

Dr Katerina Johnson - CV



PERSONAL DETAILS

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Age:	29	Twitter:	@DrKatJohnson

PROFILE

I am a versatile, energetic and driven individual, combining scientific intellect and creative flair. My passion for biology stems from its ability to change how we see the world and improve our own health and wellbeing. I have a keen interest in science communication and promoting public understanding of the life sciences through written, audio and visual media in an engaging and understandable way.

EDUCATION & QUALIFICATIONS

DPhil Degree 2014-2018	University of Oxford (Pembroke College): Interdisciplinary Bioscience Doctoral Training Partnership Research topic: Relationship between the microbiome, brain and behaviour.
MA Degree	University of Oxford (Pembroke College): Conferred in recognition of seniority within University.
BA Degree 2011-2014	University of Oxford (Pembroke College): First Class Honours in Biological Sciences, ranked first in Year 2 Final examinations, second in degree overall and awarded a Gibbs Prize for meritorious work in Biological Sciences.
A Levels June 2011	4 A*s in Biology, Mathematics, Chemistry, Geography (including 100% in Biology, Geography, 2 Mathematics modules and a Chemistry module).
GCSEs May 2009	12 A*s in Biology, Chemistry, Physics, Mathematics, English language, English literature, French, Latin, ICT, Geography, Religious Studies, Physical Education (including 100% in English literature and ICT).
AFHEA	Associate Fellow of Higher Education Academy.
Other	Advanced OCR Free Standing Mathematics Qualification (A, the highest grade).
Qualifications	OCR NQF Vocational Qualification – Level 1+2 Certificate in Young Enterprise (Distinction).

AWARDS

- Bioscience Impact Award, Oxford Innovation, 2019.
- R. G. Collingwood Prize for exceptional academic achievement & leadership in the University & academic world, Pembroke College, 2018.
- Public Engagement & Outreach Award, Doctoral Training Centre, 2018.
- Senior Studentship, Pembroke College, 2016-2017.
- Project Publication Prizes, Doctoral Training Centre, 2016 & 2018.
- Academic Graduate Scholarship, Pembroke College, 2014-2018.
- BBSRC Studentship Award & Research Grant, 2014-2018.
- Prestigious Gibbs Prize for meritorious work in Biological Sciences, University of Oxford, 2014.
- Finals Prize awarded by Master of Pembroke College, 2014.
- Academic Undergraduate Scholarship, Pembroke College, 2013-2014.
- Governor's Prize for College examinations, 2012.
- Silver medal in the British Biology Olympiad, 2011.
- National prize winner for best A Level practical chemistry investigation, 2011.
- Best Biology Student of the Year in Oxfordshire, 2010.
- Bronze medal in British Physics Challenge, 2009.
- Academic Scholarship for secondary school and prizes for Academic Excellence.

RESEARCH INTERESTS & EXPERIENCE

- Postdoctoral position (research on the microbiome–gut–brain axis in emotion and cognition), Institute for Brain & Cognition, University of Leiden, 2021-2022.
- DPhil in Interdisciplinary Bioscience (research on the microbiome, brain and behaviour), Departments of Experimental Psychology & Psychiatry, University of Oxford, 2015-2018 and subsequently continued as Research Associate 2019-2021.

- Social & Evolutionary Neuroscience Group (research on neurochemical basis of human social behaviour), Department of Experimental Psychology, University of Oxford, Apr-July 2015.
- Sheldon Group (research on bird personality, social networks and behaviour), Department of Zoology, University of Oxford, Jan-Mar 2015.
- Aboobaker Lab (research on regeneration and stem cell biology), Department of Zoology, University of Oxford, May-Aug 2013.

RESEARCH PUBLICATIONS

- Johnson, K.V.-A. & Foster, K.R. Why does the microbiome affect behaviour? *Nature Reviews Microbiology* **16**, 647-655 (2018). [selected to be published in special 15th anniversary print issue and ranked number one of all articles ever published in this journal by Altmetric impact score, which measures amount of attention received from scientists in the field, citations, the public and media]
- Johnson, K.V.-A. Gut microbiome composition and diversity are related to human personality traits. *Human Microbiome* (invited submission) **15**, 100069 (2019).
- Johnson, K.V.-A. & Burnet, P.W.J. Microbiome: Should we diversify from diversity? *Gut Microbes* **7**, 455-458 (2016).
- Johnson, K.V.-A. & Burnet, P.W.J. Opposing effects of antibiotics and germ-free status on neuropeptide systems involved in social behaviour and pain regulation. *BMC Neuroscience* **21**, 32 (2020).
- Johnson, K.V.-A. & Dunbar, R.I.M. Pain tolerance predicts human social network size. *Scientific Reports* (Nature Portfolio) **6**, 25267 (2016). [Altmetric impact score reached >1500, placing it in top 0.015% of all research ever published globally]
- Johnson, K.V.-A. et al. Male great tits assort by personality during the breeding season. *Animal Behaviour* **128**, 21-32 (2017).
- Sarkar, A., Johnson, K.V.-A. et al. Microbial transmission in animal social networks and the social microbiome. *Nature Ecology & Evolution* **4**, 1020-1035 (2020).
- Sarkar, A., Johnson, K.V.-A. et al. The role of the microbiome in the neurobiology of social behaviour. *Biological Reviews* **95**, 1131-1166 (2020).
- Greenhough, B., Johnson, K.V.-A. et al. Setting the agenda for social science research on the human microbiome. *Humanities & Social Sciences Communications* **6**, 18 (2020).

SCIENCE MEDIA & ENGAGEMENT WORK

Science comm. Nov 2018 to present	Science communicator (media and public facing) including writing and invited talks to investors, multinational corporations, academics at conferences and events for the general public.
Wellcome Trust Immersive Science Oct-Nov 2019	Helped collaborate on and perform at an immersive science experience for the general public at one of the UK's largest comic con festivals. Adapted how I interacted and answered questions depending on the age range of the groups from children to adults.
Oxford Sparks Jan-Feb 2018	Worked with University's public engagement arm on a Facebook Live event which I helped to arrange and promote, as well as giving a live interview on the microbiome and responding to questions live from the audience. https://www.youtube.com/watch?v=spRiBCByj8w
Guerilla Science June-July 2017	Advised on a public engagement event on diet and the microbiome for the Secret Garden Party festival in Cambridgeshire and invited to speak. Since been invited back to host and speak at future events ("We've had fantastic feedback on the event, and we all thought that you were an incredibly engaging speaker – a lot of our team said your talk was a big highlight"). https://www.youtube.com/watch?v=0DkX2n5IAho
Gundog Media Ltd & CB Films Feb 2017	Hired as a paid researcher on a bioengineering documentary at the commissioning stage for National Geographic. Researched and summarised cutting-edge science stories and also identified potential contributors. Sourced images and video links and helped set up and format a website encapsulating the documentary proposal. Worked closely in a small team to meet tight deadlines.
BBC Science Jan-Feb 2017	Worked as part of a team on a three-part TV series 'Secrets of the Human Body', covering the latest science on human biology. Roles included researching science stories, writing briefs and contacting both academics and other potential contributors at various filming locations. Collaborated with other science teams and gained experience with Horizon, including on shoot and in the edit suite. Also acted as a runner on The One Show and hosted celebrities.
Oxford Scientific Films Aug 2014	Liaised with Production Coordinator and assisted Edit Producer with scientific research for BBC TV series 'Carol Klein's Plant Odysseys' and also spent time with the filming crew on shoot.

SCIENCE COMMUNICATION & RESEARCH IMPACT

- Worldwide media coverage on TV (e.g. Sky News with Kay Burley, ITV News feature, CTV News, BBC TV South Today); on radio (e.g. BBC Radio 4 PM programme, BBC Radio 4 Inside Science, BBC World Service and a range of national and international stations); on podcasts (e.g. Naked Scientists); in all the main national newspapers (e.g. The Times, Telegraph, The i, Guardian etc.) and international newspapers (e.g. Süddeutsche Zeitung, The Australian etc.); and in print and online magazines (e.g. The Scientist as Editor's Choice, Time, New Scientist, New Statesman, Huffington Post, Forbes, BBC Future, American Psychological Association's magazine etc.)
- Listed as expert for media engagement with the University of Oxford.
- TEDx Speaker 2019 on the future of the gut microbiome, 58,000 views: www.youtube.com/watch?v=cvDaaHG2CME "Insightful, funny, and educational on both a personal and societal level. She's awesome. I found it one of the most fascinating, engaging and entertaining experiences." – TEDx review
- Regional Finalist of FameLab, the national science communication competition.
- Member of Presenter Network run by Royal Museums Greenwich for individuals communicating science to the public.

GOVERNMENT SCIENCE POLICY CONTRIBUTIONS

- Invited panel member for BBSRC (Biotechnology and Biological Sciences Research Council) contributing to Strategy Advisory Panel Meeting on Agriculture, Food, Nutrition and Health and meeting to discuss future research priorities for government funding on Gut–Brain–Immunology Axis.
- Invited to participate in Parliamentary Roundtable on 'Raising awareness of the importance of fibre in the diet for gut health' in collaboration with Kelloggs.
- Selected to represent The Genetics Society to question senior politicians on science policy at the Houses of Parliament.

INVITED ACADEMIC TALKS

- Probiota Conference, Denmark, Feb 2022 (postponed due to pandemic).
- Festival of Genomics & Biodata, London, Jan 2022.
- Science lecture for Mental Health Awareness Week, University of Vienna, May 2021.
- Nutralngredients Conference (Keynote), Feb 2021.
- Seminar, University of Cambridge, 2021 (postponed due to pandemic).
- London Microbiome Meeting, Kings College London, Oct 2020.
- 8th Winter Seminar on Dementia (Keynote), Italy, Jan 2020.
- Bacteria, Brains & Behaviour, Birkbeck University, Mar 2020.
- VI Conference & XI Symposium of Psychobiology, Brazil, Nov 2019.

INVITED PUBLIC TALKS

- Guerilla Science at Gone Wild Festival, Exeter, Aug 2021.
- Leonardo Art Science Evening Rendezvous, Cambridge, 2021.
- Manchester Literary & Philosophical Society, 2021.
- Danone (for healthcare practitioners), Dec 2020: <https://wavecastpro.wistia.com/medias/8nut4wlxpd>
- Think-tank and investment firm Supersystemic.ly, Brooklyn (New York), May 2020 but postponed due to pandemic (in meantime gave virtual talk, Apr 2020): <https://www.youtube.com/watch?v=Dc6m6a53DjU>
- British Museum PechaKucha, London, Mar 2020.
- Wellcome Trust Immersive Science, York, Nov 2019.
- Science Cabaret (part of The Oxford Science & Ideas Festival), Oxford, Oct 2019.
- Guerilla Science at Barbican Centre, London, Sept 2019.
- Investment firm Vulpes, St Peter's College (Oxford), June 2018.
- Oxford Sparks Facebook Live and Q&A, University of Oxford, Feb 2018: <https://www.youtube.com/watch?v=spRiBCByj8w>
- Guerilla Science at Secret Garden Party Festival, Cambridge (funded by Wellcome Trust), July 2017: <https://www.youtube.com/watch?v=0DkX2n5IAho>

PEER REVIEW

Invited to be a reviewer for a number of high-impact journals (both research and review articles) that span the life sciences and medical sciences: *Microbiome* (BioMed Central), *Neuroscience & Biobehavioral Reviews* (Elsevier), *ISME Journal* (Nature Portfolio), *BMJ Open*, *Psychopharmacology* (Springer Nature), *Trends in Ecology & Evolution* (Cell Press), *Molecular Ecology* (Wiley), *Scientific Reports* (Nature Portfolio), *Frontiers in Microbiology*, *Antibiotics* (MDPI), *Environment International* (Elsevier).

KEY SKILLS

IT	Programming	R (& RStudio) & basic knowledge of MATLAB, Python & C.
	Statistical software	R, SPSS, JMP & basic knowledge of PAST.
	Microsoft packages	Proficient user of PowerPoint, Excel, Word, Publisher & Teams.
	Bioinformatics	QIIME, Geneious, BLAST, BioEdit & ImageJ.
	Website design	Squarespace & Wix.
	Miscellaneous	Reference management software & video conferencing e.g. Zoom.
Teaching	Associate Fellow of Higher Education Academy, undergraduate tutor, teacher for postgraduates and Magdalen College School tutor.	
Communication	Scientific writing and writing for the public, confident public speaker, media interview skills and good French language abilities.	
Scientific skills	Psychological testing (e.g. personality and emotion recognition), statistical analysis, social network analysis, questionnaire design (incl. diet, health, wellbeing and sociodemographics), working and communicating with large numbers of participants, microbiome analysis (incl. composition and diversity), bioinformatics, RNA extraction, DNA synthesis, PCR (incl. real-time), gel electrophoresis, DNA cloning, primer design, <i>in situ</i> hybridisation, western blotting, microscopy, dissection, spectrophotometry.	

SOCIETIES

The Society of Authors, The Genetics Society, Authors' Licensing and Collecting Society and OU Scientific Society.

POSITIONS OF RESPONSIBILITY & EXTRA-CURRICULAR ACHIEVEMENTS

Captain of University Challenge Team	Progressed through all three selection rounds and represented Pembroke College as captain of the team 2018.
Vice President of Oxford University Biological Society	Arranged talks with eminent scientists and helped organise events with many attendees, raising the profile of the society and greatly increasing membership.
Oxford University Athletics Club	Selected for the Blues Team in the Athletics Varsity Match 2012.
Young Enterprise	As IT Director, I won the Cisco Human Networking ICT National Award and Best Presentation at Young Enterprise County Finals.
Duke of Edinburgh	Gold, Silver and Bronze Awards.
Music	ABRSM Grade 6 merit for violin and Grade 5 merit for theory.

EARLY WORK EXPERIENCE & VOLUNTEERING

Corporate	<ul style="list-style-type: none"> Google: BOLD Immersion Programme (Building Opportunities for Leadership and Development) and chosen for their special year-long Mentorship Programme. Banking: Morgan Stanley, Citi (Women of Tomorrow Programme) and Merrill Lynch. Consulting: Oliver Wyman. Intellectual Property Rights: Herbert Smith Freehills.
Scientific	<ul style="list-style-type: none"> Syngenta: Crop science and sustainable agriculture (invited back to 'blue skies' research dept). Gatsby Plant Science: Selective course for high-achieving university students. Cotswold Wildlife Park: Biodiversity and conservation, interacted with public and shadowed vet.
Creative	<ul style="list-style-type: none"> Le Manoir: Raymond Blanc's Michelin starred restaurant.
Volunteering	<ul style="list-style-type: none"> Pets As Therapy: Visiting dementia care home with therapy dog on a weekly basis for 3 years.

INTERESTS

I enjoy the competition, dedication and teamwork of sport and have represented my county in netball and South England in athletics. I love using computer software, especially for graphic design and video editing and I also enjoy creative cooking.