Targets novelty analysis

Target novelty is estimated based on the index calculated by the formula:

$$index = \frac{Ca1}{1 + Na/Ca2} + \frac{Ct1}{1 + Nt/Ct2} + \frac{Cc1}{1 + Nc/Cc2} + \frac{Cy1}{1 + (2024 - year)/Cy2}$$

Ca1, Ct1, Cc1, Cy1 - are normalization coefficients:
Ca1 = 0.0667, **Ct1** = 0.2, **Cc1** = 0.333, **Cy1** = 0.4
Ca2, Ct2, Cc2, Cy2 - are scaling factors:
Ca2 = 200, **Ct2** = 80, **Cc2** = 2, **Cy2** = 3
Na - number of articles (on Pubmed) that mention the Target in abstracts
Nt - number of articles (on Pubmed) that mention the Target in the title
Nc - number of clinical studies (on clinicaltrials.gov) related to the Target
year - year of the first clinical study (on clinicaltrials.gov) related to the Target

0 < index < 0.2 - Low novelty
0.2 < index < 0.49 - Moderate novelty
0.49 < index < 1 - High novelty

Novelty calculated by index

Target	Target Novelty	Company
PDE10	Moderate	BenevolentAI
CHK1	Low	BenevolentAI
RARαβ	High	BenevolentAI
TrkA, TrkB, and TrkC	Low	BenevolentAI
CDK7	Moderate	Exscientia
PKC-theta	High	Exscientia
LSD1	Low	Exscientia
MALT1	Moderate	Exscientia
A2aR	Low	Exscientia
TNIK	High	Insilico Medicine
USP1	High	Insilico Medicine
QPCTL	High	Insilico Medicine

PHD1/2	Moderate	Insilico Medicine
3CLpro	Moderate	Insilico Medicine
MAT2A	Moderate	Insilico Medicine
TEAD	Moderate	Insilico Medicine
ENPP1	Moderate	Insilico Medicine
KAT6	High	Insilico Medicine
DGKA	High	Insilico Medicine
CDK12/13	Moderate	Insilico Medicine
FGFR2/3	Low	Insilico Medicine
KIF18A	High	Insilico Medicine
WRN	Low	Insilico Medicine
cMYC	Low	Insilico Medicine
NLRP3	Low	Insilico Medicine
HDAC	Low	Recursion Pharmaceuticals
MEK1 / MEK2	Low	Recursion Pharmaceuticals
C. difficile toxins	Low	Recursion Pharmaceuticals
RBM39	High	Recursion Pharmaceuticals
FGFR2 (mutant+WT)	Low	Relay Therapeutics
ERα	Low	Relay Therapeutics
PI3Kα	Low	Relay Therapeutics
CDK2	Low	Relay Therapeutics
SHP2	Low	Relay Therapeutics
αGal	Low	Relay Therapeutics
NRAS	Low	Relay Therapeutics
MALT1	Moderate	Schrodinger
CDC7	Low	Schrodinger
WEE1/MYT1	Low	Schrodinger
SOS1	Low	Schrodinger
TYK2	Low	Schrodinger
JAK2	Low	Schrodinger
ACC	Low	Schrodinger
α4β7	Low	Schrodinger
HPK1	Moderate	Schrodinger

APJR	Moderate	Schrodinger
LPA1R	High	Schrodinger
PIKfyve	Moderate	Verge Genomics
HER2	Low	Iambic
CDK2/4	Low	Iambic
MEK1 / MEK2	Low	Healx
ROCK 1/2	Low	Valo Health