

# ANNUALREPORT

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Annual report of the  
bimolecular archaeology  
WUN group



## New Directions in Ancient Biomolecules Annual Report 06/07

By Matthew Collins

Executive Summary: *New Directions in Ancient Biomolecules* is a relatively new WUN grouping. The group has been exploring alternative means of communicating and extending discussing research opportunities in a fast moving research field.

Activity has been in two main areas, a series of videoseminars and a study visit to the USA (by the leader of the network, Matthew Collins). In addition WUN members have participated in an EU FP7 application to develop a training network in the area of Ancient Biomolecules

### Video Seminars

Two approaches have been taken to video-seminars, Lecture Quality and Marratech Recorded.

#### 1) Quicktime recorded and edited seminars

The first *four seminars* were recorded by the University of Bristol and made available in both Quicktime and Windows Media formats using a simple html index.

These video were designed as an introduction to the *New Directions in Ancient Biomolecules* seminar series, and are

available to view directly from the WUN website.

The lectures being designed designed as a basic background for students interested in Biomolecular Archaeology could also have a second role, and can incorporated as additional resources for teaching. Matthew Collins (York) deployed these lectures within a Virtual Learning Environment (VLE) and student feed back on these has been excellent, as highlighted by the VLE rollout team at York. Despite their utility and longevity (estimated to be four years) these lectures were costly to record and edit. In the

remainder of the year the WUN Biomolecular Archaeology group has explored a cheaper and simpler system using Marratech

## 2 Marratech Seminars

Marratech seminars. In the spring and summer terms of 07 a series of seminars was held using the Marratech video conferencing tool. Most seminars took the form of a lecture followed by a question and answer session. At the end of the lectures debriefings for the participants were held.

Unlike the Quicktime recorded lectures which were held in video suites, these were run from desktops and participation was correspondingly more relaxed. The lectures were principally research level seminars given by leading researchers from each of the participating laboratories.

Despite the relatively low cost of attendance student participation has remained low, and this was part of the rationale for the study visit by Matthew Collins. Part of the problem for the poor levels of attendance was the need to cancel some seminars and rearrange dates of others - and this meant that the regular slot identified by the members as a key attribute of this session was lost.

One interesting development was the running of one of these as a student seminar. This seminar was not open to all. One Research Fellow, and two by PhD

students gave presentations on their research all around a related theme and then their supervisors contributed to a joint discussion on each short paper together with all the presenters. This approach had promise of sharing new research findings at a less formal level than the remainder of the video seminars.

## Study Visit to the USA

Matthew Collins made a study visit to the USA (to the two major US participants, Wisconsin & Illinois) in an attempt to increase participation in the network. Part of the trip was to discuss with local coordinators and partly it was to advertise the existing resources developed by the WUN series.

## US Postgraduate Participation.

The problem identified was the lack of large post-graduate schools in the USA to parallel the UK equivalents. This disjunction reflects differences in funding priorities between the USA and UK. The small size of the postgraduate schools in the USA limits the potential of the WUN links there. The development of new links (such as those to University of Sydney) may in part improve the situation, but it does reflect the novelty and marginal

nature of the subject area, which may pose problems for the future viability of the group.

## Funding opportunities

An NSF PIRE proposal to develop stronger links in Biomolecular Archaeology failed to be shortlisted by the host institute. David Lauder (EU Office, York) gave a presentation on Funding opportunities within FP7 as part of one of the Marratech seminars.

This presentation and the existence of the WUN network has led to the addition of WUN partners to an FP7 EU Marie Curie Training Network in Biomolecular Archaeology. However the limited funds available to the US through this scheme restricts the amount of interaction possible. The proposal has reached the 2nd round and a full application is now being prepared.

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### New Directions in Ancient Biomolecules

A virtual seminar series from WUN's Biomolecular Archaeology network.

Biomolecular Archaeology is still a relatively recent field of interdisciplinary study including Archaeology, Chemistry, Biochemistry, Geochemistry and Molecular Biology and involving biochemical analyses of DNA and other molecules preserved in archaeological remains and living organisms to answer questions about the human past.

This series of virtual seminars has the following aims:

- To provide students and researchers with authoritative summaries of the state of the field, providing an opportunity to debate with international experts in the field
- To provide an opportunity for colleagues within the WUN group to showcase recent research developments in this exciting field, with a view to developing international research collaborations.

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### VideoStreams

**VideoSeminar Ancient DNA**  
DNA videoSeminar  
Additional introduction (Clicktime) which may be helpful to explore key concepts in ancient DNA.  
The applications of DNA in Biomolecular Archaeology  
Terry Brown, Manchester  
Use the menu on the side to navigate through the lecture.

**VideoSeminar Ancient Proteins**  
VideoSeminar  
Additional introduction (Clicktime)  
Application of ancient proteins in archaeology: more than radiocarbon and stable isotopes  
Matthew Collins

**VideoSeminar Dating/Chronology**  
VideoSeminar  
Additional introduction (Clicktime)  
Chronology, Radiocarbon dating and resolution  
Alistair Pike (Bristol) and Paul Pettit (Sheffield)

**VideoSeminar Lipids**  
VideoSeminar  
Additional introduction (Clicktime)  
Lipids as tools for archaeologists  
Richard Evershed (Bristol)

The need for an Anglo-Saxon Mass Migration  
This audio-visual presentation by Mike Weale shows why Anglo-Saxon Mass Migration is needed to explain the genetic similarity

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### Biomolecular archaeology

The use of biomolecular information to address archaeological issues

- Proteins
- Lipids
- Carbohydrates
- Isotopes
- DNA