

Advances in Single-Cell RNA Sequencing Technologies

Taylor Thomas
PhD
University of Oslo
Problemveien 7, 0315 Oslo, Norway

Adrian Davis
PhD
KU Leuven
Oude Markt 13, 3000 Leuven, Belgium

Dana Anderson
PhD
University of Auckland
Auckland 1010, New Zealand

Abstract. Single-cell RNA sequencing (scRNA-seq) has transformed our understanding of cellular heterogeneity. This article reviews the latest advancements in scRNA-seq technologies and their application in molecular biology. We highlight how these techniques provide insights into cellular diversity and function at an unprecedented resolution, with implications for developmental biology and disease research.

Keywords: single-cell RNA sequencing, scRNA-seq, cellular heterogeneity, gene expression, molecular biology

Introduction

Single-cell RNA sequencing (scRNA-seq) represents a revolutionary advancement in the field of molecular biology, enabling researchers to dissect cellular heterogeneity with unparalleled precision. This review focuses on the latest technological developments in scRNA-seq and their applications in understanding cellular diversity and function. By allowing the analysis of gene expression at the single-cell level, scRNA-seq provides insights into the complexities of developmental biology and disease pathogenesis. We discuss the implications of these technologies for identifying novel therapeutic targets and improving personalized medicine approaches. Our review underscores the significance of scRNA-seq in advancing molecular biology research and its potential to drive innovation in biomedical sciences.

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References

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