

蒙梓棋

职称：助理教授

学院/部门：醫學院

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学历

- **2010 年** – 爱丁堡大学 生物医学博士 (PhD)
论文题目：树突肽释放的机制
资助：英国生物技术与生物科学研究委员会 (BBSRC) 奖学金
- **2004 年** – 阿伯丁大学 生物医学荣誉理学学士 (药理学)

研究资助

- 澳门科技发展基金 (FDCT) 一般研究资助 (2022–2025)
選擇性抑制 γ -氨基丁酸(GABA)受體以治療麻藥引起的術後認知缺陷
项目负责人; 资助金额：澳门币 1,400,000
- 澳门科技发展基金 (FDCT) 一般研究资助 (2022–2024)
研究國藥滅活疫苗 BBIBP-CorV 和 BioNTech mRNA 疫苗初種系統及同源與異源加強劑在澳門地區人群中對新冠肺炎病毒變異毒株的有效性
项目负责人; 资助金额：澳门币 644,000
- 澳门科技大学院系研究基金 (2021–2022)
早期逆境誘發突觸外的 α 5-GABA A 類受體的重定位所導致記憶喪失及對長期增益作用損害的深入性研究
项目负责人; 资助金额：澳门币 100,000
- 澳门科技发展基金 (FDCT) 一般研究资助 (2021–2024)
電壓門控鈉離子通道 Nav1.5 介導大腸癌細胞凋亡逃逸途徑的前瞻性研究
共同研究者, 资助金额：澳门币 2,650,000
- 英国内分泌学会小额科研资助计划 (2007–2008)
树突肽释放机制研究
共同研究者; 资助金额：澳门币 113,330
- 格·劳伦斯基金 (G Lawrence Fund) (邓迪大学, 2015 年及 2018 年)
- EMBO 3D 发育成像课程项目与差旅奖学金 (2011 年)

学术成果 近年发表的主要 SCI/eSCI 期刊论文： (*Corresponding author)

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/ α 4 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 α 5-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 α 5-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**

教学

教授以下本科及研究生课程：

- 药理学与治疗学（生物医学博士课程、护理学硕士、医学本科一年级与二年级）
教学内容包括：药物的吸收、分布、代谢与排泄（ADME）、药效学、抗生素、药物相互作用与药物基因组学。
- 生理学（医学本科一年级与二年级、护理学硕士）
覆盖的系统模块包括：呼吸系统、心血管系统、胃肠系统、血液与免疫系统、内分泌系统、泌尿生殖系统、肌肉骨骼系统、神经系统及特殊感觉系统。
- 语言与沟通（医学本科一年级、二年级与三年级）
重点培养学生的反思写作能力、学术沟通技巧、自主学习能力以及医学专业身份的初步建立。
- 工程学生生物学（二年级通识课程）
为缺乏生物背景的工程学生讲授核心生物概念，包括细胞生物学、酶、细胞呼吸、DNA 与遗传、分子生物学及进化。
- 人工智能与医学（通识课程及高中生大学课程）
讲授人工智能在医疗领域的应用，特别是在医学影像中的实际案例；引入临床试验的基本概念，帮助学生设计与医学影像 AI 相关的研究项目。

OLIVIA F. DE SOUZA MONTEIRO

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Assistant Professor, Faculty of Medicine

Macau University of Science and Technology

Avenida Wai Long, Taipa

Languages: English, Mandarin, Cantonese



EDUCATION

2010: PhD, University of Edinburgh; Mechanisms of Dendritic Peptide Release.

BBSRC funded studentship

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

RESEARCH FUNDING

- FDCT General research grant (2022 – 2025) Selective inhibition of GABAARs on the treatment of postoperative cognitive deficit (POCD) caused by anaesthesia. (Grant value MOP 1,400,000) **Principal investigator**
- FDCT General research grant (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. (Grant value MOP 644,000) **Principal investigator**
- Macau University of Science and Technology Faculty Research Grant (2021-2022) - Relocalization of extrasynaptic $\alpha 5$ -GABAA receptors causes memory loss and impairs long-term potentiation in a model of early life adversity (Grant value MOP 100,000). **Principal investigator.**
- FDCT General research grant (2021-2024) - The voltage-gated sodium channel Nav1.5 functions as an escape pathway from apoptosis in colon cancer cells (Grant value MOP 2,650,000). Co-investigator.
- Society for Endocrinology Small Grant Programme for Scientific Research in Endocrinology (2007-2008) – Mechanisms for dendritic peptide release (Grant value MOP 113,330) Co-investigator.
- The G Lawrence fund (University of Dundee) 2015 and 2018.
- Project and travel award for EMBO 3D developmental imaging course 2011

SELECTED PUBLICATIONS

25. 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**
26. 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
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33. 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**
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43. **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**
44. **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/ α 4 interaction reduces mutant Huntingtin levels in primary neuronal cultures. *Neuroscience Letters* 673, pp. 44-50. IF 2.026. Contributing Author
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47. 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 α 5-GABAA receptors by S44819 (Egis-13529), a novel competitive GABAA receptor inhibitor compound. *Neuropharmacology* 125, pp. 353-364. IF 5.1026. Contributing Author
48. **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**

TEACHING

Course	Title
MBBS Year 1	Language and Communications
MBBS Year 1	Foundation Block
MBBS Year 1	Respiratory Block
MBBS Year 1	Cardiovascular Block
MBBS Year 1	Gastrointestinal Block
MBBS Year 2	Language and Communications
MBBS Year 2	Haematology and Immunology Block
MBBS Year 2	Endocrine Block
MBBS Year 2	Urogenital Block
MBBS Year 2	Musculoskeletal Block
MBBS Year 2	Nervous System Block
MBBS Year 2	Special Senses Block
FIE Year 1	Biology
General Education	AI in medicine
DPBS	PhD in Biomedical Sciences
MHNZ	Master of Nursing
PhD student supervision	
Master student supervision	

SERVICES

- Block coordinator for MBBS Foundation Block, Endocrine Block, Nervous System Block
- Editor for Faculty Monograph II
- Co-editor for Faculty Monograph I
- Represented FMD for Institutional Accreditation
- Represented FMD for Admissions talk
- High school public engagement talks promoting FMD
- Imaging Core Facility coordinator
- Organiser for MSD Research Seminar Series
- Organising committee for 2nd and 3rd Frontiers in Medicine Summits
- Interviewer for MBBS admissions
- Interviewer for DPBS PhD program admissions
- Interviewer for SP PhD program admissions
- Interviewer for SP MSc program admissions