Dr Angus JM Cameron

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Research Interests

Targeting protein kinases presents both opportunities and challenges in cancer treatment. Some 2% of transcribed genes are kinases, many are implicated in tumorigenesis and all are potentially druggable. Our research focuses on various cancer associated kinases including PKC, PKN, mTOR and the EGFR family.

Our research currently focuses on:

- *The role of the PKN kinases in development and cancer*. PKN kinases have been implicated in a number of cancers, including breast, ovarian and prostate, where they are thought to play a role in cell motility and invasion. We have also shown that these kinases are essential for cell growth and motility during embryogenesis. Our goal is to test whether the PKN kinases are a useful cancer drug target.
- *Protein kinase C and the EGFR family of tyrosine kinase growth factor receptors*. We are particularly interested in the allosteric effects of inhibitors on kinase function which can have significant implications for therapy.

Major Funders

- Early Career Researcher, Barts Cancer Institute
- Cancer Research UK

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Recent Publications

- Linch M, Sanz-Garcia M, Rosse C, Riou P, Peel N, Madsen C, Sahai E, Downward J, Khwaja A, Dillon C, Roffey J, **Cameron AJ**, Parker PJ. Regulation of polarized morphogenesis by protein kinase C iota in oncogenic epithelial spheroids. Carcinogenesis. 2013;35(2): 396-406.
- Linch M, Sanz-Garcia M, Soriano E, Zhang Y, Riou P, Rosse C, **Cameron AJ**, Knowles P, Purkiss A, Kjaer S, McDonald NQ, Parker PJ. A cancer-associated mutation in atypical protein kinase c iota occurs in a substrate-specific recruitment motif. Science Signal. 2013;6: 293.
- **Cameron AJ**, Linch MD, Saurin AT, Escribano C, Parker PJ. mTORC2 targets AGC kinases through Sin1-dependent recruitment. Biochem J. 2011 Oct 15;439(2):287-97.
- **Cameron AJ**. Occupational hazards: allosteric regulation of protein kinases through the nucleotide-binding pocket. Biochem Soc Trans. 2011 Apr;39(2):472-6. Review.
- **Cameron AJ,** Parker PJ. Protein kinase C - a family of protein kinases, allosteric effectors or both? Adv Enzyme Regul. 2010;50(1):169-77.
- Rosse C, Linch M, Kermorgant S, **Cameron AJ**, Boeckeler K, Parker PJ. PKC and the control of localized signal dynamics. Nat Rev Mol Cell Biol. 2010 Feb;11(2):103-12. Review.
- **Cameron AJ**, Escribano C, Saurin AT, Kostelecky B, Parker PJ. PKC maturation is promoted by nucleotide pocket occupation independently of intrinsic kinase activity. Nat Struct Mol Biol. 2009;16(6): 624-30.