

September 17, 2013

Volume 52, Issue 37

Pages 6301-6574

Rapid Reports

DNA Polymerase V Kinetics Support the Instructive Nature of an Oxidized Abasic Lesion in Escherichia coli

John Ernest V. Bajacan and Marc M. Greenberg

pp 6301-6303

Publication Date (Web): September 9, 2013 (Rapid Report)

DOI: 10.1021/bi400997h

Section:

Enzymes

Articles

Contribution of Electrostatics to the Binding of Pancreatic-Type Ribonucleases to Membranes

Nadia K. Sundlass, Chelcie H. Eller, Qiang Cui, and Ronald T. Raines

pp 6304-6312

Publication Date (Web): August 16, 2013 (Article)

DOI: 10.1021/bi400619m

Section:

Enzymes

Bifacial Peptide Nucleic Acid Directs Cooperative Folding and Assembly of Binary, Ternary, and Quaternary DNA Complexes

Xijun Piao, Xin Xia, and Dennis Bong

pp 6313-6323

Publication Date (Web): August 21, 2013 (Article)

DOI: 10.1021/bi4008963

Section:

General Biochemistry

Anti-apoptosis Proteins Mcl-1 and Bcl-xL Have Different p53-Binding Profiles

Hongwei Yao, Shuofu Mi, Weibin Gong, Jian Lin, Nuo Xu, Sarah Perrett, Bin Xia, Jinfeng Wang, and Yingang Feng

pp 6324-6334

Publication Date (Web): August 26, 2013 (Article)

DOI: 10.1021/bi400690m



General Biochemistry

Monitoring the Kinetics of the pH-Driven Transition of the Anthrax Toxin Prepore to the Pore by Biolayer Interferometry and Surface Plasmon Resonance

Subhashchandra Naik, Susan Brock, Narahari Akkaladevi, Jon Tally, Wesley Mcginn-Straub, Na Zhang, Phillip Gao, E. P. Gogol, B. L. Pentelute, R. John Collier, and Mark T. Fisher

pp 6335-6347

Publication Date (Web): August 21, 2013 (Article)

DOI: 10.1021/bi400705n

Section:

Toxicology

Local Control of cis-Peptidyl-Prolyl Bonds Mediated by CH $\cdots\pi$ Interactions: The Xaa-Pro-Tyr Motif

Himal K. Ganguly, Hundeep Kaur, and Gautam Basu

pp 6348-6357

Publication Date (Web): August 13, 2013 (Article)

DOI: 10.1021/bi4007918

Section:

General Biochemistry

Carboxyl Group of Glu113 Is Required for Stabilization of the Diferrous and Bis-Fe^{IV} States of MauG

Nafez Abu Tarboush, Erik T. Yukl, Sooim Shin, Manliang Feng, Carrie M. Wilmot, and Victor L. Davidson

pp 6358-6367

Publication Date (Web): August 18, 2013 (Article)

DOI: 10.1021/bi400905s

Section:

Enzymes

Influence of N-Myristylation and Ligand Binding on the Flexibility of the Catalytic Subunit of Protein Kinase A

Adam C. Bastidas, Levi C. Pierce, Ross C. Walker, David A. Johnson, and Susan S. Taylor

pp 6368-6379

Publication Date (Web): September 4, 2013 (Article)

DOI: 10.1021/bi400575k

Section:

Enzymes

Structural Insight into Maternal Embryonic Leucine Zipper Kinase (MELK) Conformation and Inhibition toward Structure-Based Drug Design

Giulia Canevari, Stefania Re Depaolini, Ulisse Cucchi, Jay A. Bertrand, Elena Casale, Claudia Perrera, Barbara Forte, Patrizia Carpinelli, and Eduard R. Felder

pp 6380-6387

Publication Date (Web): August 5, 2013 (Article)

DOI: 10.1021/bi4005864

Section:

Pharmacology

Triplet State of the Semiquinone-Rieske Cluster as an Intermediate of Electronic Bifurcation Catalyzed by Cytochrome bc₁

Marcin Sarewicz, Małgorzata Dutka, Sebastian Pintscher, and Artur Osyczka

pp 6388-6395

Publication Date (Web): August 13, 2013 (Article)

DOI: 10.1021/bi400624m

Section:

Enzymes

Allostery and Substrate Channeling in the Tryptophan Synthase Bienzyme Complex: Evidence for Two Subunit Conformations and Four Quaternary States

Dimitri Niks, Eduardo Hilario, Adam Dierkers, Huu Ngo, Dan Borchardt, Thomas J. Neubauer, Li Fan, Leonard J. Mueller, and Michael F. Dunn

pp 6396-6411

Publication Date (Web): August 16, 2013 (Article)

DOI: 10.1021/bi400795e

Section:

Enzymes

Thiol-Dependent Recovery of Catalytic Activity from Oxidized Protein Tyrosine Phosphatases

Zachary D. Parsons and Kent S. Gates

pp 6412-6423

Publication Date (Web): August 19, 2013 (Article)

DOI: 10.1021/bi400451m

Section:

Enzymes

Structural Basis for Assembly of the Mn^{IV}/Fe^{III} Cofactor in the Class Ic Ribonucleotide Reductase from Chlamydia trachomatis

Laura M. K. Dassama, Carsten Krebs, J. Martin Bollinger, Jr., Amy C. Rosenzweig, and Amie K. Boal

pp 6424-6436

Publication Date (Web): August 7, 2013 (Article)

DOI: 10.1021/bi400819x

Section:

Enzymes

The Myosin Duty Ratio Tunes the Calcium Sensitivity and Cooperative Activation of the Thin Filament

Milad Webb, Del R. Jackson, Jr., Travis J. Stewart, Samuel P. Dugan, Michael S. Carter, Christine R. Cremo, and Josh E. Baker

pp 6437-6444

Publication Date (Web): August 15, 2013 (Article)

DOI: 10.1021/bi400262h

Section:

General Biochemistry

Interaction of 14-3-37 with Microtubule-Associated Protein Tau within Alzheimer's Disease Neurofibrillary Tangles

Hamid Y. Qureshi, Tong Li, Ryen MacDonald, Chul Min Cho, Nicole Leclerc, and Hemant K. Paudel

pp 6445-6455

Publication Date (Web): August 20, 2013 (Article)

DOI: 10.1021/bi400442d

Section:

Mammalian Pathological Biochemistry

Interaction of Profilin with the Barbed End of Actin Filaments

Naomi Courtemanche and Thomas D. Pollard

pp 6456-6466

Publication Date (Web): August 15, 2013 (Article)

DOI: 10.1021/bi400682n

Section:

General Biochemistry

Fundamental Reaction Pathway and Free Energy Profile for Butyrylcholinesterase-Catalyzed Hydrolysis of Heroin

Yan Qiao, Keli Han, and Chang-Guo Zhan

pp 6467-6479

Publication Date (Web): August 30, 2013 (Article)

DOI: 10.1021/bi400709v

Section:

Pharmacology

Characterization of the Interdomain Motions in Hen Lysozyme Using Residual Dipolar Couplings as Replica-Averaged Structural Restraints in Molecular Dynamics Simulations

Alfonso De Simone, Rinaldo W. Montalvao, Christopher M. Dobson, and Michele Vendruscolo

pp 6480-6486

Publication Date (Web): August 14, 2013 (Article)

DOI: 10.1021/bi4007513

Section:

Enzymes

Binding of Chondroitin 4-Sulfate to Cathepsin S Regulates Its Enzymatic Activity

Juliette Sage, Florian Mallèvre, Fabien Barbarin-Costes, Sergey A. Samsonov, Jan-Philip Gehrcke, Maria Teresa Pisabarro, Eric Perrier, Sylvianne Schnebert, André Roget, Thierry Livache, Carine Nizard, Gilles Lalmanach, and Fabien Lecaille

pp 6487-6498

Publication Date (Web): August 22, 2013 (Article)

DOI: 10.1021/bi400925g



Enzymes

Thio Effects and an Unconventional Metal Ion Rescue in the Genomic Hepatitis Delta Virus Ribozyme

Pallavi Thaplyal, Abir Ganguly, Barbara L. Golden, Sharon Hammes-Schiffer, and Philip C. Bevilacqua

pp 6499-6514

Publication Date (Web): September 3, 2013 (Article)

DOI: 10.1021/bi4000673

Section:

Enzymes

Surface Reengineering of RPA70N Enables Cocrystallization with an Inhibitor of the Replication Protein A Interaction Motif of ATR Interacting Protein

Michael D. Feldkamp, Andreas O. Frank, J. Phillip Kennedy, James D. Patrone, Bhavatarini Vangamudi, Alex G. Waterson, Stephen W. Fesik, and Walter J. Chazin

pp 6515-6524

Publication Date (Web): August 20, 2013 (Article)

DOI: 10.1021/bi400542z

Section:

General Biochemistry

Deamination of 6-Aminodeoxyfutalosine in Menaquinone Biosynthesis by Distantly Related Enzymes

Alissa M. Goble, Rafael Toro, Xu Li, Argentina Ornelas, Hao Fan, Subramaniam Eswaramoorthy, Yury Patskovsky, Brandan Hillerich, Ron Seidel, Andrej Sali, Brian K. Shoichet, Steven C. Almo, Subramanyam Swaminathan, Martin E. Tanner, and Frank M. Raushel

pp 6525-6536

Publication Date (Web): August 23, 2013 (Article)

DOI: 10.1021/bi400750a

Section:

Enzymes

Axial Ligand Replacement Mechanism in Heme Transfer from Streptococcal Heme-Binding Protein Shp to HtsA of the HtsABC Transporter

Yanchao Ran, G. Reza Malmirchegini, Robert T. Clubb, and Benfang Lei

pp 6537-6547

Publication Date (Web): August 27, 2013 (Article)

DOI: 10.1021/bi400965u



General Biochemistry

What's in Your Buffer? Solute Altered Millisecond Motions Detected by Solution NMR

Madeline Wong, Gennady Khirich, and J. Patrick Loria

pp 6548-6558

Publication Date (Web): August 30, 2013 (Article)

DOI: 10.1021/bi400973e



General Biochemistry

Site-Directed Mutagenesis of Catalytic Residues in N⁵-Carboxyaminoimidazole Ribonucleotide Synthetase

Mahender B. Dewal and Steven M. Firestine

pp 6559-6567

Publication Date (Web): July 30, 2013 (Article)

DOI: 10.1021/bi400444y

Section:

Enzymes

The Periplasmic Cavity of LacY Mutant Cys154→Gly: How Open Is Open?

Xiaoxu Jiang, Arnold J. M. Driessen, Ben L. Feringa, and H. Ronald Kaback

pp 6568-6574

Publication Date (Web): August 20, 2013 (Article)

DOI: 10.1021/bi401026d

Section:

General Biochemistry