



Medical Writing explores the many faces of biotechnology

This *Medical Writing* issue focuses on the crucial role of medical writing and communications in biotechnology and product development in healthcare. In the pharmaceutical and medical device industries, biotechnology uses biological systems and living organisms in R&D and production processes for product development. Some biotechnologies include biologic and biosimilar pharmaceuticals, vaccines, and advanced therapy medicinal products (ATMPs), including gene and cell therapies and tissue engineered products.

Biotechnology is not a new topic in *Medical Writing*. Contributions to the Biotechnology section, which I edit, have shown how biotechnology is applied in different ways. It supports the pharmaceutical product lifecycle, for instance, in non-clinical

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work using *in silico*, *in vitro*, and animal testing methods as outlined by **Vanessa Zaitz Bittencourt** and **Sheng-Chih Chang** in our March 2022 issue.¹ Biotechnology and artificial intelligence (AI) interface where AI makes finding healthcare solutions easier and faster, wrote **Ahmad Nazzal** in our June 2022 issue.² And some biotechnology might seem a little ... curious, as written about by **Jana Kubátová** in our December 2022 issue, where she described how one person's healthy

gut microbiota can be transplanted *via* their faeces to help a person with unhealthy gut microbiota.³ Indeed, biotechnology is a platform technology that is applied so broadly that some applications seem unusual.

Medical Writing provides readers with information to help them in their careers, and this issue highlights the broad applications biotechnology has in areas supported by medical writers. It is important to pay attention to how individuals define biotechnology because definitions vary depending on a person's background, for example, academic vs. industrial.

Biotechnology is used in biomanufacturing, also known as bioproduction. "Biomanufacturing" and "bioproduction" are terms that are familiar to the pharmaceutical industry.⁴ They are also familiar to industrial



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biotechnology used outside the pharmaceutical industry. **Jim Philp's** article "Biomufacturing and One Health" outlines the significance of biomufacturing to One Health. One Health focuses on human-animal-environment interface health threats. Jim's article is particularly interesting to our readers because it is from the perspective of someone who has never worked in the health and medical industry. Jim has extensive biotechnology experience in academia and industry and, since 2011, in government at the **Organisation for Economic Co-operation and Development** as a policy analyst. Considering One Health interfaces, Jim's insights are important from an environmental health and sustainability perspective.

Other feature articles are more familiar in a health and medical industry setting. EMWA's Editor-in-Chief **Raquel Billiones** reports on answers to five questions about non-clinical medical writing put to Astra Zeneca's **Ruggero Galici**. Real Life Sciences' **Elliot Zimmerman** advises on how to overcome confidential information challenges faced by study sponsors today, including biotechnology company sponsors. Freelance medical writer **Archana Nagarajan** educates us on advances in CRISPR systems and gene therapy. CRISPR is considered an ATMP so might be regulated in Europe alongside gene therapies, somatic-cell therapies, and tissue-engineered products. Avi MedComms' **Avi Saha** educates us on the Pharma 4.0 CAR T cell therapy paradigm shift. Regulatory Science Manager and Writer **Ivana Turek** highlights information on cannabinoids and psilocybin derived from plants for medicinal use in cancer patients. Freelance medical writer **Anna Jesionek** discusses how to write for scientific journals about pharmaceuticals developed from plants. And Morula Health's **Lucy Hargreaves** discusses the evolution of biotechnology from ancient civilisation to the modern day and how medical writing developed alongside it.

While perhaps not biotechnology itself, support services personnel like those in biobanks and supply chains require an understanding of biotechnology, particularly from a storage temperature and mechanical vibration perspective. Mechanical vibrations and suboptimal temperatures can cause biotechnology product defects that are risky for patients and bad for company reputations. *So, don't drop biotechnology product boxes on a transportation cross dock and leave them there in 40°C heat!*

Biotechnology is controversial. My view is that biotechnology is more benign than it is given credit for and it has the potential to make a positive difference in people's lives.^{5,6} I hope this sentiment is reflected in this issue. I want to thank feature and regular section article authors for their contributions. I also want to thank Biotechnology section contributors from earlier *Medical Writing* issues.

Jen



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About the guest editor

Jen Bell worked in pharmaceutical and medical device manufacturing and distribution quality management roles from 2010 to 2018. She has a life science education and is interested in One Health concerning threats in the animal-human-environment interface. Jen is passionate about the potential for biotechnology to improve lives. Today, she is a freelance biotechnology consultant and medical writer.

Meet EMWA's AI Working Group

The group focuses on providing an overview of the AI landscape for our members – its opportunities, future potential, ethical framework, risks, and limitations and the impact AI will have on the medical writing role.

The AI Working Group will actively discuss how we will address this transition in our profession.



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