

**The 171st Committee Meeting of the British Biophysical Society, held from
12.30 pm – 4.00 pm on Tuesday 16th May 2017 in room 259, Chemistry Building, at
Imperial College London**

Edited Minutes

Date: 16th May 2017

Present: Anthony Watts (Chair), Tharin Blumenschein (Secretary), Guy Grant (Meetings Secretary), Jeremy Craven (Treasurer), John Seddon, Olwyn Byron (via Skype), Mark Leake, Svetlana Antonyuk, John Sanderson and Mark Wallace.

1 Apologies: Robin Leatherbarrow, Peter Crowley, Tuomas Knowles, Syma Khalid, Ehmke Pohl, Gordon Roberts, David Scott and Rob Cooke

2 Approval of Minutes of the 170th meeting

The Minutes were accepted with minor corrections.

3 Matters Arising

Discussions are ongoing regarding the succession of Tony Watts as committee Chair.

4 **Chairman's Report** (Anthony Watts)

- Organization of the IUPAB/EBSA/BBS/IoP Congress (timetabling, inviting speakers, canvas for sponsorship, advertise congress at various meetings, etc) is taking most of the time available;
- Our previous supplier of medals for the Young Investigator Award, and also for EBSA medals, has ceased trading. An interim solution has been found, but we are still looking for alternative suppliers and any suggestions will be welcome.

Action: all to suggest

- There were 7 or 8 Biophysics Week (March 6 – 10th) events in the UK. The Chair has organised two events in Oxford.
- Talked about Biophysics and did demonstrations at a science fair in Dubai over 3 days, reaching a total of 15,000 students.
- Gave public engagement lectures on Biophysics in Abu Dhabi and in Dubai.

5 **EBSA/IUPAB Activities** (John Seddon/Gordon Roberts)

EBSA – Tony Watts will take over as EBSA president in July at the IUPAB / EBSA / BBS / IoP Congress. Philipp Kukura was selected for the EBSA Young Investigators' Medal and Prize, to be awarded at the IUPAB / EBSA / BBS / IoP Congress. The Avanti Polar Lipids/EBSA Award will be given to Jean Marie Ruyschaert, from the Université libre de Bruxelles, Belgium.

About 60 bursaries, consisting of registration and accommodation, were awarded for early career researchers to attend the IUPAB / EBSA / BBS / IoP Congress. John Seddon was in the committee that selected the winners.

EBSA General Assembly will take place on Tuesday, 18th July, 19:00-20:00. Olwyn will represent the BBS.

The 2019 EBSA meeting will take place at the Universidad Complutense de Madrid, in July 2019.

IUPAB – 60 early career bursaries for the IUPAB / EBSA / BBS / IoP Congress have also been awarded.

The IUPAB Extraordinary General Assembly, followed by the General Assembly, will take place on Tuesday, 18th July, 14:00-18:10.

6 **IOP Activities** (Mark Wallace)

The IoP is happy for the Tom Duke Prize lecture award recipient to be invited to also do the BBS Irish Lecture Tour, if an appropriate candidate is selected. There are no thoughts of repeating that for all recipients. There will be a meeting at King's College in December.

There are ongoing discussions in the IoP about what should be in the core Physics curriculum, including how much Biophysics. Perhaps an easier way to incorporate Biophysics would be to include biological examples in all areas where possible.

The committee agreed that it would be useful to have a lunchtime session on education as part of the IUPAB / EBSA / BBS / IoP Congress.

Action: Jeremy to provide a title

The IoP has in the past developed a website and teaching resources for the teaching of Biophysics. The website is still available, awareness could be increased.

7 **Physics of Life Network** (Olwyn Byron/Mark Leake)

There are 3 upcoming workshops on “Technology touching life”, on 6th June (Midlands), 16th June (London), and 20th June (Scotland).

Contact leads for the network were identified, the aim is to create a long term interdisciplinary funding stream.

Workshops have taken place in Durham, there will be more upcoming workshops associated with the IUPAB / EBSA / BBS / IoP Congress. All the information about the workshops is on the POLNET2 website. Perhaps the BBS should be more involved in helping advertise, or even organise future workshops. Mark Leake commented that there is potential for organising co-badged workshops. For instance, the antimicrobial resistance workshop is led by the IoP. The BBS should take a similar initiative. The workshop phase finishes this year, the sandpit phase starts next year.

The committee was very favourable to take a stand and publicly support the initiative.

The network would like a lunchtime Q & A session at the IUPAB / EBSA / BBS / IoP Congress. The BBS committee is happy for it to happen.

Action: Tony Watts to arrange a room

There may be a town meeting at the end, but there is a desire for a town meeting this Autumn. Suggestions for speakers are welcome.

8 **Secretary’s Report** (Tharin Blumenschein)

- 1) *Royal Society of Biology emails* – Newsletters have been circulated to the committee. Also a number of consultations.
- 2) *Royal Society of Biology renewal* – we were presented with an invoice for the same heavily discounted value from last year. The committee agreed to renew our membership with the RSB.
- 3) *Emeritus member* – David Hulmes has contacted the BBS secretary to say he has retired and is now emeritus, and asks about becoming an emeritus member. His emeritus membership was approved by the

committee.

- 4) I was contacted by a company that sets up online payments for charities. I don't think it really applies to us, and it was very expensive, but it's interesting to know they exist.
- 5) Gordon Roberts will step down from the committee when he leaves the IUPAB executive, after the IUPAB / EBSA / BBS / IoP Congress.
- 6) I was contacted by Glitterbox TV, they are working on a new TV pilot (not to be broadcast) and looking for biophysicists (or students) interested in learning something new. Sing, dance, master the trapeze, tightrope walking... The committee decided it would be inappropriate to get involved or use the newsgroup to advertise this opportunity.
- 7) We need an AGM at the IUPAB / EBSA / BBS / IoP Congress.
Action: Tony Watts to arrange a time slot and room

9 Treasurer's Report (Jeremy Craven)

- Accounts for the Charity Commission will be done soon.
- We continue looking for a Direct Debit solution. It needs to be hassle-free, and we can then start offering it to new members. Perhaps someone can be hired part-time to regularly (but occasionally) look at the Direct Debit.

Action: Jeremy to look into it further

10 Meetings Secretary's Report (Guy Grant)

2017

16th – 20th July: Joint IUPAB / EBSA / BBS / IoP Congress, Edinburgh.
To be discussed as a separate point in the agenda.

21st – 23rd July: Satellite meeting - The Interplay Between Membrane Physics and Cell Biology, Durham.

Action: John Sanderson

December: a one-day meeting to be organised, volunteer required. Possible topics include cell biophysics, developmental biology and mathematical biology. Avoid clashing with NMRDG, 14th December.

Action: Guy to follow it up

December: The BBS has agreed to sponsor a lecture at the "Quantitative methods in gene regulation" meeting.

2018

January: The BBS has agreed to offer bursaries for early career members to attend the “*Frontiers in Computational Biophysics: understanding conformational dynamics of complex lipid mixtures relevant to biology*” meeting in Switzerland, and to advertise it on our website.

February: *The Artificial Cell* (Royal Society, Milton Keynes – Barbara Ciani) – the BBS will provide a poster prize.

April: *Joint meeting with the Belgian Biophysical Society*, likely in Brussels. Andre Matagne is the contact. The topic will relate to protein-protein interactions.

11-13 July: *BBS Biennial Meeting*, Southampton. The lecture theatres have been booked.

Action: Syma to continue organising

Action: All - next committee meeting to be in Southampton

December: a one-day meeting to be organised, possibly outside of London. Volunteer required.

Action: Guy

2019

April: Joint meeting with NMRDG.

Action: Tharin to email Stephen Byard

11 IUPAB/EBSA/loP/BBS Congress (Tony Watts)

Tony presented the programme of the congress. There will be a BBS dinner at the Sheraton hotel on Sunday evening, to which honorary members will be invited.

There will be a whisky and beer reception on Monday evening.

Two invited speakers pulled out for personal reasons, but other than that the programme for invited speakers is generally ready.

There is a great array of satellite meetings.

Most of the exhibitor stands are taken, with only 5 or 6 left. There's also a good number of sponsor that are not exhibiting.

Childcare will be available at the meeting.

There are already 1300 registrations, not including over 100 invited speakers still to register.

The BBS will provide 21 bursaries, at £500 each. A few people have been

awarded both BBS and IUPAB bursaries. As the IUPAB bursary is somewhat smaller, the BBS will supplement the difference to these awardees. £6400 towards BBS bursaries were raised from external sources.

Out of the registrations, we have 390 males and 306 females. The other registrants declined to answer their gender.

We have so far 259 registrations from the UK, 160 from Germany, 65 from Japan, 59 from France, 50 from China, 41 from Italy, 36 from the USA, and smaller numbers from other countries, for a total of 53 countries.

We should have a clear BBS presence at the meeting, perhaps including a membership application form or a postcard in the delegates' bags. We could also have a stand, and a clearly displayed banner. We need a banner with the new logo.

Action: Mark Wallace has volunteered to do the new banner.

12 Newsletter/Publicity Officer (Syma Khalid/John Sanderson)

Syma reported that there is nothing to update. The newsgroup has had regular emails.

13 Website (Mark Wallace)

Mark has been keeping the website updated.

14 Membership (Ehmke Pohl)

- (i) Memberships have enjoyed a healthy boost with more than 30 new members since the beginning of the year. This can clearly be attributed to the upcoming IUPAB2017 conference. Almost all of these have declared to have set up standing orders of £25 so that we should see a steady increase of membership fees.
- (ii) I would like to ask all committee member to encourage the PhD students and Postdocs in their group to consider BBS membership.
- (iii) Corporate Memberships: This had been discussed in the past. If we wanted to go ahead the IUPAB conference could be an ideal opportunity to talk to companies directly and sign them up right away.

The committee is in favour of going ahead with corporate memberships.

Action: Ehmke to progress

Ehmke has also investigated the diversity statements of different societies in related areas, and has some examples that we could use as a starting point.

Action: Tharin to draft a statement for the BBS

15 Irish Sub-section (Peter Crowley)

Peter Crowley sent a report on the Irish Tour, attached at the end of these minutes. The committee felt that 5 locations for the lecture tour is a large number, and we may not expect future speakers to do as many.

16 Honorary members

Candidates to honorary members have been selected: Richard Cogdell (Glasgow), Paul Engel (UC Dublin) and Andrew Miller (Oxford). If they agree, their names will be submitted for approval at the AGM

Action: Tony to contact

Action: Tharin to compile a list of past suggestions for honorary members for future reference

17 AOB

Tuomas Knowles was awarded the Corday-Morgan Prize from the Royal Society of Chemistry, for his fundamental work on the mechanism of amyloid aggregation, including the discovery of the role of secondary nucleation.

The committee congratulates Tuomas.

Action: Mark Wallace to add on website

Durham is still looking for candidates for the Howard Prize Lecture 2017. Ehmke encourages everyone on the committee to mention it to suitable candidates.

John Sanderson contacted Steven Lee, chair of the RSC Biophysical Chemistry Group, over the phone. There is now a link to the BBS on their website. The committee agreed that Ann Dixon should be invited to join the committee and provide cross-representation for the RSC Biophysical Chemistry Group.

18 Date of Next Meeting

The next committee meeting will be in September, in Southampton, so we can see the venue for the next Biennial Meeting. The date will be decided after a Doodle poll.

Action: Tharin to organise poll

BBS – Irish Lecture Tour (April 2017)

The 2017 BBS Irish Lecture Tour was delivered in April by Prof. James Naismith (Bishop Wardlaw Professor of Chemical Biology at University of St. Andrews). The tour lasted one week and involved five universities on the island of Ireland (Table 1).

Table 1. Sites of the 2017 BBS Irish Lecture Tour

Date	Place	Hosts
24th April	University College Dublin	Prof. Pat Guiry & Dr. Cormac Murphy
25th April	University College Cork	Prof. Dmitri Papkovsky & Dr. Thomas Moore
26th April	NUI Galway	Dr. Peter Crowley & Dr. David Cheung
27th April	Queen's University Belfast	Dr. Irina Tikhonova & Dr. Christopher Law
28th April	Trinity College Dublin	Prof. Martin Caffrey & Dr. Jonathan Bailey

Jim delivered a fantastic lecture on the biosynthesis of patellamides, a class of heavily modified, cyclic peptides produced by cyanobacteria (see title and abstract below). Structural evidence was presented for the function of each enzyme in the pathway. Remarkably intricate mechanisms were revealed, including steric selection in the highly unusual amide methylation reaction.

The organizer gratefully acknowledges the time and effort made by Jim to present his work on a relatively tight schedule that involved long drives around Ireland.

The organizer notes also that the tour coincided with SFI grant reviews, which meant that some faculty were occupied with preparing rebuttals etc. In future, it may be advisable to hold the lecture tour earlier in the spring.

Speaker: Prof. James Naismith (University of St. Andrews)

Title: Modifying Ribosomal Peptides; Making Rings and Other Hard to do Chemistry

Abstract: Various peptide macrocycles originating from natural products have been known for a long time to be effective medicines for a number of conditions. More recently these molecules have attracted considerable interest as potential therapeutic starting points particularly in disrupting protein-protein interfaces. Our lab has focussed on the biophysics of the enzymes involved in patellamide biosynthesis following the ground breaking work of Schmidt in mapping out the gene cluster. Patellamides are the exemplar of the cyanobactin class of macrocyclic peptides and contain multiple chemical modifications. We have characterised all the enzymes in the pathway at both the structural and mechanistic level. We have used this information to engineer the enzymes for in vitro synthesis, to make peptide non-peptide hybrid macrocycles and a small library of macrocycles which we tested for biological activity. I will report our progress on combining solid phase synthetic chemistry to generate libraries coupled to enzymes. I will discuss very recent work on new classes of modifying enzymes that are not in the patellamide pathway but act on ribosomal peptides and have significant potential.