(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
7 September 2001 (07.09.2001)

PCT

(10) International Publication Number
WO 01/64948 A1

(51) International Patent Classification[7]: C12Q 1/68

(21) International Application Number: PCT/NL01/00177

(22) International Filing Date: 5 March 2001 (05.03.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
00200757.3 3 March 2000 (03.03.2000) EP

(71) Applicant *(for all designated States except US)*: **DR. VAN HAERINGEN LABORATORIUM B.V.** [NL/NL]; Agro Business Park 100, NL-6708 PW Wageningen (NL).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **VAN HAERINGEN, Willem, Anne** [NL/NL]; Thorbeckesingel 114, NL-3904 CW Veenendaal (NL). **VAN HAERINGEN, Hendrik** [NL/NL]; Jac. P. Thijsselaan 94, NL-3903 EE Veenendaal (NL).

(74) Agent: **PRINS, A., W.**; Vereenigde, Nieuwe Parklaan 97, NL-2587 BN The Hague (NL).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 01/64948 A1

(54) Title: UNIVERSAL VARIABLE FRAGMENTS

(57) Abstract: A method and associated kit for analysing genomic DNA in a sample, said method comprising: providing first and second oligonucleotide primers, said first oligonucleotide primer being a 5' variation generator, and comprising a repeat sequence and at least one nucleotide inconsistent with the repeat pattern, said first oligonucleotide primer having at least one nucleotide positioned on the first oligonucleotide's 5' end, and said second oligonucleotide primer being a 3' fragment generator starting within such a genetic distance that amplification of the genomic DNA can be performed; conducting a nucleic acid amplification on said genomic DNA in the sample at a relatively low annealing temperature using both the first and second oligonucleotide primers, said amplification being conducted under conditions such that neither the first nor the second oligonucleotide primer alone can amplify DNA, thus producing DNA fragments based on repeat sequences on one end of the genomic DNA and other sequences based on the opposite end of the genomic DNA; and analysing the amplified products thus produced to determine the length of a repeat sequence found in said genomic DNA.