



UNIVERSITY OF
PORTSMOUTH

School of Pharmacy and
Biomedical Science
St Michael's Building,
White Swan Road,
Portsmouth, PO1 2DT U.K.
t: +44(0)2392 842850
e: matthew.parker@port.ac.uk

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To the Academic Council of Sankt-Petersburg State University

Re: Dr. Kalueff's Doctoral Dissertation

Dear Sir/Madame,

Brain disorders are highly prevalent human illnesses. Yet they are complex and their aetiology is largely unclear. Developing novel models of brain disorders and uncovering their mechanisms are an important area of neurobiology and physiology. Dr. Allan Kalueff's higher doctorate dissertation, "**Biological bases of experimental modelling of CNS processes and human brain disorders using zebrafish (*Danio rerio*)**", makes an important contribution to this field. I am writing this letter to most strongly support awarding Dr. Kalueff, the degree of Doctor of Biological Sciences in Physiology, for his Dissertation work presented to the Academic Council of Sankt-Petersburg State University.

Dr. Kalueff's dissertation comprises an impressive collection of evidence, collected and conceptually interpreted by him personally, that spearheads multiple applications of zebrafish models to neuroscience research. The main goal of his research are: 1) to develop novel models of CNS pathogenesis using zebrafish and 2) to explore evolutionarily conserved, fundamental physiological principles of CNS normal and pathological functioning, based on such models. The presented dissertation work fully achieves these goals.

The presented work is both topical and acknowledged, as can be seen by a large number of citations to Dr. Kalueff's research papers in the literature. The dissertation, drawing upon these publications, is a comprehensive and well-written volume which is also logically organized, well-structured and well-presented. This research substantially widens the methodological and conceptual bases of CNS disease modelling utilizing aquatic model species, and applies both traditional research methods with novel models and tests the author has introduced and developed.



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The author's role as a prominent and visible member of neuroscience community is consistent with his demonstrated leadership in the field of zebrafish neurobiology, including his long-term work as the Chair of the International Zebrafish Neuroscience Research Consortium. My collaborators and my own lab are often using Dr. Kalueff's zebrafish papers. Furthermore, I regularly use his findings, including those forming his present Dissertation, in teaching Neuroscience and Neuropharmacology at University of Portsmouth, UK.

In conclusion, Dr. Kalueff's seminal studies continue to open new important avenues of research in the field of experimental neuroscience and physiology. I recognize Professor Allan V. Kalueff, Cand Biol Sci, PhD, as a deserving outstanding scholar to be awarded the higher doctorate degree of Doctor of Biological Sciences in Physiology.

Yours faithfully,

Dr Matthew Parker, BSc. MSc. PhD. FHEA

Group leader Brain and Behaviour Lab

Scientific Director Portsmouth Zebrafish Research Facility

Senior Lecturer in Neuroscience and Psychopharmacology

University of Portsmouth
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Michael's Building
Wilton Swan Road
Portsmouth
PO1 2DT