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(54) Title (EN): SEQUENCING BY COALASCENCE

(54) Title (FR): SÉQUENCAGE PAR COALESCENCE

(57) Abstract:

(EN): A method of sequencing a single, elongated target polynucleotide molecule can include the steps of seeding a plurality of separately resolvable origins of polynucleotide synthesis along the single, elongated target polynucleotide; contacting the target polynucleotide with a polymerase and labelled nucleotides; incorporating a labelled nucleotide, using the polymerase, into a plurality of sequence fragments complementary to the target polynucleotide and originating from the origins of polynucleotide synthesis; identifying and storing the identity and positions of the labelled nucleotide incorporated into each of the plurality of sequence fragments; and repeating the incorporating and identifying steps until adjacent sequence fragments coalesce and result in continuous sequence reads spanning two or more adjacent sequence fragments.

(FR): Un procédé de séquençage d'une seule molécule polynucléotidique cible allongée peut consister à ensemençer une pluralité d'origines de synthèse de polynucléotides pouvant être résolues séparément, le long du polynucléotide cible allongé unique; à mettre en contact le polynucléotide cible avec une polymérase et des nucléotides marqués; à incorporer un nucléotide marqué, à l'aide de la polymérase, en une pluralité de fragments de séquence complémentaires du polynucléotide cible et provenant des origines de synthèse de polynucléotides; à identifier et stocker l'identité et les positions du nucléotide marqué incorporé dans chaque fragment de la pluralité de fragments de séquence; et à répéter les étapes d'incorporation et d'identification jusqu'à ce que des fragments de séquence adjacents coalescent et conduisent à des lectures de séquence continue couvrant au moins deux fragments de séquence adjacents.

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