

Dr Richard Grose



Research Interests

Our main research areas are in growth factor signalling in breast, endometrial and pancreatic cancer. Specifically, we are investigating how Fibroblast Growth Factors (FGFs) and their receptors (FGFRs), which play critical roles during development, are hijacked by cancer cells to drive tumourigenesis.

Our main research interests are:

- Nuclear trafficking of FGFRs: Our goals are to dissect the mechanisms controlling FGFR proteolytic cleavage and trafficking, and to identify novel putative targets to block the pro-invasive effects of nuclear FGFR signalling.
- FGFR signaling in cancer–stromal crosstalk: Investigating the FGFR dependent communication between cancer cells and stellate cells in pancreatic cancer invasion.
- Dissecting mechanisms of resistance to FGFR inhibition: Using phosphoproteomic approaches to identify pathways that mediate resistance to FGFR inhibition in cancers driven by FGFR mutations.

Major Funders

- Breast Cancer Campaign
- Pancreatic Cancer Research Fund
- Cancer Research UK

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Recent Publications

- Adaptive upregulation of EGFR limits attenuation of tumor growth by neutralizing IL-6 antibodies with implications for combined therapy in ovarian cancer. Milagre CS, Gopinathan G, Everitt G, Thompson RG, Kulbe H, Zhong H, Hollingsworth RE, **Grose R**, Bowtell DD, Hochhauser D, Balkwill FR. *Cancer Res.* (2015) 75(7):1255-64
- Pancreatic cancer cell invasion is mediated by nuclear translocation of FGFR1 and FGF2 in stellate cells. Coleman SJ, Chioni A-M, Ghallab M, Anderson RK, Lemoine NR, Kocher HM, **Grose R**. (2014) *EMBO Mol. Med.* 6:467-481
- Careless talk costs lives: fibroblast growth factor receptor signalling and the consequences of pathway malfunction. Carter EP, Fearon AE, **Grose RP**. (2014) *Trends Cell Biol.* 25(4):221-33
- The ins and outs of fibroblast growth factor receptor signaling. Coleman SJ, Bruce C, Chioni AM, Kocher HM, **Grose RP**. (2104) *Clinical Science.* 127(4):217-231
- Grb-ing receptor activation by the tail. *Nature Structural and Molecular Biology.* Fearon AE, **Grose RP**. (2014) 21(2):113-114
- Identification of ZDHHC14 as a novel human tumour suppressor gene. Yeste-Velasco M, Mao X, **Grose R**, et al. (2014) *J. Path.* 232(5):566-77
- FGFR1 cleavage and nuclear translocation regulates breast cancer cell behavior. Chioni A-M and **Grose R**. (2012) *J. Cell Biol.* 197(6):801-17
- Fibroblast growth factor signalling: from development to cancer. *Nat Rev Cancer.* Turner N, **Grose R**. (2010) 10(2): 116-29