

INTRODUCTION

This special issue is dedicated to Tom Bruice on the occasion of his 75th birthday (August 25, 2000). Many of the articles within are derived from lectures given in his honor in Santa Barbara recently at a day-long symposium.

Tom is one of the gigantic figures in mechanistic bioorganic chemistry and a longstanding member of the editorial board of *Bioorganic Chemistry*. The breadth of his work includes so much of what most of us who are interested in the functioning of biological systems simply take for granted. The very first discovery that esters and amides could be cleaved by nitrogenous bases such as imidazole, which just happened to be within the active site of chymotrypsin, was revolutionary. The realization that the tight juxtapositioning of the active site histidine and serine in chymotrypsin to the substrate's carbonyl is responsible for a great deal of the rate acceleration of the enzyme was a fresh concept. Other investigations by him are equally part of our scientific legacy: the cofactors pyridoxal, nicotinamide, biotin, and flavin all have had their mechanism of action sketched in sharp detail in his work as well as in small molecular models that mimic the active site chemistry of lysozyme, serine esterases, oxidases, etc. What hasn't he touched and then clarified or explained?

Tom is an extraordinary scientist. His productivity (he is the author of ca. 500 papers) and creativity are legendary; his curiosity and intense interest in science continue unabated. This short volume is a small tribute from your friends and students in appreciation for your achievements and in gratitude for how much you have helped and guided our careers. Long may yours continue.

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