

## Professor John Heath

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### Postgraduate supervision

For a list of possible PhD projects offered by Prof Heath

**[www.findaphd.com/search/customlink.asp?inst=birm-Biol&supersurname=Heath](http://www.findaphd.com/search/customlink.asp?inst=birm-Biol&supersurname=Heath)** (<http://www.findaphd.com/search/customlink.asp?inst=birm-Biol&supersurname=Heath>)

### Research

Research Theme within School of Biosciences: **[Molecular and Cell Biology \(/research/activity/cellbiology/index.aspx\)](/research/activity/cellbiology/index.aspx)**

*Short research description:* Organisation and behaviour of chromosomes in plant meiosis

#### Structure and function of growth factors and their receptors

We are interested how the specificity and dynamics of growth factor signalling is controlled in human cells. This is a central problem in understanding a wide variety of human disease states such as cancer, inflammation, tissue repair and infertility.

Our research relies heavily on advanced techniques for studying and manipulating the formation and dynamic distribution of protein complexes including mass spectroscopy/proteomics, optical imaging, computational modelling and structural biology.

Funding for the research comes from Cancer Research UK and the **[EC Endotrack programme. \(http://www.endotrack.org/\)](http://www.endotrack.org/)**

### Publications

Cunningham DL, Creese AJ, Auciello G, Sweet SM, Tatar T, Rappoport JZ, Grant MM, Heath JK. Novel binding partners and differentially regulated phosphorylation sites clarify Eps8 as a multi-functional adaptor. PLoS One. 2013 Apr 23;8(4):e61513. doi: 10.1371/journal.pone.0061513. Print 2013. PubMed PMID: 23626693; PubMed Central PMCID: PMC3634024.

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Dudka AA, Sweet SM, Heath JK. (2010) Signal transducers and activators of transcription-3 binding to the Fibroblast Growth Factor Receptor is activated by receptor amplification. Cancer Res. 2010 Apr 15;70(8):3391-401. PubMed PMID: 20388777.

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Heath, J. K. (2009). The Equivalence between Biology and Computation. Lecture Notes in Bioinformatics, vol. 5688. pp 18-25. DOI= [http://dx.doi.org/10.1007/978-3-642-03845-7\\_2](http://dx.doi.org/10.1007/978-3-642-03845-7_2) ([http://dx.doi.org/10.1007/978-3-642-03845-7\\_2](http://dx.doi.org/10.1007/978-3-642-03845-7_2))

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