

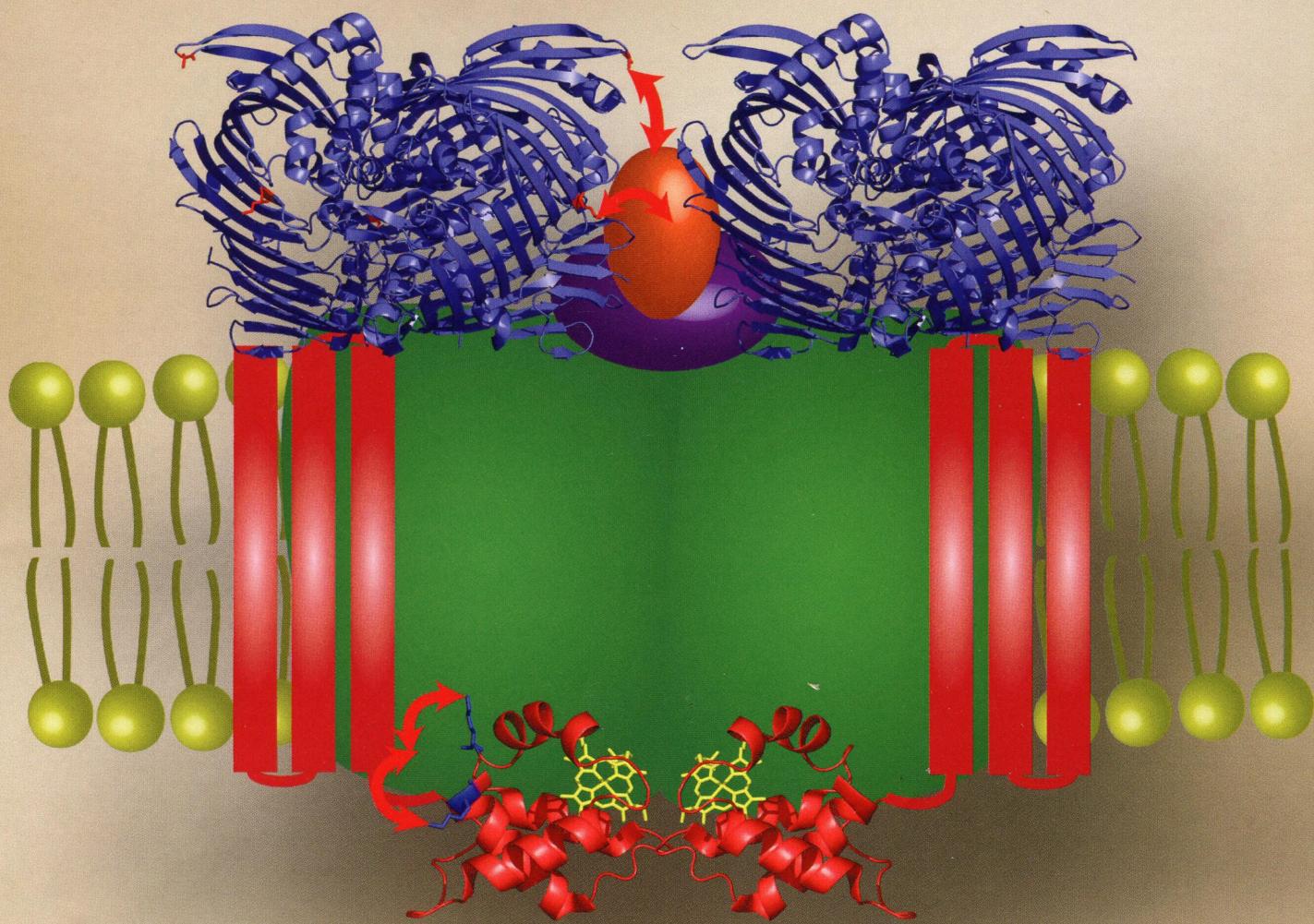
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DECEMBER 30, 2014 • VOLUME 53 NUMBER 51

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BIOCHEMISTRY

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DECEMBER 30, 2014

VOLUME 53 ISSUE 51

BIOCHAW 53(51) 8001–8084 (2014)

ISSN 0006-2960

Registered in the U.S. Patent and Trademark Office

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ON THE COVER: The photosynthetic apparatus of the anoxygenic photosynthetic green sulfur bacterium *Chlorobaculum tepidum* includes the reaction center core (RCC) complex and the FMO antenna protein. The RCC complex is an FeS-type (type I) reaction center, which is composed of a homodimeric core structure formed by two PscA proteins, PscB Fe-S protein, a cytochrome c_{SS1} (PscC) protein, and a PscD protein. A structural model of the FMO/RCC complex is proposed on the basis of chemical cross-linking results.

Rapid Reports

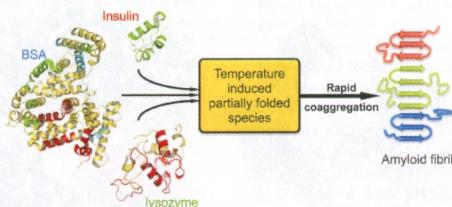
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DOI: 10.1021/bi501333q

Evidence of Rapid Coaggregation of Globular Proteins during Amyloid Formation

Kriti Dubey, Bibin G. Anand, Mayur K. Temgire, and Karunakar Kar*



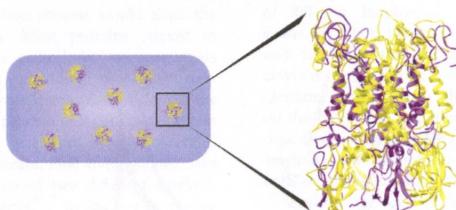
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DOI: 10.1021/bi501118c

Heteromultimerization of Prokaryotic Bacterial Cyclic Nucleotide-Gated (bCNG) Ion Channels, Members of the Mechanosensitive Channel of Small Conductance (MscS) Superfamily

Hannah R. Malcolm, Yoon-Young Heo, Donald E. Elmore, and Joshua A. Maurer*



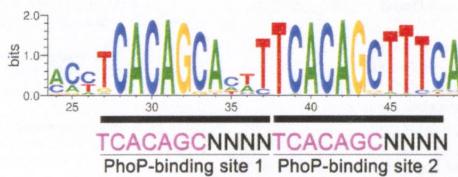
Articles

8008

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DOI: 10.1021/bi501019u

DNA Consensus Sequence Motif for Binding Response Regulator PhoP, a Virulence Regulator of *Mycobacterium tuberculosis*
Xiaoyuan He and Shuishu Wang*



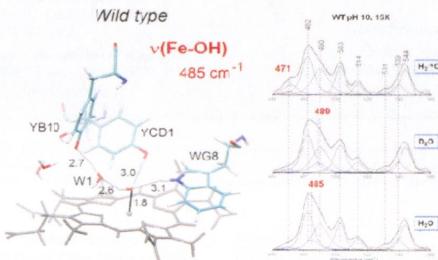
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DOI: 10.1021/bi501132a

Interplay of the H-Bond Donor–Acceptor Role of the Distal Residues in Hydroxyl Ligand Stabilization of *Thermobifida fusca* Truncated Hemoglobin

Francesco P. Nicoletti, Juan P. Bustamante, Enrica Droghetti, Barry D. Howes, Maria Fittipaldi, Alessandra Bonamore, Paola Baiocco, Alessandro Feis, Alberto Boffi, Dario A. Estrin, and Giulietta Smulevich*

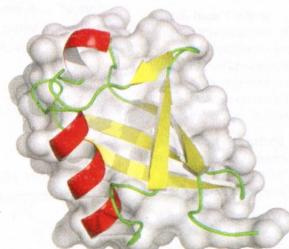


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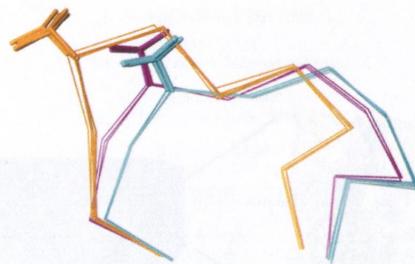
DOI: 10.1021/bi5006317

Characterizing Substrate Selectivity of Ubiquitin C-Terminal Hydrolase-L3 Using Engineered α -Linked Ubiquitin Substrates
Mario F. Navarro, Lisa Carmody, Octavio Romo-Fewell, Melissa E. Lokengard, and John J. Love*



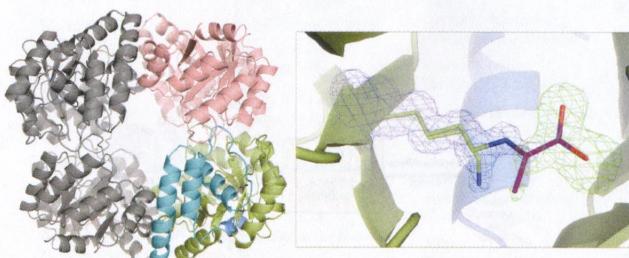
Hysteresis in Human UDP-Glucose Dehydrogenase Is Due to a Restrained Hexameric Structure That Favors Feedback Inhibition

Renuka Kadirvelraj, Gregory S. Custer, Nicholas D. Keul, Nicholas C. Bennett, Andrew M. Sidlo, Richard M. Walsh Jr., and Zachary A. Wood*



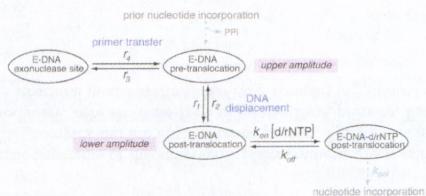
Structure and Function of a Decarboxylating *Agrobacterium tumefaciens* Keto-deoxy- β -galactarate Dehydratase

Helena Taberman, Martina Andberg, Tarja Parkkinen, Janne Jänis, Merja Penttilä, Nina Hakulinen, Anu Koivula, and Juha Rouvinen*

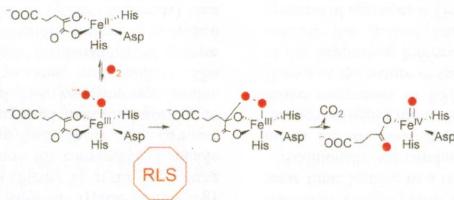


Kinetic Mechanisms Governing Stable Ribonucleotide Incorporation in Individual DNA Polymerase Complexes

Joseph M. Dahl, Hongyun Wang,* José M. Lázaro, Margarita Salas,* and Kate R. Lieberman*



The Rate-Limiting Step of O₂ Activation in the α -Ketoglutarate Oxygenase Factor Inhibiting Hypoxia Inducible Factor
 John A. Hangasky, Hasand Gandhi, Meaghan A. Valliere, Nathaniel E. Ostrom, and Michael J. Knapp*



hypoxia-inducible factor (HIF) is a heterodimeric transcription factor composed of HIF-1 α and HIF-1 β subunits. HIF-1 α is a basic helix-loop-helix protein that binds to DNA in hypoxic conditions, whereas HIF-1 β is a constitutive component of the HIF-1 complex.¹ HIF-1 α is a target of the α -ketoglutarate (α-KG) oxygenase factor (α-KGOF), which is a heterotetramer composed of HIF-1 β , HIF-1 α , HIF-2 α , and HIF-2 β .² α-KGOF converts α-KG to succinate and activates HIF-1 α by a mechanism that involves the reduction of HIF-1 α and the formation of a complex between HIF-1 α and HIF-2 β .³ The mechanism of α-KGOF activation has been studied by several groups, and it appears to involve the reduction of HIF-1 α by α-KG, followed by the formation of a complex between HIF-1 α and HIF-2 β .⁴ The reduction of HIF-1 α is catalyzed by α-KGOF, and the formation of the HIF-1 α -HIF-2 β complex is mediated by α-KGOF. The HIF-1 α -HIF-2 β complex is then targeted to the DNA by α-KGOF, where it activates transcription of HIF-1 target genes. The HIF-1 target genes include the vascular endothelial growth factor (VEGF) gene, the platelet-derived growth factor (PDGF) gene, and the hypoxia-inducible factor 1α (HIF-1α) gene.

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