admitted on the same terms. Except in unusual circumstances, applications for admission will not be considered after July 1st.

If vacancies occur, students from other institutions desiring advanced standing may be admitted to the second or third year provided they fulfill our requirements and present exceptional qualifications.

### INSTRUCTION

The academic year begins the Tuesday nearest October 1, and closes the second Tuesday in June. The course of instruction occupies four years and especial emphasis is laid upon practical work in the laboratories, in the wards of the Hospital and in the dispensary.

### TUITION

The charge for tuition is \$300 per annum, payable in three installments. There are no extra fees except for rental of microscope, certain expensive supplies, and laboratory breakage.

The annual announcement and application blanks may be obtained by addressing the

Dean of the Johns Hopkins Medical School,  
Washington and Monument Sts., Baltimore, Md.

### SUMMER WORK FOR GRADUATES IN MEDICINE

Beginning Monday, June 4th, and ending Saturday, July 14th, a course in medical diagnosis, including laboratory exercises in clinical pathology and demonstrations in pathological anatomy, will be offered. The course will be limited to thirty students, fee \$100. Applications should be made to the Dean's Office.

## SCHOOL OF MEDICINE Western Reserve University of Cleveland, Ohio

HIGH STANDARD OF ADMISSION\*  
RESTRICTED CLASSES  
THOROUGH INSTRUCTION  
LARGE CLINICAL FACILITIES  
HIGH STANDARD OF SCHOLARSHIP

*\*Admission confined to students  
having academic degrees and to  
Seniors in Absentia.*

For information address:

THE REGISTRAR  
1353 East 9th St., Cleveland, O.

## YALE UNIVERSITY SCHOOL OF MEDICINE

Affiliated with the New Haven Hospital  
and New Haven Dispensary

### 111TH SESSION

Reorganized on a full-time basis

**Entrance Requirements:** A minimum of three years (or its equivalent) of college including general biology, physics, general and organic chemistry, qualitative analysis, physical chemistry or laboratory physics, and either French or German.

**ALL THE GENERAL FACILITIES  
OF THE UNIVERSITY ARE AVAIL-  
ABLE TO MEDICAL STUDENTS**

As the number admitted to each class is limited, applications must be made before July 1.

Dean, Yale University School of  
Medicine

NEW HAVEN, CONN.

## NEW YORK HOMOEOPATHIC MEDICAL COLLEGE AND FLOWER HOSPITAL

**Entrance Requirements:** A minimum of two years of college work, which must include certain specified courses.

**Instruction:** Four years' duration; broad in scope; adequate laboratory and clinical facilities. Active dispensary service.

For catalog address:

**THE REGISTRAR**  
1183 Avenue A, New York City

## Marine Biological Laboratory

Woods Hole, Mass.

### INVESTIGATION

Entire Year

Facilities for research in Zoology, Embryology, Physiology, and Botany. Eighty-four private laboratories \$100 each for not over three months. Thirty tables are available for beginners in research who desire to work under the direction of members of the staff. The fee for such a table is \$50.00.

### INSTRUCTION

July 3 to August  
14, 1923

Courses of laboratory instruction with lectures are offered in Invertebrate Zoology, Protozoology, Embryology, Physiology and Morphology and Taxonomy of the Algae. Each course requires the full time of the student. Fee, \$75.00.

### SUPPLY DEPARTMENT

Open the Entire  
Year

Animals and plants, preserved, living, and in embryonic stages. Preserved material of all types of animals and of Algae, Fungi, Liverworts and Mosses furnished for classwork, or for the museum. Living material furnished in season as ordered. Microscopic slides in Zoology, Botany, Histology, Bacteriology. Catalogues of Zoological and Botanical material and Microscopic Slides sent on application. State which is desired. For catalogues and all information regarding material, address:

**GEO. M. GRAY,**  
Curator, Woods Hole, Mass.

The annual announcement will be sent on application to The Director, Marine Biological Laboratory, Woods Hole, Mass.



## National Research Council

### National Research Fellowships in the Biological Sciences

Post-doctorate fellowships in the Biological Sciences (Zoology, Botany, Anthropology, and Psychology) will be assigned by the Board of National Research Fellowships in the Biological Sciences for the academic year 1923-24. Appointments may date from July 1 or later. Forms of application and statement of conditions will be furnished on application to the Secretary, Board of National Research Fellowships in the Biological Sciences, National Research Council, Washington, D. C.

Applications for early consideration should be in the hands of the Secretary of the Board by April 10, but they may be sent at any time for later consideration, and appointments may be made to begin at any time of the year.

## SUMMER SCHOOL in BIOLOGY at CORNELL UNIVERSITY

July 7—August 17, 1923

Courses in zoology, entomology, embryology, histology, botany, mycology, plant pathology, plant physiology, bacteriology, and genetics.

Graduate work leading to advanced degrees.

All the well-known facilities of the Cornell laboratories and libraries at the service of the students.

Rich collecting grounds easily accessible.

*Write for a catalogue to the*  
**Secretary of Cornell University,**  
Ithaca, N. Y.

### TEACHERS WANTED

We need men for Physics at salaries of \$1,800, \$2,250 and up. Men for Biology at \$1,800, \$2,200, and \$2,500. College positions. Free enrollment. Address: The Interstate Teachers' Agency, Macheca Building, New Orleans, Louisiana.