Why we focus on Metastasis & Invasion

Around 90% of cancer deaths are attributable to invasion and metastasis. Metastasis is the spread of disease from one organ or part to another not directly connected with the primary site; the defining characteristic of a malignant neoplasm. How this spread is achieved is important for understanding neoplastic disease.

Characterisation of the molecules driving tumour dissemination can reveal possible ways to block the process while, if secondary tumour deposits continue to express the gene products that first allowed their spread, such products could also be potential therapeutic targets.

What we do

• We investigate epithelium-stroma interactions in breast cancer.
• We study adhesion and integrins, specifically αvβ6-mediated carcinoma cell invasion.
• We investigate angiogenesis and disseminating tumour cells’ access into new, leaky tumour blood vessels.
• We study cell signalling and ligand-receptor interactions that modulate invasive and/or metastatic behaviour.
• In pancreatic cancer, we focus on stellate cell-epithelial cell interactions, and the proteomic analysis of primary and secondary deposits.
Key Publications

- Froeling et al. Retinoic acid-induced pancreatic stellate cell quiescence reduces paracrine Wnt-β-Catenin signaling to slow tumor progression. Gastroenterology 2011; 141: 1486-97.

Who does the research

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Angiogenesis
Breast Cancer
Pancreatic Cancer
Adhesion & Integrins
Pancreatic Cancer
Cell signalling

Major Funders

- Association for International Cancer Research
- Breast Cancer Campaign
- Cancer Research UK
- Pancreatic Cancer Research Fund
- British Lung Foundation
- DebRA
- MRC