



# 84<sup>th</sup> EAS CONGRESS

May 29 - June 1, 2016  
Innsbruck, Austria

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## 84<sup>th</sup> European Atherosclerosis Society Congress 2016 – Innsbruck, Austria

### Tomasz Block

I was awarded a Young Investigator Fellowship from the European Atherosclerosis Society (EAS) and selected for a Guided Poster Presentation at the 84<sup>th</sup> EAS Congress, which was held in the City of Innsbruck at the heart of the Austrian Alps. This award was based on my work as a contributing author in a novel study (1) at the Baker Heart and Diabetes Institute in Melbourne that explored the concept of how persistent changes in DNA methylation through parental diet in utero influence the future risk of metabolic disease in offspring. This is closely aligned with the emerging importance of chromatin modifications in atherosclerosis, which have been demonstrated as potential markers able to detect atherosclerotic disease in the pre-symptomatic phase as well as measure its progression (2). Therefore, by appreciating the underlying gene and environmental interactions there is a great potential to not only better understand this complex multifactorial disease but also formulate future personalized genome therapies for patients.

The outstanding scientific programme at EAS 2016 covered recent developments in the field of atherosclerosis-related disease and clinical therapies, with leading authorities from across Europe and the world presenting their findings in plenary, oral communication, workshop and moderated poster sessions. Over 2,000 delegates attended the 4-day conference, largely represented by specialist clinicians and scientists in the fields of atherosclerosis, clinical chemistry, diabetes, endocrinology and primary care.

The highlights of the opening ceremony included a Tyrolean folklore performance that combined both traditional and modern melodies by renowned Austrian singers and a thought provoking lecture by Professor Peter Carmeliet, which overviewed recent findings from his research that implicate maladaptation of endothelial cell metabolism as a contributor to endothelial dysfunction, excess angiogenesis and vessel disorganization (3, 4). This exciting discovery has potential therapeutic implications for cancer treatment and innovative approaches for the management of cardiovascular disease due to the underlying role of angiogenesis in the pathogenesis of atherosclerosis, with Professor Carmeliet concluding that: *'These novel findings imply a paradigm shift in anti-angiogenic therapy from targeting angiogenic factors to focusing on vascular metabolism.'*

The interactive EAS 2016 mobile App served as a practical all-in-one guide for the duration of the congress by allowing me to access the programme, read about the speakers as well as bookmark and choose the most clinically relevant sessions since many were run concurrently during the day. The comfortable atmosphere of the congress venue allowed for effective networking and discussion with peers, sponsors and industry exhibitors, with superb Tyrolean culinary highlights that were offered throughout the meeting and during the enjoyable EAS International Networking Evening that took place amidst a unique and natural alpine backdrop.

My personal highlight of the education programme was the inspiring Keynote lecture by Nobel laureate Professor Michael S. Brown, who together with Joseph L. Goldstein, discovered the human low density lipoprotein (LDL) receptor, an integral component in the regulation of

cholesterol metabolism, which laid the theoretical groundwork for the development of statins. In his lecture entitled “Not how low but **how long** to lower LDL cholesterol”, Professor Brown proposed that the current clinical focus in cardiovascular disease prevention should be on the total length of LDL cholesterol lowering rather than a target LDL level, citing a key paper (5), in which carriers of a proprotein convertase subtilisin/kexin type 9 (PCSK9) sequence variant associated with reduced plasma levels of LDL cholesterol had a substantial reduction in the incidence of myocardial infarction at 60 years of age. Caucasian individuals possessing the PCSK9 variant had a 15% reduction in plasma LDL levels leading to a 47% lower incidence of coronary heart disease (CHD), while a different PCSK9 variant in African Americans resulted in a 28% reduction in plasma LDL levels and 88% reduction in CHD incidence. Therefore, lifelong exposure to lower plasma LDL levels was associated with a substantial reduction in the incidence of coronary events. As Professor Brown concluded: *‘If we intervene earlier in life we may not need the drastic reductions in LDL cholesterol as with current therapeutic strategies. The challenge will be identifying the individual threshold, as well as the most appropriate timing for intervention.’*

My Guided Poster Presentation was an extremely worthwhile experience as a unique and valuable opportunity to present and have my research critiqued, serving as the first important step inaugurating my involvement in clinically based research, which I intend to pursue in my future medical career. Moreover, the topic and findings of my research were met with considerable interest. The constructive feedback that I received was invaluable for my own professional development and confidence for future presentations. Throughout my studies I have come to the realisation that a surprisingly low number of clinicians are actively involved in clinical studies and research. This is why I endeavour to take a broader approach by combining the two domains in order to be the most well rounded healthcare practitioner that I can be.

Innsbruck, the congress location is the capital of Tyrol in western Austria. Located in a broad valley between high Alpine mountains, it is an internationally renowned winter sports centre and an amazing treasure trove of art and culture encompassing the Tyrolean State Theatre, 30 museums and galleries, 200 concerts and 4 music and comedy festivals every year. The 800-year-old town is brimming with sights and attractions that reflect the city’s colourful history: The famous Golden Roof over the alcove balcony together with the City Tower and splendid Gothic townhouses represent the heart of the Old Town. Lavish celebrations were held at the nearby Imperial Palace and Court Church. The city is overlooked by the magnificent Ambras Castle and its grounds.

I would like to personally thank Professor Assam El-Osta, Sam Keating and Ishant Khurana for their instrumental support and guidance throughout my research. Furthermore, my deep gratitude to my parents for helping with the practical side of my travel, without which this trip would not have been possible.

## References:

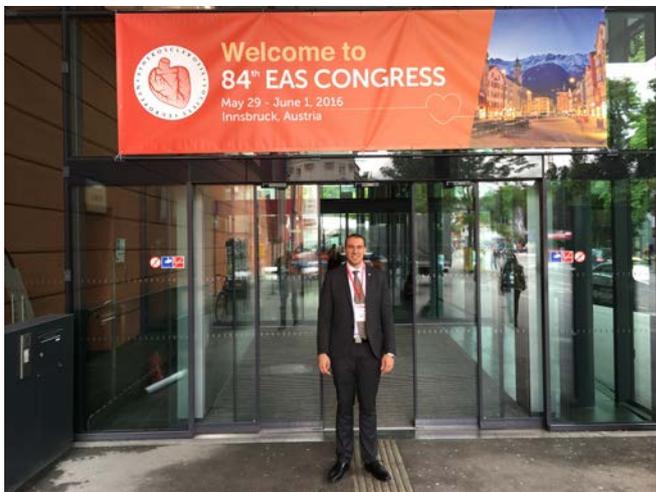
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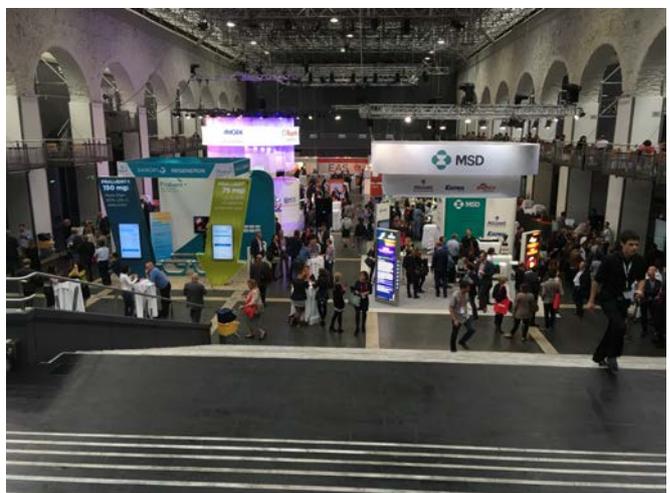
**With Nobel Laureate Professor Michael S. Brown**



**My poster with my Baker IDI lab supervisor Professor Assam-EI Osta**



**In front of the EAS 2016 Conference main entrance**



**The EAS 2016 Conference Sponsorship area**