

Editorial

The *Young Scientists Journal* is proud to present Issue 12. It features articles on some of the most debated areas of science – genetically modified crops, animal testing, and drug resistance in bacteria – as well as some on topics that you may not know much about, such as proposed methods for lowering the levels of oestrogen in our water supply. I hope that you find this issue informative, interesting, and inspiring. On my last point, we are always looking to receive articles from budding young scientists between the ages of 12 and 20 who would like to see their own work in print.

Following on from the interview with Sir Harold Kroto, published in Issue 11, this issue contains two more interviews with Nobel Prize-winning scientists. The first is with Hamilton Smith, one of the discoverers of restriction enzymes, and the second is with Jean-Marie Pierre Lehn, who was rewarded for his work on the development of cryptates. Allen Zheng's article on the development of the atomic theory continues the Nobel theme as some of the most famous winners of the Physics prize (Thomson, Bohr, Schrödinger, and Heisenberg) were instrumental to advancements in this field.

An area that has seen progression in recent years thanks to our greater understanding of DNA is biotechnology. Karen Wang's article probes the idea of genetically modified food, which can present the advantages of being more nutritious, delivering vaccinations, and even disease resistance. The concerns about this technology include those about risk to human health and the possibility of genes spreading, allowing 'super weeds' to develop. This phenomenon, in bacteria, is posing one of the biggest challenges to healthcare; our supply of antibiotics for which there are no strains of resistant bacteria is diminishing. The article 'Evolution of drug resistance in bacteria' explains how these varieties have increased in prevalence.

The modern pathway in the development of new drugs often involves testing on animals, which has proved to be a controversial practice. Shany Sun explains why she believes that it is worthwhile, as without it challenges such as the antibiotic deficiency, cancer, and acquired immune deficiency syndrome (AIDS) would be overcome at a much slower rate. Another potential avenue for the employment of animals is in earthquake forecasting. Claire Hartnett presents case studies, theories, and quotes from specialists that she procured during her investigations in this well-researched piece.

Our first research article in this issue is a report on fieldwork that a group of Spanish volunteers undertook to help protect their local wildlife. Their tale about an unexpected find shows that investigative science is a possibility for every caliber of scientist. The other paper contains full details about an experiment studying how the density of the stomata on lavender leaves varies under different light intensities.

Finally, this issue is my last as the Chief Editor. Fiona Jenkinson shall fill my role while Chloé Forsyth replaces her as the Head of the Editorial Team. Fiona's work alongside me over the past year gives me confidence that she will take to the post with aplomb, and I look forward to seeing what they both will bring to the journal. I would like to thank all of the authors, editors, and members of the International Advisory Board (IAB) who have helped make my time working on the journal both rewarding and thoroughly enjoyable.



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