

Jasmeet Singh Reyat

[School of Biosciences \(/schools/biosciences/index.aspx\)](/schools/biosciences/index.aspx)

Contact details

Telephone [+44 \(0\)121 414 \(tel:+44 121 012 1414\)](tel:+44%20121%20414)

Email [jsr236@bham.ac.uk \(mailto:jsr236@bham.ac.uk\)](mailto:jsr236@bham.ac.uk)

School of Biosciences
University of Birmingham
Edgbaston
Birmingham
B15 2TT
UK

About

PhD Title: Tetraspanin regulation of ADAM10: impact on atherosclerosis

Supervisors: Dr Michael G Tomlinson (School of Biosciences) and Professor G Ed Rainger (School of Clinical and Experimental Medicine)

Atherosclerosis is a chronic disease that occurs within the wall of arteries and is ultimately a major cause of death and disability from heart attack and stroke. ADAM10 is a transmembrane metalloprotease that is upregulated on endothelial cells during atherosclerosis and promotes leukocyte transmigration *in vivo*. However, the effects of endothelial ADAM10 on leukocyte transmigration and atherosclerosis are largely unknown. The aim of my research is to determine whether endothelial ADAM10 promotes leukocyte transmigration and atherosclerosis *in vivo*, and secondly whether certain tetraspanins help ADAM10 to achieve this unwanted outcome.

Qualifications

BSc in Biomedical Sciences (2012)

Biography

Jasmeet completed his undergraduate degree in Biomedical Sciences at Keele University where he developed an interest in inflammation during his final year project in the lab of Dr Srabasti Chakravorty. He then approached Dr Tomlinson with a detailed research plan to study the role of tetraspanins in atherosclerosis. Following modification to Jasmeet's initial research proposal to include the role of ADAM10 and associated tetraspanins in leukocyte transmigration and atherosclerosis, he was awarded a three-year PhD Studentship funded by the British Heart Foundation to carry out the research.

Research

Research interests: Vascular pathology and chronic inflammation

Tomlinson Lab/Rainger lab

<http://www.birmingham.ac.uk/research/activity/mds/domains/cardio-resp-neuro/cardiovascular-sciences/vascular-tetraspanin-group/index.aspx>

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<http://www.birmingham.ac.uk/research/activity/mds/domains/cardio-resp-neuro/cardiovascular-sciences/leukocyte-trafficking/index.aspx>

<http://www.birmingham.ac.uk/research/activity/mds/domains/cardio-resp-neuro/cardiovascular-sciences/leukocyte-trafficking/index.aspx>

Other activities

Member of the Biochemical Society

Publications

Poster presentation at the UK Adhesion Meeting, Birmingham, November 2013