

### Prof. Szent-Györgyi

PROF. SZENT-GYÖRGYI, the well-known Hungarian biochemist and Nobel prize-winner, has recently visited Moscow at the invitation of the Soviet Government. On May 17, he lectured to the Physiological Society at the University of Moscow on his new work on the chemical composition of striated muscle (*Acta Physiol. Scan.*, 9, Suppl. 25; 1945). From muscle material Szent-Györgyi has succeeded in preparing myosin in a crystalline form, and a new protein, isolated by his collaborator, F. B. Straub, called actin. Both myosin and actin have striking properties. Myosin is completely discharged by minimal quantities of potassium. Actin can exist in both globular and fibrous forms, and in the cycle of contraction both forms are involved. The contractile system consists of a combination of these two proteins: actomyosin. In relaxed muscle actomyosin is dissociated into actin and myosin. Actomyosin passes into the contracted form in the presence of potassium, magnesium and adenosin triphosphate. Szent-Györgyi has demonstrated the contractile properties of this system *in vitro*, and his work provides a mechanical picture which is consistent with all the phenomena of muscle contraction. It is only necessary to assume that in striated muscle there are double rods of actin and myosin, to account for the contraction of living muscle. If the molecules of myosin are spirally arranged around a chain of actin molecules, then contraction, when myosin is discharged by ions, will result in a sudden decrease in the pitch of the spiral. This theory is consistent with microscopic evidence. The familiar cross-striation can be explained by the optical properties of the spiral: for, by rotating muscle fibre under the microscope, Szent-Györgyi has observed the apparent travelling of the spiral along the length of the muscle. This work was done by Szent-Györgyi in Szeged between 1939 and 1944. When the Germans occupied Hungary in 1944, Szent-Györgyi had to go into hiding, and he took a lead in anti-Fascist activities and preparations for the liberation of Hungary. In February 1945 he was liberated by the Red Army. He has now transferred his laboratory to Budapest, and he has accepted chairmanship of the Hungarian Board of Education. Outside his field of research, Szent-Györgyi's main interests are the re-education of his nation for peace, and the re-establishment of international scientific relations.

### Prof. Ragnar Granit

ON June 29, Prof. Ragnar Granit is to deliver at the Royal Institution the fourteenth Thomas Young Oration of the Physical Society, and his subject will be "The Electro-physiological Analysis of the Fundamental Problem of Colour Reception". The occasion will provide an opportunity for a first-hand account of Prof. Granit's recent studies of the electrical response of the retina, summaries of which appeared in *Nature* of January 2, 1943, p. 11, and June 16, 1945, p. 711. Some fifteen years ago, Prof. Granit was working at the Johnson Foundation of Medical Physics, University of Pennsylvania, on the general problem of the retina as a nervous centre; in these experiments he relied mainly on the subjective observations of flicker phenomena. Later, he worked in Sir Charles Sherrington's laboratory at Oxford, where he investigated and analysed the retinal action potentials which develop on stimulation of the retina by light; in this work his tests were carried out on

the retinae of decerebrated cats. Since then he has held the chair of physiology at the University of Helsinki and is now at the Nobel Institute of Neurophysiology, Karolinska Institutet, Stockholm. The continued refinement of his experimental technique has enabled him to record the responses from individual receptors in the retina and to investigate their variation with wave-length. This work is of fundamental importance to the understanding of the processes of colour perception. The account of Granit's methods is of interest not only in connexion with vision but also in the much wider field of nerve physiology; indeed his studies of the retina now form only a part of his research activities.

### Manchester Joint Research Council

THE Manchester Joint Research Council, which is representative of the University of Manchester and the Manchester Chamber of Commerce, has appointed Mr. A. D. Butchart to be executive officer. Mr. Butchart will commence his duties immediately and will be known as Executive Liaison Officer. As the permanent official of the Council, his duties will cover a wide field; in particular, he will be accessible for discussion and will deal with correspondence having specific reference to any problems facing industrialists where scientific information would prove valuable. It will be recalled that one of the objects of the Council is "the encouragement of activities designed to bring science and industry into closer relationship". As a practical move to give effect to this, the Council is creating an Information Service, and Mr. Butchart will be in charge of it. The service will not aim at furnishing scientific answers to problems submitted, but at placing the inquirer in touch with that scientific institution or authority best able to deal with each particular subject. In short, the essence of the service will be to introduce the industrial inquirer to the relevant scientific worker. Mr. Butchart has had a long experience in the oil industry. As a research chemist and in other capacities he has served in Burma, Iran and Iraq. From the outbreak of war to the present time, he has been employed on important Government work. Until a permanent office can be established, contact can be made with the Executive Liaison Officer, c/o The Manchester Joint Research Council, at the Manchester Chamber of Commerce, Ship Canal House, King Street, Manchester, 2.

### Scholarships and Research Fellowships in the Textile Industries

TEXTILE MACHINERY MAKERS, LTD., the constituent firms of which are Platt Brothers and Co., Ltd., Howard and Bullough, Ltd., and other textile machinery manufacturers, have established a scheme for the furtherance of higher education and research in relation to the textile industries. It provides in the first instance for the expenditure of £35,000 over a period of seven years, the administration of the funds being vested in a Board of Trustees for the award of scholarships and research fellowships to be known as "The Sir Walter Preston Scholarships and Research Fellowships" and tenable in the Faculty of Technology of the University of Manchester, or in such other university institution as may be from time to time determined.

The scholarship awards will be as follows: Group I, for works apprentices who have obtained the Higher National Certificate in Mechanical Engineering (£250-

300 a year for three years); Group II, for works apprentices who have obtained the Ordinary National Certificate in a textile or equivalent subject (£225-300 a year for four years); and Group III for secondary school leavers possessing the Higher School Certificate or equivalent qualification (£200-250 a year for three years). The courses to be followed will be in textile engineering, or mechanical engineering, or textile technology, or economics. A small number of scholarships (Group IV, £300-350 a year for three years) will also be offered to honours graduates in science or engineering in order to attract suitable workers into the textile machinery industry or the textile industry. The Trustees are also empowered to award one or more research fellowships which will enable a selected candidate from any of the groups I to IV to continue in advanced study and research for a further period of two, three or four years, with grants of £400-550 a year.

During the first year of the scheme the following awards will be offered: five in Group I; three in Group II; two in Group III; one in Group IV. In succeeding years further awards will be offered of which due notice will be given. In deciding on the scale of assistance to be given under the scheme, the directors of Textile Machinery Makers, Ltd., have been guided by two main considerations: (1) compensation for the sacrifice of freedom to engage in remunerative occupation; and (2) the desirability of enabling all scholars to play a full part in the social, athletic and other extra-curricular activities of university life. All undergraduate scholars will be required to live in one of the university halls of residence, provided there is accommodation available. The award of scholarships in Groups I and II is restricted to candidates nominated by the constituent companies of Textile Machinery Makers, Ltd. The scheme will come into operation for the university session commencing October 1945, and applications addressed to S. H. L. Greaves, Textile Machinery Makers, Ltd., 60 Huddersfield Road, Oldham, were to be submitted not later than June 23, 1945.

### National Certificates in Applied Physics

THE announcement by the Ministry of Education of a scheme for the award of Ordinary and Higher National Certificates in Applied Physics brings to fruition one of the recommendations made in the Institute of Physics report on Education and Training issued in 1943. Students may obtain further particulars of the courses from their local technical colleges or local director of education. With a rapid growth of physics in industry and in the different Government services, it has been found that the existing courses in branches of engineering, in chemistry and so on do not singly provide the combination of knowledge required by juniors in some branches of work which depend on the advances of science, such as, for example, the physical testing of materials and the maintenance and use of instruments for the measurement and control of different processes.

The three-year part-time course for the Ordinary National Certificate in Applied Physics must include mathematics, physics and chemistry, and in the first year a special course (not the orthodox engineering one) in workshop practice and drawing. The physics in the course is to be treated realistically and the principles are whenever possible to be illustrated by practical examples drawn from the industries in which the

students are working. The course in applied physics in the final year is to be related to the local industries. Although English is not included formally as a subject in the course, it is a part of the scheme that at all stages and in all classes attention is to be paid to its correct use. It is hoped in this way to help to train students to present written statements which are clear and concise, when in the course of their employment they are required to report on their work. The course for the Higher National Certificate must be a two-year part-time one, and must aim at reaching a standard in the several branches of physics corresponding to that required for a degree in the subject at pass standard. It will include mathematics and a special subject related to the student's daily work in local industry.

### Royal Asiatic Society of Bengal

AT the annual meeting of the Royal Asiatic Society of Bengal, the following medals and prize were awarded: Joy Gobind Law Memorial Medal, to Rai Bahadur Dr. S. L. Hora, director of fisheries, Bengal, in recognition of his conspicuously important contributions to our knowledge of the ichthyology of Asia; Paul Johannes Bruhl Memorial Medal, to Dr. N. L. Bor, formerly forest botanist, Imperial Forest Research Institute, Dehra Dun, for his important original research in the Gramineae and the ecology of Indian plants; Dr. Bimala Churn Law Gold Medal, to Dr. D. R. Bhandarkar, formerly Carmichael professor of ancient Indian history and culture, University of Calcutta, for his important contributions to ancient Indian history and archaeology; Sarat Chandra Roy Memorial Medal, to Dr. Verrier Elwin, of the Bhumiyan Seva Mandel, Patangarh, C.P., for his meritorious and many-sided contributions to the study of cultural anthropology of India; Elliott Prize for Scientific Research for 1944, to Dr. S. K. Chakrabarty, of the University College of Science and Technology, Calcutta (the Prize for 1944 was for mathematics).

The following officers were elected: *President*, Dr. Meghnad Saha; *General Secretary*, Dr. Kalidas Nag; *Treasurer*, K. P. Khaitan; *Philological Secretary*, Dr. Nalinaksha Dutt; *Joint Philological Secretary*, Dr. Mohammad Ishaque; *Natural History Secretaries*, Dr. S. L. Hora (Biology), Dr. K. N. Bagchi (Physical Science); *Anthropological Secretary*, Rev. W. G. Griffiths; *Historical and Archaeological Secretary*, Dr. B. C. Law; *Medical Secretary*, Dr. Indubhusan Basu; *Library Secretary*, Dr. Nalinaksha Dutt.

### International Commission on Zoological Nomenclature

THE International Commission on Zoological Nomenclature announces its intention of publishing at an early date a revised and up-to-date edition (1) of the "International Code of Zoological Nomenclature" and (2) of the "Official List of Generic Names in Zoology". The last edition of the English text of "The International Code of Zoological Nomenclature" was published some years before the War and is now out of date for various reasons, including the adoption by the International Congress of Zoology of changes in some of the Articles in the International Code. The revised edition will consist of the substantive French text (on left-hand pages) and the English translation (on right-hand pages). The volume, which will be fully indexed, will also