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PUBLICATIONS

Peer-reviewed publications

1. Singleton S., Dieterle C., Walker D.J., Runeberg T., Oswald A.S., Rosenqvist G., Robertson L., McCarthy T., Sarkar S., **Baptista-Hon D.** and Hales T.G. Activation of μ receptors by SR-17018 through a distinctive mechanism. *Neuropharmacology* (2024; Accepted in press) (IF: 4.7).
2. Zhang K., Zhou H. Y., **Baptista-Hon D. T.**, Gao Y., Liu X., Oermann E., Xu S., Jin S., Zhang J., Sun Z., Yin Y., Razmi R. M., Loupy A., Beck S., Qu J., Wu J., & International Consortium of Digital Twins in Medicine. Concepts and Applications of Digital Twins in Healthcare and Medicine. *Patterns* (2024, Accepted, In Press) (IF: 6.7; Co-first author).
3. Ye Y., Tong H.Y.K., Chong W.H., Li Z., Tam P.K.H., **Baptista-Hon, D.T.**, Monteiro O. A systematic review and meta-analysis of the effects of long-term antibiotic use on cognitive outcomes. *Scientific Reports* (2024) 14:4026. (IF: 4.6; Co-corresponding author)
4. Wang, J., Gao, Y., Wang, F., Zeng, S., Li, J., Miao, H., Wang, T., **Baptista-Hon, D.**, Monteiro, O., Cheng, L., Lu, Y., Luo, Z., Zhu, J., Zhou, Y., Zhang, K. Accurate Estimation of Biological Age Using a Transformer-based Holistic Representation of Multi-modal Image Information. *Proceedings of the National Academy of Sciences* (2024) 121(3): e2308812120. (IF: 12.78)
5. Sarkar S. & **Baptista-Hon D.T.** Application of machine learning to classify cancers of unknown primary. *Medcomm – Oncology* (2023) 2:e63 (Corresponding author).
6. Wei J., **Baptista-Hon D.T.**, Wang Z., Li G., Herrler T., Dai C., Liu K., Yu B., Chen X., Yang M., Han D., Gao Y., Huang R.-L., Guo L., Zhang K., Li Q. Bioengineered human tissue regeneration and repair using endogenous stem cells. *Cell Reports Medicine* (2023) 4(8):101156 (IF: 16.99, Co-first author).
7. Wang G., Liu X., Wang K., Gao Y., Li G., **Baptista-Hon D.T.**, Yang X.H., Xue K., Tai W.H., Jiang Z., Cheng L., Fok M., Lau J. Y.-N., Yang S., Lu L., Zhang P., Zhang K. Deep-learning-enabled protein–protein interaction analysis for prediction of SARS-CoV-2 infectivity and variant evolution. *Nature Medicine* (2023) 29:2007-2018 (IF: 87.24, Co-first author).
8. Gao Y., **Baptista-Hon D.T.**, Zhang K. The inevitable transformation of medicine and research by large language models: The possibilities and pitfalls. *Medcomm – Future Medicine* (2023) 2(2):e49.
9. Kuo C.W.S., Dobi S., Gök C., Costa A., Main A., Robertson-Gray O., **Baptista-Hon D.T.**, Wypijewski K.J., Costello H., Hales T.G., MacQuaide N., Smith G.L., Fuller W. Palmitoylation of the pore-forming subunit of Ca(v)1.2 controls channel voltage sensitivity and calcium transients in cardiac myocytes. *Proceedings of the National Academy of Sciences* (2023) 120(7): e2207887120. (IF: 12.78)

10. **Baptista-Hon D.T.**, Fesalbon G.J.W. & Monteiro O. Changing clinical features of the 2022 monkeypox global health emergency. *Medcomm – Future Medicine* (2022) 1(2):e24 (*First and corresponding author*)
11. Lao U.S., Law C.F., **Baptista-Hon D.T.** and Tomlinson B. Systematic review and meta-analysis of statin use and mortality, intensive care unit admission and requirement for mechanical ventilation in COVID-19 patients. *J Clin Med* (2022) 11(18):5454 (IF: 4.96, *Co-corresponding author*)
12. Monteiro O., Li Y.W. & **Baptista-Hon D.T.** Phylogenomic characterisation of the 2022 outbreak of monkeypox virus – The importance of sustained genetic surveillance. *Medcomm – Future Medicine* (2022) 1:e16. (*Corresponding author*)
13. Li G., Zhou Z., Du P., Zhan M., Li N., Xiong X., Tang S., Man M., **Baptista-Hon D.T.** and Lu L. Heterologous mRNA vaccine booster increases neutralization of SARS-CoV-2 Omicron BA.2 variant. *Signal Transduct Target Ther* (2022) 7(1):243. (IF: 38.15, *Co-corresponding author*)
14. Zhou Z.C., Du P., Li N., Xiong X.X., Tang S.J., Dai Q.J., Wang T.R., Yu M.X., Man M., Lam K., **Baptista-Hon D.T.**, Monteiro O., Ng W.S., Lee U.M., Liu Z.H., Zhang K. and Li G. Homologous or heterogenous vaccination boosters enhance neutralizing activities against SARS-CoV-2 Omicron BA.1 variant. *MedComm* (2022) 3(2):e143.
15. Ao D., Lan T., He X., Liu J., Chen L., **Baptista-Hon D.T.**, Zhang K., Wei X. SARS-CoV-2 Omicron variant: Immune escape and vaccine development. *MedComm* (2022) 3(1):e126.
16. Monteiro O., Bhaskar A., Ng K.M., Murdoch C.E. and **Baptista-Hon D.T.** Computer based virtual laboratory simulations: LabHEART cardiac physiology practical. *Adv Physiol Ed* (2021) 45(4):856-868. (IF: 2.89, *Corresponding author*)
17. Monteiro O., Bhaskar A., Wong I.N., Ng K.M. and **Baptista-Hon D.T.** Teaching bioelectricity and neurophysiology to medical students using LabAXON simulations. *Adv Physiol Ed* (2021) 45(4):702-708. (IF: 2.89, *Corresponding author*)
18. Li G., Zhou Z.C., Du P., Yu M.X., Li N., Xiong X.X., Huang H., Liu Z.H., Dai Q.J., Zhu J., Guo C.B., Wu S.Y., **Baptista-Hon D.T.**, Miao M., Ming L.W., Wu Y., Zeng F.X., Zhang C.L., Zhang E.D., Song H.F., Liu J.H., Lau J.Y.N., Xiang A.P., Zhang K. The SARS-CoV-2 spike L452R-E484Q co-variant in the Indian B.1.617 strain Showed Significant Reduction in the Neutralization Activity of Immune Sera. *Precision Clinical Medicine* (2021) pbab016. <https://doi.org/10.1093/pccmedi/pbab016>
19. Zhou Z.C., Du P., Yu M.X., **Baptista-Hon D.T.**, Miao M., Xiang A.P., Lau J.Y.N., COVID-19 Immunity Investigation Group, Li G. and Zhang K. Assessment of Infectivity and the Impact on Neutralizing Activity of Immune Sera of the COVID-19 Variant, CAL.20C. *Signal Transduct Target Ther* (2021) 6(1):285. <https://doi.org/10.1038/s41392-021-00695-0> (IF: 21.2).
20. Singleton S., **Baptista-Hon D.T.**, Edelsten E., McCaughey K.S., Camplisson E. and Hales T.G. TRV130 partial agonism and capacity to induce anti-nociceptive tolerance revealed through reducing available μ -opioid receptor number. *Br J Pharmacol* (2021) 178(8):1855-1868. <https://doi.org/10.1111/bph.15409> (IF: 6.81).
21. **Baptista-Hon D.T.**, Smith M., Singleton S., Antonides L.H., Nic Daeid N., McKenzie C. and Hales T.G. Activation of μ -opioid receptors by MT-45 (1-cyclohexyl-4-(1,2-diphenylethyl)piperazine) and its fluorinated derivatives. *Br J Pharmacol* (2020) 177(15):3436-3448. <https://doi.org/10.1111/bph.15064> (IF: 6.81).

22. Gottschald Chiodi C., **Baptista-Hon D.T.**, Hunter W.N. and Hales T.G. Amino acid substitutions in the human homomeric $\beta 3$ GABAA receptor that enable activation by GABA. *J Biol Chem* (2019) 294(7):2375-2385 (IF: 4.28).
23. **Baptista-Hon D.T.***, Elajnaf T.* (joint first authorship) and Hales T.G. Potent inactivation-dependent inhibition of adult and neonatal Nav1.5 channels by lidocaine and levobupivacaine. *Anaesth Analg* (2018) 127(3):650-660 (IF: 3.83).
24. Wright L., **Baptista-Hon D.T.**, Bull F., Dalgaty F., Gallacher M., Woods J.A., Ibbotson S.H. and Hales T.G. Phototoxicity causes pain by activating TRPV1 receptors. *Pain* (2018) 159(2):284-297 (IF: 6.03).
25. Bull F., **Baptista-Hon D.T.**, Lambert J.J., Walwyn W. and Hales T.G. Morphine activation of mu opioid receptors causes disinhibition of neurons in the ventral tegmental area mediated by β -arrestin 2 and c-src. *Scientific Reports* (2017) 7(1):9969 (IF: 4.53).
26. Bull F., **Baptista-Hon D.T.**, Sneddon C., Wright L., Walwyn W. and Hales T.G. Src kinase inhibition attenuates morphine tolerance without affecting reinforcement or psychomotor stimulation. *Anaesthesiology* (2017) 127(5):878-889 (IF: 4.14).
27. **Baptista-Hon D.T.**, Gulbinaite S. and Hales T.G. The identity of a loop G residue in the GABA_A receptor $\alpha 1$ subunit influences gating efficacy. *J Physiol.* (2017) 595(5):1725-1741 (IF: 4.95).
28. **Baptista-Hon D.T.**, Krah A., Zachariae U. and Hales T.G. A role for loop G in the $\beta 1$ strand in GABA_A receptor activation. *J Physiol.* (2016) 594(19):5555-71 (IF: 4.95).
29. House C.D., Wang B.D., Ceniccola K., Williams R., Simaan M., Olender J., Patel V., **Baptista-Hon D.T.**, Annunziata C.M., Gutkind J.S., Hales T.G. and Lee N.H. Voltage-gated Na⁺ Channel Activity Increases Colon Cancer Transcriptional Activity and Invasion Via Persistent MAPK Signaling. *Sci Rep.* (2015) 5:11541 (IF: 4.53).
30. Morton R.A., **Baptista-Hon D.T.**, Hales T.G. and Lovinger D.M. Agonist- and antagonist-induced up-regulation of surface 5-HT₃ A receptors. *Br J Pharmacol.* (2015) 172:4066-77 (IF: 6.81).
31. **Baptista-Hon D.T.**, Robertson F.M., Robertson G.B., Owen S.J., Rogers G.W., Lydon E.L., Lee N.H. and Hales T.G. Potent inhibition by ropivacaine of metastatic colon cancer SW620 cell invasion and Nav1.5 channel function. *Br J Anaesth.* (2014) 113 S: i39-i48 (IF: 6.50).
32. **Baptista-Hon D.T.**, Deeb T.Z., Lambert J.J., Peters J.A. and Hales T.G. The minimum M3-M4 loop length of neurotransmitter-activated pentameric receptors is critical for the structural integrity of cytoplasmic portals. *J Biol Chem.* (2013) 288: 21558-68 (IF: 4.28).
33. Othman N.A, Gallacher, M., Deeb T.Z., **Baptista-Hon, D.T.**, Perry, D.C. and Hales T.G. Influences on blockade by TBPS of GABA_A receptor spontaneous gating, agonist activation and desensitization. *J Physiol.* (2012) 590:163-78 (IF: 4.95).
34. **Baptista-Hon D.T.**, Othman N.A., Sharp D., Deeb T.Z., and Hales T.G. The 5-HT₃B subunit affects high potency 5-HT₃ receptor inhibition by morphine. *Br J Pharmacol.* (2012) 165:693-704 (IF: 6.81).

Peer-reviewed conference proceedings

1. Singh K., **Baptista-Hon D.T.**, Hewitt M., Kouli O., Hossain-Ibrahim K. and Hales T.G. Determining an in vitro dose-response relationship of photodynamic therapy with first and second-generation photosensitisers for high grade tumours. *17th International Photodynamic Association World Congress* (2019). DOI: 10.1117/12.2527574.

2. Smith M., **Baptista-Hon D.T.**, Antonides L., Mckenzie C., Daeid N. and Hales T.G. Activation of the mu-opioid receptor by MT-45 and its synthetic and metabolic derivatives. *Br J Anaesth* (2019). DOI: 10.1016/j.bja.2018.10.047 (IF: 6.50).
3. Singleton S., **Baptista-Hon D.T.**, Bull F. and Hales T.G. Measuring the bias of morphine, oxycodone, and buprenorphine for G protein activation vs β -arrestin2 recruitment to the μ opioid receptor. *Br J Anaesth* (2019). DOI: 10.1016/j.bja.2018.10.038 (IF: 6.50).
4. Pospiech G., **Baptista-Hon D.T.** and Hales T.G. Consequences of dynamic changes in palmitoylation of $\text{Na}_v1.5$ voltage-gated Na^+ channels. *Br J Anaesth* (2018) 120(5): E8 (IF: 6.50).
5. Ong S., Elajnaf T., **Baptista-Hon D.T.** and Hales T.G. Voltage-activated Na^+ channels as novel targets for treating metastatic colon cancer: investigating the effect of local anaesthetics on $\text{Na}_v1.5$ channels in metastatic colon cancer. *Br J Anaesth* (2016) 116(6):E935 (IF: 6.50).
6. Vickery O.N., **Baptista-Hon D.T.**, Seeliger D., Hales T.G. and Zachariae U. Investigating the effect of sodium and voltage on δ -opioid receptors. *Biophysical J* (2015); 108(2): 414 (IF: 3.67).
7. Millar F.R., **Baptista-Hon D.T.**, O'Neill S.C. and Díaz M.E. Increasing anti-oxidant capacity reverses iron overload mediated dysfunction in cardiomyocytes. *Heart* (2011) 97:A96-A97 (IF:5.21)
8. **Baptista-Hon D.T.**, Elliott A.C. and Díaz M.E. Iron(II) modulation of cardiac ryanodine receptors (RyR2). *Biophysical J* (2009); 96(3): 113-114 (IF: 3.67).
9. **Baptista-Hon D.T.**, Díaz M.E. and Elliott A.C. Acute exposure to iron (II) alters calcium handling in isolated rat ventricular myocytes. *J Mol Cell Cardiol* (2005); 39: 179 (IF: 5.01).

Book and Book Chapters

1. Local Anaesthesia and Cancer, Hales T.G. & **Baptista-Hon D.T.** (2023): In Perioperative Care of the Cancer Patient. Editors: Hagberg, Gottumukkala, Riedel, Nates & Buggy. Elsevier.
2. Monograph (2020): A Dream Come True. Chief editors: Patil N.G., **Baptista-Hon D.T.**, Lam C.W.K. Faculty of Medicine, Macau University of Science and Technology, Macau SAR, China.