



## Peter G. Schultz

The Scripps Research Institute  
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Peter G. Schultz graduated summa cum laude from Caltech in 1979 and continued there for his doctoral degree (in 1984). He then spent a postdoctoral year at the Massachusetts Institute of Technology before moving to the University of California, Berkeley, and the Howard Hughes Medical Institute. He is currently President and the Scripps Professor of Chemistry at the Scripps Research Institute. Schultz has made a number of major contributions to science including the discovery of catalytic antibodies, methodology that for the first time expands the genetic codes of living organisms, and the development and application of combinatorial methods in chemistry and biology including the first generation of combinatorial materials libraries. Schultz has received numerous awards including the Alan T. Waterman Award, NSF (1988), the Wolf Prize in Chemistry (1994), the Paul Ehrlich Prize (2002), the Cope Award (2006), the Solvay Prize (2013) and Wieland Prize (2016). Professor Schultz is a member of the National Academy of Sciences, USA (1993) and the Institute of Medicine of the National Academy of Sciences (1998). He is active on many editorial and scientific advisory boards and co-founder of Affymax, Symyx Technologies, Syrrx, Kalypsys, Phenomix, Ambrx, Ilypsa, Wildcat Technologies and Ardelyx.

### **Abstract: Playing with the Molecules of Life**

Our research program combines the tools and principles of chemistry with the molecules and processes of living cells to synthesize new molecules and molecular assemblies with novel physical, chemical and biological functions. By studying the structure and function of the resulting molecules, new insights can be gained into the mechanisms of complex biological and chemical systems. Examples of this synergistic chemical/biological approach to synthesis will be discussed including the addition of amino acids with novel biological, chemical and physical properties to the genetic codes of prokaryotic and eukaryotic organisms, and the identification of small molecules that control stem cell self-renewal and directed differentiation, as well as reprogramming of somatic cells.