featured the stimulating vice-presidential address by James D. Ebert on "Interacting systems in development" and the important contributions of Mahlon B. Hoagland (Harvard) and Tore Hultin (Wenner-Gren Institute, Stockholm). The other sessions were entitled "Oögenesis and fertilization," "Cytodifferentiation," "Sequential appearance of proteins during differentiation," and "Regulatory phenomena." Daniel Mazia (California), Clifford Grobstein (Stanford), W. Eugene Knox (Harvard), and Sol Spiegelman (Illinois) presided over these sessions. Other participants were J. G. Gall (Yale), David Epel (Pennsylvania), Paul Gross (Brown), Tore Hultin (Stockholm), Fred Wilt (California), Stanley Cohen (Vanderbilt), Irwin Konigsberg (Carnegie Institution of Washington, Baltimore), Norman K. Wessells (Stanford), Ruth Doell (Stanford), John Papaconstantinou (Connecticut), Olga Greengard (Institute for Muscle Disease, New York), Maurice Sussman (Brandeis), H. O. Halvorson (Wisconsin), and Ulrich Clever (Purdue). Clement L. Markert (Johns Hopkins) summarized the symposium. His special AAAS Moving Frontiers Lecture, "The role of genes in development," added emphasis to the discussion of developmental biology at the meeting.

Section N cosponsored several programs of other groups, including the very relevant symposium on cytoplasmic units of inheritance, organized by the American Society of Naturalists.

The new chairman of Section N is A. Baird Hasting (Scripps Clinic and Research Foundation, La Jolla), and the incoming secretary is Robert E. Olson (University of Pittsburgh Graduate School of Public Health).

OSCAR TOUSTER, *Secretary*

Academy of Psychoanalysis (N1)

The four-session program (26–27 December) of the Academy of Psychoanalysis was a symposium entitled Cognitive Processes and Psychopathology. Cosponsors included the American Psychiatric Association and the Section on Medical Sciences (N). Topics covered during the four sessions included: the psychoanalytic theory, Holistic theories of psychopathology, information theory and cybernetics, and the developmental theory. For complete details of this program, see page 914.

Alpha Epsilon Delta (N2)

The symposium on opportunities for medical education in Canada, held in Montreal (29 December), was one of the most successful ever sponsored by the society and attracted a large and enthusiastic audience of students and educators. J. Wendell MacLeod (executive secretary, Association of Canadian Medical Colleges) outlined the development of the Canadian medical schools and gave figures on their graduates and enrollment by classes, sex, residences, and number of U.S. and foreign students. Archie N. Solberg (University of Toledo) outlined the major questions being asked of premedical advisors about opportunities for U.S.-trained students in the Canadian schools. The panelists from medical schools at McGill University, University of Montreal, University of Ottawa, Dalhousie University, and University of Toronto highlighted the admissions, language, and residency requirements, and tuition and other pertinent information regarding their respective schools. They participated in a vigorous question and answer discussion with the audience. Lloyd G. Stevenson (Yale University; formerly dean, Faculty of Medicine, McGill University) summed up the status of U.S. students in Canada and pointed out the opportunities for such students were decreasing as the number and quality of Canadian applicants increased. Harold Wiggers (Albany Medical College) presented a stimulating and provocative discussion on the problems confronting the premedical advisors in coping with the expanding number of premedical students, the development of additional medical schools, and the need to provide better counseling and guidance to those students with limited prospects of acceptance in the increasing competition for places in the medical school.

MAURICE L. MOORE, *National Secretary*

American Society for Microbiology (N6)

A panel discussion of the viral origins of cancer constituted part I of the symposium on Frontiers of Microbiology (30 December 1964).

Joseph Beard (Duke University Medical School) reviewed the history of oncogenic avian viruses. His own significant work in this field looms large and he thoroughly explored the contributions of others, setting forth the model systems worked out on the chicken for the study of the relationship of viruses to oncogenesis. Practically all the known human tumors have their counterparts in the chicken, and since these occur under natural conditions and pose major economic problems, they merit careful study by research workers.

The greatly predominant malignant lesions in chickens, under present conditions, consist of visceral lymphomatosis and the remainder of leukemias, primarily erythroblastosis and occasionally myeloblastosis. One of the most interesting tumors is the nephroblastoma, which is much like the Wilms tumor of humans. Each strain of the several avian oncogenic viruses has its own tumor spectrum and these agents have now been studied and well characterized chemically, by tissue culture, electron microscopy, and serological reactions. Finally, it has been shown that chicken viruses can cause malignant lesions in mammals such as mice, hamsters, rabbits, and monkeys.

In conclusion, Beard wistfully pointed out that study of chicken viruses presently seems out of style, in spite of the availability of well integrated model systems and the fact that these viruses offer to the experimenter excellent guides in designing future research for the study of the relationship of viruses to cancer in man.

Ludwick Gross (Veterans Administration Hospital, Bronx, New York) then discussed the oncogenic viruses other than those of the avian group. He emphasized that various trigger mechanisms such as radiation, chemicals, hormones, and hereditary factors could activate latent oncogenic viruses and thus cause the disease "cancer," and that many cancers, if not all, have been shown to be caused by viruses. The tide turned to this conclusion when it was shown that many tumors in different animal species could be transmitted by filtrates, and a variety of oncogenic viruses was described in detail. Tissue culture techniques, electron microscopy, and various chemical and physical studies have aided materially in the purification and characterization of these viruses.

Gross then reviewed his extensive work with leukemic viruses of mice,

Alpha Epsilon Delta (N2)

Maurice L. Moore

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