



International Lecture Series

Disease Biology and Molecular Medicine

ALL WELCOME!



Tudor A. Fulga

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8 June 2015
7 p.m.

Stadthaus Halle
Großer Festsaal
Marktplatz 2

“Deciphering microRNA genome regulation using high precision molecular scalpels”

Tudor A. Fulga obtained his PhD from the EMBL in Heidelberg. He subsequently conducted research at Harvard Medical School as postdoctoral fellow and instructor in Cell Biology. In 2011, he joined the Weatherall Institute of Molecular Medicine (WIMM) in Oxford as a Group Leader and MRC senior research fellow. In 2014 he was appointed Associate Professor of Genome Biology. During his PhD, he studied the process of protein translocation across the ER and mechanisms guiding invasive cell migration. At Harvard, Tudor investigated the molecular mechanisms underlying Alzheimer's disease. Amongst several other important scientific contributions, he delineated the actin cytoskeleton as a critical mediator of neurodegeneration. Subsequently, he pioneered transgenic miRNA competitive inhibitors (miR-sponges), a highly versatile *in vivo* technology for conditional knockdown of miRNA activity with precise spatial-temporal resolution.

His research program in Oxford is focused on deciphering the role of non-coding RNAs in development and diseases, and molecular mechanisms of miRNA target recognition and silencing. He also aims to repurpose the functionality contained within RNAs to develop logic-function molecular devices that are capable of rewiring cellular behavior. The resulting synthetic devices have potential for widespread applications, ranging from basic tools for miRNA research to components in targeted diagnostic and therapeutic strategies.

Selected papers

J Neurosci. 2014 Jan 15;34(3):969-79, *Development.* 2012 Aug;139(15):2821-31. *PLoS Genet.* 2010 Jul 15;6(7):e1001026, *Genes Dev.* 2010 Apr 1;24(7):625-35. *Nat Methods.* 2009 Dec;6(12):897-903, *Neuron.* 2008 Feb 7;57(3):339-44. *Nature.* 2007 Jul 19;448(7151):362-5. *Nat Cell Biol.* 2007 Feb;9(2):139-48.

