

## NEWS AND VIEWS

## Nobel Prizes for Physiology and Medicine

Prof. C. Heymans

PROF. CORNEILLE HEYMANS is professor of pharmacology in the University of Ghent, being the direct successor in that chair to his father, the late Prof. J. Z. Heymans, in collaboration with whom he had carried out researches, involving some of the ingenious methods of cross-circulation and artificial perfusion, which he has later developed in the series of masterly investigations which have just been recognized by the award of the Nobel Prize for Physiology and Medicine for 1938. Some of Prof. Heymans' most important work has dealt with the sensory mechanisms in the vascular system, through which the arterial blood pressure is kept under reflex nervous control. This sensory function of the carotid sinus had been discovered and described by H. E. Hering and E. Koch in Germany, but the work of Heymans greatly extended knowledge of its importance and demonstrated the presence of analogous sensory apparatus in other parts of the vascular system. Heymans also discovered the sensitiveness of the carotid sinus to chemical changes in the blood, and its consequent importance in regulating the activity of the respiratory centre. Prof. Heymans is responsible for many other important advances in physiology and pharmacology, largely concerned with the control of the circulation. He is well known outside his own country, and a frequent and welcome visitor to Great Britain, where his remarkable command of English, as of several other languages, enables him to give clear and fluent accounts of the progress of his researches, and where the honour now done to him will be warmly greeted by his many friends and admirers.

Prof. G. Domagk

PROF. GERHARD DOMAGK, who has been awarded the Nobel Prize for Physiology and Medicine for 1939, is the pathologist to the medical and biological research laboratories of the Bayer Company of Elberfeld. Domagk was comparatively little known, beyond the range of those familiar with the work of that institution, until, nearly five years ago, he made a discovery which has led to one of the most rapid and remarkable advances on record in therapeutic science and practice. The late Paul Ehrlich began his researches in chemotherapy with the attempt to find substances which would deal directly, as disinfectants, with bacterial infections in the living body. He, like many others who have followed, abandoned what seemed to be a hopeless quest, and turned his attention to the discovery of chemotherapeutic remedies for infections due to protozoa and spirochaetes, the most important outcome being the discovery of salvarsan. It had almost come to be assumed that bacterial infections were beyond the reach of chemotherapy, though Morgenroth's 'Opto-

chin' and its allies had given some hope of eventual success. Domagk appears to have examined a series of dyes for their action on streptococcal infections in the living body, irrespective of a lack of disinfectant properties outside it. In January 1935 he described the remedial effect on streptococcal infections in mice of a red dye, named 'Prontosil', an amide of chrysoidine, which had been prepared by Mietzsch and Klarer, chemists on the staff of the Bayer Company. Some confirmatory clinical results were obtained, but the first organized trial of 'Prontosil' on a uniform series of cases of streptococcal infection in man was made by Colebrook in Great Britain.

MEANWHILE, it had been found by Trefouel, Nitti and Bovet, in France, that a simpler, uncoloured component of 'Prontosil', sulphanilamide, had a similar action; and there seems reason to believe that this is the direct antistreptococcal agent, being split off in the body from 'Prontosil'. Since then, each month has seemed to bring evidence of the therapeutic importance in some new direction of 'Prontosil', sulphanilamide, or one of the numerous derivatives made from the latter in many countries; a conspicuous example being the pyridyl-sulphanilamide (M. & B. 693) made by Ewins in Great Britain, and shown by Whitby to have special activity in pneumococcal infections, such as lobar pneumonia. The result of this development has the aspect of a revolutionary advance in therapeutics, and there will be general satisfaction, among medical research workers and physicians in all countries, that the Nobel Committee have thus recognized the pathologist whose initial discovery opened the way to such a great development.

Prof. V. L. Komarov

IN honour of his seventieth birthday and in appreciation of his great services to science, the Soviet Government has awarded the Order of Lenin (the highest Order in the Soviet State) to Prof. V. L. Komarov, president of the Academy of Sciences of the U.S.S.R. The name of Vladimir Leontievitch Komarov will always be inseparably associated with the flora of Manchuria. Komarov was attached to the Russian expedition to Manchuria in 1896, and during this and subsequent years made extensive botanical collections, duplicates of which were distributed to the principal herbaria of the world. The outcome of these collections was the valuable and detailed three-volume "Flora Manshuriae", published in parts in the *Acta Horti Petropolitani* from 1901 until 1907. In 1908 Komarov joined the expedition of Theodor Pavlovitch Riabushinsky to Kamchatka, where he remained for two years, collecting assiduously. Accounts of the botanical results of the expedition were published by Komarov