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Biochemical Pharmacology 64 (2002) 753

Biochemical Pharmacology

Editorial

Cell signaling, transcription and translation as therapeutic targets

As the sequencing of the human genome comes close to completion, thousands of novel genes coding for hundreds of regulatory proteins, transcription factors or elements of the signal transduction cascades are about to be discovered. Mutations within the genes encoding those factors are certainly responsible of or contribute to the development of genetic diseases. Moreover, controlling the expression of those proteins could provide a better understanding of the mechanisms of gene regulation. For the molecular pharmacologist, the better knowledge of (i) the molecular biology of those regulatory factors and (ii) the interactions with other related proteins might allow the identification of molecular targets suitable for the treatment of incurable diseases like cancer, diabetes or ischemic heart diseases. The elucidation of those pathologies represents a considerable step toward a complete understanding of molecular pathologies.

The aim of our meeting was to draw a picture including the most important molecular elements of information transfer occurring within or between cells linking external signals to internal responses. This topic is tremendously vast so that choices had to be done. For the molecular pharmacologists, novel targets could be described and novel drugs were presented. An attempt had been made to present a discussion of the major classes of proteins that participate at particular clinical phenotypes specifically involved in the field of apoptosis.

Finally, this volume should provide an introduction to the various key components of signal transduction, transcription and translation and illuminates their role in physiological processes and under pathological conditions.

This field is moving daily, so that from January 29th–February 1st 2003, we will ask fundamental and clinical researchers to gather again in Luxembourg for a fourth meeting to discuss the evolution of the depicted therapeutic applications specifically in the field of apoptosis: **Apoptosis 2003, From signaling pathways to therapeutic tools**. We are confident that this meeting will then allow new insights and complete our view of pathophysiology at the molecular level.

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PII: S0006-2952(02)01178-4