

Promoting microbiology in schools and colleges for more than 50 years

CHAIRMAN'S ANNUAL REPORT 2019-2020

Summary

The Chairman attended an investiture for the presentation of decorations to those listed in the Queen's Birthday Honours. Celebrations of the 50th year of the foundation of MiSAC continued with a reception and exhibition. The 32nd MiSAC Annual Competition in 2020, *VaccAid: Fighting Infection*, was sponsored by MiSAC. The management of the MiSAC web site was strengthened and the web pages were updated, some with new publications. MiSAC continued to offer authoritative advice to schools, colleges and other organisations in the UK. Members contributed to a range of meetings, talks and exhibitions in the UK and abroad including continued collaboration with schools in SE Asia. The Committee held only one face-to-face meeting because of the Covid-19 pandemic but continued its work electronically.

Covid-19 pandemic

The normal activities of MiSAC have been adversely affected by the Covid-19 pandemic. Our second and third committee meetings were cancelled after the national lockdown was initiated. Since then, the work of the MiSAC committee has necessarily been conducted by email communication.

Notable events

The Chairman attended an investiture at Buckingham Palace, conducted by HM the Queen, for the presentation of the MBE insignia. The award of this honour equally pays just tribute to the many individuals and organisations, past and present, for the ideas and support given so ably and willingly to MiSAC over the past 50 years.

The Association for Science Education Annual Conference, held at the University of Reading, provided an added opportunity to mark the 50th year of the foundation of MiSAC. A reception and exhibition of MiSAC documents and publications were organised to which present and former supporters of MiSAC, representing eighteen organisations, were invited.

MiSAC 32nd Annual Competition 2020, *VaccAid: Fighting Infection*

The theme of vaccination was chosen for the 2020 competition a year before the onset of the Covid-19 pandemic. The competition was sponsored by MiSAC.

The aim of the competition was to increase an understanding among teenagers of the benefits of vaccination in fighting infection. The requirements maintained the well-established approach of basing the competition on a topic that is associated with school curricula but with specifications that require students to explore material beyond the curriculum.

Publicity for the competition involved an email campaign conducted by a mailing house in which a flyer, giving background information and instructions for submitting entries, was sent to 5,800

schools throughout the UK. This was supplemented by postal delivery of the flyer to 550 schools, including those which had entered previous competitions, the distribution of 300 flyers by the NCBE and CLEAPSS, and email posting to all North Wales secondary schools by the Science Advisory team. Further publicity was provided via the MiSAC web site, by MiSAC's regular sponsors, the Royal Society of Biology, the Biochemical Society and via social media.

As a result of the pandemic, the closing date for the competition has been extended from April 6th to October 31st. Although MiSAC fears that the disruption of the UK educational system will affect the number of entries severely, the response so far is encouraging. Some schools have incorporated the competition into their online teaching programmes.

MiSAC web site

After MiSAC changed the management of its web site back to Indent Design Ltd, work has continued to update the site. The annual competition page now includes information on the previous UK competitions, and those held in Thailand and China.

The collection of 50th Anniversary Articles has been extended by an article on malaria, alongside four new *MiSACbriefings* describing *Fungi at Work*. (See MiSAC publications below for details.)

Work is ongoing to update the Copyright web page, stimulated by publication of the anniversary articles collection-

Indent Design recommended that the MiSAC web site should be moved to another server to improve the stability and performance of our web site. This transfer has now been completed successfully.

MiSAC publications

MiSAC*matters* 50th Anniversary Articles

In 2019, to celebrate the 50th anniversary of the founding of MiSAC, 33 articles on a wide range of microorganisms and their activities were published on the MiSAC web site. Since then, a further article

has been added to the collection: *Malaria parasite transmission: starting the journey from A to B and back again* by Andrew P. Waters, a distinguished parasitologist.

The interest generated internationally by the anniversary articles is reflected by the request received from a professor at the University of Gothenburg, Sweden for permission (readily granted) to translate several articles into Swedish for publication in a web-journal *Bioscience Explained*.

MiSACbriefings

David Moore, an eminent mycologist, has written four MiSACbriefings using the theme *Fungi at Work*. These explore the activities of fungi, including their importance in nature, and explain how these microbes are of considerable value to humans. The topics explored are: *Producing life-saving drugs*, *Feeding farm animals*, *Making plant roots work* and *Recycling leaves and wood*.

ASE Annual Conference, January 2020

The Chairman provided two talks to Association for Science Education members attending the conference at the University of Reading: *Studying microbes in natural materials* and *Eats, roots, soils and leaves*. The latter talk formed part of *Living Systems and their Environment*, the 17th annual *Biology in the Real World* lecture programme organised by NUCLEUS. Both talks included references to the collection of 50th Anniversary Articles that were published on the MiSAC web site in autumn 2019.

Advisory work

The Treasurer has been invited to work with the South East Asia Ministries of Education Organisation (SEAMEO), which is part of UNESCO, at its STEM Education Regional Centre in Bangkok, to develop projects in Thailand and SEAMEO Regional Countries, linked to earlier MiSAC-based activities.

SEAMEO STEM-ED has made a request to draw up a Memorandum of Understanding with MiSAC in advance of the proposed collaboration over implementing the MiSAC Schools Microbiology Competition in countries of SE Asia.

The Treasurer has held a video conference with SEAMEO Thailand, Prof Vikineswary Sabaratnam, Malaysia and Prof Diana Waturangi, Indonesia to discuss the feasibility of introducing a schools' competition in microbiology in the three countries as a pilot for future expansion. There is currently no programme of microbiology education in schools in any of these countries. The 'microbiology of street food' was agreed as a topic which would have wide appeal; everyone in these tropical countries has experience of such food. Preliminary arrangements have been made in Indonesia and Malaysia and further video meetings will be held in due course.

The Treasurer has also established valuable links with teachers in north Wales through the activities of the North Wales Science Advisor and STEM Support Advisor. It is hoped that entries for the 2020 and 2021 annual competitions can be encouraged from schools which have only recently been introduced to the range of MiSAC resources. Enquiries are ongoing to create similar links with schools in mid and south Wales.

The Chairman attended a Regional Road Show at Reading University in November 2019 organised by the Microbiology Society. This well-attended event explored the theme of *Microbiology in the Food Industry* and provided the Chairman with an opportunity to discuss MiSAC activities with the Society's President and Chief Executive.

The Chairman also contributed an article to the Microbiology Society's magazine 'Microbiology Today', 46 (4), 190 (November 2019). Its title, *Microbiology Society and MiSAC: 50 years of mutualism*, reflected how the Society, one of MiSAC's founding sponsors, and MiSAC had worked together in supporting school microbiology over the past 50 years.

Future activities

In 2021, the 33rd Annual MiSAC Competition will be sponsored by the British Mycological Society which will celebrate its 125th anniversary. The chosen topic is *Fungi and Climate Change*. Students will be asked to prepare information for pages on a social-media web site on climate change, aimed at teenagers. Working in consultation with the sponsors, a subcommittee of MiSAC officers has prepared the flyer to advertise the competition. Publicity will begin after the 2020 entries have been judged.

MiSAC will also contribute to the celebrations of the BMS anniversary by submitting an article to the May issue of 'Microbiology Today'. This will explore the work of the BMS in microbiology education, including its longstanding financial support for MiSAC and the regular provision of sponsorship for the annual competition.

The microscopy workshop for teachers and technicians at the University of Reading, which MiSAC and the Quekett Microscopical Club had planned, has been postponed because of the Covid-19 pandemic. It is hoped that circumstances will have improved in 2021 to enable a session to be rescheduled.

Finance and sponsorship

MiSAC finances remain relatively healthy, thanks to prudence in expenditure and the much-appreciated support from its sponsors:

- *British Mycological Society (BMS)*,
- *CLEAPSS*,
- *Microbiology Society (MS)*,
- *NCBE*,
- *The Quekett Microscopical Club (QMC)*,
- *SSERC*.

Their generosity provides an annual financial contribution, meeting rooms and laboratory facilities.

MiSAC continues to limit its expenditure by reducing commitments at exhibitions and conferences which would not be cost effective. Also, the costs to sponsors of the annual competition have been reduced by requiring schools to print the certificates that entrants receive.

The annual return was made to the Charity Commissioners.

MiSAC Committee

At the beginning of 2020, Phil Bunyan, Assistant Secretary, retired from the MiSAC committee. His long association with MiSAC began when he became Director of CLEAPSS. His wisdom and support in composing the minutes of committee meetings will be sorely missed. At the same time, MiSAC was saddened to hear of the illness of Kit Brownlee which required her to relinquish her representation of the Quekett Microscopical Club. We will miss her special experience and influence. Phil Greaves has taken over her position on the committee.

Committee membership 2019-2020 (with affiliations)

Chairman: John Grainger, MBE
(University of Reading)
Vice-Chairman: John Schollar (NCBE)
Secretary: John Tranter (ASE)
Treasurer: Margaret Whalley (BMS)
Lay members: Nathan Smith (BMS)
Jason Harding /
Ai-Linh Tran (CLEAPSS)
Rachel Exley (MS)
Phil Greaves (QMC)
Kate Andrews (SSERC)

Acknowledgements

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