

зонты *Toxoplasma* достигали пика плотности 1,040 г/мл при применении фикола, 1,060 г/мл при применении декстрана и 1110 г/мл при применении сахарозы. Имея ввиду успешную сепарацию экзо-кишечных стадий *Toxoplasma* путем центрифугирования в градиентах плотности, обсуждается возможность применения этого метода для выделения разных эндо-кишечных стадий развития паразита.

REFERENCES

- CUTTS H. J., Cell separation methods in nematology. Academic Press, New York and London, 1970.
- DUBEY J. P., FRENKEL J. K., Cyst-induced toxoplasmosis in cats. J. Protozool. 19: 155—177, 1972.
- FRENKEL J. K., DUBEY J. P., MILLER N. L., *Toxoplasma gondii* in cats: Fecal stages identified as coccidian oocysts. Science 167: 893—896, 1970.
- HUTCHISON W. M., DUNACHIE J. F., SIIM J. Chr., WORK K., Coccidian-like nature of *Toxoplasma gondii*. Brit. med. J. 1: 142—144, 1970.
- LYCKE E., LUND A., A tissue culture method for titration of infectivity and determination of growth rate of *Toxoplasma gondii*. I. Acta path. microbiol. scand. 60: 209—220, 1964.
- MACH O., LACKO L., Density gradient in a Dextran medium. Ann. Biochem. 22: 393 to 397, 1968.
- MASIH K. N., MACH O., VALKOUN A., JÍRA J., *Toxoplasma gondii*: Large-scale purification by zonal density gradient centrifugation. Exp. Parasitol. 39: 84—87, 1976.
- NAKABAYASHI T., MOTOMURA I., A method for separating cysts of *Toxoplasma gondii* from the infected mouse brains by multilayer centrifugation with gum arabic solution. Trop. Med. (Nagasaki) 10: 72—80, 1968.
- WERNER H., VOSS H., Entwicklungsformen von *Toxoplasma gondii* im Säugetierorganismus. Zbl. Bakt., I. Abt. Orig. 213: 120 bis 133, 1970.

Received 7 March 1978.

K. M., Department of Medical Parasitology, Robert Koch Institute, D-1000 Berlin 65

FOLIA PARASITOLOGICA (PRAHA) 26: 13—14, 1979.

Dr. Konstantin Aleksandrovich Breev (1910—1978)

On 15 May 1978 Konstantin Aleksandrovich Breev, an outstanding zoologist and parasitologist, the leading scientific worker of the Zoological Institute, the USSR Academy of Sciences, passed away suddenly in Leningrad.

K. A. Breev was born on 29 November 1910 in Voronezh. After completing his secondary school education he began studying natural sciences at the Pedagogical faculty of the Rostov University and in 1930 transferred to the University of Leningrad, from which he graduated in 1935, specializing in entomology. After graduation he worked for two years in Turkmenia in an expedition organized by the USSR Academy of Sciences, and lectured at the Pokrovsky Pedagogical Institute in Leningrad. In this early period he was already engaged in the studies on the ecology of parasitic Diptera. After the outbreak of the Second World War he joined the army in 1941 as a volunteer and fought against fascism until 1945. He was twice wounded and decorated with military orders.

After the war he completed his post-graduate studies at the Institute of Zoology, the USSR Academy of Sciences, where he received his



Candidate of Sciences degree in 1949, using for his thesis "Activity of blood-sucking Diptera and

warble flies attacking reindeer and factors regulating this activity". As a scientific worker he joined the staff of the Institute of Northern Agriculture, Animal Husbandry and Production, the USSR Ministry of Agriculture. He elaborated new methods for the protection of reindeer against parasitic Diptera which were widely applied in practice. In 1955 he became the leading scientific worker at the Zoological Institute in Leningrad and in 1972—1977 he headed the Parasitological laboratory there.

In his professional career K. A. Breev primarily focused his attention on the ecology of warbleflies and their relationship to hosts. On the basis of this material he elaborated a new trend in the studies on regulatory systems in the parasite and host populations by mathematical methods. His paper on the regularities of negative binomical distribution in the parasite populations, published in the booklet "Application of negative binomical distribution in the studies on population ecology of parasites", is a fundamental discovery, indicating a new direction in parasitological research. The problems of function and organization of ecological systems may be considered basic not only for parasitology, but for ecology in the widest sense as well, and K. A. Breev's contributions along these lines are therefore extremely valuable. K. A. Breev published over 80 professional papers, among them a number of contributions on ecological principles in the control methods against parasitic arthropods and original articles on the application of mathematical methods in biology.

K. A. Breev's scientific activities were highly appreciated. He was presented with a State prize and two awards for outstanding service and was honoured with many other awards and distinctions of the Academy of Sciences. In 1974 he was elected a full member of the International

Biometric Society and in 1978 honorary member of the Czechoslovak Society for Parasitology, affiliated to the Czechoslovak Academy of Sciences.

An important element in K. A. Breev's scientific activities was his collaboration with specialists of other institutes in the Union Republics, primarily with mathematicians and veterinarians, and his extensive activities as consultant and teacher. He collaborated with staff members of the Institute of Parasitology, Czechoslovak Academy of Sciences for nearly 25 years. He also participated in numerous scientific symposia and congresses at home and abroad. The application of fundamental research and direct organization of control measures against the economically important cattle disease — hypodermatosis, conducted by K. A. Breev, caused a marked decrease of this disease in the European part of the USSR and its complete eradication in the Leningrad region. His methods applied in cooperation with workers of the Institute of Parasitology, Czechoslovak Academy of Sciences and State Veterinary Administration, were also instrumental in the liquidation of cattle hypodermatosis on the territory of the Czech Socialist Republic.

The sudden death of K. A. Breev was a great loss to parasitology, ecology and zoology and came as a great shock to all who had known his vitality and working enthusiasm and who deeply respected him.

From among us was taken a scientist who blazed new trails in his chosen field of science, who was a keen and dedicated specialist of world renown, but primarily a fine and generous man. Czechoslovak parasitologists have lost a wise friend and a longtime collaborator. To honour his memory it is our duty to continue his work.

Dr. A. V. Gussev, C.Sc., Dr. J. Minář, C.Sc. and Prof. Dr. B. Rosický, D.Sc.