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MetaGenomics Sequencing In Situ

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Message from the Guest Editors

Dear Colleagues,

In situ sequencing has a broad range of applications, such as for infectious disease diagnosis and tracking, ecological and agricultural research, and even space exploration. The MinION sequencer has given the opportunity to improve in situ sequencing as it measures differences in current caused by DNA or RNA strands passing through nanopores embedded in membranes, with the change in current at a given time being diagnostic of the nucleotides passing through the pore. Because nanopore-based sequencing directly measures the molecules rather than relying on their synthesis, it can be used to sequence RNA directly without having to convert it to cDNA first, as well as detect modified bases in both DNA and RNA. The footprint and energy requirements of the MinION is also significantly smaller than other sequencing platforms, enabling use in settings outside of traditional or core laboratories.

In this Special Issue, we seek original research and reviews of field applications of nanopore sequencing, including the development of in situ sample preparation and processing hardware and procedures, as well as local data processing and analysis.



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Special Issue



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Message from the Editor-in-Chief

Genes are central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fastmoving field. There is a need for good quality, open access journals in this area, and the *Genes* team aims to provide expert manuscript handling, serious peer review, and rapid publication across the whole discipline of genetics. Starting in 2010, the journal is now well established and recognised.

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