

## Dr Benjamin Fisher MD(Res)

Senior Clinical Lecturer in Experimental Translational Inflammation

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### Contact details

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### About

Ben Fisher is a Senior Clinical Lecturer in Experimental Translational Inflammation. He has published research papers on rheumatoid arthritis and has participated in many national and international collaborations.

### Qualifications

- MD(Res) Medicine 2011
- MRCP 2002
- MBBS 1999
- BSc (Hons) Immunology 1996

### Biography

Benjamin Fisher studied medicine at the United Medical and Dental Schools of Guy's and St. Thomas's Hospitals in London, obtaining a BSc(Hons) in Immunology in 1996 and his MBBS in 1999. He trained as a Rheumatologist in London with academic studies at the Kennedy Institute of Rheumatology, Imperial College London. Here he worked in the clinical trials unit and completed an MD(Res) on antibodies to citrullinated alpha enolase peptides in rheumatoid arthritis. Following this he was appointed as a Walport Clinical Lecturer at Imperial College. He joined Birmingham University as a Senior Clinical Lecturer in 2012.

### Research

#### RESEARCH THEMES

Anti-citrullinated protein antibodies, Clinical Trials, Ultrasound, Rheumatoid arthritis

#### RESEARCH ACTIVITY

##### Antibodies to citrullinated proteins (ACPA)

ACPA are a specific feature of rheumatoid arthritis, however the proteins that they target in the body, the reasons why they occur, and their role in the disease, are still a matter of investigation. Dr Fisher has studied alpha-enolase as a candidate citrullinated autoantigen, and has examined the immunogenetic associations of antibodies to an alpha-enolase peptide. He has also investigated the diagnostic and prognostic value of these antibodies in rheumatoid arthritis.

##### Clinical Trials

A second focus of his research has been the use of novel outcome measures in clinical trials. He has investigated power Doppler ultrasound as an early imaging biomarker of treatment response in rheumatoid arthritis. Patients with active rheumatoid arthritis have a thickened, inflamed synovial joint lining which requires its own blood supply. Power Doppler ultrasound allows the measurement of this synovial vascularity, which is dramatically increased in the rheumatoid joint. Validation work has included studying its diurnal variation and its relationship with oxygen levels which are typically low in inflamed joints.

### Publications

Fisher BA, Venables PJ (2012) Inhibiting citrullination in rheumatoid arthritis: taking fuel from the fire. *Arthritis Res Ther.* 14:108.

Quirke AM, Fisher BA, Kinloch AJ, Venables PJ (2011) Citrullination of autoantigens: upstream of TNF $\alpha$  in the pathogenesis of rheumatoid arthritis. *FEBS Lett.* 585:3681-8.

Fisher BA, Plant D, Brode M, van Vollenhoven RF, Mathsson L, Symmons D, Lundberg K, Rönnelid J, Venables PJ (2011) Antibodies to citrullinated  $\alpha$ -enolase peptide 1 and clinical and radiological outcomes in rheumatoid arthritis. *Ann Rheum Dis.* 70:1095-8.

Fisher BA, Charles P, Lundberg K, Gillespie KM, Newton RW, Venables PJ (2010) Organ-specific autoantibodies but not anti-cyclic citrullinated peptides are a feature of autoimmunity in Down's syndrome. *Ann Rheum Dis.* 69:939-40.

Mahdi H, Fisher BA, Källberg H, Plant D, Malmström V, Rönnelid J, Charles P, Ding B, Alfredsson L, Padyukov L, Symmons DP, Venables PJ, Klareskog L, Lundberg K (2009) Specific interaction between genotype, smoking and autoimmunity to citrullinated alpha-enolase in the etiology of rheumatoid arthritis. *Nat Genet.* 41:1319-24.

Lundberg K, Kinloch A, Fisher BA, Wegner N, Wait R, Charles P, Mikuls TR, Venables PJ (2008) Antibodies to citrullinated alpha-enolase peptide 1 are specific for

