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(71) Applicant *(for all designated States except US)*: **THE GENERAL HOSPITAL CORPORATION** [US/US]; 55 Fruit Street, Boston, MA 02114 (US).

(71) Applicant *(for TT only)*: **CREASE, Devanand, John** [GB/GB]; Keltie, Fleet Place House, 2 Fleet Place, London EC4M 7ET (GB).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **KINGSTON, Robert** [US/US]; Havard Medical School, Department of Genetics, Massachusetts General Hospital, Department of Molecular Biology, 185 Cambridge Street, Simches Research Building, Floor 7, Boston, MA 2114 (US). **DEJARDIN, Jerome** [US/US]; Havard Medical School, Department of Genetics, Massachusetts General Hospital, Department of Molecular Biology, 185 Cambridge Street, Simches Research Building, Floor 7, Boston, MA 2114 (US).

(74) Agents: **CREASE, Devanand, John** et al.; Keltie, Fleet Place House, 2 Fleet Place, London EC4M 7ET (GB).

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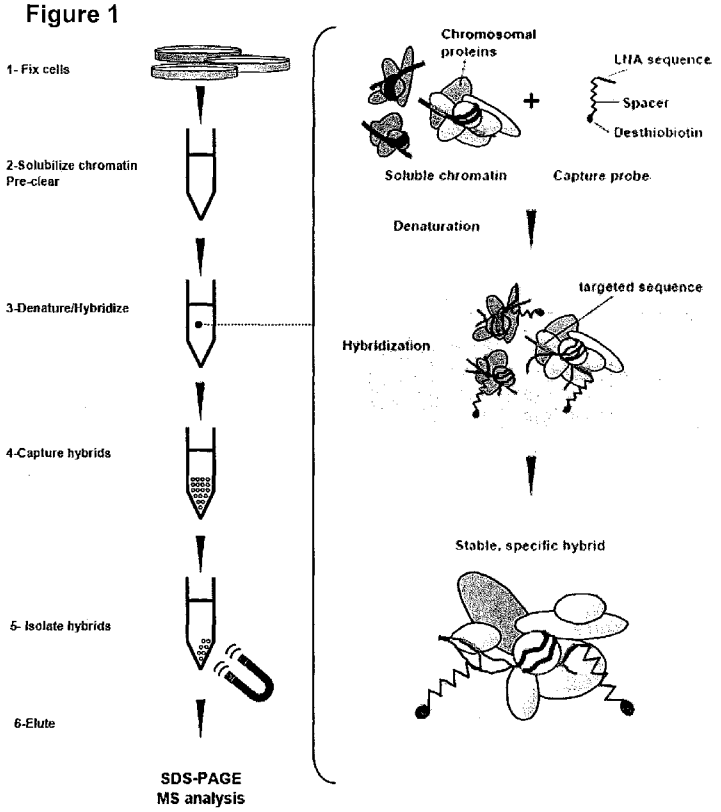
(54) Title: ISOLATION OF PROTEIN FACTORS THAT ASSOCIATE DIRECTLY OR INDIRECTLY WITH NUCLEIC ACIDS

Figure 1



(57) Abstract: Methods for isolating polypeptides and polypeptide complexes that are associated with a target nucleic acid sequence are provided. The methods comprise the steps of obtaining a sample that comprises a target nucleic acid sequence and one or more polypeptides or proteins associated with that target nucleic acid sequence; contacting the sample with at least one oligonucleotide probe that comprises a sequence that is complimentary to and capable of hybridising with at least a portion of the target nucleic acid sequence, wherein the oligonucleotide probe comprises at least one locked nucleic acid (LNA) nucleotide and wherein the oligonucleotide probe further comprises at least one affinity label (e.g. biotin); allowing the at least one oligonucleotide probe and the target nucleic acid sequence to hybridise with each other so as to form a probe-target hybrid; isolating the probe-target hybrid from the sample by immobilizing the probe-target hybrid through a molecule that binds to the at least one affinity label (e.g. using streptavidin-coated magnetic beads); and eluting the one or more polypeptides that are associated with the target nucleic acid sequence. Probes (e.g. with long spacer) for use in the methods of screening are also provided.

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