III CELL BIOLOGY CONFERENCE—UNIVERSITY OF DELHI

A CONFERENCE of Cell Biologists in the country was held in the Department of Zoology under the auspices of the Centre of Advanced Study from December 29th to 31st, 1969. This was the third such Conference. It brought together scientists, interested in cell structure and function, working in a number of Universities and Research Institutes in the country. Over a hundred participants read 55 papers. Broadly speaking, the Conference dealt with Cell Biology under three heads: 1. Cell Structure, function and differentiation. 2. Cytogenetics. 3. Action of radiation and chemicals at the cellular level.

Several workers from the Biology Division of the Bhabha Atomic Research Centre presented results of their investigations on a wide variety of subjects. P. R. Mahadevan dealt with cell wall bound enzymes in *Neurospora* and problems of RNA in the organism. A comparative microspectrophotometric study of pigment composition in *Anabœna* was presented by Joseph Thomas. K. Sundaram and his colleagues dealt with the effects of antilymphocyte serum on lymph node cells. S. Narayanaswami presented a paper on tissue differentiation in certain plant cells. A paper on iodination of bacterial membrane was presented by B. B. Singh. The biological effects of high background radioactivity, especially on plant populations growing in the high radiation areas of Kerala and Madras States, was presented by G. G. Nayar.

From the Cancer Research Institute, Bombay, B. M. Braganca discussed the results of her group on the changes produced by a cytotoxic protein from Cobra venom on Yoshida Sarcoma Cell membrane. The Indian Agricultural Research Institute was also well represented. R. N. Raut presented a paper on differential strength of nucleolar chromosomes in cellular RNA synthesis. Two papers on human chromosomes were presented by R. A. Pai and K. Kant. B. N. Chowdaiah from the Zoology Department, Bangalore University, presented the salivary gland map of *Anopheles barbirostris*. Other aspects relating to the chromosomes of higher organisms, concerned with the dosage compensation phenomenon in *Drosophila* and DNA replication in duplicate type of sex chromosomes of an insectivore, *Suncus*, were presented by Lakhotia from the Zoology Department, Calcutta University and V. K. Sharma from the Zoology Department, University of Delhi, respectively. Aspects of sexual dimorphism in the interphase nuclei in some reptiles were discussed by T. Sharma from the Zoology Department of Banaras Hindu University. Besides these, several papers dealing with effects of chemicals on chromosomal organisation and cellular metabolism were read at the Conference. R Vimla Nair from the Biochemistry Department of Calcutta University dealt with the effects of actinomycin-C on mitosis and DNA synthesis in a mold, *Physarum polycephalum*. In higher organisms, specially on *Vicia faba*, two papers concerning the effects of an alkylating agent, Mitomycin-C and an alkloid, Vincaleukoblastine (VLB) were presented by V. C. Shah and Sharda respectively, both from the Zoology Department, University of Delhi. R. P. Sharma from the Indian Agricultural Research Institute discussed the probable mechanism of induced meiotic crossing over in *Drosophila melanogaster*. S. V. Goswami of the Delhi University, Zoology Department, presented a paper on the action of steroid and protein hormones on *in vitro* maturation of oocytes of the cat-fish, *Heteropnuestes fossilis*. The ultrastructural organisation of the macronuclear replication band in a ciliate. *Stylonychia notiphora* was presented by C. M. S. Dass, Zoology Department, Delhi University. G. Bhaumik, of the Biophysics Division of Saha Institute of Nuclear Physics, discussed the variation in the X-ray sensitivity on the replicative states of DNA in bacteria.

An important lesson which one gained from the Conference was that modern work in Cell Biology needed the collaboration of persons working in different fields and that people trained in classical biology were clearly at a disadvantage. This was beautifully illustrated by the fact, the most outstanding contributions came from the Bhabha Atomic Research Centre where, in the Biology Division, Physicists, Chemists, and Biologists work together on problems of cell structure and function, bringing to bear on them the advantages of their training in their respective fields. It is an indisputable fact that today it is the physicists and chemists rather than classical biologists that are making important break-throughs in Biological Sciences. In contrast with, BARC, the disadvantage which the Biology Departments of the Universities suffered from was clear. For, in the Universities, we still have old concepts of classical Botany and Zoology with little possibility of interaction with physics and chemistry. Can one imagine, in the present state of our Universities, physicists and chemists being appointed in Biology departments or *vice versa*? As long as we continue to cling to ancient ideals our Biological Research must remain ancient

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