



Report on the MiSAC Annual Competition 2012

Fit for purpose: microbes and healthy living

The requirement of the 24th Annual Microbiology in Schools Advisory Committee (MiSAC) Competition was to produce a one-page, illustrated news article for a healthy living magazine with the main aim of improving understanding of the contribution of the activities of microbes to a healthy life style. The broader aim was to use this knowledge for promoting the importance of healthy eating habits. Special sponsorship for the competition was generously provided by Yakult UK Limited.

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As usual, entries were invited in two groups: Key Stage 3 and Key Stage 4 (Secondary 1/2 and 3/4, respectively, in Scotland). More than 60 group entries from 55 schools and colleges yielded over 400 separate entries consisting of some 250 from KS3 (S1/2) and 160 from KS4 (S3 /4) in which more than 500 students were involved from England, Wales, Scotland, Northern Ireland and Eire, and from British schools in Belgium and Germany. About a half of the participating establishments took part for the first time, joining those from the large pool of frequent participants that looks forward to the competition as an important annual event.

Entrants were required to consider only one aspect of the role of microbes in healthy living. Guidance was provided through a list of 6 suggested aspects but choice was not limited to the list. The aspect that found most favour overall from those suggested was 'mycoprotein', most noticeably in the KS4 (S3/4) group, closely followed, particularly in the KS3 (S1/2) group, by 'the normal flora of the gut'. There was also considerable interest in 'modification of the normal gut flora (probiotics, prebiotics)'. Smaller

numbers of entries dealt with 'micro-algae', 'fermented oriental foods' and 'food supplements (vitamins, amino acids, enzymes)'. Yeasts were the focus of the few who chose their own aspect.

The Chairman and other members of MiSAC were joined on the judging panel by representatives from the science team at Yakult UK: Dr Linda Thomas (Science Director and a microbiologist) and Leanne Hewitt (a nutritionist). The judges looked particularly for those entries which met the required brief of being written as an article, taking account of the intended readership, confining attention to one aspect, and incorporating the specified points, i.e. names and roles of microbes and their possible benefits. Many entries met these stringent requirements well which made the adjudication a difficult but rewarding process.

Appropriately illustrated and attention-grabbing layouts found favour as did evidence of good science and use of an entrant's own words. The requirement to give a name to the magazine, a title to the article and sources of further information provided an outlet for imaginative and witty talents. For the KS4 (S3/4) entry group, the continuing increase in quality and participation rate (a record 40% of all entries) was welcomed. When writing the name of a micro-organism, students need to learn the rule of nomenclature whereby upper case and lower case initial letters are used for the genus and species, respectively, e.g. *Lactobacillus acidophilus*. Also there is still a long way to go in understanding the correct use of singular and plural cases, e.g.

'alga', 'bacterium', 'fungus', 'mycelium' (singular); 'algae', 'bacteria', 'fungi', 'mycelia' (plural).

Money awards totalling £1,000 were made to all 1st, 2nd and 3rd prize winners and their schools or colleges; in addition, several entries were Highly Commended for scientific merit or design. All other student participants were awarded a certificate of entry, a much appreciated feature of the competition, and Yakult has kindly provided some microbiology teaching resources for each establishment.

MiSAC thanks all the students who entered this year's competition and also their teachers for encouraging them and for providing guidance. The topics chosen for the competition are always linked to the National Curriculum but the requirements are framed so as to draw students into looking beyond its confines. It is hoped that this approach has provided an enjoyable experience that has also increased an interest in microbiology and will encourage interest in future MiSAC competitions. The topic for 2013 is Facebug: a social media network for microbes, sponsored by the Society for Applied Microbiology. (For details see the MiSAC Annual Competition page on www.misac.org.uk)



The MiSAC competition 2012 judging panel