

Dr Roger Watson PhD

Senior Lecturer

School of Cancer Sciences

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About

Roger Watson is a Senior Lecturer in the School of Cancer Sciences.

Dr Watson has published 70 research papers as well as reviews and book chapters in the fields of virology and cancer gene function over the years. He has received research funding from Cancer Research UK, the Association for International Cancer Research and the Biotechnology and Biological Sciences Research Council.

Dr Watson is Programme Lead for the [MRes Cancer Sciences \(/postgraduate/courses/combined/med/cancer-sciences.aspx\)](#) course introduced in 2013.

Qualifications

PhD in Virology, University of Glasgow

BSc (Hons) in Microbiology and Virology, University of Warwick

Biography

Upon graduating BSc (Hons) in Microbiology and Virology from the University of Warwick in 1975, Roger Watson was awarded a Medical Research Council PhD Scholarship to study herpes simplex virus transcription at the Institute of Virology, University of Glasgow. In 1979 he went to the USA as a Fogarty Visiting Fellow at the National Cancer Institute, NIH to develop this research interest. Whilst working at the NIH under the guidance of Dr George F. Vande Woude, Roger became engaged in the newly emerging cellular oncogenes field. After a stint at a biotechnology company in Minnesota, he returned to the UK in 1984 to start a research group working on Myb oncogenes at the Imperial Cancer Research Fund laboratories in London (now merged into Cancer Research UK). In 1991 his group transferred to the St Mary's branch of the Ludwig Institute for Cancer Research (associated with Imperial College London), where the research focus was centred on Myb oncoproteins and cell cycle regulation. In 1996 Roger was appointed Senior Lecturer and later Reader at Imperial College and discovered a latent interest in undergraduate teaching in cancer biology and infectious diseases.

After taking early retirement from Imperial College London in 2010, Roger moved to the West Midlands and was appointed to a part-time Senior Lectureship at the University of Birmingham. Here he has been involved in developing post-graduate teaching and has also maintained an interest in Myb research through interactions with the group of Prof. Jon Frampton and Dr Paloma Garcia.

Teaching

- BMedSc
- MRes Cancer Sciences Programme Lead

Research

Roger Watson's research has in more recent years focussed on cell cycle regulatory mechanisms, with a particular interest in the Myb transcription factors. Early work on cloning and characterising the mouse and human B-myb genes uncovered a novel mechanism for cell cycle transcription involving repression by retinoblastoma (RB) family proteins interacting through a promoter E2F-binding site. Because of its simplicity and high degree of cell cycle modulation, the B-myb promoter has subsequently been used extensively as a model system by researchers throughout the world. The importance of this regulatory mechanism to switch off cell cycle gene expression during cell differentiation and senescence was further demonstrated by mutating the B-myb promoter E2F site in the mouse germline.

The Watson laboratory has also taken a leading role in studying B-Myb protein function and showed that this activity is regulated post-transcriptionally during the cell cycle by cyclin-dependent kinases. Subsequently it was discovered that B-Myb is associated with an evolutionarily conserved protein complex termed DREAM. DREAM switches from a repressive RB-related complex in G1 to a transcriptionally active complex with B-Myb in S/G2 phases. Subsequent work showed that the repressive DREAM complex was a critical target whose disruption enables human papillomavirus oncoproteins to drive cell proliferation. Moreover, the B-Myb-DREAM complex has been implicated in the so-called "proliferation signature" in breast cancer, which is strongly associated with poor prognosis.

Roger Watson has published extensively in leading peer-reviewed journals including Nature, Science and EMBO Journal.

Other activities

- Associate Editor, Papillomaviruses, at Virology Journal

Publications

Santilli, G., Schwab, R., Watson, R., Ebert, C., Aronow, B.J. and Sala, A. "Temperature-dependent modification and activation of B-MYB: Implications for cell survival" J.

Biol. Chem. 280, (2005), 15628-15634.

Garcia, P., Berlanga, O., Watson, R. and Frampton, J. "Generation of a conditional allele of the B-myb gene" *Genesis* 43, (2005), 189-195.

Soeiro, .I, Mohamedali, A., Romanska, H.M., Lea, N.C., Child, E.S., Glassford, J., Orr, S.J., Roberts, C., Naresh, K., Lalani, E.-N., Mann, D.J., Watson, R.J., Thomas, N.S.B. and Lam, E.W.-F. "p27Kip1 and p130 cooperate to regulate haematopoietic cell proliferation in vivo" *Mol. Cell. Biol.* 26, (2006), 6170-6184.

Tavner, F., Frampton, J. and Watson, R. "Targeting an E2F site in the mouse genome prevents promoter silencing in quiescent and post-mitotic cells" *Oncogene* 26, (2007), 2727-2735.

Jammeh, S., Tavner, F., Watson, R., Thomas, H.C. and Karayiannis, P. "Effect of basal core promoter and pre-core mutations on hepatitis B virus replication" *J. Gen. Virol.* 89, (2008), 901-909.

Knight, A.S., Notaridou, M. and Watson, R.J. "A Lin-9 complex is recruited by B-Myb to activate transcription of G2/M genes in undifferentiated embryonal carcinoma cells" *Oncogene* 28, (2009), 1737-1747.

Nor Rashid, N., Yusof, R. and Watson, R.J. "Disruption of repressive p130-DREAM complexes by HPV16 E6/E7 oncoproteins is required for cell cycle progression in cervical cancer cells" *J. Gen. Virol.* 92, (2011), 2620-2627.

Down, C., Millour, J., Lam, E.W.-F. and Watson R.J. "Binding of FoxM1 to G2/M promoters is dependent on B-Myb" *Biochim. Biophys. Acta* 1819, (2012), 855-862.

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