

Dr Stéphanie Kermorgant

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Research Interests

My lab is investigating c-Met signalling in cancer in the view of designing appropriate therapies. c-Met receptor, overexpressed or mutated in cancer, promotes cell proliferation, migration and survival. Thus c-Met is a major target and several c-Met inhibitors are in clinical trials.

We study c-Met endocytic trafficking and c-Met signalling in breast, lung and pancreatic cancer cells and patient tissues. We have demonstrated that “c-Met endosomal signaling” plays a role in cell transformation *in vitro* and *in vivo*. We are dissecting the mechanisms regulating c-Met endocytosis / trafficking. We are determining the “endosomal signals” and how they are regulated. We are assessing whether targeting c-Met endocytosis / trafficking or the endosomal signals reduce cell transformation *in vitro* and *in vivo*.

It is hoped that our research will help design appropriate therapies for c-Met driven cancer and overcome potential resistance to c-Met inhibitors.

Major Funders

- Breast Cancer Campaign
- Medical Research Council
- Cancer Research UK
- Barts and the London Charitable Foundation

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Recent Publications

- Ménard L, Parker PJ, Kermorgant S. Receptor Tyrosine Kinase c-Met controls the cytoskeleton from different endosomes via different pathways. **Nature Communications** **2014** 5:3907.
- Barrow-McGee R, Kermorgant S. Met endosomal signalling: In the right place, at the right time. **Int. J Biochem Cell Biol** **2014**, 49:69-74.
- Mai A, Muharram G, Barrow R, Baghirova H, Rantala J, Kermorgant S*, Ivaska J*. Distinct c-Met Activation Mechanisms Induce Cell Rounding or Invasion Through Pathways Involving Integrins, RhoA, and Hip1. **J Cell Sci** **2014**, 127:1938-52. * Co-last authors
- Ho-Yen CM, Green AR, Rakha EA, Brentnall AR, Ellis IO, Kermorgant S, Jones JL. C-Met in invasive breast cancer: Is there a relationship with the basal-like subtype? **Cancer** **2014** 120:163-71.
- Radtke S, Milanovic M, Rossé C, de Rycker M, Lachmann S, Hibbert A, Kermorgant S*, Parker PJ*. ERK2 but not ERK1 mediates HGF-induced motility in non small cell lung carcinoma cell lines. **J Cell Sci** **2013**, 126: 2381-91. *Co-corresponding authors
- Joffre C, Barrow R, Ménard L, Calleja V, Hart IR and Kermorgant S. A direct role for Met endocytosis in tumorigenesis. **Nat Cell Biol** **2011**, 13:827-37.
- Kermorgant S and Parker PJ. Receptor trafficking controls weak signal delivery: a strategy employed by c-Met for STAT3 nuclear accumulation. **J Cell Biol** **2008**, 182: 855-63.



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