University of Birmingham

Dr Gavin Bendle Ph.D.

Leukaemia and Lymphoma Research Bennett Senior Fellow

School of Cancer Sciences (/schools/cancer/index.aspx)

Contact details

Telephone **+44 (0)121 414 7458 (tel:+44 121 414 7458)**

Email **g.bendle@bham.ac.uk (mailto:g.bendle@bham.ac.uk)**

School of Cancer Sciences
Cancer Immunology and Immunotherapy Centre (CIIC)
University of Birmingham
Vincent Drive
Edgbaston
Birmingham B15 2TT

About

Gavin Bendle is a Leukaemia and Lymphoma Research Bennett Senior Fellow in the School of Cancer Sciences and a member of the Cancer Immunology and Immunotherapy Centre (CIIC).

He has recently joined the School to establish his own research group that aims to contribute towards the development of adoptive immunotherapy of cancer, with a particular focus on T cell receptor (TCR) gene therapy of haematological malignancies. Leukaemia and Lymphoma Research support his group's work.

Qualifications

- Ph.D in Tumour Immunology, Imperial College London. 2005
- MSc in Immunology, Imperial College London, 2001
- BSc (Hons) in Zoology, University of Sheffield, 1999

Biography

Gavin qualified with a BSc (Hons) in Zoology from the University of Sheffield in 1999 before completing an MSc in Immunology at Imperial College London in 2001. He then went on to study for a Leukaemia and Lymphoma Gordon Piller PhD studentship at Imperial College London in the group of Hans Stauss, where he assessed immunity and tolerance to the tumour-associated antigen MDM2. After completing his PhD in 2005 he worked at University College London as a Post-doc in the Stauss group.

At the beginning of 2007 he obtained a Leukaemia & Lymphoma Research Post-doctoral Travel Fellowship and moved to Ton Schumacher's group at the Netherlands Cancer Institute in Amsterdam. The focus of Gavin's research in Amsterdam was the pre-clinical development of TCR gene therapy of cancer.

In 2013 Gavin was awarded a Leukaemia & Lymphoma Research Bennett Senior non-clinical Fellowship and he moved to the School of Cancer Sciences at the University of Birmingham to establish his own research group. The primary focus of his group's research is the development of TCR gene therapy for the treatment of haematological malignancies.

Teaching

- MSc Immunology & Immunotherapy
- MSc Clinical Oncology

Postgraduate supervision

Gavin is interested in supervising doctoral research students in the following areas:

- Engineering immunity to human cancer through TCR gene transfer
- Immune responses to human cancer
- The use of pre-clinical models to optimize TCR gene therapy of cancer

If you are interesting in studying any of these subject areas please contact Gavin on the contact details above, or for any general doctoral research enquiries, please email: **dr@contacts.bham.ac.uk (mailto:dr@contacts.bham.ac.uk)** or call +44 (0)121 414 5005

Research

Research in the Bendle group is focused on the engineering of immunity to human cancer through TCR gene transfer.

Current research projects in the group include:

1. The selection and validation of TCRs for the clinical application of TCR gene therapy of multiple myeloma.
2. The use of pre-clinical models to optimize the efficacy and safety of TCR gene therapy of cancer.
3. Assessing if enhanced T cell immunity contributes towards the anti-tumour effect of immunemodulatory drugs (IMiDs) in multiple myeloma patients.

Other activities

- Reviewer for grant funding bodies and journals

Publications

Linnemann, C., Heemskerk, B., Kvistborg, P., Kluin, R.J.C., Bolotin, D.A., Chen, X.,Bresser, K., Nieuwland, M., Schotte, R., Michels, M., Gomez-Eerland, R., Jahn, L., Hombrink, P., Legrand, N., Shu, C.J., Mamedov, I.Z., Velds, A., Blank, C.U., Haanen, J.B.A.G., Turchaninova, M.A., Kerkhoven, R.M., Spits, H., Reker Hadrup, S., Heemskerk, M.H.M, Blankenstein, T., Chudakov, D.M, Bendle, G.M. , Schumacher, T.N.M. High-throughput identification of antigen-specific TCRs by TCR gene capture. **Nat Med**. (*in press*)

Linnemann, C., Schumacher, T.N., Bendle, G.M. (2011) T Cell Receptor Gene Therapy: critical parameters for clinical success. **Journal of Investigative Dermatology**. 131:1806-1816

Bendle, G.M., Linnemann, C., Hooijkaas, A.I., Bies, L., de Witte, M.A., Jorritsma, A., Pouw,N., Kaiser, A.K., Debets, R., Kieback, E., Uckert, W., Song, J., Haanen, J.B., Schumacher, T.N.^ (2010) Lethal Graft-versus-Host Disease in mouse models of T Cell Receptor Gene Therapy. **Nat. Med**. 5:565-70

Wright, G.P., Notley, C.A., Xue S.A., Bendle, G.M ., Holler, A., Schumacher, T.N., Ehrenstein, M.R., Stauss, H.J. (2009) Adoptive therapy with redirected primary regulatory T cells results in antigen-specific suppression of arthritis. **Proc Natl Acad Sci USA**. 106:19078-83.

Bendle, G.M., Haanen, J.B., Schumacher, T.N. (2009) Preclinical development of T cell receptor gene therapy. **Curr Opin Immunol**. 21:209-14

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De Witte, M.A., Bendle G.M., Coccoris, M., van den Boom, M.D., Schell, T.D., Tevethia, S.S., Mesman, E.M., Song, J., Schumacher, T.N. (2008) TCR gene therapy of spontaneous prostate carcinoma requires in vivo T cell activation. **J Immunol**. 181:2563-71

Bendle G.M., Xue S., Holler A., Stauss H.J. (2007) A study of T cell tolerance to the tumor-associated antigen MDM2: cytokines can restore antigen responsiveness, but not high avidity T cell function. **PloS ONE** 2(4):e353

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