

CHRONICLES

FIFTH SOVIET - INDIAN SYMPOSIUM ON THE CHEMISTRY OF NATURAL COMPOUNDS

V. A. Mnatsakanyan

The Fifth Soviet - Indian Symposium on the Chemistry of Natural Compounds was held in Erevan from May 11 to May 16, 1978. More than 200 specialists, including 120 scientists from various research centers of the Soviet Union and 20 scientists from India, participated in the work of the symposium.

The work of the symposium was accomplished in plenary sessions and two sectional sessions. Papers by prominent Soviet and Indian scientists on advances made with respect to the problems of bioorganic chemistry and the chemistry of natural and synthetic physiologically active compounds were presented in six plenary sessions. These papers included those by Academician Yu. A. Oychinnikov ("The molecular mechanism of ion transport through membranes"), by Corresponding Member of the Academy of Sciences N. K. Kochetkov ("The structure of antigen polysaccharides of the microorganism *Shigella disenteriae*") by Doctor Sukh Dev ("The chemistry of plant medicinal substances of ancient Indian medicine"), by Doctor B. S. Joshi ("Alkaloids from Indian plants of the Piperaceae family"), by Doctor D. S. Bakuni ("Some aspects of the biosynthesis of alkaloids"), and by Academician of the Academy of Sciences of the Armenian SSR S. A. Vartanyan ("The synthesis of biologically active compounds from six-membered heterocycles").

A total of 83 papers devoted to the problems involved in the isolation, structure elucidation, structure modification, and study of the activity of natural compounds and to the development of methods for their synthesis and the synthesis of some analogs were presented in the sectional sessions. More than 15 papers were devoted to the investigation of protein and peptide compounds of plant, animal, and microbial origin (including nitrotoxins) and to the preparation of their synthetic analogs. The majority of the communications dealt with research on terpenoid compounds - mono-, sesqui-, di-, and triterpenoids (particularly those with a lactone group), steroids and their glycosides, coumarins, furocoumarins, and flavonoids.

Papers dealing with the chemistry and synthesis of alkaloids and related structures constituted a significant part of the symposium. In particular, the isolation and elucidation of the structures of isoquinoline bases of forms of poppy (V. A. Mnatsakanyan), corydalis (I. A. Israilov), the meadow saffron (M. K. Yusupov), the indole alkaloids of the periwinkle (É. Z. Dzhakeli), the steroid bases of the nightshade (S. K. Pakrashi, Calcutta), sulfur-containing alkaloids (S. F. Aripova), etc., were reported.

A number of papers were devoted to the synthesis of analogs of natural heterocyclic compounds - to the synthesis of dihydrogambirtanin and related compounds (É. A. Markaryan), derivatives of 4-pyrimidinylamino-phosphoric acids (R. G. Melik-Ogandzhanyan) - to the synthesis of new biheterocyclic systems - piperidine, tetrahydropyran, and tetrahydrothiopyran derivatives (R. S. Vartanyan) - and to the synthesis of substituted cytochrome c heme derivatives (M. A. Kulish). Of the research that did not involve the chemistry of heterocycles, one should note the series of communications on the isolation and synthesis of prostaglandins and their analogs and various polysaccharides.

The papers presented at the symposium, which in the overwhelming majority of cases involved the use of ^1H and ^{13}C NMR spectrometry, chromatographic mass spectrometry, high-resolution mass spectrometry, circular dichroism, etc., demonstrated the rise in the qualitative level of the research currently being carried out in the USSR and India on the chemistry of natural compounds.

As in the previous Soviet - Indian and Indian - Soviet symposia, this symposium was conducted in an atmosphere of friendship and mutual understanding and promoted a further strengthening of the bonds between the scientists of the USSR and India.

Translated from *Khimiya Geterotsiklicheskikh Soedinenii*, No. 12, p. 1695, December, 1978.