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(54) Title: NANOPORE-BASED ANALYSIS OF PROTEIN CHARACTERISTICS

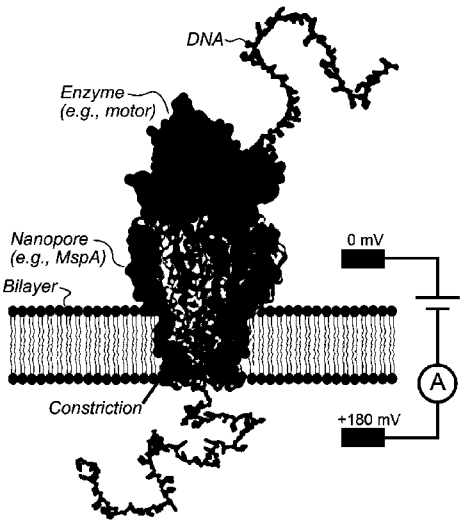


FIG. 1A

(57) Abstract: Methods for nanopore-based protein analysis are provided. The methods address the characterization of a target protein analyte, which has a dimension greater than an internal diameter of the nanopore tunnel, and which is also physically associated with a polymer. The methods further comprise applying an electrical potential to the nanopore system to cause the polymer to interact with the nanopore tunnel. The ion current through the nanopore is measured to provide a current pattern reflective of the structure of the portion of the polymer interacting with the nanopore tunnel. This is used as a metric for characterizing the associated protein that does not pass through the nanopore.

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