

Emmanuel Quansah, Ph.D.

Center for Neurodegenerative Science, Van Andel Research Institute
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Research Focus

Molecular Neurobiology, Neurodegeneration, Genetics, Pharmacology

Key Skills

Cell and molecular biology – Cell culture, transfection, RT-PCR, gel electrophoresis, western blotting, immunofluorescence and immunohistochemistry

Microscopy – Light and confocal

Neurochemistry - Nuclear magnetic resonance spectroscopy (NMR) and HPLC

In vivo techniques – Rat and mice stereotaxic surgery, microdialysis

Bioinformatics/Statistics – *MetaboAnalyst*, SIMCA, SPSS, GraphPad Prism, Excel, Minitab and R Statistical Package

Education and Qualifications

Ph.D., Molecular Neurobiology, De Montfort University, Leicester, UK Thesis Title: Molecular and neurochemical effects of methylphenidate on the developing brain. Advisor: Dr. Tyra S. C. Zetterström	2013-2017
M.Sc., Pharmaceutical Biotechnology (<i>Distinction</i>), De Montfort University, Leicester, UK	2012-2013
B.Sc., Molecular Biology and Biotechnology (<i>Second Class Upper Honors</i>), University of Cape Coast, Cape Coast, Ghana	2007-2011

Postdoctoral Training

Postdoctoral Fellow (<i>alpha-synuclein immunotherapy</i>) Advisor: Prof. Patrik Brundin Center for Neurodegenerative Science, Van Andel Research Institute, Grand Rapids, MI	2017-present
Researcher (<i>mitochondrial dysfunction and Parkinson's disease</i>) Advisor: Dr. Nicoleta Moiso Neuropharmacology, De Montfort University, Leicester, UK	2016-2017

Research Experience

Mitochondrial dysfunction and Parkinson's disease, M.J. Fox project Working in a team evaluating mitochondrial UPR and proteolytic pathways altered in PD and their potential rescue mechanisms (involved cell culturing, microscopy, RT-PCR and immunoblotting)	2016-2017
Proteomic and metabolic effects of an anti-ADHD medication, DMU project Evaluating the short- and long-term effects of methylphenidate on genetic, proteomic and metabolic pathways implicated in ADHD (involved <i>in vivo</i> microdialysis, HPLC, NMR, RT-PCR and immunoblotting)	2013-2017

Teaching and Educational Activities

Research Mentor (mentored seven pharmacy students in their BSc/MSc research), De Montfort University, UK	2014-2017
Laboratory Demonstrator (biochemistry and physical chemistry), De Montfort University, UK	2013-2016

Teaching/Research Assistant (molecular biology and biotechnology), University of Cape Coast, Ghana	2011-2012
Intern Laboratory Technician, St Francis Xavier Hospital, Ghana	2010-2011

Honors and Awards

High-Flyers Scholarship, De Montfort University, UK	2013-2017
Travel grant for conference attendance, De Montfort University, UK	2014
Ghana Education Trust Fund (GETFund) Scholarship	2012

Professional Memberships and Activities

British Neuroscience Association	2016-2017
Federal of European Neurosciences Societies	2016-2017
Ghana Neuroscience Society	2016-Date

Publications

Peer-reviewed publications

1. Quansah E, Rodado VR, Grootveld M, Zetterström TSC. 2017. Methylphenidate alters monoaminergic and metabolic pathways in the cerebellum of adolescent rats. *Eur Neuropsychopharmacol*.
2. Quansah E, Rodado VR, Probert F, Grootveld M, Zetterström TSC. 2017. 1H NMR-based metabolomics reveals neurochemical alterations in the brain of rats treated with methylphenidate. *Neurochem Int* 108:109–120.
3. Quansah E, MacGregor NW. 2017. Towards diversity in genomics: The emergence of neurogenomics in Africa? *Genomics* 10.1016/j.ygeno.2017.07.009.
4. Quansah E, Karikari TK. 2016. Potential role of metabolomics in the improvement of research on traditional African medicine. *Phytochem Lett* 17:270–277.
5. Quansah E, Karikari TK. 2015. Motor neuron diseases in sub-Saharan Africa: The need for more population-based studies. *BioMed Res Int* e298409.
6. Quansah E, Karikari TK. 2015. Neuroscience-related research in Ghana: a systematic evaluation of direction and capacity. *Metab Brain Dis* 31(1):11–24.
7. Quansah E, Sarpong E, Karikari TK. 2015. Disregard of neurological impairments associated with neglected tropical diseases in Africa. *eNeurologicalSci* 3:11–14.
8. Karikari TK, Quansah E, Mohamed WMY. 2015. Developing expertise in bioinformatics for biomedical research in Africa. *Appl Transl Genom* 6:31–34.

Presentations, Posters & Abstracts

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| 9. Quansah E, Zetterström TSC, Biochemical markers altered in the cerebellum of rats treated with methylphenidate. 10 th FENS symposium, Copenhagen, Denmark. | 2016 |
| 10. Quansah E, Zetterström TSC, Effects of methylphenidate on dopaminergic targets in the left and right brain hemispheres. 27 th ECNP Congress, Berlin, Germany. | 2014 |