

Progress in Experimental Tumor Research

Editor: J.R. Bertino

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35 Animal Models of Cancer Predisposition Syndromes

Editors: H. Hiai, Kyoto; O. Hino, Tokyo  
VIII + 176 p., 29 fig., 3 in color, 21 tab., hard cover, 1999. ISBN 3-8055-6719-7

36 Marrow Protection

Transduction of Hematopoietic Cells with Drug Resistance Genes

Editor: J.R. Bertino, New York, N.Y.  
VIII + 184 p., 36 fig., 21 tab., hard cover, 1999. ISBN 3-8055-6828-2

37 COX-2

A New Target for Cancer Prevention and Treatment

Editors: A.J. Dannenberg, New York, N.Y.; R.N. DuBois, Nashville, Tenn.  
VIII + 292 p., 32 fig., 6 in color, 20 tab., hard cover, 2003. ISBN 3-8055-7536-X

38 Transglutaminases

Family of Enzymes with Diverse Functions

Editors: K. Mehta, Houston, Tex.; R. Eckert, Cleveland, Ohio  
X + ■ p., 39 fig., 6 in color, 16 tab., hard cover, 2005. ISBN 3-8055-7901-2

Transglutaminases are a family of structurally and functionally related enzymes that are widely distributed and have been identified in a variety of organisms ranging from bacteria to mammals and plants. The reactions (isopeptide bonds) catalyzed by these enzymes are of great physiologic significance; they are highly stable and resistant to proteolytic degradation. Isopeptide bonds are commonly found in hair and skin, and they accumulate during wound healing, apoptosis, and blood clotting. Dysregulation of transglutaminase functions results in a number of pathologic conditions, such as neurodegeneration, autoimmune diseases, infectious diseases, progressive tissue fibrosis and diseases related to the assembly of the stratum corneum of the epidermis of the skin. The ability of transglutaminases to catalyze highly stable isopeptide bonds is also being exploited by the food processing and textile industries. Moreover, there has been a recent surge in findings indicating that transglutaminases are involved in various biological processes such as normal and neoplastic cell growth, reproduction, and cell death.

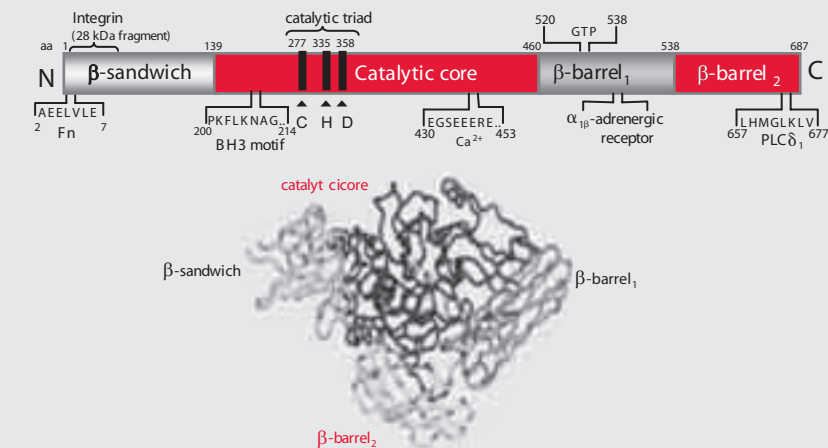
As newer members of the transglutaminase family are being discovered and new functions for existing members are being described, it becomes imperative to collect all the findings in a book. This volume provides the most comprehensive single source of information and will appeal to both new investigators just entering the field and established researchers aiming to elucidate the biological relevance of these enzymes in cancer, inflammation, autoimmune diseases and related areas of research.

Cover illustration: Functional domains and three-dimensional structure of human TG2 protein.  
For details see Mehta K., this volume p.1.

# Transglutaminases Family of Enzymes with Diverse Functions

Editors

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