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**Physicians crossing borders . . .**

## Ludwig Neyses MD

### **A physician who has crossed many frontiers and has changed direction a number of times**



Ludwig Neyses is Vice President of Research at the University of Luxembourg and Professor of Medicine/Cardiology at the University of Manchester, UK (joint appointment). Born in Stuttgart, Germany, he studied medicine in Mainz and went on to train in France, the UK, the USA, and Switzerland.

His main research focus has always been on calcium signalling related to molecular mechanisms of heart failure, but he has had a wide array of other interests including clinical interventional studies, combating malaria through blocking calcium signalling, and a 'male pill' based on blocking a calcium pump.

The son of a surgeon, Neyses showed an early interest in both chemistry and physics as well as in philosophy, history and languages, but eventually chose to study medicine at the University of Mainz near Frankfurt. Keen on science and fired with enthusiasm for biochemistry and physiology by engaging teachers, he recognised that the best role for him would be a physician–scientist. With an inclination for travel, he took advantage of a practice encouraged by German universities and spent a year abroad studying in Montpellier, France.

He spent his final year of Medical School at the former Westminster Medical School, London. In-between his studies abroad, he worked on his doctoral thesis in immunology in Mainz. After completing obligatory military service in Germany as a medic, he undertook a 9-month surgical training session at a small hospital close to Bonn, but then switched to cardiovascular medicine and secured a research post at the University of Zürich, Switzerland. He spent 3 years in Switzerland and was awarded a Böhlinger Ingelheim stipend to investigate hypertension at the Swiss Federal Institute of Technology, where he worked with Ernesto Carafoli. The biochemist was famous for his work in calcium transport and this was an area which would become Neyses's main research theme.

Neyses returned to Germany in the mid-1980s following an offer from the Cardiology Department at the University of Bonn where he completed training in internal medicine and cardiology. It was also in Bonn that he started his own laboratory and began to build a reputation investigating calcium transport and signalling in hypertension and heart failure.

Between 1994 and 2001, he served as an Associate Professor in the Department of Internal Medicine in Würzburg, to the east of Frankfurt. During the 1990s, he completed two sabbaticals: the first while he was still at Bonn in the cardiovascular division of Duke University in Durham NC, working with R. Sanders Williams in molecular biology. He credits Williams—who went on to become President of the Gladstone Institutes in San Francisco, CA, USA, with firing his enthusiasm for molecular biology. Würzburg was a good place to be for a physician–scientist as it was designated a specialist national research centre by the German government and enabled Neyses to produce a wealth of new papers and publications which he travelled to international congresses and meetings to present.

After almost 7 years at Würzburg serving as an associate professor, he started to look around for opportunities and his gaze fell on Trinity College, Dublin in Ireland where he came out as the preferred external candidate for a chair, second after the local candidate. Another offer from across the Irish Sea, in Manchester, UK proved fully successful. He says, 'The former Dean from Manchester who was part of the selection process for the Irish job, approached me about the possibility of a similar position and after some negotiation I was offered a chair at the University of Manchester to build up a research group looking mainly at calcium signalling in heart failure'. It was a great opportunity supported by University funding and an International Appointee Grant from the UK Medical Research Council (MRC), only one of four that had ever been given.

In 2013, after more than a decade in the UK, a change of scene beckoned when Neyses was offered the role of Vice President of the University of Luxembourg. It was a departure from the physician–scientist role and required a new focus on management skills with a wide remit which included establishing research priorities, building up the international research reputation of the University and managing funding.

Neyses says, 'The aspects that attracted me to Luxembourg were that it was an up-and-coming institution with a substantial state endowment to work with and good people. I also spoke the three official languages of this university, German and French and English, fluently, so that helped'. One of his tasks was to establish a medical curriculum which he did by incorporating the best elements of UK, USA, and European systems based on his experience. He went on to develop a team-based learning BA degree and potentially later an MA in medicine. He also introduced the rigorous UK grant application system and has so far been successful in securing seven European Research Council Fellowships in 4 years and has doubled the institution's Horizon 2020 income. An independent evaluation of the university suggests it is fast becoming a high quality international institution.

As someone who has travelled widely and actively embraced migration and foreign working environments and cultures, Neyses is an advocate for crossing geographical and linguistic barriers, but warns that it requires a strong constitution and support. A native speaker of German and with a near-native proficiency in French and English, he believes that good language skills are essential. 'Being able to listen and being able to understand people and peoples is important, because you need to respond in difficult situations where there may be underlying tensions. It's no good going into certain situations with congress French or English, and it is really important to focus on the spoken language in detail'.

Integrating into a country as far as possible is also important, particularly if you have a family, he believes. Moving a young family can be challenging as there is much to adapt to, not just a new language, but also a new education system. He credits his wife Anna-Lucie, herself

a doctor, with working hard to help the family's three children adapt and flourish in the UK.

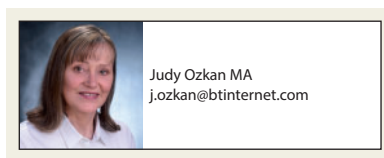
He draws a distinction between scientists and researchers on the move and clinicians seeking to work in overseas health care systems and suggests that academia may be more easily accessible. He observes that research is a global business with similar approaches, outlooks and topics almost everywhere, although there are distinct differences between Europe and the UK. 'Most universities in the UK are organised top down, except for Oxbridge, whereas most universities in Germany or indeed continental Europe are much more democratic. The professors elect the Dean and participate in the election of the President of the university, so the role of a professor is very different in the UK where professors are much more dependent on the management of the university'. The flip side of this is that continental universities can seem to be slower to react and adapt to change than in the USA or UK. The concentration of power in the hands of a single individual may also mean that the institution is tied to the calibre of the decisions made by the person at the top.

For migrating clinicians, the UK National Health Service (NHS) can be a challenging environment, especially for someone coming from a US- or European-style mixed system of public-private health care. He suggests that what the NHS gains in being state funded, it often loses in mind-numbing 'notorious bureaucracy'. He is more upbeat than some of his British contemporaries about the NHS and admires the way that the system treats long-term conditions such as heart failure, rheumatoid arthritis, and diabetes.

Being responsive and open to new opportunities and situations is an absolute necessity for anyone who wants to build a career abroad. Neyses says that opportunities favour those who are willing to engage and explore and points to his own experience in being offered a chair in

Manchester following his approach to Trinity College, Dublin. Actively looking for new openings combined with taking good opportunities when they arise is recommended as a strategy for success. He believes that relocation on a national or international level is simply a part and parcel of academic life. 'If you are not willing to move, your career opportunities will be severely hampered and although it can be complicated for families to move such complications are a small price to pay for expanding career and personal horizons. So, I would say that although you need to take the practicalities into consideration it can be very rewarding, not just from a career point of view, but also from a personal and cultural point of view in getting to know a different culture and working closely with people who know about it and can share it with you in a fascinating way'.

Since arriving in Luxembourg in 2013, Neyses has overseen growth and development at the university whose vision statement: multilingual-international-research orientated could almost be used to sum up his own career. In 2017, the University came number 11 in the Times Higher Education New University Rankings in little more than 14 years, and is on target to grow and develop further over the next decade.



**Conflict of interest:** none declared.

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## WHF Emerging Leaders Program

### The 2017 Update of the 4th seminar held in Cape Town hosted by Dr Karen Sliwa

#### Program overview

The World Heart Federation's (WHF) Emerging Leaders program ([whfel.org](http://whfel.org)) was initiated in 2014 with the goal of creating a cadre of committed, talented individuals who will contribute towards improving global cardiovascular health and reduced global cardiovascular disease.<sup>1</sup> The program is aligned with the World Health Organization's '25 × 25' target of reducing the risk of premature (<70 years) mortality from cardiovascular disease and other non-communicable diseases by 25% by 2025.<sup>2</sup>

During the past 4 years, the program has trained 100 emerging leaders from 42 countries and 6 continents who have participated in online training, a 5-day think-tank seminar, and collaborative small group project proposals developed during the seminar to facilitate 'learning by doing' in the fields of implementation science, health systems strengthening, and health policy research, including articles outlined in the World Health Organization's Framework Convention for Tobacco Control (Figure 1).

Collaborative projects are supported by CHF 25 000 or more in seed funding provided by the World Heart Federation based on expert review of these proposals developed during think-tank seminars, a key feature of this training program. The program is currently supported by unrestricted educational grants from Boehringer Ingelheim and Novartis with previous support from AstraZeneca and BUPA.

#### 2014–2017 Emerging Leader Cohorts

Each previous Emerging Leader cohort has focused on a priority area for the World Heart Federation and aligned its work with the World Heart Federation Roadmaps. For example,

2014: *Secondary prevention*, hosted by Dr Salim Yusuf at the Population Health Research Institute at McMaster University and Hamilton Health Sciences in Hamilton, Canada.<sup>3</sup>