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Biochemistry beyond the lab

by Heather Doran, Science editor

I love this issue for the diversity of the articles within it. Biochemistry knowledge has impacted on global health and nutrition and is also supporting new approaches to slow climate change. This issue covers the past and the present and looks to the future for biochemistry. It could have been a very large issue!

The UK has around 90,000 people employed as biochemists across industry, academia and healthcare. They work in areas such as forensic science, health and agriculture. Earlier this year our issues have focused on the significant contributions biochemistry has given to the COVID-19 pandemic, and there is a new article on that topic in this issue. More surprising might be the biochemistry of bacteria that support the generation of electricity or the removal of plastic pollution.

Biochemistry emerged as a field of academic study in the very early 20th century. The first chair of biochemistry in the UK (at the University of Liverpool), Benjamin Moore was also responsible for founding the *Biochemical Journal* in 1906 and was a founder of the Biochemical Society in 1911. I felt, for this issue, it's worth a look back at the establishment of biochemistry as a field of biology back in the early 1900s.

Biochemistry has had an extremely busy century, uncovering the processes and proteins within living organisms. I have to mention the work of Frederick Sanger who won the Nobel Prize in chemistry twice, the first for his work on determining the chemical structure, the amino acid sequence, of insulin in 1958 and then for his work on determining the base sequence of nucleic acids in 1980. The 100th anniversary of insulin was celebrated by a special issue of *The Biochemist* earlier in 2021. Dorothy Hodgkin went on to determine the structure of insulin through X-ray chromatography. Of course, these firsts and the development of the methods led to the discovery of many other protein structures, an important step in visualizing the minutiae of life **g** another theme we gave an issue to earlier this year.

Studying, working in or researching biochemistry opens up a new, very small world where your knowledge gives you privileged access. Each issue I edit teaches me more about new advances in this field, which moves forward at a rapid pace, as methods for biochemistry evolve and technology becomes more powerful, allowing us to see and understand more about the molecular level. So, whether you are a student of biochemistry, a seasoned biochemist, a former biochemist or just have an interest in this fascinating area you will definitely find something new in this issue.





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