

A Tribute to Professor Larry Hench

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Larry Hench is a giant in the biomaterials world. He was the first researcher to introduce the concept of a bioactive implant for tissue regeneration. It has been my privilege to

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be a friend and colleague of Larry since his seminal discovery of bioactive glass in the 1960s. My esteem for him is shared by leading biomaterials researchers internationally, as demonstrated by the distinguished delegate list to his celebratory Symposium at Imperial College. Highlights from this Symposium are brought together in this issue of *Journal of Materials Science: Materials in Medicine*, as a testament to his singular input to the subject.

Larry Hench was born in rural Ohio in 1938, and progressed to Ohio State University, where he completed his Bachelor's Degree in ceramic engineering. After a subsequent PhD studying the mechanisms of high temperature grain boundary diffusion, Larry moved to the University of Florida where he was to stay for the next thirty years. When Larry went to the University of Florida in the 1960s, biomaterials was still in its infancy. The notable achievement of 1961 had been the introduction of the Charnley hip replacement prosthesis, which empowered replacement surgery for an enlarged patient population, but was still based on the concept of using bio-inert materials. Hence Larry's innovation of bioactive glasses, which were not predicted from the biological template, was, at the time, truly outstanding and created new opportunities for medical devices. His work spawned a myriad of research over succeeding years until the present time to develop this concept, with associated distinctive clinical outcomes. Details are to be found in the papers in this volume.

The other remarkable feature of Larry's work was the introduction of biological-property assessment as a key measure of implant performance. In this work, he was greatly aided by his wife and lifetime collaborator, Dr June Wilson-Hench. As a result, Larry was able to investigate the relationship between structure, mechanical properties and biological performance, a methodology, which would become the model for laboratories around the world to follow. It is

memorable that June was able to share the celebration of Larry's Symposium, but sadly, since then, she has passed away, and is sadly missed.

After taking early retirement from Florida, Larry moved to Imperial College, where he established a second laboratory of note and, in particular, began to explore the fundamental gene mechanisms responsible for enhanced biological activity. This work continues, and again provides a testament to Larry's special insight.

Larry has always been a strong family man, and his wish to inspire the younger generation into science led to the notable Boing-Boing series of books, in which the fundamentals of materials science are eloquently illustrated to the younger generation through a bionic cat.

Hence, this particular Issue is very special as a record of the empowerment of biomaterials by the vision of Professor Larry Hench, and I am particularly pleased to have the opportunity to pay my personal tribute.