

Chemical Reviews

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Frontiers in Biological Chemistry: Introduction

Some of the most important advances in science during the last few decades have been in the general area of "biological chemistry". Yet, over the same period, articles in this field have been underrepresented in *Chemical Reviews*. The primary purpose of this special issue is to highlight important recent research advances in biological chemistry. However, a secondary purpose is to call attention to the fact that *Chemical Reviews* welcomes contributions in this area, and will attempt to better serve this segment of the chemical community in the future.

The articles in this issue dramatically illustrate the partnership of "biological chemistry" with other branches of chemistry. Several reviews feature research that interfaces with inorganic chemistry (Köpf-Maier and Maier; Lauffer; Lippard and Sherman; Elder and Eidsness; Stubbe and Kozarich; Dawson and Sono). This is not a coincidence; several of the participants in a recent ACS meeting symposium on "Metals in Medicine" elected to use *Chemical Reviews* as a follow-up forum for their proceedings. We encourage similar future suggestions from groups of symposium participants.

Another group of articles (Croteau; Gupta; Quinn; Kluger; Gerlt; Dawson and Sono) deal with diverse aspects of enzyme mechanisms. Specific topics include biosynthesis, catabolism, QSAR relationships in enzyme inhibition, mechanisms of acetylcholinesterase and thiamin diphosphate dependent decarboxylations, and site-directed mutagenesis as a mechanistic probe. Structural issues are dealt with at membrane and protein-nucleic acid levels (Fendler; Ollis). Other articles feature bacterial chemotaxis (Dahlquist and Stewart), molecular interactions with DNA (Stubbe and Kozarich; Lippard and Sherman), and stereoelectronic effects in biomolecules (Gorenstein).

In summary, we feel that the 15 articles in this issue give an excellent picture of the breadth of exciting research in biological chemistry, and we hope they will stimulate the interest of readers in all branches of chemistry.

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