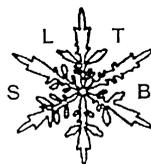


SLTB Newsletter



SLTB UPDATE

Forthcoming Meetings

Current Trends in Cryobiology and Lyophilization

To be held at NIBSC, South Mimms, Herts, UK on 4-5th September 2003

This year's SLTB AGM and scientific meeting, held in conjunction with the National Institute for Biological Standards & Control (NIBSC), focuses on the latest developments in cryobiology and freeze-drying applications. The exciting line up of speakers include experts with decades of experience in these areas, together with shorter contributions from newer workers communicating their recent findings in the crucial area of biopharmaceutical research.

Central themes for the meeting will include both the underlying theory and new practical developments in freeze-drying and cryopreservation. Breakthroughs in the area of the supporting analytical technologies will be featured as well as new areas of application. The meeting provides an ideal and inexpensive opportunity to hear some of the most famous speakers in this area of science and to benefit to the full from the informal opportunities to question and learn from this gathering of active practitioners, as the meeting is limited to a maximum of 70 attendees.

The keynote speaker is **Dr Alan MacKenzie (University of Washington)**, USA. He was a pioneer of the development of the cryomicroscope in the

1960s and has been active over many years in both academia and as a consultant to the lyophilization industry. He is also course director for a popular specialist freeze-drying training program run each year on both sides of the Atlantic. His contributions to the program in September will focus both on underlying principles and practical improvements in the control of the freeze-drying process.

Professor Duncan Craig (University of East Anglia) has recently moved from a Chair of Pharmacy at Queens University Belfast. He has published widely in the area of the analysis and formulation of pharmaceutical entities. His presentation will highlight new thermal and other analytical approaches to provide information on which to base lyophilization strategies. **Dr Vicky Kett (Queens University Belfast)** will further this theme with how such technologies can be applied in the successful lyophilization of protein pharmaceuticals.

Dr Felix Franks (BioUpdate Foundation, London), whose fundamental contributions to this area of science need no introduction, will be speaking on the interplay between product formulation and the freeze-drying process and the first day of lectures will close with a look at recent challenges in the lyophilization of biological reference materials by **Dr Paul Matejtschuk (NIBSC)**.

On Day 2 of the meeting **Dr Charlie Hunt (NIBSC)**, formerly of the National Blood Service's Cambridge-based cord blood stem cell bank, will describe the state of the art in cryopreservation of haematopoietic stem cells. **Dr John**

Morris (Asymptote, Cambridge), again a speaker actively involved with collaborative research across Europe into freezing and freeze-drying of biologicals, will describe new approaches to cryopreservation, in particular the application of non-linear freezing cycles. Day 2 will also feature several oral presentations from selected speakers from across the range of cryobiology.

As always there will be plenty of opportunity for the exchange of ideas and commentary, with time for informal discussion over refreshments and a SLTB dinner on the first evening. A poster session will be running across the two days, as will a Trade Exhibition, where at least seven organisations actively serving the field of cryobiology will bring you up to date with the latest enabling technologies for your research.

The SLTB AGM will be held on the afternoon of the 5th September. We are grateful to NIBSC for acting as host for the meeting. The *Director of NIBSC, Dr Stephen Inglis*, will introduce the new facilities at the Institute, the Department of Health funded new £9million Centre for Biological Reference Materials and the new MRC funded UK Stem Cell Bank. Tours of these facilities will then follow.

It's not too late to register! – contact Pam Lane at NIBSC (email: plane@nibsc.ac.uk) for an application form and accommodation details or telephone 01707 641400.

CryoBiomol 2003

**To be held at Coimbra, Portugal,
September 14th-18th 2003**

The final plans for CryoBioMol have now been set, and as the dust settles on the hard work put in by Professor Rui Fausto and his team at the University of Coimbra, we can see that this will be an exceptional meeting. Four full days of presentations on the latest topics in Low Temperature Biology have been planned, across a broad range of topics. In addition to the important traditional subject areas of low temperature technology, such as cryo-banking of plant cells, animal embryos

and gametes, blood cells and cryosurgery, there are exciting new areas on the programme which have rarely been touched upon in previous meetings. These include Life at Extreme Low Temperatures, Low Temperature Chemistry, and Ethical Implications of Cryobiology. There are several Plenary Lectures from acknowledged experts on specific topics, a varied mix of Brief Communications and an afternoon devoted to the Poster Session. Now that the Society for Cryobiology has joined with SLTB and Rui Fausto for the meeting, it promises to be an excellent forum for discussion and exchange of ideas. The truly international flavour of the Congress is highlighted by the fact that there are already participants registered from more than 20 countries spanning both sides of the equator. Allied with the attractive Social Programme planned by Rui and his colleagues (for example, a Reception with the Mayor of Coimbra, and an evening of music traditional to the University of Coimbra), it will surely be 'one not to miss'. For those who need to check out details of travel, accommodation, registration or the scientific programme, these can all be found on the Meetings Web site at: <http://www.qui.uc.pt/~rfausto/cryobiomol/> There will still be time to make a late registration if you do it quickly, and Rui and his colleagues will be pleased to assist in any way they can.



SLTB Web Site

The SLTB web site has proven very problematic of recent months; indeed some of you may have noticed that it is currently not available. These problems relate to difficulties in transferring ownership of the SLTB domain name from the web site designer to the Society. This has in turn led to the internet service provider taking our site down. However, in the past few weeks progress has been made and we very much hope to return to "Normal Service" in the not too distant future, as the web site is an important source of information for the membership.

Paul Lynch, General Secretary



Words from the Chairman

When **Roland Fleck**, asked me to "...provide a few words from the chairman...", I fell into agony. What kind of contribution might be interesting for our readers? After thinking for a while, it began to dawn on me: who could be a better advisor than the greatest chairman of all times, Chairman Mao Tse-tung himself? *"Where do correct ideas come from? Do they drop from the skies? No. Are they innate in the mind? No. They come from social practice, and from it alone; they come from three kinds of social practice, the struggle for production, the class struggle and scientific experiment"* [Where Do Correct Ideas Come from? (May 1963), 1st pocket ed., p.1]. And being the newly elected chairman, what did Mao say about the leadership of committees? He said: *"It has recently been found that in some (of course not all) leading bodies it is the habitual practice for one individual to monopolize the conduct of affairs and decide important problems. Solutions to important problems are decided not by ... committee meetings but by one individual, and membership in the ... committee has become nominal. Differences of opinion among committee members cannot be resolved and are left unresolved for a long time. Members of the ... committee maintain only formal, not real, unity among themselves. This situation must be changed."* [On Strengthening the Party Committee System (September 20, 1948), Selected Works, Vol. IV, pp. 267-68]. But what could I do to change the situation? And who could help me to achieve this? Again, Mao was helpful: *"The secretary of a ... committee must be good at being a "squad leader..."*. Although I have difficulty thinking of **Paul Lynch** as being a "squad leader"... Mao continued: *"A secretary or deputy secretary will find it difficult to direct his "squad" well if he does not take care to do propaganda and organizational work among his own "squad members", is not good at handling his relations with committee members or does not study how to run meetings successfully."* [Methods of Work of Party Committees (March 13, 1949), Selected

Works, Vol. IV, p. 377]. Yes, running meetings is a really difficult job in science, and I am happy to have a Meetings Secretary like **Barry Fuller** in my corner. With Barry's knowledge of natural science nothing can go wrong as: *"Natural science is one of man's weapons in his fight for freedom. For the purpose of attaining freedom in society, man must use social science to understand and change society and carry out social revolution. For the purpose of attaining freedom in the world of nature, man must use natural science to understand, conquer and change nature and thus attain freedom from nature"* [Speech at the inaugural meeting of the Natural Science Research Society of the Border Region (February 5, 1940)]. I started to think about the role of my three female colleagues on the committee, **Monica Wusteman**, **Tiantian Zhang**, and **Ursula Rau**. And again Mao provided the helpful interpretation: *"With the rise of the peasant movement, the women in many places have now begun to organize rural women's associations; the opportunity has come for them to lift up their heads, and the authority of the husband is getting shakier every day. In a word, the whole feudal-patriarchal ideology and system is tottering with the growth of the peasants' power"* [Report on an Investigation of the Peasant Movement in Hunan (March 1927), Selected Works, Vol. I, pp. 44-46]. The SLTB committee will follow Mao's rules closely, always keeping in mind that *"We must not become complacent over any success. We should check our complacency and constantly criticize our shortcomings, just as we should wash our faces or sweep the floor every day to remove the dirt and keep them clean"* [Get Organized! (November 29, 1943), Selected Works, Vol. III, p. 160]. Finally the reader (and member) is kindly asked: *"As for criticism, do it in good time; don't get into the habit of criticizing only after the event"* [On the Question of Agricultural Co-operation (July 31, 1955), 3rd ed., p. 25]. ☺

[Note: Quotation refers to the first English edition of the book or pamphlet cited as published by the Foreign Languages Press, Peking.]

Andreas Sputtek, Chairman



The Piper, the Penguin, and Ghosts from the Frozen Past

In March just passed, I made a weekend dash from London by the early morning train to Edinburgh. A former student (and SLTB attendee in years gone by), Nick Lane, was talking at the Edinburgh Science Festival (he has made a career move into science writing, and his first book, 'Oxygen, the Molecule that Made the World, is doing rather well – there's the plug I could not avoid). Anyway, we just made the post lunch slot, and Nick duly gave his performance). I had the afternoon stretching in front of me, so I decided to move on to the National Museum of Scotland. Imagine my delight to walk in unexpectedly on a superb exhibition illustrating one of the true pioneers of Low Temperature Biology, in the form of William Speirs Bruce. This was a name unknown to me, but that just shows my ignorance of Polar Exploration and the early studies on the natural history of biology in extreme environments. We all know of the exploits of Scott and Ernest Shackleton (of whom, more later), but WSP seems to have outdone them in his application and enthusiasm for biology. He led the Scotia expedition, the research ship of the Scottish National Antarctic Expedition between 1902-1904 (before the Scott expedition), and reached the Antarctic Peninsula. He was an enthusiastic low temperature biologist and had prepared himself thoroughly for his task by spending some winters on top of Ben Nevis, the highest peak in the UK. (Apparently he made some of the first observations on insect over-wintering in the UK). On his voyages, he made meticulous records of the environment and the species he encountered. He recorded and preserved specimens for scientific research (for example, here were the only specimens of Antarctic Cod (*Nototheniidae*) and Ice Fish (*Channichthyidae*) – which I have ever seen), and generally added a great deal to the contemporary understanding of the polar ecosystems – he later made expeditions to the sub-Arctic as well. He returned successfully without losing a

man, and there were some wonderful clips of an original cinematographic film of the ship sailing up the Clyde and the crew disembarking to applause from a huge crowd. The exhibition contained many excellent photographs, and there is one image which will stay in my mind forever when thinking of polar exploration. In this, there can be seen a piper in full regalia, with bagpipes in action, on the winter ice in the sub-Antarctic, about 3 meters away from a King Penguin. The bird is looking spectacularly unimpressed by the lament (or the reel, it is hard to guess which) – but apparently this was a true experiment (even if a little tongue in cheek). Trapped by the winter ice, WSP and crew were looking for good ways to use their time, and decided to test the effect of music on the penguin. As obvious from the photo, the record stated that the penguin, 'being a most phlegmatic bird' was not given to musical appreciation! All in all, a very interesting exhibition, and if any of you are interested in polar biology, I would recommend tracking down any one of the several contemporary texts which were available on WSP. Also, his exploits have been detailed on several web sites, one of which can be found at: <http://gdl.cdlr.strath.ac.uk/scotia/vsindexbruce.html>

Well, that deals with the Piper and the Penguin, as for the Ghosts.... I left the exhibition to celebrate Nick's success in the traditional Edinburgh fashion, with a fair supply of single malts and an unremembered expanse of evening. We had booked into a Bed & Breakfast off Princes Street by the Internet, and managed to negotiate our way there late in the night - dark corridors, and rapid unconsciousness. The Breakfast Room was approached next morning with some trepidation and twenty per cent brain function. After about the third coffee, you can imagine my surprise when, finally raising my eyes, I was looking at a massive, two wall mural of ...yes...Antarctica!.... and the Shackleton expedition. Completely unknown to us, we had booked into the house apparently previously owned by a relative of ES. The present owner had decided to commission the mural by a local artist (very good, too). He was somewhat surprised when the resident SLTB member was more

interested in the wall than in the eggs and toast on offer, but then, a weekend in Edinburgh can be a strange affair.....

Barry Fuller, Meetings Secretary



Charity Status for SLTB

The April issue of the Newsletter was accompanied by a copy of the draft constitution that has now been approved by the Charity Commission. In accordance with the motion passed at the Ambleside meeting, members were asked to indicate any objections to that draft. None were received. The next step, which is in accord both with our present rules and the proposed new draft constitution, will be for the members to vote on a recommendation by the Committee to adopt the draft constitution. Our present rules require that no alteration may be made to the rules unless a minimum of 21 members are present and two thirds of those voting are in favour. This vote will be held at the AGM taking place at NIBSC on September 5th.

David Pegg



Interesting Article

For those SLTB members with a general interest in all things cold, there is an interesting and informative article in the latest edition of the Quekett Journal of Microscopy on snow crystals. "Snow crystals – A history of their study and microscopy" provides a brief history of the snow crystal and its study with a reference from as early as the Han Dynasty, 135 BC. The article also considers the snow crystal in relation to its study by microscopy.

Fredrick W. Price. 2003. Snow crystals – A history of their study and microscopy. *Quekett Journal of Microscopy*. **39/5**, 483-490.



Request for Email Addresses

To help improve communication with the membership we want to develop a database of all members' email addresses. The intention is not to replace the traditional Society Newsletter with an electronic version, but rather to supplement it with specific news items etc. which we wish the membership to be aware of between the Newsletter's publication. Would you please send your email address to the General Secretary at **P.T.Lynch@derby.ac.uk**. Sending it electronically will save him lots of typing, and the inevitable mistakes.

Thank you to those members to responded to the request for email addresses in the last Newsletter.



From the Treasurer

SLTB Annual Membership Fees

To keep the Society in good running order, run the website and plan our meetings we *REALLY* need all our members to pay their annual fees on time. Membership (kept at £15 for full members, £10 for students) is one of the Great Bargains of 2003. Please check your records, and if you find that you have forgotten, please contact our Treasurer, Tiantian Zhang on tiantian.zhang@luton.ac.uk to arrange your payment.



Note: The material for this edition was prepared by Roland Fleck.

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