

The need for interdisciplinary approaches to advance modern healthcare technologies

Prof Francis L Martin PhD
RD&I Lead Manager
Blackpool Victoria hospital



Who am I????

- **Postdoctoral Research Fellowship, Institute of Cancer Research, 2001**
- **Professor in Chemical Biology, from 2012, Lancaster University**
- **Have led my own research laboratory for >20 y**
- **Supervised >50 PhD studentships and >10 Clinical MD Fellows**
- **>150 researchers from all over the world have worked under my supervision**
- **In addition to my UK research base, have on-going research activities in Brazil, China and Europe**

- **Have authored >450 research papers in peer-reviewed literature**
- **Have authored >20 book chapters**
- **Organised National and International conferences**
- **President of an academic society**

Secure | https://scholar.google.com/citations?user=-_OwNdQAAAAJ&hl=en&oi=ao



Francis L Martin ✎

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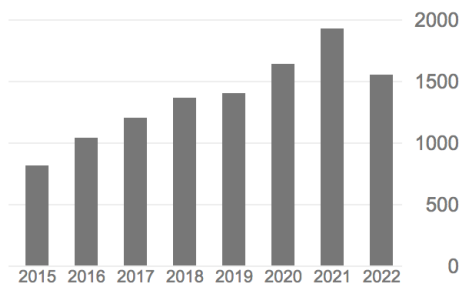
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<input type="checkbox"/>	TITLE	CITED BY	YEAR
<input type="checkbox"/>	Using Fourier transform IR spectroscopy to analyze biological materials MJ Baker, J Trevisan, P Bassan, R Bhargava, HJ Butler, KM Dorling, ... Nature protocols 9 (8), 1771-1791	1416	2014
<input type="checkbox"/>	Using Raman spectroscopy to characterize biological materials HJ Butler, L Ashton, B Bird, G Cinque, K Curtis, J Dorney, ... Nature protocols 11 (4), 664-687	887	2016
<input type="checkbox"/>	Exposure of electronics dismantling workers to polybrominated diphenyl ethers, polychlorinated biphenyls, and organochlorine pesticides in South China X Bi, GO Thomas, KC Jones, W Qu, G Sheng, FL Martin, J Fu Environmental Science & Technology 41 (16), 5647-5653	425	2007
<input type="checkbox"/>	Distinguishing cell types or populations based on the computational analysis of their infrared spectra FL Martin, JG Kelly, V Llabjani, PL Martin-Hirsch, II Patel, J Trevisan, ... Nature protocols 5 (11), 1748-1760	308	2010

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Citations	15465	9139
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My major research focus

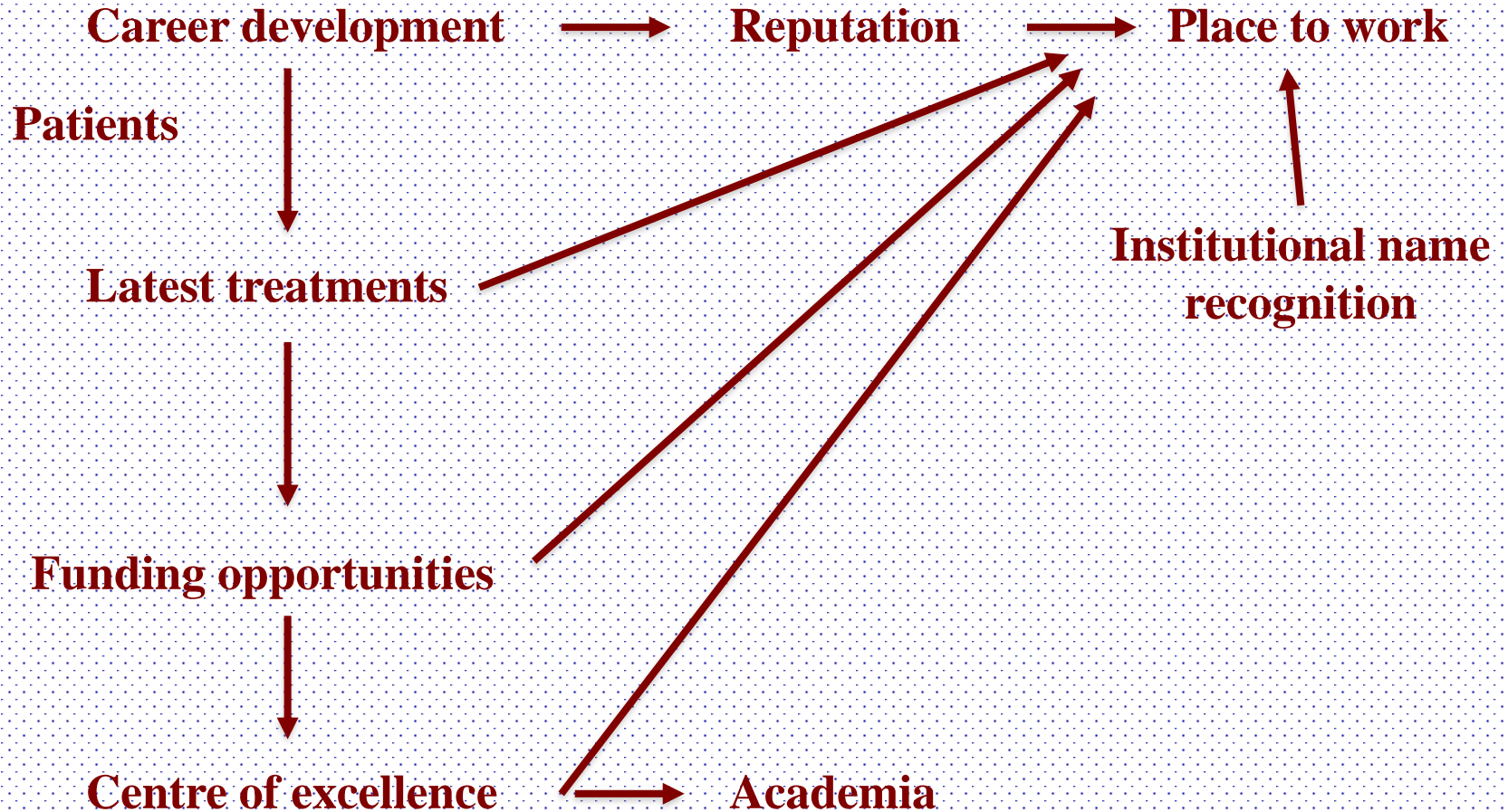
- **Biospectroscopy (IR and Raman): an emerging bio-sensing tool**
- **Applications in environmental and human health monitoring**
- **Towards interpretability *via* extraction of discriminating wavenumbers → mechanism of action + molecular pathology**
- **High-throughput and non-destructive**
- **An information-rich visualization format**

Martin FL (2011) *Nature Methods* 8:385-387

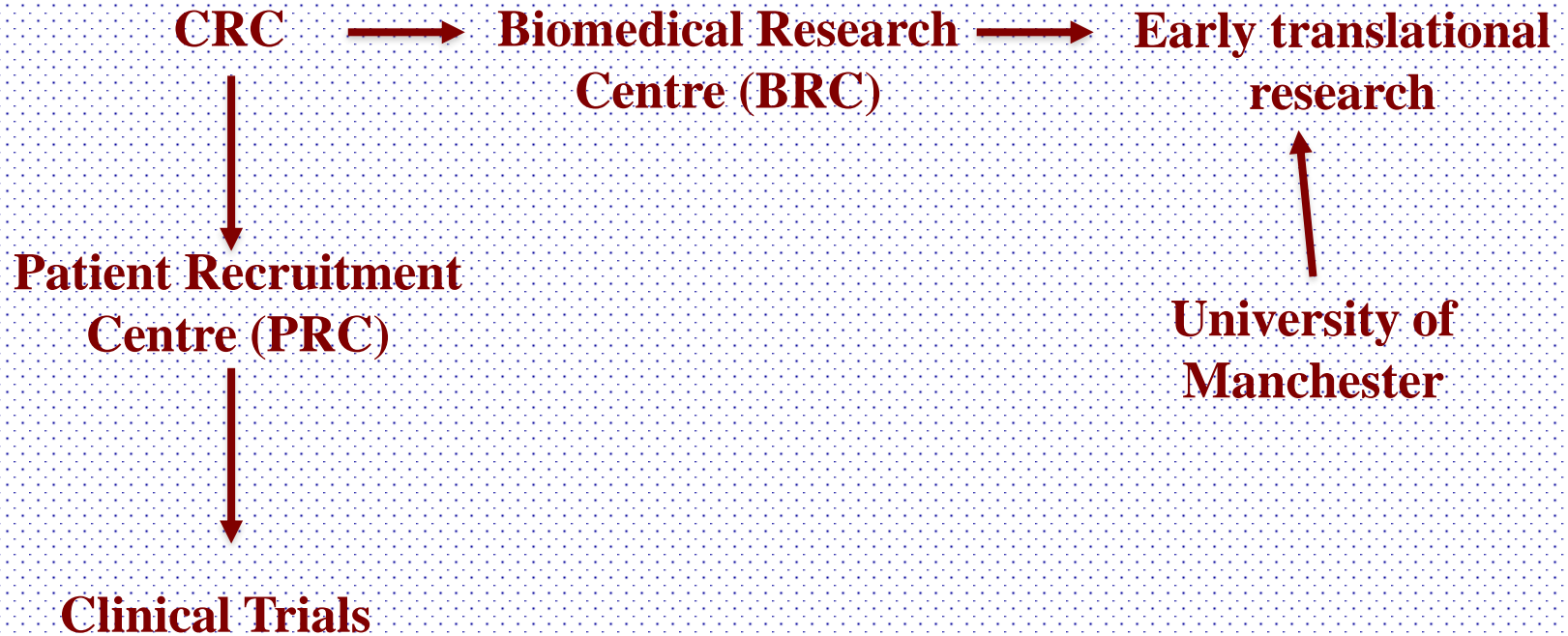
Martin FL *et al.* (2010) *Nature Protocols* 5:1748-1760

Martin FL and Fullwood NJ (2007) *PNAS* 104:E1

Benefits of research



Clinical Research Centre



Main areas

- **Cardiology**
- **Oncology**

- **Need to diversify**
- **If you are interested in being a PI**

- **francis.martin2@nhs.net**

Thank you

NIHR | National Institute
for Health Research

National Patient Recruitment Centre