Reagents for Typing Nucleic Acids for Genetic Analysis

Technology none044

“Lead Inventors: Philip Goelet, Ph.D.; Michael R. Knapp, Ph.D.

Genetic Analysis Requires Challenging Process of Isolating Nucleic Acids  Current techniques in genetic analysis predominately use enzymes or nucleic acids to recognize DNA fragments produced from sequence-specific cleavage by restriction enzymes. Isolating nucleic acids, particularly those which are related to a biological process or condition of interest, can be difficult due to a lack of suitable hybridization probes and information concerning the structure or identity of the target nucleic acid.

Hybridization Probe Library to Facilitate Genetic Analysis and Disease Diagnosis  This technology presents methods and reagents for developing a library of probes whose hybridization patterns to targeted nucleic acids may be used for genetic analysis. The hybridization probe library consists of mixtures of oligonucleotides with random and pseudorandom sequences. The method can be used with restriction digestion to generate a restriction map of a nucleic acid without sequencing.

Applications:
• Genetic analysis (i.e. fingerprinting)
  o Forensic medicine
  o Paternity identification
  o Lineage analysis
  o Allelotyping
  o Biopsy analysis
  o Diagnosis of disorders and infectious diseases
• Restriction mapping

Advantages:
• No sequencing required
• Generates library of hybridization probes with greater ease

Patent Status: Patent Issued (US 5,595,870) ~ see link below.

Licensing Status: Available for Licensing

Inventors
Philip Goelet