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(71) Applicant *(for all designated States except US)*: **ERASMUS UNIVERSITY MEDICAL CENTER** [NL/NL]; Faculty of Medicine, Dept. of Cell Biology and Genetics, P.O. Box 1738, NL-3000 DR Rotterdam (NL).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **DE LAAT, Wouter** [NL/NL]; Dept. of Cell Biology, Erasmus MC, PO Box 1738, NL-3000 DR Rotterdam (NL). **GROSVELD, Frank** [NL/NL]; Dept. of Cell Biology, Erasmus MC, PO Box 1738, NL-3000 DR Rotterdam (NL).

(74) Agent: **LLOYD, John, Scott**; D Young & Co, 120 Holborn, London EC1N 2DY (GB).

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(54) Title: CIRCULAR CHROMOSOME CONFORMATION CAPTURE (4C)

(57) Abstract: The present invention relates in one aspect to a method for analysing the frequency of interaction of a target nucleotide sequence with one or more nucleotide sequences of interest (eg. one or more genomic loci) comprising the steps of: (a) providing a sample of cross-linked DNA; (b) digesting the cross-linked DNA with a primary restriction enzyme; (c) ligating the cross-linked nucleotide sequences; (d) reversing the cross linking; (e) optionally digesting the nucleotide sequences with a secondary restriction enzyme; (f) optionally ligating one or more DNA sequences of known nucleotide composition to the available secondary restriction enzyme digestion site(s) that flank the one or more nucleotide sequences of interest; (g) amplifying the one or more nucleotide sequences of interest using at least two oligonucleotide primers, wherein each primer hybridises to the DNA sequences that flank the nucleotide sequences of interest; (h) hybridising the amplified sequence(s) to an array; and (i) determining the frequency of interaction between the DNA sequences.

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