

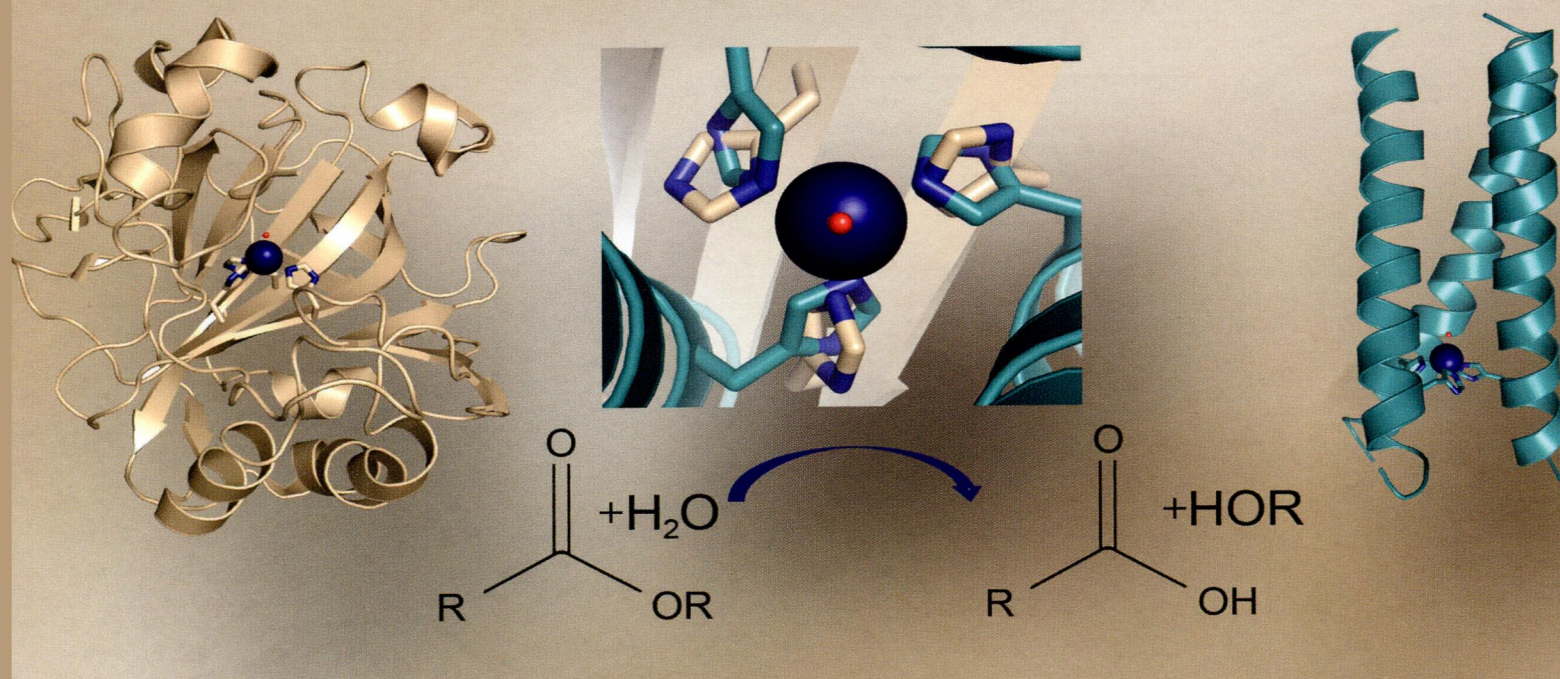
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ON THE COVER: Using de novo and redesign approaches toward the preparation of structural and functional models of hydrolytic zinc metalloenzymes. [Zastrow, M. L., and Pecoraro, V. L. (2014) *Biochemistry* 53, 957–978]

Perspectives

2749

[dx.doi.org/10.1021/bi500417m](https://doi.org/10.1021/bi500417m)

How DNA Polymerases Catalyze DNA Replication, Repair, and Mutation

Ming-Daw Tsai*

DNA Replication
Pol Repair
 Mutation

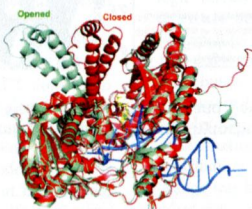
Current Topics

2752

[dx.doi.org/10.1021/bi4014215](https://doi.org/10.1021/bi4014215)

RB69 DNA Polymerase Structure, Kinetics, and Fidelity

Shuangluo Xia and William H. Konigsberg*

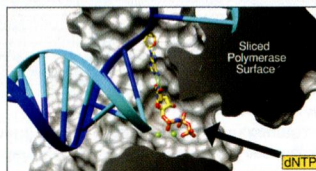


2768

[dx.doi.org/10.1021/bi500139h](https://doi.org/10.1021/bi500139h)

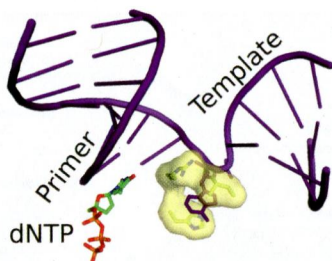
Structure and Mechanism of DNA Polymerase β

William A. Beard and Samuel H. Wilson*

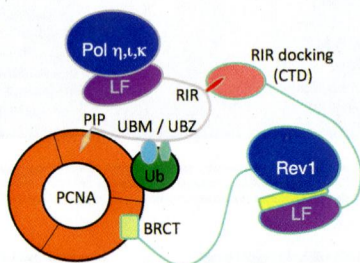


Structure–Function Studies of DNA Polymerase λ

Katarzyna Bebenek,* Lars C. Pedersen, and Thomas A. Kunkel

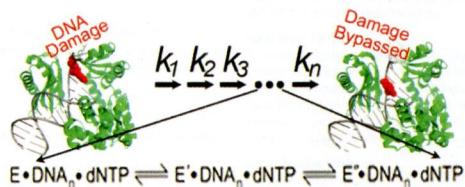
An Overview of Y-Family DNA Polymerases and a Case Study of Human DNA Polymerase η

Wei Yang*



Recent Insight into the Kinetic Mechanisms and Conformational Dynamics of Y-Family DNA Polymerases

Brian A. Maxwell and Zucchi Suo*



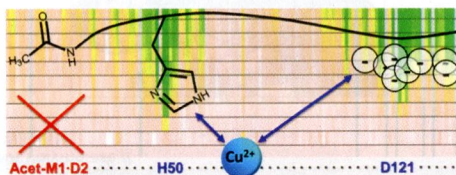
Rapid Reports

2815 **S**

dx.doi.org/10.1021/bi5003025

A Revised Picture of the Cu(II)- α -Synuclein Complex: The Role of N-Terminal Acetylation

Gina M. Moriarty, Conceição A. S. A. Minetti, David P. Remeta, and Jean Baum*



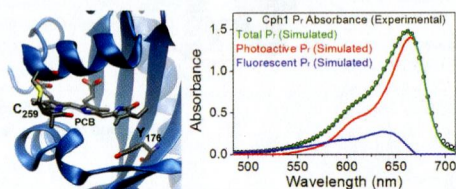
Accelerated Publications

2818 **S**

dx.doi.org/10.1021/bi500108s

Dynamic Inhomogeneity in the Photodynamics of Cyanobacterial Phytochrome Cph1

Peter W. Kim, Nathan C. Rockwell, Shelley S. Martin, J. Clark Lagarias, and Delmar S. Larsen*



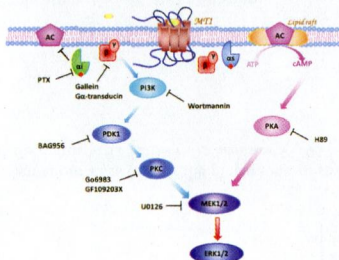
Articles

2827 **S**

dx.doi.org/10.1021/bi500092e

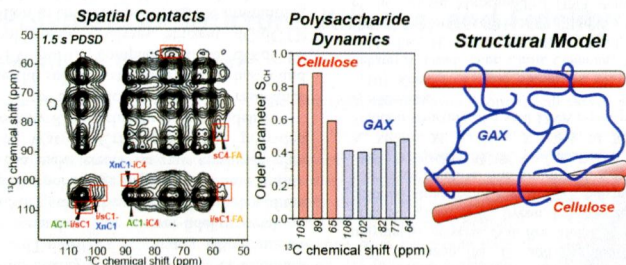
Melatonin Receptor Type 1 Signals to Extracellular Signal-Regulated Kinase 1 and 2 via G_i and G_s Dually Coupled Pathways in HEK-293 Cells

Linjie Chen, Xiaobai He, Yaping Zhang, Xiaopan Chen, Xiangru Lai, Jiajie Shao, Ying Shi, and Naiming Zhou*



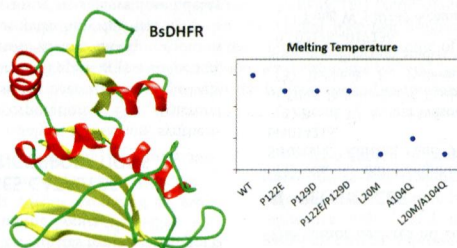
Structure and Dynamics of *Brachypodium* Primary Cell Wall Polysaccharides from Two-Dimensional ^{13}C Solid-State Nuclear Magnetic Resonance Spectroscopy

Tuo Wang, Andre Salazar, Olga A. Zabolina, and Mei Hong*



Thermal Adaptation of Dihydrofolate Reductase from the Moderate Thermophile *Geobacillus stearothermophilus*

Jiannan Guo, Louis Y. P. Luk, E. Joel Loveridge, and Rudolf K. Allemann*



Retractions

Retraction of Cooperation between Subunits Is Essential for High-Affinity Binding of *N*-Acetyl-D-hexosamines to Dimeric Soluble and Dimeric Cellular Forms of Human CD69

Daniel Kavan,* Monika Kubičková, Jan Bílý, Ondřej Vaněk, Kateřina Hofbauerová, Hynek Mrázek, Daniel Rozbeský, Pavla Bojarová, Vladimír Křen, Lukáš Židek, Vladimír Sklenář, and Karel Bezouška