

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
30 May 2025 (30.05.2025)



(10) International Publication Number
WO 2025/108794 A1

(51) International Patent Classification:

G16B 20/00 (2019.01) C12N 5/07 (2010.01)
G16B 40/20 (2019.01) C12Q 1/6881 (2018.01)

(21) International Application Number:

PCT/EP2024/082142

(22) International Filing Date:

13 November 2024 (13.11.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

23211920.6 24 November 2023 (24.11.2023) EP

(71) Applicant: **EVONIK OPERATIONS GMBH** [DE/DE];
Rellinghauser Strasse 1-11, 45128 Essen (DE).

(72) Inventors: **HUANG, Lingzhi**; 43A Margaret Drive,
#28-318, Singapore 143043 (SG). **ROY, Suki**; #20-06,
Boonview, Blk 1 Marymount Terrace, Singapore 574036
(SG). **WONG, Kit Yeng**; 77 Woodgrove Ave, #02-47,
Singapore 737811 (SG). **NAGARAJAN, Sanjanaa**; Blk
521 Woodlands Drive 14, #11-357, Singapore 730521
(SG). **IGWE, Emeka Ignatius**; Theresienstr. 120, 80333
München (DE). **BÖHL, Florian**; Am Schänzel 12, 60151
Neckargemünd (DE).

(74) Agent: **EVONIK PATENT ASSOCIATION**; c/o Evonik
Industries AG, IP Management, Postcode 84/339, Roden-
bacher Chaussee 4, 63457 Hanau (DE).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG,
KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY,
MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA,
NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO,
RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS,
ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, CV,

GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST,
SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ,
RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ,
DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT,
LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE,
SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a
patent (Rule 4.17(ii))

Published:

— with international search report (Art. 21(3))

(54) Title: PREDICTING THE FITNESS OF A CHO CELL

(57) Abstract: The present invention relates to a method of establishing a biomarker for a first phenotype of interest of a CHO cell, the method comprising the steps of: (a) determining methylation values of CpG sites within genomic DNA obtained from a population of CHO cells that are a representation of the first phenotype of interest and are part of the training samples, (b) defining a set of specific CpG sites having reliable methylation values in the training samples of step (a); and (c) performing a penalized regression using the methylation values of step (b) as input and phenotype of interest correlated to the training samples as dependent variable, by applying a penalized regression model; thereby obtaining the specific CpG sites with corresponding weighting factors and intercept of the linear model equation as parameters defining the biomarker for the first phenotype of interest.



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