The Division of Cardiovascular Sciences The University of Manchester, UK

Tony Heagerty

Tony Heagerty, a former President of the ISH is Head of the Division of Cardiovascular Sciences situated in Manchester which is the largest Medical School in the United Kingdom graduating 500 students annually. His personal duties still include everyday clinical practice which is carried out in Manchester Royal Infirmary, the hospital adjacent to the laboratories where the Division's research is conducted. The clinical service was recognised as an ESH Hypertension Centre of Excellence when the scheme began in 2005 and has been renewed since.

The clinic acts as a tertiary referral centre for the North Western region and receives referrals from far and wide as well as patients from overseas and offers comprehensive workup for secondary hypertension as well as non-adherence testing which is increasing in popularity and academic interest as a result of the recent appointment of Professor Maciej Tomaszewski who is the current Secretary of the ISH. The Division itself comprises 36 principal investigators and currently has 79 postgraduate students reading for PhD or MD degrees. In addition, there are 18 MRes students and very vibrant Academic Clinical Fellowship and Academic Clinical Lectureship programmes for young clinicians interested in cardiovascular research. Also, the group has had a 4 Year PhD Scheme sponsored by the British Heart Foundation for the last 10 years offering 6 research positions annually. In the last full academic year, the group won 25 research awards worth a total of £4.6million. In the current year there have been awards already in excess of £2million and in the last 18 months the group has published 188 papers.

Not all of the activity is focused on hypertension per se and Tony Heagerty's group is interested in perivascular adipose tissue and its role in the pathogenesis of obesity related hypertension and diabetes. There is an internationally recognised Stroke group looking at minimising damage following cerebral haemorrhage and a large amount of activity devoted towards the mechanisms responsible for heart failure and the development of new therapies. There is also very vibrant research activity focusing on the distribution of sodium and potassium channels in conducting tissue of the heart and the genesis of atrial dysrhythmias. The success of the group has been augmented by the appointment of a new British Heart Foundation funded Professor (Bernard Keavney) with his interest in cardiac genetics and within 4 years this group has grown into a large and highly successful operation, and perhaps most interesting has been the recruitment of Holly Shiels as a fish biologist interested in cardiac dysrhythmias in salmon and trout (it was fascinating to find out that even a change of temperature in the water can provoke malignant dysrhythmias in fish!).

Continued overleaf

Figure 1

The Cardiogenetics Group is headed by Professor Bernard Keavney (top left) with Professor Maciej Tomaszewski (ISH Secretary) and David Talavera who is a Lecturer recently appointed. They have research grant income which they have raised of over 5million dollars in 3 years. Bernard Keavney's interests are in the genetics of congenital heart disease. Maciej is of course known for his hypertension genetics research and David Talavera is interested in analysing large datasets.

Tony Heagerty has always been involved in bringing on the careers of young and aspiring clinicians as well as academic scientists. The group has been keen to develop a career track for both non-clinical and clinical principal investigators and this has been rewarded with the appointments at senior academic level of a number of young clinicians who are now working in Manchester as well as Professors in Cardiac Physiology. The reputation of the whole Division is such that there are always visitors from all over the world and given that Manchester has the largest cluster of Chinese people in the United Kingdom, it is hardly surprising that very many graduate students come from mainland China to work with the principal investigators in Manchester, but in addition, the group reaches out all over the world and collaborates in North America, Canada, Australia, New Zealand and of course, in many countries in Europe.

Manchester itself is a highly vibrant city and annually is at the top of the list of preferred cities for young people to come and study. It boasts a road one mile long which is solely full of Indian restaurants as well as some of the finest Chinese eateries in the country and with three universities and over 40,000 students, term-time is extremely lively! The North West of England has the worst rates of heart disease and cancer in England and the Division is striving as hard as possible to put that right quickly!

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Figure 2

The Heart Failure Team is shown on this slide with contributions from Andy Trafford and Kat Dibb (top left), Vicky Liu and Joy Wang (centre and top right), Nick Ashton and Holly Shiels.

Figure 3

The giraffe which is a much loved creature related to the cow and hypertensive throughout life gives a department focus in cardiovascular research given the fact that all of its organs are exposed to extreme pressures throughout its life.

Figure 4

An original illustration from the classic work of Goetz and Keen (*Some Aspects of the Cardiovascular System in the Giraffe*. Goetz RH, Keen EN. *Angiology* 1957;8:542-64) showing a dissected giraffe heart with massive left ventricular hypertrophy which, of course, is important in keeping the giraffe alive but in humans is a sinister adverse cardiovascular risk factor. The research group looking at ways of reducing this comprises Elly Cartwright (top), Delvac Oceandy (centre) and Gina Galli (bottom).