NUCLEIC ACID NEWS
A NEWSLETTER FROM THE NUCLEIC ACIDS GROUP OF THE RSC

THE 1ST NUCLEIC ACIDS GROUP MICHAEL J. GAIT AWARD LECTURE

The RSC Nucleic Acids Group is pleased to announce the launch of a new flagship awards lecture series in honour of Mike Gait, who will retire from our committee this year after many years of outstanding service. Mike works in the field of nucleic acids chemistry, particularly in the synthesis of modified nucleic acids and peptide-nucleic acid conjugates and the application of this technology to target cellular RNA for therapeutic purposes. Mike is also renowned as an Editor of the classic textbook "Nucleic Acids in Chemistry and Biology" as well as for his enthusiastic and tireless contributions to the UK Nucleic Acids community.

The first recipient of the Michael J. Gait lectureship will be Stephen C. Kowalczykowski, Distinguished Professor of Microbiology and of Molecular & Cellular Biology at the University of California at Davis. Professor Kowalczykowski's laboratory have applied a wide range of biochemical and biophysical techniques to the study of the interactions between DNA and proteins, with a particular focus on the mechanisms of DNA helicases and the process of genetic recombination.

http://microbiology.ucdavis.edu/kowalczykowski/

In recent years, his laboratory have become pioneers in the application of single molecule visualisation methods for the analysis of the dynamics of proteins on flow-stretched DNA molecules. Indeed, the group were the first to detect the activity of a DNA helicase at the single molecule level. Their approach has recently resulted in several high profile publications and it is this work that Kowalczykowski will discuss in his award lecture. The 1st Michael J. Gait Lecture will be given at the Machines on Genes II conference to be held at St Anne's College Oxford this summer (see below).

The Michael J. Gait Awards Lecture series is generously sponsored by Idera Pharmaceuticals.

STEVE KOWALCZYKOWSKI

CONFERENCES COMING SOON!

THE 8TH NUCLEIC ACIDS FORUM FRIDAY 6TH JULY 2012 SCHOOL OF CHEMISTRY, BIRMINGHAM ABSTRACT DEADLINE – 8TH JUNE

The RSC Nucleic Acids Group invites those involved in nucleic acids research to the 8th Nucleic Acids Forum: an informal one day meeting to be held at the School of Chemistry in the University of Birmingham.

As is the tradition with the Forum, there is no particular theme to the meeting as it is intended to provide a broad opportunity for discussion of exciting new research at the chemistry-biology interface that involves the study of nucleic acids. The meeting is for all researchers, but is particularly aimed at new academic staff members, post-doctoral workers or PhD students who wish to communicate their latest results.

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NUCLEIC ACIDS FORUM
ASTON-WEBB BUILDING

MACHINES ON GENES II: THE CENTRAL DOGMA AT THE INTERFACE OF BIOLOGY, CHEMISTRY AND PHYSICS

19TH – 23RD AUGUST 2012

ST ANNE'S COLLEGE, OXFORD, UK

DEADLINE - 21ST MAY

The meeting is organised by Dr Jim Tucker and will consist of a series of short talks, selected entirely from the submitted abstracts, including time available to view poster presentations. The meeting is intended to function as a forum and, as such, talks will be short (15 minutes) with time allocated for discussion.

Please visit the Nucleic Acids Forum website for full details of how to register and submit abstracts.

www.bristol.ac.uk/biochemistry/naf/index.html

The registration fee is £10 for RSC Nucleic Acids Group members and £20 for non-members to cover refreshments and a light lunch.

The meeting will be held at the Aston-Webb building (see picture) in the University of Birmingham's School of Chemistry, which is easily accessible by train from central Birmingham stations.

Further details about the meeting are available from Dr Jim Tucker: j.tucker@bham.ac.uk

The replication, maintenance and transcription of the genome requires the coordinated activity of an array of protein machines including polymerases, helicases, translocases, nucleases, recombinases and topoisomerases. These often function as transient or stable components within multi-protein complexes.

Increasingly, the elucidation of the mechanisms of these remarkable and complex enzymes has involved a multi-disciplinary approach. In this spirit, Machines on Genes II will showcase the work of world leaders in the fields of structural biology, chemical biology and novel biophysical methods including single-molecule detection.

In addition to talks from the invited speakers there will be ample opportunities for delegates to present their work, both in the form of oral presentation slots and in poster sessions. We are particularly pleased that Machines on Genes will host two award lectures.

The 1st RSC Nucleic Acids Group Michael J. Gait Awards Lecture sponsored by Idera Pharmaceuticals – Steve Kowalczykowski

"Single molecule visualization of protein-DNA complexes: watching machines at work"

The 2012 Biochemical Society Early Career Research Award – Vidya Chandran

"Structural studies of the type IV secretion system"

FORTHCOMING CONFERENCES

DATES FOR YOUR DIARY

2012	
10 – 15 June	Nucleic Acids Enzymes, Snowmass Village, Colorado, USA (FASEB)
6 July	8th Nucleic Acids Forum, School of Chemistry, University of Birmingham
19 - 23 Aug	Machines on Genes II. St Anne's College, Oxford. (Biochemical Society)
10 – 12 Sep	Riboregulation. Fudan University, China
2013	
15 – 17 Jan	Biogenesis and turnover of small RNAs, Royal Society of Edinburgh (Biochemical Society)
17 – 19 June	CRISPR: evolution, mechanisms and infection. St Andrews University (Biochemical Society)
July	Structure-specific nucleic acid-protein interactions, University of Dundee
4 - 8 Aug	Helicases and Nucleic Acid Translocases, Robinson College, Cambridge. (Biochemical Society)

DAVID HUTCHISON MEMORIAL BURSARY FUND

The Nucleic Acids Group has access to some funds that can be used to support attendance at meetings. For example, the David Hutchinson Memorial Bursaries are available for UK-based students to attend NAG supported meetings. Enquiries and applications should be made to Mark Dillingham (mark.dillingham@bristol.ac.uk). Further details are available on the Group's web-site.

THE RSC NUCLEIC ACIDS GROUP COMMITTEE

www.rsc.org/Membership/Networking/InterestGroups/NucleicAcids/

***David Lilley* (Chair)**, University of Dundee (d.m.j.lilley@dundee.ac.uk)
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Duncan Graham, University of Strathclyde
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Penny Jeggo, University of Sussex
Jason Micklefield, University of Manchester
Mark Searcey, University of East Anglia
Achillefs Kapanidis, University of Oxford
David Hodgson, University of Durham

ABOUT US

The Nucleic Acids Group is a subject group of the Royal Society of Chemistry and part of the Chemical Biology Forum. The group was formed in 2003, having previously been a special interest group (The Nucleic Acids and Molecular Biology Group) of both the RSC and the Biochemical Society.

The purpose of the group is to promote the subject of nucleic acids (including aspects of their chemistry, biochemistry, molecular biology and biophysics), primarily via organization of meetings covering topics within the subject.