

Our Legacy: School of Medicine 1711-2011

Professor Dermot Kelleher¹'s Speech at 2011 Alumni Awards

4 November 2011

The School of Medicine was founded in 1711, as a result of the generous bequest from the Widow Parsons, to build an anatomy building. On the 16th of August the inaugural Professors lectured in anatomy, botany, physics, chemistry and natural philosophy with a poem read by scholar Thompson. This poem disappeared for about a century but was in fact recovered from a solicitors' box and reprised in the poem which we commissioned from Iggy McGovern to celebrate the tercentenary.

In late August 24th 1711, the Professors met in a coffee shop opposite Christ Church Cathedral called Darby's Coffee Shop, just down the road from St Patrick's Cathedral, where Jonathan Swift was the famous Dean and discussed how to examine medical students. At that time, the Medical School included among its Professors, Professors of Chemistry and Professors of Botany, thus representing the foundation of these important disciplines within the College. Over the next three centuries, these disciplines have contributed enormously, not only in the academic world in teaching and in research, but also in the creation of a body of knowledge, which has had important implications for the world that we live in and a powerful resource within the City of Dublin.

It is instructive to look back on the early days of the Medical School in Dublin, when philanthropy was embedded in our culture, where hospitals were founded because of the will and wills of individual donors and their colleagues and friends, who combined to create the basis of the powerhouses of Medical Education and knowledge that we know today. It is instructive also to look back on the utilisation of the will of Sir Patrick Dun. Sir Patrick Dun was a graduate from Aberdeen, who was physician to the Duke of Ormond and to the Army in Ireland. He practiced an old style of Medicine that we would not recognise today. His prescriptions include for example the ingestion of 6 guinea fowl and large quantities of claret. However, he and his counterparts at the time as physicians encountered great danger in the management of disease within the Irish population and this level of danger continued well into the century, with conditions such as typhus and infectious disease endemic in the poorest parts of our community.

One of the prime conditions of Sir Patrick Dun's will was the appointment of three professors in medicine, surgery and midwifery and pharmacy and material medica. In addition on the instigation of Robert Perceval, the Professor of Chemistry, his bequest was used to fund a Teaching Hospital, in concert with the Royal College of Physicians

¹ Professor Dermot Kelleher was Head of the School of Medicine from 2006 to 2012.

of Ireland. Perceval in a ploy which is known to many grant writers of the modern age persuaded the college to equip a chemical laboratory on the basis that running costs would not be required....many heads of school have since used this approach!

However, in this bequest, the principles of enquiry and questioning, which we believe to be paramount in our educational system were born and given fruit with the development of a succession of Sir Patrick Dun Hospitals, one of which remains erect today on Grand Canal Street – a hospital in which I served my training period and my internship and where I first encountered our awardee Deirdre Kelly and indeed Prof Donald Weir . Perceval's foresight in creating a chemical laboratory helped to foster the discipline and created the seed from which modern chemistry has grown at TCD. It is instructive to look back on the principles that informed the process of Medical Education and Research at that time. These principles remain today and are part of our formal heritage and tradition within Trinity College in the Schools of Medicine, Botany and Chemistry. When we look at what we have given the world over the centuries, there is an extraordinary and formidable body of work.

Leared's discovery of the binaural stethoscope opened up a new world to cardiologists and respiratory physicians, including Gabriel Stokes, who together with William Graves co-authored some of the most important manuscripts of the 19th century in Medicine. Leared, unfortunately did not patent his stethoscope in the appropriate way and the rights to this discovery rest in the United States. However, the binaural stethoscope as the symbol of Medical Practice is frequently overlaid on the Seal of Hippocrates, as one of the defining elements within Medical Practice.

However, other discoveries in Cardiology and in Respiratory Medicine and the discovery of Graves Disease and the description thereof have made enormous contributions to Medicine in the world. In this respect, we must particularly mention one of our most extraordinary graduates, Denis Burkitt, who identified Burkitt's Lymphoma in Uganda, performed a controlled, clinical study of methotrexate, which was curative for the condition, provided the samples from which the Epstein-Barr Virus was identified transported by plane from Uganda on Friday nights and thus resulted in the first understanding of how viruses cause cancer in humans and in his own modest way identified the importance of fibre to digestive health. The right man in the right place, his impact on patient suffering in Africa was immense but equally his discovery paved the way for new insights on viruses and cancer (Nobel prize) drug trials of cytotoxic agents for childhood disease, chromosomal translocation and healthy eating.

Our Teaching Hospitals and our Medical School have contributed to the City of Dublin in myriad ways. The provision of Health Care through the ages was dependent on the philanthropic contributions which led to the creation of our Teaching Hospitals. At the time when I was a student, we had seven major TCD Teaching Hospitals within the City: Patrick Dun's, Baggot Street, Mercer's, Dr Steevens', Adelaide, Meath, St James's Hospital. All of these were founded based on voluntary contributed and existed to serve the people of the City. In health care terms, the contribution at an economic level, cannot be underestimated, but in terms of the standing of Dublin within the world, the

steady stream of high quality graduates, who have populated, first the British Colonies and then following our independence, United States Universities, Australian Universities and Teaching Hospitals and African and Developing World Hospitals really constitutes a value that cannot be estimated within our society.

It is telling that in this 21st Century, within the new Institute of Biomedical Sciences, that these disciplines come together again, joined at the hip, working hand in hand to develop new chemical entities for the treatment of human disease with an approach that has not been seen in this strategic way in this university for some time.

Botany started as a discipline within the Medical School, but has since expanded to involve far more than this. It is also telling that in this modern age that after centuries of divergence, that we now realise once again the huge importance of working together in areas such as Ecology, Global Warming and areas around food supply and the development of new ways of generating human medicines. In these respects, although we have singular and individual foci of work, our research must combine for maximal efficacy in Human Health as we move forward. One of the key elements of botany was the necessity of having a physic garden of which several were constructed at TCD most influenced by the Physic garden at Leiden at which several of the distinguished Professors had trained. We now thanks to Fraser Mitchell have a new physic garden at Trinity College and I would suggest that you visit. [If you look carefully at this physic garden you will see a plant called feverfew, a derivative of which is now under investigation as a drug for the modulation of innate immunity. Interestingly, Luke O'Neill's first paper ever was on the biological effects of feverfew.]

However as time progressed botany became less important in the study and practise of medicine but individuals such as John Foster, Lord Iveagh and the late David Webb and more recently Peter Wyse Jackson contributed substantially to the creation of the Botanical gardens and the Trinity Herbarium. Years ago when I was young and foolish I took the Orient Express and travelling in a crowded compartment I met an old Romanian Botanist who had produced a dictionary of Botany in 7 languages. He was bringing this to Paris to present the first copy to his hero, a Professor there but he said to me that the second copy would go to David Webb. We are now coming full circle in the world – plant derived medications such as artemisin used for the treatment of malaria are stimulating new interest in the old subject of material medica.

We are really living in exciting times and in particular with regard to chemistry. The School of Chemistry has gone from being part of the medical school to being an independent school a long time ago. The School has been characterised by powerful figures such as Frances Hutcheson who ran courses in chemistry for the public in the school in the 1760s – and we think that the public engagement with science is something we have invented.. He also went under the stage name of Francis Ireland – a name similar to another physician of the 20th century the artist Patrick Ireland as a songwriter and performer. More recently the nicotine patch emerged as one of the major discoveries from this school and as we speak scientists within the school are making

serious progress in developing new anti-cancer drugs, anti-depressant molecules and in generating new nanoparticles and molecular beacons, not only creating new knowledge in the shape of heavily cited papers but also helping to create new generations of drugs and therapies for human disease. Biochemistry, now known as Biochemistry and Immunology also spun out from chemistry thus creating a new powerhouse of ideas and knowledge in the biomedical sciences.

So, Ladies and Gentlemen, I would like to say to you that in this Tercentenary Year, we should work together, as a University, within the Disciplines of Medicine, Botany and Chemistry and also Biochemistry & Immunology, Pharmacy and bioengineering to re-generate our contribution to Medicine to Human Health at a global level. The values of our endeavours over the last three centuries have had significant impact not only in terms of the discoveries made, the fabric of our hospital systems but also in terms of the prestige of this nation on an international stage. At this moment in time we are all excited by the level of discovery research taking place in our system and despite the straitened times, we see a new vista which has opened in front of us facilitated by the Biomedical Sciences Institute where our light now shines on the global stage in biomedical sciences.

The creation of new knowledge at this moment in time is a challenging venture, but the strategic approach taken by our Schools, collectively and individually, means that we are in a stronger position than we have been for many, many years to make a defined, powerful and cogent contribution to the world of science, to the economy and to the health of our nation. Dublin is next year's City of Science and it is fitting that in this year, we welcome the world to our doorstep to see what we have to offer. Part of what we offer is a legacy of what transpired 300 years ago, with the creation of these three powerful disciplines and we must continue to work together to demonstrate our strength and value to the future development of this City and this Country.