

Henry W. Oviatt, Ph.D.
Professional Biography/Cover Letter
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I am a professional chemist with experience in organic and polymer synthesis, physical characterization of small molecules, polymers, hybrid inorganic-organic materials, and materials for application to device development. I have over twenty-five years corporate work experience in chemistry in the biomedical device field, biomaterials research, and applied polymer research, as well as five years experience in my graduate program in analytical and materials chemistry.

I was most recently the Western Regional manager of sales for Brookhaven Instruments Corporation. Brookhaven Instruments manufactures equipment for particle sizing, zeta potential, and molecular weight analysis. In this role I have had the opportunity to prospect, close sales, do installations and training of new and existing customers, as well as provide technical support to the customers in my territory.

Prior to Brookhaven Instruments I held the position of Distinguished Engineer at Edwards Lifesciences in Irvine, CA, focusing on critical care monitoring devices and specifically the in-house development of novel technology for a continuous glucose monitoring system. Great progress was made with over 20 patent disclosures and at least 4 patent applications for developments in the program, including unique selective membrane technology for glucose sensors. The partnering of Edwards Lifesciences with Dexcom dramatically changed the project direction after the first two years and I chose not to stay with the company.

At Southwest Research Institute I led and managed projects in the development of new dental impression resin compositions, research on anti-calcification of tissue heart valves, molecular imprinting, wound care, infant delivery devices, and other healthcare related projects. While at SWRI I had submitted a proposal to NIH for the development of blood pool imaging agents in conjunction with the University of Texas San Antonio Health Science Center (UTSA-HSC) department of radiology that we subsequently won. SWRI chose not to have this project performed at their institution, and I subsequently moved to UCI where I successfully completed the project with UTSA Radiology.

At Alcon Laboratories I was a Principal Scientist in the Process Development group, implementing research results into manufacturing processes for medical devices and pharmaceuticals in a global sales environment. I was instrumental in managing the technology transfer team of the Perfluoron (Reg.) intravitreal tamponade perfluorocarbon product (used for retinal reattachment surgery) to the Fort Worth facility from the UK. I led the technical team implementing product manufacturing and packaging changes to achieve a sterile exterior to this product, as well as managing the associated regulatory approvals (PMA supplements) for the US, Europe, and Japan. I was a key contributor in resolving technical hurdles to the silicone oil intravitreal tamponade product leading to FDA approval, received in February of 2001. My expertise in carbohydrate polymers was also significant in achieving the CellugelTM viscoelastic product approval in 1999, contributing to the CMC sections and making production plant visits to Puurs, Belgium. Additional technical contributions were made on the shelf life and stability of viscoelastic products based hyaluronic acid used in ocular surgery, especially for our Japan submissions.

I spent one year on staff with CSIRO Molecular Science in Australia where I utilized plasma polymerization, wet chemical, and surface analytical methods to modify and characterize short and long term blood contacting interactions with synthetic materials, including antibody immobilization. I developed methods of making porous materials from a highly blood compatible polyurethane developed in-house for use in blood contact applications. This was the ElasteonTM Polyurethane spun off from CSIRO and subsequently purchased by Aortech, UK.

I went to work for Chiron Vision (now Bausch & Lomb) right after graduate school where I developed protocols, test methods, and raw material specifications for the Gancyclovir controlled release drug delivery device in support of the VitrasertTM product for treatment of cytomegalovirus-induced vitreoretinopathy. For the New Drug Application required by FDA, and throughout product launch for this product, I evaluated test methods used in various product applications and provided technical support for manufacturing and QA departments, including troubleshooting of existing processes and analytical methods. I was key in the successful launch of the PassportTM silicone lens delivery device, resolving adhesion issues between the silicone lens and the insertion device, and was a joint author on two patents. I also developed improved processes for silicone intraocular lens (IOL) formulation, developed and implemented standardized test methods for determining the lubricity of IOL delivery cartridge surfaces, and developed new HPLC methods for determining unbound UV chromophore in silicone IOLs. I further resolved a longstanding issue of dissolution time for the Corneal Shield product by implementing a process change resulting in excellent product consistency that greatly increased the product yield. I additionally found made successful site visits to qualify a new vendor for our proprietary UV absorber for our silicone lenses when our previous vendor could no longer supply it, as well as resolving materials issues due to catalyst stability in our manufacturing processes.

My graduate work in chemistry encompassed many separate projects. One involved synthesizing multi-functional organosilicon monomers used to form highly porous materials by sol gel methods, as well as investigating the conditions for hydrolysis and condensation in sol-gels from these precursors, and the effects of catalyst on porosity and the degree of condensation of novel bifunctional trialkoxysilane monomers. We used H^1 and C^{13} solution as well as solid state C^{13} and Si^{29} NMR, and porosimetry methods to characterize these materials. As a second component of this project I synthesized novel multifunctional organosilicon monomers containing chromophores with known nonlinear optical susceptibility and developed methods for forming thin films for second order nonlinear optical properties, leading to a publication with the non-linear optics team at USC. Another component of my graduate program involved the discovery and enhancement of highly pseudoplastic viscoelastic materials from semi-dilute *Xanthan* solutions induced by thermal treatment of such solutions. My peer reviewed publications and patents are cited in over 70 other patents and publications.

Prior to attending graduate school I was employed by American Hospital Supply/Baxter Healthcare in the Corporate Technology Center in Irvine, provided technical support for operating divisions as well as contributing to in-house development projects, including surface grafting projects and the development of unique silicone materials containing oxygen sensitive fluorophores for use in oxygen and glucose sensors, working with hydrogel for contact lenses, and various other research projects.

Please visit my LinkedIn page to see recommendations and referrals from previous coworkers and current clients.

PROFESSIONAL CHRONOLOGY: Western Region Sales Manager, Brookhaven Instruments Corp. (current), Associate Professor, Saddleback College, Consultant (US Polymer Solutions), Distinguished Engineer, Edwards Lifesciences, 2007 to 8/2009; UC Irvine Department of Chemistry, 2006- 2007, Principal Scientist, Southwest Research Institute, March 2001 to Jan. 2005; Principal Scientist, Alcon Laboratories, May 1998 to March 2001; Research Chemist, CSIRO Molecular Science, March 1997 to April, 1998; Scientific consultant & contract research, Radical Designs, August 1996 to March 1997; Staff Scientist, Chiron Vision, August 1995 to August 1996; Scientist, Chiron Vision, March 1994 to August 1995; Staff Scientist, Biomaterials Technology, 1982 to 1988, Baxter Healthcare/American Hospital Supply Corp.

Education: Ph.D. (Chemistry, Polymers and Materials) and B.S. degrees (Chemistry) from UC Irvine.