

Promoting microbiology in schools and colleges since 1969

Annual report 2009-10

Summary

The 22nd MiSAC Annual Competition 2010, Food safety and barbecues, was sponsored by the Society for Applied Microbiology. Members contributed to a range of meetings, seminars, courses and exhibitions in various parts of the UK. MiSAC participated in the 2010 Annual Conference of the Association for Science Education in Nottingham by sponsoring a talk in the Biology in the Real World programme. Existing issues of MiSACactivities and MiSACbriefings were reprinted and distributed in a newly designed folder. Work on new issues in the series continued and the development of an independent MiSAC web site was undertaken. MiSAC continued to be consulted as an authoritative source of advice by schools and colleges and a range of other organisations. The Committee held four meetings, one of which was for judging the competition entries.

MiSAC Annual Competition 2010: 'Food safety and barbecues'

The objective of the 22nd annual competition was to design a story board for a television advertisement to promote food safety at barbecues. The topic was chosen with the aim of developing an appreciation and understanding of the simple steps that can be taken to prevent food poisoning by such microbes as *Salmonella* and *Campylobacter* through correctly storing food, cooking it properly and preventing cross contamination from uncooked to cooked food. We are most grateful to the Society for Applied Microbiology (SfAM) for providing special sponsorship for the competition.

The competition was publicised by mail to all secondary schools, on the Society of Biology *BioEd* newsletter, at teachers' conferences, and to participants on Society for General Microbiology (SGM) and CLEAPSS training courses. Sponsor representatives Professor Martin Adams (University of Surrey), Lucy Harper (the society's Communications Manager) and Dr Anthony Hilton (University of Aston) joined the Chairman and other MiSAC members for the judging which took place at SGM headquarters in Reading. We are again grateful to SGM for providing facilities for the immense amount of time and effort involved in the administration of the competition. MiSAC assumed responsibility for arranging the design and printing of the student entry certificates.

As usual, the competition was open to two entry groups, Key Stage 3 and Key Stage 4 (GCSE).

There were some 300 entries involving more than 400 students from nearly 50 schools and colleges drawn from England, Wales, Scotland and Northern Ireland; an entry from a Ministry of Defence school in Cyprus maintained the international appeal of the competition.



Although the concept of this year's competition was challenging, the high quality and creative approach of the entries in both entry groups was very impressive and imaginative, and many entrants clearly relished the opportunity to express their artistic talents. There was an excellent level of adherence to the overall entry rule of submitting an A3-size storyboard containing six panels, and a good grasp of what makes an effective storyboard, perhaps aided by the guidance provided for entrants. The judges looked particularly for originality, eye-catching design, a title that immediately indicated the purpose of the storyboard, a clear sequence to the panels that maintained viewers' attention, sound factual and scientific content including mention of specific microbes involved in food poisoning, an appropriate approach to communicating science to a television audience, and use of the entrant's own words.

Money prizes totalling more than £1,000 were awarded to winning students and their schools, and several commendations were made for concept, content and design. In addition, these students were given a memory stick loaded with Micropod podcasts from SfAM. Also, all students who participated were given a certificate of entry, a much appreciated feature of the competition, and their schools received some microbiology teaching resources and a summary report on the competition.

The student prizes were 1st Prize £50, 2nd Prize £30 and 3rd Prize £20 for students, and to their schools £250, £125 and £70 respectively. Prizes and commendations were awarded to students from the following schools:

• Key Stage 3 Group: 1st Prize – Ipswich High School; 2nd Prize – Dame Alice Harper School, Bedford; 3rd Prize – Portsmouth

MiSAC provides resource material, procedures and investigations for practical microbiology for teachers, technicians and students. © MiSAC 2010. Microbiology in Schools Advisory Committee, c/o NCBE, University of Reading, 2 Earley Gate, Reading RG6 6AU. E: microbe@misac.org.uk. W: www.misac.org.uk. Grammar School; Commendations – The Mount School York and St Olaves Grammar School, Orpington.

• Key Stage 4 Group: 1st Prize – Pocklington School, York; 2nd Prize – Rugby High School; 3rd Prize – The Mount School, York; Commendations – St Anselm's School, Canterbury.

Reports of the competition were published in *Mycological News*, *Microbiologist* and *Microbiology Today*, the house magazines of, respectively, British Mycological Society (BMS), SfAM and SGM.

2010 Association for Science Education Annual Conference

MiSAC keeps participation in the Association for Science Education (ASE) Annual Conference under constant review because of the increasing costs of taking part and the apparent decrease in attendance by numbers of practising teachers and technicians. Therefore, we decided not to have an exhibition stand at the conference in Nottingham in January 2010 but to continue to co-sponsor with SGM a talk in the Biology in the Real World series organised by NUCLEUS of which MiSAC is a member. The talk was given by Professor Kim Hardie (University of Nottingham) on 'Beating superbugs by understanding gene transfer'. We are grateful to CLEAPSS, a MiSAC sponsor, for arranging for MiSAC materials to be displayed at the conference.

Advisory work

Among the range of enquiries from school teachers and technicians, the previously reported increase in interest in the use of micro-organisms in practical work was sustained, perhaps as a reflection of the microbiological content of the new GSCEs. Included were questions about sources and suitability of cultures and culture media, staining and microscopy. There is still evidence of the need for clarification of protocols for practical work that arises from shortcomings in awarding body specifications and associated textbooks.

Enquiries come either directly to MiSAC or more usually via CLEAPSS, the National Centre for Biotechnology Education (NCBE) and the Society for General Microbiology (SGM), three of our sponsors. Much mutual benefit is derived from the exchanges of expertise readily available with these and our other sponsors. Direct interaction with teachers, technicians and PGCE students on



The late Peter Fry, Vice-Chairman (far left) and Janet Hurst, retiring Secretary (third from right) with other committee members and Alexandra Blair, The Times Education Correspondent (extreme right). Reproduced with permission from Microbiology Today, August 2006.

practical microbiology training courses and at exhibitions in England and Scotland continues to provide valuable opportunities for informal discussions on current issues. Involvement with other organisations included *Practical Biology*, a web-based resource, for which extensive advice on protocols for practical work on nitrogen fixation was provided, the British Mycological Society (BMS, a MiSAC sponsor) for a proposed practical using the oyster mushroom, and serving as publications referee for *Science in School*, a European education journal.

Other activities

The main business of MiSAC was conducted at three meetings of the Committee and there was an additional meeting for judging the annual competition. The business meetings were held at the headquarters of the Society of Biology, a MiSAC sponsor. Members continued to promote the work of MiSAC through their various roles on a wide range of other organisations, thereby also remaining informed about and contributing to discussions on current trends and future developments in school education. MiSAC materials were distributed in information packs for participants on the SGM and CLEAPSS practical microbiology courses. Liaison was maintained with suppliers of biological materials to schools and with publishers.

Many contributions were made in support of other organisations throughout the UK. Dr Margaret Whalley again presented and offered advice on the use of MiSAC materials at the annual SB Scottish Teachers' Conference in Stirling and, for the first time, at the ASE Scotland Conference in Dunblane. Participation in the latter event, which was done on a trial basis, included a joint workshop with the Scottish Schools Equipment Research Centre (SSERC).

Dr John Grainger represented MiSAC at meetings of NUCLEUS to discuss arrangements for the Biology in the Real World lecture programme for the 2010 ASE Annual Conferences and demonstrated MiSAC practical materials at Bioscience Evening events organised by RBG Kew at Wakehurst Place and Kew. With Dr John Schollar (NCBE), he delivered SGM training courses in practical microbiology for teachers, technicians and PGCE students at the universities of Belfast, Cardiff, Kingston, Leeds and Loughborough, the National Science Learning Centre, York and the East Midlands Regional Science Learning Centre, Leicester. This ended MiSAC's involvement in SGM courses during which the 'Two Johns' delivered 100 courses over a period of 10 years.

Future activities

Development of a new MiSAC web site will be a major activity. A working party has been set up to oversee the project and has chosen Indent Design Ltd, Reading to do the work. Development of new titles in the printed series *MiSACactivities, MiSACbriefings, MiSACmatters* series will continue and *MiSAChelps* will be created for the web site only.

The topic for the 23rd Annual MiSAC competition for 2011 will be *Helpful and harmful fungi* wholly funded by special sponsorship from BMS. MiSAC will take a full part in the ASE Annual Conference in Reading in January 2011 by having an exhibition stand and workshop and jointly sponsoring a talk in the *Biology in the Real World* programme.

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Committee membership 2009-10 (with affiliations)

Chairman: Dr John Grainger (University of Reading)

Vice-Chairman:Mr Peter Fry (SB) Secretary: Mrs Janet Hurst (SGM) Treasurer: Dr Margaret Whalley (British Mycological Society)

Assistant Secretary:Mrs Dariel Burdass (SGM)

Lay members:Professor Martin Adams (SfAM); Mr Phil Bunyan (CLEAPSS); Mrs Kath Crawford (SSERC); Mrs Mary Philpott (CLEAPSS), Dr John Schollar (NCBE), Mr John Tranter (ASE)

Finance

The sound financial position that MiSAC has developed over recent years is thanks largely to the generosity of our sponsors through their annual contributions and their further support in ways that cannot be seen from the accounts. These include additional special sponsorship in turn to cover the full costs of the annual competition, travel costs of sponsor representatives to attend committee meetings, provision of meeting rooms and laboratory facilities, and distribution of MiSAC materials. In addition, the cautious approach adopted towards attending conferences and exhibitions in terms of their cost effectiveness has also contributed towards the satisfactory end of year balance. However, this will be depleted significantly in the forthcoming year as a result of printing costs and, particularly, development of a new MiSAC web site.

The annual return was made to the Charity Commissioners.

Acknowledgements

MISAC is most grateful to all sponsors for their continued support. The generous amount of voluntary time willingly given by MiSAC Officers and the other Committee members is also gratefully acknowledged. In addition, we are greatly appreciative of the work of the Honorary Auditor.

The Committee was pleased to welcome Mrs Mary Philpott (CLEAPSS) to its ranks but greatly regrets the loss of two members, both of long standing. Mrs Janet Hurst (Secretary) stood down on taking retirement from her position at SGM after serving on MiSAC for 13 years during which time she made an invaluable contribution, in particular by using her influence to enable MiSAC to reach its current position of strength in terms of both activities and influence. But it gives MiSAC much sadness to record the sudden death of our Vice-Chairman, Mr Peter Fry, who was a member for 36 years and gave the benefit of his vast experience by serving also as Chairman and on many MiSAC working groups, notably the management group for the project which led to the publication Practical Microbiology and Biotechnology for Schools and the writing group for Practical Microbiology for Secondary Schools. Both colleagues are greatly missed.

Dr John Grainger, Chairman

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