This record is presented in recognition of contributions to Eterna, the internet-scale molecular design platform. Verify authenticity of this record at: https://eternagame.org/certificate/35741

ISSUED	September 10, 2024

PLAYER DETAILS

PERSONAL NAME	Max Goff
PLAYER NAME	Max Goff
REGISTRATION DATE	January 2012
GLOBAL RANK	53 of 248,885
PUZZLES CLEARED	5,416
PUZZLES CREATED	188
TUTORIALS CLEARED	3/5
ADVANCED TUTORIALS CLEARED	10/10

Eterna puzzles are created by the Eterna team or players. They invite players to devise effective procedures for pairing nucleotides in hypothetical or biologically-inspired RNA strands.

Learn more on Max Goff's player profile: https://eternagame.org/players/35741

PUBLICATION CONTRIBUTIONS

Contributions towards pre-print or peer-reviewed scientific publications.

1. EVIDENCE OF AN UNUSUAL POLY(A) RNA SIGNATURE DETECTED BY HIGH-THROUGHPUT CHEMICAL MAPPING

May 2020 Biochemistry *Gameplay Contributor*

2. PRINCIPLES FOR PREDICTING RNA SECONDARY STRUCTURE DESIGN DIFFICULTY

February 2016 Journal of Molecular Biology *Gameplay Contributor*

3. RNA DESIGN RULES FROM A MASSIVE OPEN LABORATORY

February 2014 Proceedings of the National Academy of Sciences *Gameplay Contributor*

4. ETERNABRAIN: AUTOMATED RNA DESIGN THROUGH MOVE SETS FROM AN INTERNET-SCALE RNA VIDEOGAME

June 2019 PLOS Computational Biology *Gameplay Contributor*

5. RNA SECONDARY STRUCTURE PACKAGES EVALUATED AND IMPROVED BY HIGH-THROUGHPUT EXPERIMENTS

October 2022 Nature Methods *Gameplay Contributor*

6. SENTRNA: IMPROVING COMPUTATIONAL RNA DESIGN BY INCORPORATING A PRIOR OF HUMAN DESIGN STRATEGIES

March 2018 Preprint *Gameplay Contributor*

7. THEORETICAL BASIS FOR STABILIZING MESSENGER RNA THROUGH SECONDARY STRUCTURE DESIGN

September 2021 Nucleic Acids Research *Gameplay Contributor*

8. CROWDSOURCED RNA DESIGN DISCOVERS DIVERSE, REVERSIBLE, EFFICIENT, SELF-CONTAINED MOLECULAR SENSORS

April 2022 Proceedings of the National Academy of Sciences *Gameplay Contributor*

9. COMBINATORIAL OPTIMIZATION OF MRNA STRUCTURE, STABILITY, AND TRANSLATION FOR RNA-BASED THERAPEUTICS

March 2022 Nature Communications *Gameplay Contributor*

10. DEEP LEARNING MODELS FOR PREDICTING RNA DEGRADATION VIA DUAL CROWDSOURCING

December 2022 Nature Machine Intelligence *Gameplay Contributor*

11. COMMUNITY SCIENCE DESIGNED RIBOSOMES WITH BENEFICIAL PHENOTYPES

February 2023 Nature Communications *Gameplay Contributor*

DESIGN SUBMISSIONS

Contributions towards Eterna biomedical challenges experimentally tested through in-vitro synthesis and structure mapping measurements.

	TOTAL (#)	TESTED	BEST (%)
Directed Evolution vs. Rational Design (ATP Light-Up Switches)	55	0	-
First Player Project	17	16	90
FMN aptamers	4	0	91
FMN Riboswitch Targets: FMNsanity	17	5	97
FMN/MS2 Riboswitch Structure: the Paper	1	1	60

Kissing Loop Lab - Round 2	3	3	84
Logic Gates	5	5	56
MS2 Riboswitches On Chip - Round 2	1	1	60
Next Generation Riboswitches On Chip	3	3	46
OpenASO: RNA Rescue Round 1	18	0	100
OpenKnot Round 1	22	22	51
OpenKnot Round 3	20	0	-
OpenRibosome Challenge Round 2	8	0	40
OpenRibosome Challenge Round 3	15	0	-
OpenRibosome Challenge Round 4	4	0	-
OpenRibosome Pilot Challenge	5	0	50
OpenRibosome Pilot Challenge Warm-up	23	0	-
OpenTB - Getting started	2	2	72
OpenTB - Getting started Round 3	2	2	72
OpenTB - Getting started Round 4	60	0	-
OpenTB Round 4	690	0	-
OpenVaccine - Covid-19 Delta Variant Spike mRNA	1	0	-
OpenVaccine Omicron	7	0	-
OpenVaccine: "Roll Your Own Structure" Round 2	7	7	84
OpenVaccine: "Roll Your Own Structure", RNA backbone stability in aqueous solution	60	60	93
OpenVaccine: Nanoluciferase revisited	4	0	-
OpenVaccine: [Round 3-extended] Lightning Round Design + Vote of Nanoluciferase	20	0	55
OpenVaccine: [Round 5] mRNA designs (Sandbox for RYOS Round 2)	16	0	-
Repeatability - Multibranch Loop Protection	3	1	51
Single-input Switches (Round 2)	500	0	-
Small Loop Next Generation Riboswitches	1	1	60

T-box Switch Pilot	20	0	31
T-box Switch Round 1	20	0	-
Testing Lab mgotrik	3	0	-
The Revolutionary	5	4	74
'Light-up' Switches (Round 1)	1,200	0	-

TOTAL (#): The total number of design submissions made to an Eterna challenge.
TESTED: The total number of design submissions made to an Eterna challenge that were experimentally tested.
BEST (%): Player's best score (as a percentage) for experimentally tested design submissions made to an Eterna challenge