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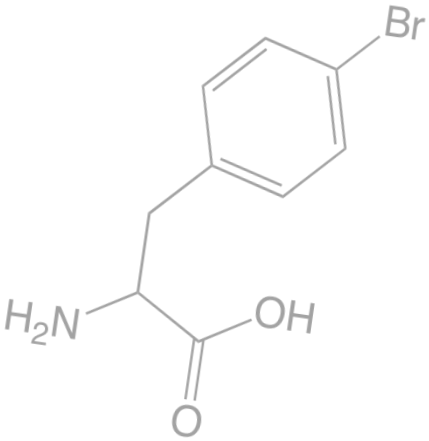
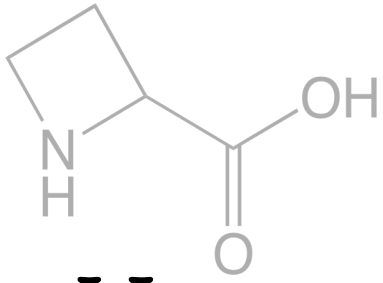
Chemistry & Biochemistry



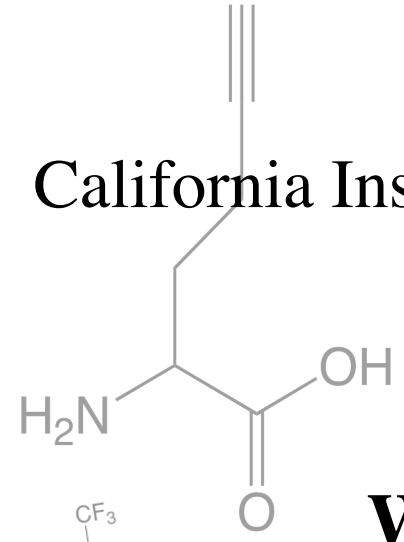


Hirschmann Lecture

Proteins that Nature Never Made

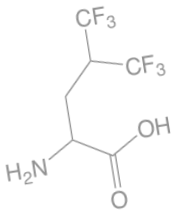
Macromolecular chemistry has traditionally been divided into two fields, with biochemists and biochemical engineers working on proteins and nucleic acids while polymer chemists and materials scientists have concerned themselves with synthetic polymers. These two classes of macromolecules are profoundly different from one another; proteins and nucleic acids are uniform, well folded, and evolvable, whereas polymers are heterogeneous and for the most part adopt random-coil conformations. These differences in molecular structure and behavior have led to striking differences in the ways in which natural and synthetic polymers are used – largely for information storage and transfer in biology, and largely as materials in the technological world. This lecture will describe an ongoing attempt to bridge the gap between polymers and proteins by using artificial genes to direct the synthesis of artificial proteins in bacterial cells, and to combine the physical and informational properties of macromolecules.

A General Audience Lecture from



David Tirrell

California Institute of Technology



Tuesday 4/15/08
8 pm
West Lecture Hall

Dr. Tirrell will also be speaking at 4:45 pm Tuesday 4/15 in A255