

John Parrington — Selected Published Research Publications

Total publications >110. H index=54, Google Scholar

1. Alharbi AF, **Parrington J.** (2025) TPC2 in drug development: Emerging target for cancer, viral infections, cardiovascular diseases, and neurological disorders. *Pharmacol Res.* 213:107655
2. Jin X, Hanbashi A, Kamli F, Pan X, Goding CR, **Parrington J.** (2024) TPC1 regulates melanoma tumorigenesis via mTORC1 and TFEB. *Heliyon.* 10:e39752.
3. Bekaert B, Boel A, Rybouchkin A, Cosemans G, Declercq S, Chuva de Sousa Lopes SM, Parrington J, Stoop D, Coucke P, Menten B, Heindryckx B. (2024) Various repair events following CRISPR/Cas9-based mutational correction of an infertility-related mutation in mouse embryos. *J Assist Reprod Genet.* 41:1605-1617.
4. Nie K, Zhu L, Zhang Y, Chen Y, Parrington J, Yu H. (2024) Development of a nomogram based on the clinicopathological and CT features to predict the survival of primary pulmonary lymphoepithelial carcinoma patients. *Respir Res.* 25:144.
5. Binobaid L, As Sobeai HM, Alhazzani K, AlAbdi L, Alwazae MM, Alotaibi M, Parrington J, Alhoshani A. (2024) Whole-exome sequencing identifies cancer-associated variants of mitochondrial lysosomal ion transport channels in the Saudi population. *Saudi Pharm J.* 32:101961.
6. Barbonari S, D'Amore A, Hanbashi A, Palombi F, Riccioli A, **Parrington J***, Filippini A. (2024) Endolysosomal two-pore channel 2 plays opposing roles in primary and metastatic malignant melanoma cells. *Cell Biology International.* 48:521-540. *Joint senior author, corresponding author.
7. Hanbashi A, Homood M, Sobeai A, Binobaid L, Alhazzani K, Jin X, Kamli, Alotaibi M, Alhoshani A, **Parrington J.** (2023) Loss of two-pore channel 2 function in melanoma-derived tumours reduces tumour growth *in vivo* but greatly increases tumour-related toxicity in the organism. *Cancer Cell International.* 23:325.
8. Nie K, Tao G, Zhu L, Zhang Y, Zhao R, Parrington J, Yu H. (2023) Clinicopathological features and survival of rare primary pulmonary lymphoepithelial carcinoma: A cohort from a single center. *J Surg Oncol.* 128:675-681.
9. Navarro-Serna S, Piñeiro-Silva C, Luongo C, Parrington J, Romar R, Gadea J. (2022) Effect of Aphidicolin, a Reversible Inhibitor of Eukaryotic Nuclear DNA Replication, on the Production of Genetically Modified Porcine Embryos by CRISPR/Cas9. *Int J Mol Sci.* 23:2135.

10. Barbonari S, D'Amore A, Palombi F, De Cesaris P, Parrington J, Riccioli A, Filippini A. (2022)
Relevance of lysosomal Ca²⁺ signalling machinery in cancer. *Cell Calcium*. 102:102539.
11. Alharbi AF, Parrington J. (2021) TPC2 targeting evolution: Leveraging therapeutic opportunities for cancer. (2021) *Cell Chem Biol*. 28:1103-1105.
- 12.** Alharbi AF, **Parrington J.** (2021) The role of genetic polymorphisms in endolysosomal ion channels TPC2 and P2RX4 in cancer pathogenesis, prognosis, and diagnosis: a genetic association in the UK Biobank. *NPJ Genom Med*. 6:58.
13. Alharbi AF, Parrington J. (2021) Deciphering the Role of Endolysosomal Ca²⁺ Channels in Immunity. *Front Immunol*. 12:656965.
14. Zhang Y, Gong C, Li D, Wang ZW, Pu SD, Robertson AW, Yu H, Parrington J. (2021) A prognostic dynamic model applicable to infectious diseases providing easily visualized guides: a case study of COVID-19 in the UK. *Sci Rep*. 11:8412.
- 15.** Navarro-Serna S, Hachem A, Canha-Gouveia A, Hanbashi A, Garrappa G, Lopes JS, París-Oller E, Sarrías-Gil L, Flores-Flores C, Bassett A, Sánchez R, Bermejo-Álvarez P, Matás C, Romar R, Parrington J, Gadea J. (2021) Generation of Nonmosaic, Two-Pore Channel 2 Biallelic Knockout Pigs in One Generation by CRISPR-Cas9 Microinjection Before Oocyte Insemination. *CRISPR J*. 4:132-146.
- 16.** Alharbi A, Zhang Y, Parrington J. (2021) Deciphering the Role of Ca²⁺ Signalling in Cancer Metastasis: From the Bench to the Bedside. *Cancers (Basel)*. 13:179.
- 17.** Ferrer-Buitrago M, Tilleman L, Thys V, Hachem A, Boel A, Van Nieuwerburgh F, Deforce D, Leybaert L, De Sutter P, **Parrington J**, Heindryckx B (2020) Comparative study of pre-implantation development following distinct assisted oocyte activation protocols in a PLC-Zeta knockout mouse model. *Molecular Human Reproduction*. 26:801-815
- 18.** D'Amore A, Hanbashi A, Di Agostino, Palombi F, Sacconi A, Voruganti A, Taggi M, Canpirai R, Blandino G, **Parrington J***, Filippini A. (2020) Loss of Two-Pore Channel 2 (TPC2) Expression Increases the Metastatic Traits of Melanoma Cells by a Mechanism Involving the Hippo Signalling Pathway and Store-Operated Calcium Entry. *Cancers*. 12:2391. *Joint senior author, corresponding author.
19. Jin X, Zhang Y, Alharbi A, Hanbashi A, Alhoshani A, Parrington J. (2020) Targeting Two-Pore Channels: Current Progress and Future Challenges. *Trends Pharmacol Sci*. 41:582-594.
20. Alharbi AF, Parrington J. (2019) Endolysosomal Ca²⁺ Signaling in Cancer: The Role of TPC2, From Tumorigenesis to Metastasis. *Front Cell Dev Biol*. 7:302.

21. Parrington J, Arnoult C, Fissore RA. (2019) The eggstraordinary story of how life begins. *Mol Reprod Dev.* 86:4-19.
22. He H, Holl K, DeBehnke S, Yeo CT, Hansen P, Gebre AK, Leone-Kabler S, Ruas M, Parks JS, Parrington J, Solberg Woods LC. (2018) *Tpcn2* knockout mice have improved insulin sensitivity and are protected against high-fat diet-induced weight gain. *Physiol Genomics.* 50:605-614
23. Hachem A, Godwin J, Ruas M, Lee HC, Ferrer Buitrago M, Ardestani G, Bassett A, Fox S, Navarrete F, de Sutter P, Heindryckx B, Fissore R, **Parrington J.** (2017) PLC ζ is the physiological trigger of the Ca $^{2+}$ oscillations that induce embryogenesis in mammals but conception can occur in its absence. *Development.* 144:2914-2924.
24. Lin WK, Bolton EL, Cortopassi WA, Wang Y, O'Brien F, Maciejewska M, Jacobson MP, Garnham C, Ruas M, Parrington J, Lei M, Sitsapesan R, Galione A, Terrar DA. (2017) Synthesis of the Ca $^{2+}$ -mobilizing messengers NAADP and cADPR by intracellular CD38 enzyme in the mouse heart: Role in β -adrenoceptor signaling. *J Biol Chem.* 292:13243-13257.
25. Kelu JJ, Webb SE, **Parrington J,** Galione A, Miller AL. (2017) Ca $^{2+}$ release via two-pore channel type 2 (TPC2) is required for slow muscle cell myofibrillogenesis and myotomal patterning in intact zebrafish embryos. *Dev Biol.* 425:109-129.
26. Garcia-Rua V, Feijoo-Bandin S, Garcia-Vence M, Aragon-Herrera A, Bravo SB, Rodriguez-Penas D, Mosquera-Leal A, Lear PV, Parrington J, Alonso J, Rosello-Lleti E, Portoles M, Rivera M, Gonzalez-Juanatey JR, Lago F. (2016) Metabolic alterations derived from absence of Two-Pore Channel 1 at cardiac level. *J Biosci.* 41:643-658.
27. Ruas M, Galione A, **Parrington J.** (2015) Two-Pore Channels: Lessons from Mutant Mouse Models. *Messenger (Los Angel).* 4: 4-22.
28. Cane MC, Parrington J, Rorsman P, Galione A, Rutter GA. (2016) The two pore channel TPC2 is dispensable in pancreatic β -cells for normal Ca $^{2+}$ dynamics and insulin secretion. *Cell Calcium.* 59:32-40.
29. García-Rúa V, Feijóo-Bandín S, Rodríguez-Penas D, Mosquera-Leal A, Abu-Assi E, Beiras A, María Seoane L, Lear P, Parrington J, Portolés M, Roselló-Lletí E, Rivera M, Gualillo O, Parra V, Hill JA, Rothermel B, González-Juanatey JR, Lago F. (2016) Endolysosomal two-pore channels regulate autophagy in cardiomyocytes. *J Physiol.* 594:3061-77.
30. Parrington J, Lear P, Hachem A. (2015) Calcium signals regulated by NAADP and two-pore channels--their role in development, differentiation and cancer. *Int J Dev Biol.* 59:341-55.
31. Kelu JJ, Chan HL, Webb SE, Cheng AH, Ruas M, Parrington J, Galione A, Miller AL. (2015) Two-Pore Channel 2 activity is required for slow muscle cell-generated Ca(2+) signaling during myogenesis in intact zebrafish. *Int J Dev Biol.* 59:313-25.

- 32.** Capel RA, Bolton EL, Lin WK, Aston D, Wang Y, Liu W, Wang X, Burton RA, Bloor-Young D, Shade KT, Ruas M, Parrington J, Churchill GC, Lei M, Galione A, Terrar DA. (2015) Two-pore Channels (TPC2s) and Nicotinic Acid Adenine Dinucleotide Phosphate (NAADP) at Lysosomal-Sarcoplasmic Reticular Junctions Contribute to Acute and Chronic β -Adrenoceptor Signaling in the Heart. *J Biol Chem.* 290:30087-98.
- 33.** Arredouani A, Ruas M, Collins SC, Parkesh R, Clough F, Pillinger T, Coltart G, Rietdorf K, Royle A, Johnson P, Braun M, Zhang Q, Sones W, Shimomura K, Morgan AJ, Lewis AM, Chuang KT, Tunn R, Gadea J, Teboul L, Heister PM, Tynan PW, Bellomo EA, Rutter GA, Rorsman P, Churchill GC, **Parrington J***, Galione A. (2015) Nicotinic Acid Adenine Dinucleotide Phosphate (NAADP) and Endolysosomal Two-pore Channels Modulate Membrane Excitability and Stimulus-Secretion Coupling in Mouse Pancreatic β Cells. *J Biol Chem.* 290:21376-92. *Joint senior author
- 34.** Gerasimenko JV, Charlesworth RM, Sherwood MW, Ferdek PE, Mikoshiba K, **Parrington J**, Petersen OH, Gerasimenko OV. (2015) Both RyRs and TPCs are required for NAADP-induced intracellular Ca^{2+} release. *Cell Calcium.* 58:237-45.
- 35.** Ruas M, Davis LC, Chen CC, Morgan AJ, Chuang KT, Walseth TF, Grimm C, Garnham C, Powell T, Platt N, Platt FM, Biel M, Wahl-Schott C, **Parrington J***, Galione A. (2015) Expression of Ca^{2+} -permeable two-pore channels rescues NAADP signalling in TPC-deficient cells. *EMBO J.* 34:1743-58. *Joint senior author
- 36.** Lear PV, González-Touceda D, Porteiro Couto B, Viaño P, Guymer V, Remzova E, Tunn R, Chalasani A, García-Caballero T, Hargreaves IP, Tynan PW, Christian HC, Nogueiras R, **Parrington J***, Diéguez C. (2015) Absence of Intracellular Ion Channels TPC1 and 2 Leads to Mature-Onset Obesity in Male Mice, Due to Impaired Lipid Availability for Thermogenesis in Brown Adipose Tissue. *Endocrinology.* 156:975-86. *Joint senior author
- 37.** Lin PH, Duann P, Komazaki S, Park KH, Li H, Sun M, Sermersheim M, Gumpfer K, **Parrington J**, Galione A, Evans AM, Zhu MX, Ma J. (2014) Lysosomal two-pore channel subtype 2 (TPC2) regulates skeletal muscle autophagic signaling. *J Biol Chem.* 290:3377-89.
- 38.** Favia A, Desideri M, Gambarà G, D'Alessio A, Ruas M, Esposito B, Del Bufalo D, **Parrington J**, Ziparo E, Palombi F, Galione A, Filippini A. (2014) VEGF-induced neoangiogenesis is mediated by NAADP and two-pore channel-2-dependent Ca^{2+} signaling. *Proc Natl Acad Sci USA.* 111:E4706-15.
- 39.** Tsaih SW, Holl K, Jia S, Kaldunski M, Tschannen M, He H, Andrae JW, Li SH, Stoddard A, Wiederhold A, **Parrington J**, Ruas da Silva M, Galione A, Meigs J; Meta-Analyses of Glucose and Insulin-Related Traits Consortium Investigators, Hoffmann RG, Simpson P, Jacob H, Hessner M, Solberg Woods LC. (2014) Identification of a novel gene for diabetic traits in rats, mice, and humans. *Genetics.* 198:17-29.
- 40.** Ruas M, Chuang KT, Davis LC, Al-Douri A, Tynan PW, Tunn R, Teboul L, Galione A, **Parrington J**. (2014) TPC1 has two variant isoforms, and their removal has different effects on endo-lysosomal functions compared to loss of TPC2. *Mol Cell Biol.* 34:3981-92.
- 41.** Morgan AJ, Davis LC, Wagner SK, Lewis AM, **Parrington J**, Churchill GC, Galione A. (2013) Bidirectional Ca^{2+} signaling occurs between the endoplasmic reticulum and acidic organelles. *J Cell Biol.* 200:789-805.
- 42.** Kashir J, Jones C, Mounce G, Ramadan WM, Lemmon B, Heindryckx B, de Sutter P, **Parrington J**, Turner K, Child T, McVeigh E, Coward K. (2013) Variance in total levels of phospholipase C zeta (PLC- ζ) in human sperm may limit the applicability of quantitative immunofluorescent analysis as a diagnostic indicator of oocyte activation capability. *Fertil Steril.* 99:107-17.

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47. Walseth TF, Lin-Moshier Y, Jain P, Ruas M, **Parrington J**, Galione A, Marchant JS, Slama JT. (2012) Photoaffinity labeling of high affinity nicotinic acid adenine dinucleotide phosphate (NAADP)-binding proteins in sea urchin egg. *J Biol Chem.* 287:2308-15.
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49. Kashir J, Jones C, Lee HC, Rietdorf K, Nikiforaki D, Durrans C, Ruas M, Tee ST, Heindryckx B, Galione A, De Sutter P, Fissore RA, **Parrington J**, Coward K. (2011) Loss of activity mutations in phospholipase C zeta (PLC ζ) abolishes calcium oscillatory ability of human recombinant protein in mouse oocytes. *Hum Reprod.* 26:3372-87.
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55. Zhu MX, Ma J, **Parrington J**, Galione A, Evans AM. (2010) TPCs: Endolysosomal channels for Ca²⁺ mobilization from acidic organelles triggered by NAADP. *FEBS Lett.* 584:1966-74.
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- 60.** Young C, Grasa P, Coward K, Davis LC, **Parrington J** (2009) Phospholipase C zeta undergoes dynamic changes in its pattern of localization in sperm during capacitation and the acrosome reaction. *Fertil Steril.* 91, 2230-42.
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- 63.** Grasa P, Coward K, Young C, **Parrington J.** (2008) The pattern of localization of the putative oocyte activation factor, phospholipase Czeta, in uncapacitated, capacitated, and ionophore-treated human spermatozoa. *Hum Reprod.* 23, 2513-22.
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