



# Forthcoming FRBM SPECIAL ISSUE

## *Formation and Repair of Oxidatively Generated Damage to DNA*



The special issue consists of 23 review articles and one research paper by specialists to honor Dr Tomas Lindahl, one of the 2015 Chemistry Nobel Prize awardees, for his pioneering and outstanding contributions to this field of research.

### Guest Editors:

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## List of confirmed review articles for this special issue:

**DNA Damage Related Crosstalk Between the Nucleus and Mitochondria**, by Aishwarya Prakash and Mohammad Saki (The University of South Alabama, Mobile, Alabama)

**Removal of Oxidatively Generated DNA Damage by Overlapping Repair**, by Vladimir Shafirovich and Nicholas E Geacintov (New York University, New York, NY, USA)

**MTH1 as a Nucleotide Pool Sanitizing Enzyme: Friend or Foe?**, by Yusaku Nakabeppu, Eiko Ohta Nona Abolhassani, (Kyushu University, Fukuoka, Japan)

**Sensitive Detection of Oxidative Damage to DNA Induced by Nanomaterials**, by Andrew Collins, Naouale El Yamani and Maria Dusinska (University of Oslo, Oslo, Norway)

**Aberrant Base Excision Repair Pathway of Oxidatively Damaged DNA: Implications for Degenerative Diseases**, by Murat Saperbaev et al. (Université Paris-Sud, Villejuif, France)

**Mechanistic and Biological Considerations of Oxidative DNA Adducts for Helicase-dependent Pathways of Nucleic Acid Metabolism**, by Jack Crouch and Robert Brosh (National Institute on Aging, National Institutes of Health, Baltimore, MD)

**Consequences of Sunlight in Cellular DNA: Focus on the Effects of Oxidatively Generated DNA Damage**, by Carlos F.M. Menck et al. (Universidade Federal de Santa Maria, Rio Grande do Sul, Brazil)

**Oxidatively-induced Damage to DNA and Proteins Mediated by UVA Photosensitisation**, by Reto Brem, Melissa Guven and Peter Karran (The Francis Crick Institute, London, United Kingdom)

**Lipid Peroxidation in Face of DNA Damage, DNA Repair and Other Cellular Processes**, by Barbara Tudek et al. (Polish Academy of Sciences, Warsaw, Poland)

**Oxidized C5-Methyl Cytosine Bases in DNA: 5-Hydroxymethylcytosine; 5-Formylcytosine; and 5-Carboxycytosine**, by Arne Klungland and Adam B. Robertson (Oslo University Hospital, Oslo, Norway)

**Repair of 8-Oxoguanine in Prokaryotic and Eukaryotic Cells: Properties and Biological Roles of the FPG and OGG1 8-Oxoguanine-DNA N-Glycosylases**, by Serge Boiteux, Franck Coste and Bertrand Castaing (Centre de Biophysique Moléculaire, Orléans, France)

**Chromatin Associated Mechanisms in Base Excision Repair - Nucleosome Remodeling and DNA**

**Transcription, Two Key Players**, by Dimitar Angelov et al. (Université de Lyon, Lyon, France)

**Formation and Processing of DNA Damage Substrates for the hNEIL Enzymes**, by Aaron M. Fleming and Cynthia J. Burrows (University of Utah, Salt Lake City, UT, USA)

**The Cyclopurine Deoxynucleotides: DNA Repair, Biological Effects, Mechanistic Insights, and Unanswered Questions**, by P.J. Brooks (National Institutes of Health, Rockville, MD, USA)

**Single Nucleotide Polymorphisms in DNA Glycosylases: From Function to Disease**, by Eugenia Dogliotti et al. (Istituto Superiore di Sanità, Rome, Italy)

**Coordination of DNA Single Strand Break Repair**, by Rachel Abbotts and David M. Wilson (National Institutes of Health, Baltimore, MD, USA)

**Oxidatively Generated Base Modifications in DNA: Not Only Carcinogenic Risk Factor But Also Regulatory Mark?**, by Marco Seifermann and Bernd Epe (University of Mainz, Mainz, Germany)

**Risky Repair: Oxidative DNA-protein Crosslinks Driven by Mammalian Base Excision DNA Repair Mechanisms**, by Bruce Demple (Stony Brook University School of Medicine, Stony Brook, NY, USA)

**Hide and Seek: How Do DNA Glycosylases Locate Oxidatively Damaged DNA Bases Amidst a Sea of Undamaged Bases**, by Andrea J Lee and Susan S. Wallace (The University of Vermont, Burlington, Vermont, USA)

**Radiation-induced Clustered DNA Lesions: Repair and Mutagenesis**, by Evelyne Sage (Institut Curie, PSL Research University, Orsay, France)

**Radiation-Induced DNA-Protein Cross-Links: Mechanisms and Biological Significance**, by Hiroshi Ide et al. (Hiroshima University, Higashi-Hiroshima, Japan)

**Formation and Repair of Oxidatively Generated Damage in Cellular DNA**, by Jean Cadet et al. (Université de Sherbrooke, Sherbrooke, Canada)

**Repair of OxoG:A Mismatches by MUTYH: Mechanism, Metals, and Medicine**

Sheila S David (University of California - Davis, Davis, CA, USA)

**Role of the Oxidized Form of XRCC1 in Protection Against Extreme Oxidative Stress (Research Paper)**, by Julie K Horton et al. (National Institutes of Health, Research Triangle Park, North Carolina, USA)

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