Curriculum Vitae

Last name, First name: **Parker, Matthew** **Gender**: **Male**

Nationality/ies: **UK national**

Overall Scientific Expertise:
My research is focussed on understanding the biology of neuropsychiatric, neurodevelopmental, and neurodegenerative disorders, primarily in the context of stress. I lead the Brain and Behaviour Lab at Portsmouth, which I established in 2015, and I am Director of the Zebrafish Research Facility. I have published over 85 research articles, reviews and chapters, have an 'h' index of 30 and over 2700 citations. My group use zebrafish as a model species to study interactions between molecular (genetic/epigenetic) and environmental (e.g., alcohol, stress) factors, and the associated neural circuits, that underlie several neuropsychiatric, neurodevelopmental, and neurodegenerative disorders.

Professional Experience
[Starting with your present occupation, list in reverse chronological order each activity in which you have been engaged. Please copy and paste more rows if needed.]

Years employed from – to	Title of position	Employer – name and location	Areas of professional specialisation♠
Starting 03-10-2022	Senior Lecturer in Neuroscience	University of Surrey (UK)	Neuroscience; psychopharmacology; ecotoxicology; psychology (animal behaviour)
2015 – present (leaving 02-10-2022)	Reader in Neuroscience and Psychopharmacology	University of Portsmouth (UK)	Neuroscience; psychopharmacology; ecotoxicology; psychology (animal behaviour)
2014-2015	Lecturer in Cell Biology and Developmental Genetics	Queen Mary University of London (UK)	Neuroscience; psychopharmacology; psychology (animal behaviour)

Specific expertise in the field of the call

I am a user of zebrafish for my research, and have been for the past 12 years. I am known for this, and as well as writing several reviews, I am regularly invited to give talks at international conferences on zebrafish behavioural neuroscience. I have a particular interest in the welfare of zebrafish used in research, and how the conditions in which the animals are kept impact on behavioural endpoints. As well as having served as a UK Government adviser (I was part of the Animals in Science Committee, 2011-2014), I have also written international guidelines on the use of animals in research (Parker 2020). In addition, my group has established several important parameters for testing of zebrafish which are cited in the field. For example, we demonstrated (Parker et al 2011, PLoS ONE), that the commonly used zebrafish novel tank test was impacted

by pre-testing housing conditions. This paper has been cited >100 times. We have also recently demonstrated that pH of testing water impacts on drug-behavioural interactions (Cleal et al 2020, Pharm, Biochem, Beh), that water changes of the zebrafish impacts on their responses in common anxiety tests (Fontana et al, 2021, J Neurosci Meth). I have a strong interest in the development of national/international guidelines on the use of zebrafish in scientific research, and that this is evidence-based, and framed within the most recent research findings. This will not only help with the welfare of the animals concerned, but will also be critical for ensuring excellence and reliability in research using this fantastic and versatile model species.

Educational Background

Year	Degree awarded	Educational Institution – name and location	Areas of educational specialisation*
2009	PhD	University of Southampton, UK	Psychology (animal behaviour)
2005	MSc	University of Southampton, UK	Research Methods and Statistics
2004	BSc	University of Southampton, UK	Psychology

Memberships in Scientific Advisory Bodies/Committees/Panels *(if any)***:**
Panel member (Pool of Experts) BBSRC (UK)
Panel member NC3Rs (Skills and Knowledge Transfer Partnership panel)
Panel member NCN (Poland) committee

Memberships in Learned Societies *(if any)***:**
Graduate member of British Psychological Society

Memberships in Editorial Boards *(if any)***:**
Associate Editor: Journal of Veterinary Behavior (Elsevier)

List of Publications:

I have published 87 peer reviewed Journal articles and Book Chapters, and have an 'h' index of 30, and have received >2700 citations. I have a Field Weighted Citation Index (2016-2021) = 2.68. Below are listed my 10 most relevant recent publications.

Fontana, B.D., Alnassar, N., Parker, M.O. (2022). The zebrafish (Danio rerio) anxiety test battery: Comparison of behavioral responses in the novel tank diving and light-dark tasks following exposure to anxiogenic and anxiolytic compounds. Psychopharmacology. (Available online)

Fontana, B.D., Cleal, M., McBride, S.D., Gibbon, A., Parker, M.O. (2021). The effects of two stressors on working memory and cognitive flexibility in zebrafish (Danio rerio): The protective role of D1/D5 agonist on stress responses. Neuropharmacology, 196, 108681.

Fontana, B.D., Cleal, M., Norton, W.H.J., Parker, M.O. (2021) Chronic unpredictable early-life stress (CUELS) affects boldness depending on context and differently modulate stress-reactivity depending on stress duration. Physiology and Behavior. (Available online).

Fontana, B.D., Alnassar, N., Parker, M.O. (2021). The impact of water changes on stress and subject variation in a zebrafish (Danio rerio) anxiety-related task. Journal of Neuroscience Methods, 363, 109347.

Fontana, B.D., Alnassar, N., Parker, M.O. (2021). Tricaine methanesulfonate (MS222) has short-term effects on young adult zebrafish (Danio rerio) working memory and cognitive flexibility, but not on aging fish. Frontiers in Behavioural Neuroscience. (Available online).

Fontana, B.D., Gibbon, A.J., Cleal, M., Sudwarts, A., Pritchett, D., Petrazzini, M.E.M., Brennan, C.H., Parker, M.O. (2021). Moderate early-life stress improves adult zebrafish (Danio rerio) working memory but does not affect social and anxiety-like responses. Developmental Psychobiology, 63, 54-64.

Fontana, B.D., Gibbon, A.J., Cleal, M., Norton, W.H.J., Parker, M.O. (2020). Chronic unpredictable early-life stress (CUELS) protocol: early-life stress changes anxiety levels of adult zebrafish. Progress in Neuropsychopharmacology & Biological Psychiatry. (Available online)

Cleal, M., Gibbon, A.J., Fontana, B.D., Parker, M.O. (2020). The importance of pH: how aquarium water is affecting behavioural responses to drug exposure in larval zebrafish. Pharmacology, Biochemistry and Behavior, 199, 173066.

Parker, M.O. (2020). Module 11: The care and use of animals in research. Research Integrity, UK (2nd Ed). Oxford University Press

Parker, M.O., Millington, M.E., Combe, F.J., & Brennan, C.H. (2012). Housing conditions affect physiological and behavioural responses of zebrafish to the novel tank diving test. PLoS ONE, 7(4): e34992.