

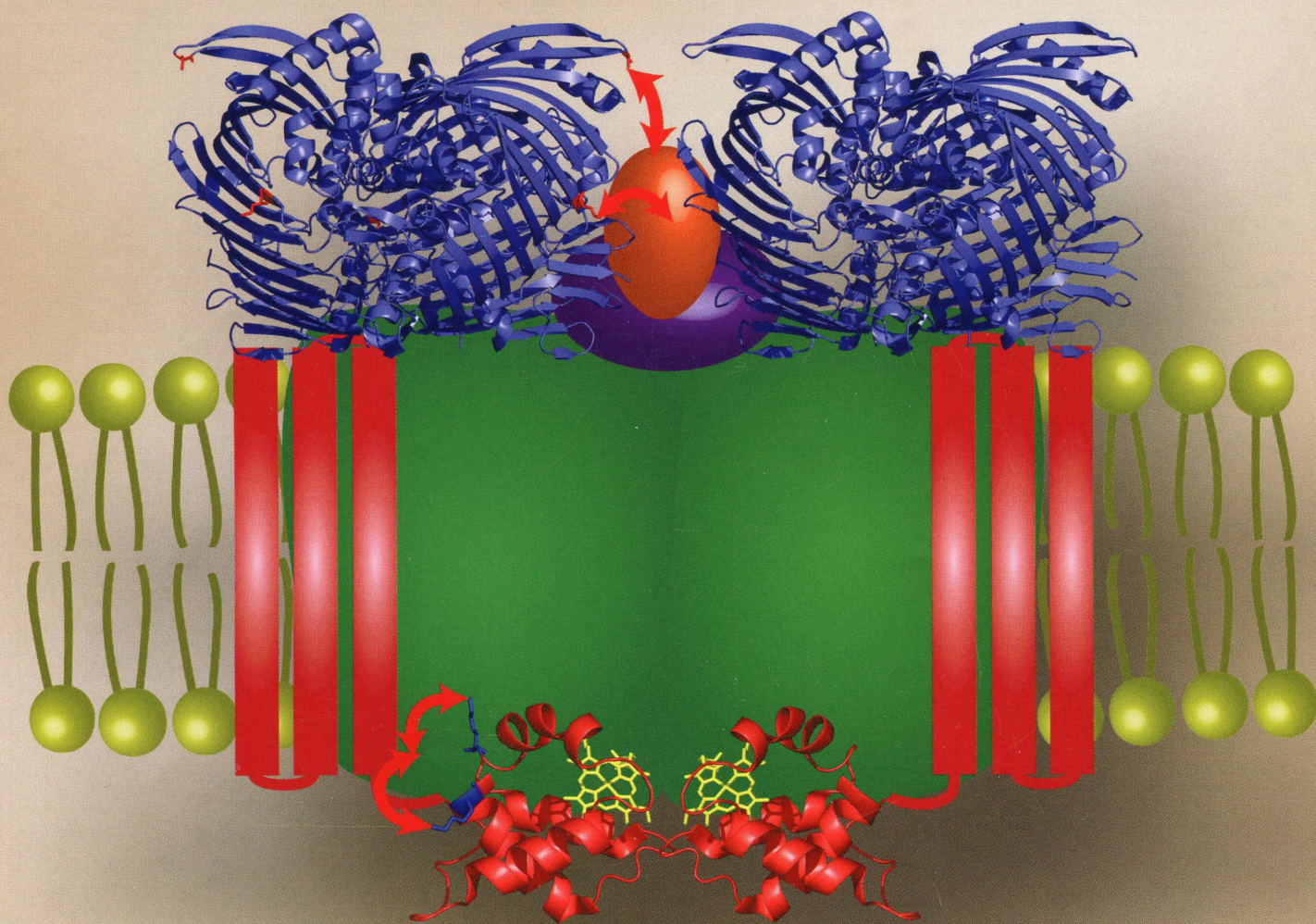
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# BIOCHEMISTRY

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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  $c_{551}$  (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

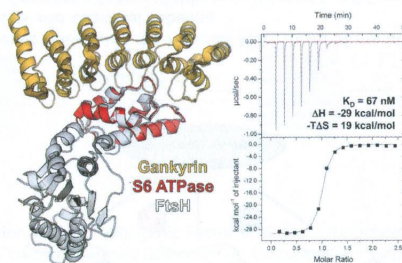
6857



DOI: 10.1021/bi5012354

### Characterization of the Binding Interaction between the Oncoprotein Gankyrin and a Grafted S6 ATPase

Alex M. Chapman, Bryce E. Rogers, and Brian R. McNaughton\*



6860

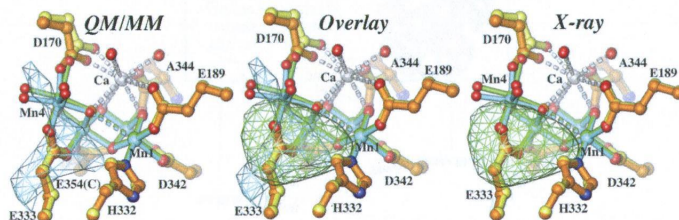


DOI: 10.1021/bi5011915

### Structural Changes in the Oxygen-Evolving Complex of Photosystem II Induced by the $S_1$ to $S_2$ Transition: A Combined XRD and QM/MM Study

Mikhail Askerka, Jimin Wang, Gary W. Brudvig,\* and Victor S. Batista\*

#### $S_2$ -minus- $S_1$ Difference Fourier Maps

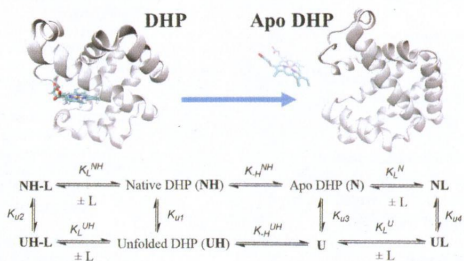


6863 **S**

DOI: 10.1021/bi5005975

Correlation of Heme Binding Affinity and Enzyme Kinetics of Dehaloperoxidase

Peter Le, Jing Zhao, and Stefan Franzen\*

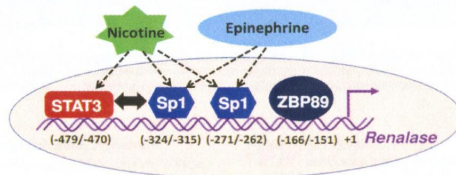


6878 **S**

DOI: 10.1021/bi500798n

Transcriptional Regulation of the Novel Monoamine Oxidase Renalase: Crucial Roles of Transcription Factors Sp1, STAT3, and ZBP89

Parshuram J. Sonawane, Vinayak Gupta, Binu K. Sasi, Ananthamohan Kalyani, Bhargavi Natarajan, Abrar A. Khan, Bhavani S. Sahu, and Nitish R. Mahapatra\*

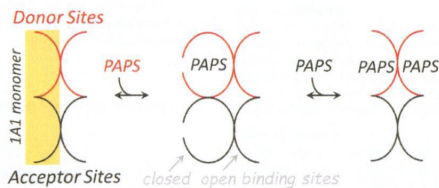


6893 **S**

DOI: 10.1021/bi501120p

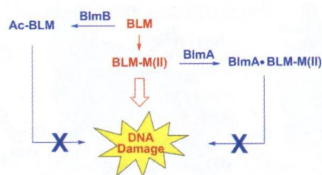
3'-Phosphoadenosine 5'-Phosphosulfate Allosterically Regulates Sulfotransferase Turnover

Ting Wang, Ian Cook, and Thomas S. Leyh\*



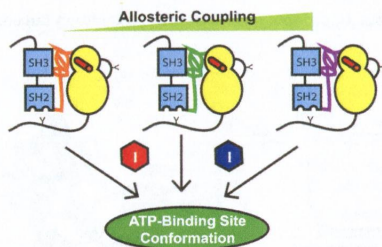
### BlmB and TlmB Provide Resistance to the Bleomycin Family of Antitumor Antibiotics by N-Acetylating Metal-Free Bleomycin, Tallysomyin, Phleomycin, and Zorbamycin

Jane M. Coughlin, Jeffrey D. Rudolf, Evelyn Wendt-Pienkowski, Liyan Wang, Claudia Unsin, Ute Galm, Dong Yang, Meifeng Tao, and Ben Shen\*



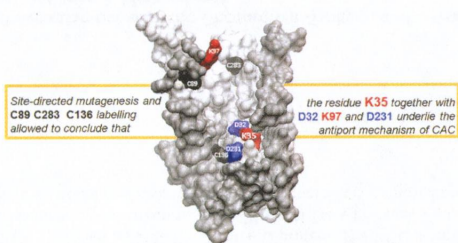
### SH2-Catalytic Domain Linker Heterogeneity Influences Allosteric Coupling across the SFK Family

A. C. Register, Stephen E. Leonard, and Dustin J. Maly\*

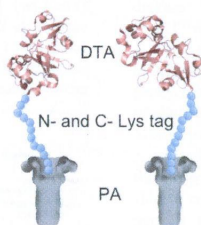


### Identification of Amino Acid Residues Underlying the Antiport Mechanism of the Mitochondrial Carnitine/Acylcarnitine Carrier by Site-Directed Mutagenesis and Chemical Labeling

Nicola Giangregorio, Lara Console, Annamaria Tonazzi, Ferdinando Palmieri,\* and Cesare Indiveri\*

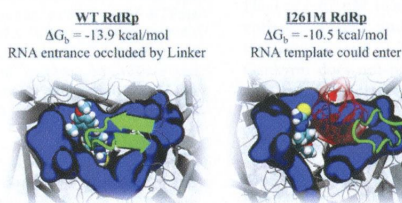


**Polylysine-Mediated Translocation of the Diphtheria Toxin Catalytic Domain through the Anthrax Protective Antigen Pore**  
Onkar Sharma\* and R. John Collier



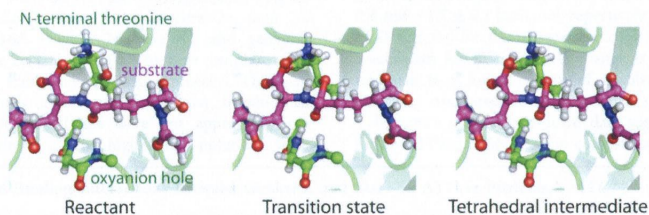
**Molecular Mechanism of Viral Resistance to a Potent Non-nucleoside Inhibitor Unveiled by Molecular Simulations**

Shailendra Asthana, Saumya Shukla, Paolo Ruggerone, and Attilio V. Vargiu\*



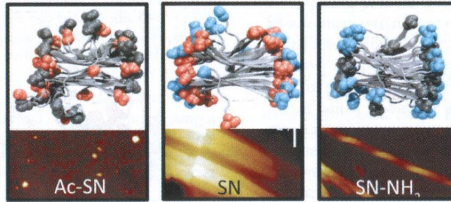
**A Reaction Path Study of the Catalysis and Inhibition of the *Bacillus anthracis* CapD  $\gamma$ -Glutamyl Transpeptidase**

Ilja V. Khavrutskii,\* Patricia M. Legler, Arthur M. Friedlander, and Anders Wallqvist



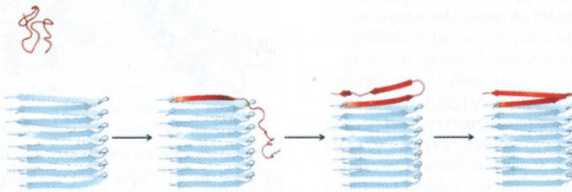
### The Importance of Being Capped: Terminal Capping of an Amyloidogenic Peptide Affects Fibrillation Propensity and Fibril Morphology

María Andreasen, Katrine Kirkeby Skeby, Shuai Zhang, Erik Holm Nielsen, Lasse Hyldgaard Klausen, Heidi Frahm, Gunna Christiansen, Troels Skrydstrup, Mingdong Dong, Birgit Schiøtt, and Daniel Otzen\*



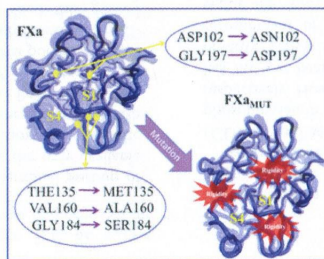
### Mechanism of Amyloid- $\beta$ Fibril Elongation

Thomas Gurry and Collin M. Stultz\*



### Molecular Dynamics Characterization of Five Pathogenic Factor X Mutants Associated with Decreased Catalytic Activity

Safwat Abdel-Azeim, Romina Oliva, Edrisse Chermak, Raimondo De Cristofaro, and Luigi Cavallo\*



## Initiation of RNA Synthesis by the Hepatitis C Virus RNA-Dependent RNA Polymerase Is Affected by the Structure of the RNA Template

Stefan Reich, Michael Kovermann, Hauke Lilie, Paul Knick, René Geissler, Ralph Peter Golbik,\* Jochen Balbach, and Sven-Erik Behrens\*

