

## Paul Terasaki - 10 September 1929 to 25 January 2016

### *A personal reflection:*



It is one of the highest honours for an individual to have an everyday item named after them - “hoover, biro, bunsen burner” - with convention dictating that their name is not capitalised. Paul Terasaki invented the terasaki tray used every day in hundreds of H&I laboratories across the world. Paul was an innovator of technical developments in H&I, their application to clinical transplantation and a world leader in data collection and its analysis to inform clinical best practise.

Paul was the leading technical innovator for the identification, classification and subsequent application of HLA proteins and genes to clinical transplantation.

Terasaki Labs bristled with machinery, highly skilled and motivated technical staff and scientists all working to increase throughput and quality of HLA testing - at the University of California at Los Angeles - at his company, One Lambda, and at his Foundation. Most developments progressing from serological analysis of HLA proteins through to next generation sequencing of HLA genes were led or improved by Terasaki.

The UK contributed to Paul’s career when he spent time in London for a period of research in Sir Peter Medawar’s laboratory, for which Paul was always grateful as stated in his chapter in his “must read” anthology “A History of HLA”, which is accompanied by his other major compilation “A History of Transplantation”. Paul also innovated the world-wide review of developments and activity in transplantation in “Clinical Transplants” published annually.

Collaboration was always a priority for Paul. He took a major role in every International Histocompatibility Workshop and actively encouraged others to contribute and not limit their own developments to publication in journals. The 1980 IHW hosted by Paul in Los Angeles was, arguably, the most innovative and progressive IHW firmly placing HLA protein testing at the centre of effective clinical transplantation by establishing, amongst other developments, the minimisation of HLA-DR protein mismatching between a recipient and their donor as a necessary prerequisite. Leading up to the 1980 IHW, Paul successfully established a world-wide transplant centre database of kidney transplants and reported through the Pre-IHW Newsletters on relevant analyses led by his close colleague Gerhard Opelz. In addition, these helpful Newsletters fed back technical developments established by IHW participating labs. Many will know that Opelz moved to Heidelberg, Germany, to build

on his experience from LA and the IHW to establish the clinically unique Collaborative Transplant Study ([www.ctstransplant.org](http://www.ctstransplant.org)).

In 1982, Paul was elected as President of the Transplantation Society - an honour for a scientist in a field dominated by clinicians. At his inaugural address at the Brighton, UK, Conference Centre he called for further international collaboration including exchange of kidneys across national boundaries to create effective transplant options for immunologically challenging recipients. Although prolonged cold storage times might result, Paul had already supported the development of Collins preservation fluid to minimise the impact of storage of kidneys at 4 °C.

When travelling to the 1984 IHW in Munich, a group of UK H&I scientists gathered in a Heathrow departure lounge and whilst conversing about the upcoming conference, Paul and his wife struggled into the room. We whispered "it's HIM". I saw all was not well and decided to approach Paul offering any help and explaining that whilst he would not know us, we all knew him. This was the start of a friendship between us which Paul always made the effort to maintain despite his elevated status in the transplant community. It transpired that his wife had not travelled well from California but thankfully soon recovered on her arrival in Munich. I helped with bags and taxis in Munich but on the first day of the IHW I was taken aback when Paul looked me up in the crowded meeting room to thank me. We met and chatted at subsequent conferences and Paul was always keen to have my thoughts on where clinical transplantation might be heading next. I shared with him the exciting work on post-transplantation sensitisation to donor mismatched HLA proteins which Sue Martin and Judith Worthington pioneered in the Manchester laboratory. This observation, which followed some earlier indicative publications, was subsequently confirmed by many others and inspired Terasaki through his laboratory at UCLA and then at his company, One Lambda, to develop highly specific and rapid tests to detect HLA reactive antibodies in patient serum.

A further important collaborative innovation which Paul pioneered was training workshops often supported financially by his company. These meetings spread across the globe and remain an important aspect for sharing developments in the field. VHBio, as the UK distributor for One Lambda, has provided much appreciated support for BSHI in several aspects, including access to training, often under-appreciated by the NHS where funds for training are scarce.

Paul never retired. After moving on from One Lambda, left in the competent hands of his colleagues (Ayoub, Han, El-Awar, Ordonez and others) who provided much technical and organisational support at the memorable 1980 IHW, he established a Foundation and private laboratory which continued to contribute innovative research findings reported in leading peer review journals and to make significant technical developments. Paul travelled world-wide to deliver important and interesting lectures, often invited as a key-note speaker. He always had something new to say. Paul's Foundation donated very substantial monies to UCLA for a building in the Department of Surgery and endowed a clinical chair there too, again illustrating Paul's generosity.

Paul was gentle, approachable and generous despite his elevated status amongst those of us working in H&I. Several of us from the UK H&I community have fond memories of Paul and all have interesting recollections to share. As you can see in the accompanying photograph when Prof Derek Middleton, myself and Paul attended a One Lambda Workshop in Cape Town, South Africa an important feature was time to relax and chat which was always

something Paul was keen to foster knowing that informal conversations are often the most productive.

Of greatest importance was Paul's innovation in many areas directly impacting on clinical transplantation. There are many 'heroes' in this field and the surgical giants of Murray, Hamburger, Starzl, Barnard, Morris and Calne are those associated with the life-saving procedures but we who work in H&I laboratories know there are many others deserving of accolades at the highest level -Paul is one of them. It was an honour and a pleasure for many of us in the UK H&I community to meet Paul, to collaborate with him and to spend time with him. Many transplants recipients alive today will never have heard the name "Terasaki" but every single one owe Paul a big "thanks" and there can be no bigger tribute.

**Professor Phil Dyer OBE, PhD, FRCPath**

BSHI Founding Chairperson 1990-1993

British Transplantation Society President 2002-2005

H&I Clinical Scientist in Birmingham (1977-78), Manchester (1979-2008) Edinburgh (2008-2012)

*for a formal obituary visit [www.terasaki.org](http://www.terasaki.org).*