FACULTY OF SCIENCE
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Department of Parasitology
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To whom it concerns: A summary of Doctoral Thesis by Dolgikh Viacheslav Vassiljevich "Biochemical, structural and functional adaptations of entomopathogenic microsporidia of genus *Paranosema* to intracellular parasitism".

It is my great pleasure to support the candidacy of Viacheslav. V. Dolgikh for obtaining the title „ Doktor biologiceskich nauk". Recent reading of his thesis and of the avtoreferat, confirmed my previous and long term oppinion on his scientific qualification, which I obtained by reading since 1994 his papers, studying them, and eventually citing them in my own publications.

V.V. Dolgikh has been working and publishing on microsporidia, a relatively not well known, but quite important group of intracellular parasites of animals, presently believed to represent a very old phylogeny sister group of lower fungi. Microsporidia are unique parasites in many respects. They have evolved a unique infection mechanism in which a germ is injected into the cell of the host and their intracellular life enabled them to modify their genome to a minimum, to reduce their energetic machine and to draw efficiently energy from the cell of the host. More and more comes to evidence that microsporidia modify the life of the host cell and even of the host organism to their purpose. In addition, microsporidia are economically and health important organisms infecting harmful, but also beneficial insects, infecting not only invertebrates but also vertebrates, mammals including man.

V.V. Dolgikh´s publications have significantly contributed to the understanding of microsporidia, which seem to be the most frequent animal parasites in existence. The international electronic database SCOPUS lists 25 publications of V.V. Dolgikh and his co-authors, in 19 of them V.V. Dolgikh is the leading author. Some of these papers were published in priority biological journals and have enjoyed excellent citation record (up to 40-50 for the two most cited articles). List of V.V. Dolgikh's publications shows that their authors contributed to the understanding of many basic questions not only related to microsporidia but also to the general cytology and physiology of eukaryotic cell. Here, I have in mind papers on the special structure and function of the microsporidian Golgi and its relationship to the endoplasmic reticulum. Other important publications of V.V. Dolgikh deal with microsporidia energetic metabolism, their ability to steal energy from the host cell using ATP transporters, secretion of proteins exported to the host cell and the physiology of microsporidian spores. Results of papers by V.V. Dolgikh and his co-authors were obtained by advanced methods of biochemistry, molecular biology and electron microscopy.

Conclusion: I believe that the long term scientific activity of V.V. Dolgikh qualify him as a world renown researcher in the field of microsporidia. I fully support his candidacy for obtaining the title „doktor of biologiceskich nauk".

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