



# Annual report 2008-09

## Summary

The 40th anniversary of MiSAC's foundation was marked in several ways. The 2009 MiSAC annual competition was sponsored by the Society for General Microbiology. Members contributed to a range of meetings, courses and exhibitions in various parts of the UK, including events organised by the Society for General Microbiology, the Institute of Biology Scottish Branch and the National Science Learning Centre, and in Malaysia. MiSAC participated as an exhibitor at the 2009 Annual Conference of the Association for Science Education in Reading and co-sponsored a talk at the conference in the 'Biology in the Real World' programme. New products in the MiSAC activities, MiSAC briefings and MiSAC helps series continued to be developed. 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.

## MiSAC 1969-2009

A series of special activities was organised to celebrate the 40th anniversary of MiSAC's foundation. This included a workshop and reception at the Association for Science Education Annual Conference, publication of an article on the history of MiSAC, a re-design of MiSAC materials and the commissioning of a special folder to contain them. Details are given in relevant sections of this report.

## Advisory work

Although the customary range of enquiries from school teachers and technicians on aspects of health and safety continued, there was encouragingly a much greater emphasis than hitherto on the use of micro-organisms in practical work, perhaps reflecting an increase in interest in the microbiological aspects of the new GCSEs. Included were questions about

sources and suitability of cultures and culture media and, a new and encouraging development, the use of the microscope. The need for clarification of protocols for practical work arising from poor support for the specifications and associated textbooks was still very much in evidence. Some enquiries from schools were in connection with post-16 work and also at that level there were requests for clarification of theoretical background information. It was not only schools that requested help, e.g. the Wellcome Trust asked for comment on a draft text of its 'Survival Rivals' practical activity for the Darwin anniversary year, and other requests came from a writer of an A-level Biology text and an amateur enthusiast of pond life.

Enquiries come either directly to MiSAC or more usually via the Society for General Microbiology (SGM) and CLEAPSS, two of our sponsors. This opportunity for readily-available exchanges of expertise with sponsors demonstrates the great mutual benefit of this relationship. Participation in the

SGM programme of courses on practical microbiology and involvement in exhibitions in England and Scotland continue to provide valuable opportunities for MiSAC to interact directly with a wide range of teachers, technicians and PGCE students, biological suppliers and examination boards.

## MiSAC Competition 2009

The objective of the 21th annual MiSAC competition, "Microbes and Climate Change", was to produce a poster to illustrate to a peer group one important aspect of the role of microbes in climate change. As usual, the competition was open to two entry groups, Key Stage 3 and Key Stage 4 (GCSE). The topic was chosen with the aim of developing an appreciation and understanding of the role of microbes in contributing to climate change and their potential for providing solutions to some of the problems caused. We are most grateful to SGM for providing special sponsorship for the competition in addition to its support as one of the main sponsors of MiSAC.

The competition was publicised by mail to all secondary schools, on the MiSAC web site, in the national educational press, at the Association for Science Education (ASE) Annual Conference, the Scottish Teachers' Conference at Stirling, and to participants in SGM and CLEAPSS training courses.

The sponsor's Deputy Chief Executive Janet Hurst and Education Manager Darrel Burdass who are both members of MiSAC joined the Chairman and other MiSAC members for the judging which took place at SGM headquarters in Reading.

Although the number of entries this year was by no means a record, the interest shown was particularly encouraging bearing in mind that the topic was a challenging one, lying as it does outside the mainstream of what is usually taught. It was clear from the reactions

**MiSAC**  
MICROBIOLOGY IN SCHOOLS ADVISORY COMMITTEE

celebrating 40 years  
1969-2009

- advice on microbiology across the curriculum
- practical teaching resources
- guidance on good laboratory practice
- factsheets
- annual prize competition
- courses and conferences
- website with downloadable resources
- email helpline

Sponsors: British Mycological Society; CLEAPSS; Institute of Biology; NCBIE; Society for Applied Microbiology; Society for General Microbiology; SSERC

received that many students enjoyed exploring a subject that extended their knowledge beyond the curriculum. There were some 350 entries involving almost 600 students from nearly 60 schools and colleges drawn from England, Wales, Scotland, Northern Ireland and Eire. As usual, KS3 provided the larger entry group but it is encouraging to see a continuing increase in support from the KS4 age group which this year provided almost a half of the entries. The recent and welcome trend for some schools to send entries for both age groups, though still small in number, was maintained.

The judges looked particularly for originality and balanced content allied with a strong visual impact achieved through good presentation, and effectiveness in communicating sound science to a peer group. The high quality of many entries in both age groups was very impressive and the creative approach taken, particularly in the KS4 group, was most welcome.

There was strong evidence of a good grasp of the purposes and nature of a poster, perhaps aided by the guidance provided for entrants. Other good features were evidence of scientific merit, the use of entrants' own words, e.g. not entire text taken directly from the web, and the use of attractive and relevant illustrations to reinforce the message. It was again very encouraging this year to see an excellent level of adherence to the entry rules, i.e. a poster of A3 size to illustrate one important aspect of the role of microbes in climate change.

Money prizes totalling more than £1,000 were awarded to winning students and to their schools. The values of the prizes to students were First Prize £50, Second Prize £30 and Third Prize £20, and to their establishments £250, £125 and £70 respectively. Prizes and commendations were awarded to students from the following schools:

- **Key Stage 3 Age Group:** First Prize - Edgbaston High School, Birmingham; Second Prize - Portsmouth Grammar School; Third Prize - Orchard School, South Leverton, Lincolnshire; Highly Commended - Portsmouth Grammar School.
- **Key Stage 4 Age Group:** First Prize - St Nicholas School, Fleet, Hampshire; Second Prize - The King's School, Ely; Third Prize - Loughborough Grammar School and The King's School, Ely; Highly Commended - St Mary's School, Colchester and Loughborough Grammar School.



MiSAC member John Schollar delivering an SGM course

In addition, each entrant was awarded a certificate, a provision that is always much appreciated, and all participating schools received a pack of support materials for teaching microbiology. Each school also received a critique of the competition entries. The results of the competition were announced on the MiSAC web site and reports of the competition were published in *Mycological News*, *Microbiologist* and *Microbiology Today*, the house magazines of, respectively, British Mycological Society (BMS), Society for Applied Microbiology (SfaM) and SGM.

The administration of the competition takes an immense amount of time and effort for which we are again grateful to SGM for providing facilities through the MiSAC Secretariat.

### ASE Annual Conference 2009

In recent reports reference has been made to the constant review that MiSAC makes of the value for money of being an exhibitor at the Association for Science Education (ASE) Annual Conference in view of the increasing costs of taking part and the apparent decrease in numbers of practising teachers attending the conferences. However, we decided to take a full part in the conference in Reading in January 2009 because of previous experience of a good attendance at that venue and the saving in costs on travel and accommodation because several MiSAC members live locally.

MiSAC and SGM shared an exhibition stand and jointly sponsored an excellent talk by Dr Helen Fletcher, University of Oxford, on vaccines against tuberculosis in the full-day lecture programme 'Biology in the Real World' organised by NUCLEUS of which MiSAC is a member.

In addition, as part of the 40th anniversary

celebrations, MiSAC organised four successful one-hour practical microbiology workshops for the new GCSEs for which the National Centre for Biotechnology Education (NCBE), a MiSAC sponsor, provided many of the materials. Also SGM most generously sponsored a well-attended reception in the course of which there were short addresses by the MiSAC Chairman, the University of Reading Pro Vice-Chancellor for Teaching and Learning Professor Rob Robson, and the ASE Immediate Past-Chairman Graham Kingsley.

### Committee meetings

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 Institute of Biology, also a MiSAC sponsor.

### Members' activities

Members continued to promote the work of MiSAC through their various roles on a wide range of organisations as members of their councils, boards and specialist committees. Such involvements, together with their own professional activities, also enable members to remain informed about and contribute to discussions on current trends and future developments in primary and secondary education. Valuable links were also maintained with suppliers of biological materials to schools.

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 IoB Scottish Teachers' Conference in Stirling, an event that provides an invaluable opportunity for consultation with and promoting the work of MiSAC to Scottish teachers. While overseas, Dr Whalley also

distributed MiSAC materials at a Microbiology Society of Malaysia conference and workshop where schoolteachers welcomed the materials as examples of good practice. Dr John Grainger represented MiSAC at meetings of NUCLEUS to discuss arrangements for the 'Biology in the Real World' programme for the 2009 and 2010 ASE Annual Conferences, wrote an account of MiSAC's first 40 years for publication in SGM's *Microbiology Today* (August 2009 issue), gave a workshop for technicians in Worcestershire, and with Dr John Schollar completed the 8th year of delivering SGM training courses in basic practical microbiology for teachers, technicians and PGCE students. The venues were the universities of Kingston, Leeds (2 courses), Plymouth, Reading, Surrey and Swansea, the National Science Learning Centre, York and the East Midlands Regional Science Learning Centre, Leicester (3 courses including an advanced course). During the year the landmark of 70 courses was passed. The Chairman represented MiSAC at a Wellcome Trust celebration of the Darwin anniversary.

### MiSAC materials

As part of the activities to mark MiSAC's 40th year, the opportunity provided by a need for reprinting existing materials was taken to re-design them and to introduce a number in each title as an aid to distinguishing between the different publications in a series. In addition, a special celebratory folder for holding the materials was commissioned. The writing of 'Sourcing, maintaining and using cultures' in the MiSAC briefings series was completed. MiSAC materials were distributed in information packs for participants on the

SGM practical microbiology courses and those run by CLEAPSS (a MiSAC sponsor), through SGM mailings, and at the ASE Annual Conference and the IoB Scottish Teachers' Conference, and in Malaysia.

### Finance

The financial position of MiSAC is sound thanks entirely 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 additional support from SGM for provision of the MiSAC Secretariat which includes management of the website and inclusion of MiSAC materials in SGM mailings.

Also, we take a cautious approach to attending conferences and exhibitions by being discriminating in terms of their cost effectiveness. This has led to expenditure over recent years being low and the accrual of a healthy balance. However, this will be depleted in the forthcoming year as a result of significant costs for printing and for design of the new independent MiSAC website (see 'Future activities').

The annual return was made to the Charity Commissioners.

### Future activities

Hitherto, MiSAC has been most fortunate that SGM has generously hosted the MiSAC website on its own website at no cost. However, impending changes to the SGM website mean that this will no longer be

### Committee membership 2008-09 (with sponsor representation)

**Chairman:** Dr John Grainger  
**Vice-Chairman:** Mr Peter Fry (IoB)  
**Secretary:** Mrs Janet Hurst  
**Treasurer:** Dr Margaret Whalley  
**Assistant Secretary:** Mrs Dariel Burdass  
**Lay members:** Professor Martin Adams (SfAM); Dr Susan Assinder (SGM); Mr Phil Bunyan (CLEAPSS); Mrs Kath Crawford (SSERC); Dr Eleanor Landy (BMS); Dr John Schollar (NCBE); Mr John Tranter

possible. Therefore, a major project for the forthcoming year is the creation of an independent MiSAC website.

Work will continue on producing, developing and extending the series of *MiSAC activities*, *MiSAC briefings*, *MiSAC matters* and, for the MiSAC website only, *MiSAC helps* will continue.

The topic for the 22nd annual MiSAC competition for 2010 will be "Food safety and Barbecues" wholly funded by special sponsorship from SfaM. MiSAC and SGM will jointly sponsor a talk on 'superbugs' in the 'Biology in the Real World' programme at the ASE Annual Conference in Nottingham in January 2010 but for cost-benefit reasons will not take an exhibition stand. MiSAC will be an exhibitor again at the Society of Biology (SB, formerly IoB) Scottish Branch Teachers' Conference in 2010 and, as a new venture in our 40th year, at the ASE Scotland Region Conference. Involvement in delivery of the SGM programme of training courses in practical microbiology will continue as it enters its 9th year.

### 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 gratefully acknowledged. We are also greatly appreciative of the work of the Honorary Auditor.

With great regret, the Committee lost the services of Dr Susan Assinder (SGM representative) at the end of the year on completion of her term of office as SGM Education Officer and during the course of the year Dr Eleanor Landy (BMS representative) through a career change. Their support and experience and influence in the wider field of microbiology education will be greatly missed.

Dr John Grainger, Chairman



Delegates at an SGM course