Special Issue

Neural Networks and Deep Learning for Biosciences

Message from the Guest Editor

Biosciences are becoming increasingly data-centric and data intensive. Diagnostics and related methodologies that once exclusively relied on experts to characterize cells, tissues, and medical information are now using big data computational techniques for decision making. Deep learning encompasses machine learning algorithms that combine a network of successive processing layers of data representation.

Deep learning has shown remarkable success in numerous life sciences disciplines, but amid concerns for lack of biological context. Nevertheless, as the field of biosciences rapidly evolves, so do the data and the computational resources available to researchers. Thus, the emerging combination of deep learning with biosciences, although challenging, can lead to high-impact goals in healthcare analytics, biomedical diagnosis, research in biology (including biophysics and biochemistry), personalized medicine, and pharmaceutical development.

This Special Issue is open for innovative contributions related to the above-mentioned topics. Manuscripts discussing the ethical considerations of deep learning in healthcare are also welcome.

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Deadline for manuscript submissions

31 January 2026

Applied Biosciences

an Open Access Journal by MDPI

CiteScore 2.9
Tracked for Impact Factor

mdpi.com/si/105164

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