蒙梓棋

助理教授

办公室： 擎天汇校区 PP-R209b

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蒙梓棋助理教授在英国阿伯丁大学获得生物医学科学本科学位，并于 2010 年在英国爱丁堡大学获得博士学位。 她的主要研究方向是神经药理学和认知神经科学，其实验室致力于研究早期生活逆境和神经退化性疾病对认知功能的影响。 她的研究重点是通过药理学方式调控 GABAA 受体（GABAARs），以削弱或增强认知功能。 此外，她的实验室也研究新兴的长期新冠（long COVID）现象，探索本地人群中免疫介质和神经传导物质水平的变化。 透过跨领域的研究方法，奥莉维亚·蒙特罗博士致力于推动基础与临床神经科学的发展，最终目标是改善受认知障碍影响个体的认知健康。

学历/ 工作经历

2020 - 现在： 澳门科技大学医学院助理教授

2012 – 2019： 博士后研究科学家; 英国邓迪大学医学院

2009-2011： 博士后研究科学家; 英国邓迪大学生命科学学院

2005-2010： 英国爱丁堡大学博士学位; 英国生物技术与生物科学研究委员会奖学金

2001-2004： 英国阿伯丁大学; 生物医学科学（药理学）学士学位

教学领域

药理学、生理学、神经科学、语言与交流

研究领域

神经药理学、认知神经科学、行为神经科学、童年不良经验的神经科学/药理学、由麻醉药物引起的术后认知障碍、长新冠、癌症生物学中的细胞死亡途径

科研奖励

- 澳门特别行政区科学技术发展基金 FDCT（2025 – 2028）早年逆境（ELA）对神经生物学、认知功能及行为的影响，并探索利用中医药靶向 α5-GABAARs 进行药理学干预作为潜在治疗方法的研究（MOP 1,507,000）项目负责人 PI
- 澳门特别行政区科学技术发展基金 FDCT（2022 – 2025）选择性抑制 γ-氨基丁酸（GABA）受体以治疗麻药引起的术后认知缺陷（MOP 1,400,000）项目负责人 PI
- 澳门特别行政区科学技术发展基金 FDCT（2022 – 2024）研究国药灭活疫苗 BBIBP-CorV 和 BioNTech mRNA 疫苗初种系统及同源与异源加强剂在澳门地区人群中对新冠肺炎病毒变异毒株的有效性（MOP 644,000）项目负责人 PI
- 澳门科技大学研究基金（2021-2022）- 早期逆境诱发突触外的α5-GABA A 类受体的重定位所导致记忆丧失及对长期增益作用损害的深入性研究（MOP 100,000）. 项目负责人 PI.
- 复星医药（2022 – 至今）澳门抗体保护研究（MOP 5,200,000）Co-I.
- 澳门特别行政区科学技术发展基金 FDCT（2021-2024）电压门控钠离子通道 N a v 1 . 5 介导大肠癌细胞凋亡逃逸途径的前瞻性研究(Grant value MOP 2,650,000). Co-I.
- The G Lawrence Award (University of Dundee) 2015 and 2018.
- European Molecular Biology Organization (EMBO) Project and Travel Award (3D developmental imaging) 2011
- Society for Endocrinology Small Grant Programme for Scientific Research in Endocrinology 2007-2008 (Grant value MOP 113,330).

学术成果（精选）

1. Patil NG, Kou NL, Baptista-Hon DT, **Monteiro O** (In press 2025) Artificial Intelligence in Medical Education: A Practical Guide for Educators MedComm – Future Medicine **Corresponding Author**

2. Wang Jinzhuo Wang, J., Wang, K., Yu, Y…**Monteiro O**…Zhang K, Qu J. (December 2024) Self-improving generative foundation model for synthetic medical image generation and clinical applications. Nature Medicine. IF 58.7. Contributing Author

3. Lok L.S.C.*, Sarkar S.*, Law C.F., Chau S.T., Leung C.Y., Cheang W.H., Li T., **Monteiro O.**[#], Baptista-Hon D.T.[#] (In press 2024) Long COVID Across SARS-CoV-2 Variants: Clinical Features, Pathogenesis and Future Directions MedComm – Future Medicine **Corresponding Author**

4. Wong IN*, **Monteiro O***, Baptista-Hon D, Wang K, Lu Wy, Sun Z, Nei S, Yin Y (November 2024). Leveraging foundation and large language models in medical artificial intelligence *Chinese Medical Journal*. IF 7.5. **1st Author**

5. L. S. C. Lok, **O. Monteiro**, D. T. Baptista-Hon (October 2024) Unlocking longevity: How blocking IL-11 signaling could extend healthspan and lifespan. MedComm – Future Medicine

6. Zhang S, Yang B, Yang H, Zhao J, Zhang Y, Gao Y, **Monteiro O**, Zhang K, Liu B, Wang S (June 2024). Potential rapid intraoperative cancer diagnosis using dynamic full-field optical coherence tomography and deep learning: A prospective cohort study in breast cancer patients. *Science Bulletin*. IF 18.9. Contributing Author

7. Sarkar S and **Monteiro O** (April 2024) Understanding long COVID—The role of serotonin in cognitive impairment MedComm – Future Medicine **Corresponding Author**

8. Guan T, **Monteiro O**, Chen D, Luo Z, Chi K, Li Z, Liang Y, Lu Z, Jiang Y, Yang J, Lin W, Yi M, Zhang K, Ou C (26/03/2024). Long-term and short-term cardiovascular disease mortality among patients of 21 non-metastatic cancers. *Journal of Advanced Research*. IF 10.7. **2nd Author**

9. Ye Y, Tong HYK, Chong WH, Li Z, Tam PKH, Baptista-Hon DT, **Monteiro O** (18/02/2024). A systematic review and meta-analysis of the effects of long-term antibiotic use on cognitive outcomes. *Scientific Reports*. IF 5.5. **Corresponding Author**

10. Zhou X, He Y, Xu T, Wu Z, Guo W, Xu X, Liu Y, Zhang Y, Shang H, Huang L, Yao Z, Li Z, Su L, Li Z, Feng T, Zhang S, **Monteiro O**, Cunha RA, Huang ZL, Zhang K, Li Y, Cai X, Qu J, Chen JF (08/02/2024). 40 Hz light flickering promotes sleep through cortical adenosine signaling. *Cell Research*. IF 44.1. Contributing Author

11. Wang J, Gao Y, Wang F, Zeng S, Li J, Miao H, Wang T, Zeng J, Baptista-Hon D, **Monteiro O**, Guan T, Cheng L, Lu Y, Luo Z, Li M, Zhu JK, Nie S, Zhang K, Zhou Y (08/01/2024). Accurate estimation of biological age and its application in disease prediction using a multimodal image Transformer system. *PNAS*. IF 11.1. Contributing Author

12. Li Z, He J, Yin Y, Tang L, Liu Y, **Monteiro O**, Zeng F (21/12/2023). SARS-CoV-2 pathogenesis in the gastrointestinal tract mediated by Spike-induced intestinal inflammation. *Precision Clinical Medicine*. IF 5.3. **Corresponding Author**

13. Ye Y, Sarkar S, Bhaskar A, Tomlinson B, **Monteiro O** (21/06/2023). Using ChatGPT in a clinical setting: A case report. *MedComm – Future Medicine*. **Corresponding Author**

14. Baptista-Hon DT, Fesalbon GJW, **Monteiro O** (21/11/2022). Changing clinical features of the 2022 monkeypox global health emergency. *MedComm – Future Medicine*. Contributing Author

15. **Monteiro O** (17/10/2022). How will previous infection or current vaccination strategies protect us from future SARS-CoV-2 variant infections? *MedComm – Future Medicine*. **1st Author**

16. **Monteiro O**, Li YW, Baptista-Hon DT (16/08/2022). Phylogenomic characterization of the 2022 outbreak of monkeypox virus—The importance of sustained genetic surveillance. *MedComm – Future Medicine*. **1st Author**

17. Zhou Z, Du P, Li N, Xiong X, Tang S, Dai Q, Wang T, Yu M, Man M, Lam K, Baptista-Hon DT, Tai WH, **Monteiro O**, Ng WS, Lee UM, Liu Z, Zhang K, Li G (June 2022). Homologous or heterogenous vaccination boosters enhance neutralizing activities against SARS-CoV-2 Omicron BA.1 variant. *MedComm*. IF 10.7. Contributing Author

18. **Monteiro O**, Bhaskar A, Wong IN, Ng AKM, Baptista-Hon DT (Dec 2021). Teaching bioelectricity and neurophysiology to medical students using LabAXON simulations. *Adv Physiol Ed*. IF 2.89. **1st Author**

19. **Monteiro O**, Bhaskar A, Ng AKM, Murdoch CE, Baptista-Hon DT (Oct 2021). Computer-based virtual laboratory simulations: LabHEART cardiac physiology practical. *Adv Physiol Ed*. IF 2.89. **1st Author**

20. **Monteiro O**, Chen CW, Bingham R, Rowland P, Argyrou A, Buxton R, Pancevec C, Jones E, Bridges A, Gatfield K, Krauss S, Lambert J, Langston R, Schweiger S, Uings I (2018). Pharmacological disruption of the MID-1/α4 interaction reduces mutant Huntingtin levels in primary neuronal cultures. *Neuroscience Letters* 673, pp. 44-50. IF 2.026. Contributing Author

21. King R, **Monteiro O**, Etherington L, Swinny J, Lambert JJ, Langston RF, Schweiger S (in preparation). Early cognitive and synaptic plasticity deficits in HdhQ111 mice are reversed by inhibition of α5-GABAA receptors. *Neuropharmacology*. IF 5.1026. Equal Contribution

22. Arnoux I, Willam M, Griesche N, Krummeich J, Watari H, Offermann N, Weber S, Dey NP, Chen CW, **Monteiro O**, Buettner S, Meyer K, Bano D, Radyushkin K, Langston RF, Lambert JJ, Wanker E, Methner A, Krauss S, Schweiger S, Stroh A (2018). Early cortical network dysfunction and behavior changes in a mouse model of Huntington's Disease can be reversed by Metformin. *eLife*. IF 7.725. Contributing Author

23. Etherington L, Mihalik B, Pálvölgyi A, Ling I, Pallagi K, Gunn BG, Brown AR, Livesey MR, **Monteiro O**, Belelli D, Barkóczy J, Spedding M, Lambert JJ, Antoni FA (2017). Selective targeting of extra-synaptic α5-GABAA receptors by S44819 (Egis-13529), a novel competitive GABAA receptor inhibitor compound. *Neuropharmacology* 125, pp. 353-364. IF 5.1026. Contributing Author

24. **Monteiro O**, Wiegand UK, Ludwig M (2011). Vesicle degradation in dendrites of magnocellular neurones of the rat supraoptic nucleus. *Neuroscience Letters* 489, pp. 30-33. IF 2.026. **1st Author**

DE SOUZA MONTEIRO, OLIVIA

Assistant Professor of Pharmacology

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E-mail: omonteiro@must.edu.mo



Dr. Olivia Monteiro completed her undergraduate degree in Biomedical Sciences at the University of Aberdeen, UK before earning her PhD from the University of Edinburgh, UK in 2010. With a primary focus on neuropharmacology and cognitive neuroscience, her laboratory investigates the impacts of anaesthesia, early life adversities and neurodegenerative diseases on cognitive function. Her research focuses on the pharmacological manipulations of $GABA_AR$s to impair or to enhance cognition. Additionally, her laboratory explores the emerging phenomenon of long COVID, examining alterations in immune mediators and neurotransmitter levels within the local population.

Academic History

2020 - 現在: Assistant Professor, Faculty of Medicine MUST

2012 – 2019: Post-doctoral scientist, Faculty of Medicine, University of Dundee

2009-2011: Post-doctoral scientist, College of Life Science, University of Dundee

2005-2010: PhD, University of Edinburgh; BBSRC studentship

2001-2004: BSc. Hons, University of Aberdeen; Biomedical Sciences (Pharmacology)

Teaching Area

Pharmacology, Physiology, Neuroscience, Language and Communication

Research Area

Neuropharmacology, cognitive neuroscience, behavioural neuroscience, early life adversity, post-operative cognitive deficits caused by general anaesthesia, long COVID, Pathways of cell death in cancer biology

Competitive Research Funding and Awards

- FDCT (2025 – 2028) The Impact of Maternal Distraction on Offspring Cognitive Development: Mechanistic Insights and Pharmacological Interventions via α5-GABAARs. (MOP 1,507,000) Principal investigator
- FDCT (2022 – 2025) Selective inhibition of GABAARs on the treatment of postoperative cognitive deficit (POCD) caused by anaesthesia. (MOP 1,400,000) Principal investigator
- FDCT (2022 – 2024) Effects of Sinopharm BBIBP-CorV and BioNTech mRNA primary vaccination series and homologous and heterologous booster shots against SARS-CoV2 variants of concern in a local population in Macao. (MOP 644,000) Principal investigator
- Macau University of Science and Technology Faculty Research Grant (2021-2022) - Relocalization of extrasynaptic α5-GABAA receptors causes memory loss and impairs long-term potentiation in a model of early life adversity (MOP 100,000). Principal investigator.
- Fosun Pharmaceuticals (2022 – present) Macau Antibody Protection Study (MOP 5,200,000) Co-Investigator.
- FDCT (2021-2024) - The voltage-gated sodium channel NaV1.5 functions as an escape pathway from apoptosis in colon cancer cells (MOP 2,650,000). Co-investigator.
- The G Lawrence Award (University of Dundee) 2015 and 2018.
- European Molecular Biology Organization (EMBO) Project and Travel Award (3D developmental imaging) 2011
- Society for Endocrinology Small Grant Programme for Scientific Research in Endocrinology (2007-2008) – Mechanisms for dendritic peptide release (MOP 113,330).

Selected Publications

1. Patil NG, Kou NL, Baptista-Hon DT, **Monteiro O** (In press 2025) Artificial Intelligence in Medical Education: A Practical Guide for Educators MedComm – Future Medicine **Corresponding Author**

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23. Etherington L, Mihalik B, Pálvölgyi A, Ling I, Pallagi K, Gunn BG, Brown AR, Livesey MR, **Monteiro O**, Belelli D, Barkóczy J, Spedding M, Lambert JJ, Antoni FA (2017). Selective targeting of extra-synaptic α5-GABAA receptors by S44819 (Egis-13529), a novel competitive GABAA receptor inhibitor compound. *Neuropharmacology* 125, pp. 353-364. IF 5.1026. Contributing Author

24. **Monteiro O**, Wiegand UK, Ludwig M (2011). Vesicle degradation in dendrites of magnocellular neurones of the rat supraoptic nucleus. *Neuroscience Letters* 489, pp. 30-33. IF 2.026. **1st Author**