July 25th, 2019

<Press Release>

Announcing Strategic Capital Alliance and
Joint Development of Synthetic Biology Software Tools

Synthetic DNA manufacturer Synplogen Co., Ltd. (Synplogen) and synthetic biology software developer Tupac Bio, Inc. (Tupac.Bio) are pleased to announce the execution of a strategic capital alliance, as well as the kickoff of a comprehensive collaboration to develop software tools that improve and simplify gene synthesis and biodesign.

[Partnership Announcement]

Recent years have seen striking progress in the field of synthetic biology, from the development of microbial bioproduction processes that are non-reliant on petrochemicals to numerous medical advances arising from genome editing technologies. Indeed, the synthetic biology market is expected to enjoy a CAGR of greater than 36% between 2019 and 2025,[1] and by 2030 the resulting bioeconomy is anticipated to grow to approximately 2 trillion USD in size.[2]

However, many promising yet untouched synthetic biology applications require DNA that is too long, repetitive, or challenging to synthesize, or that cannot be feasibly created through other conventional techniques. Synplogen develops and commercializes technologies related to the design and synthesis of this high-value DNA for use in a myriad of applications, including bioproduction, medical treatment, drug development, and more. Tupac.Bio builds biodesign and bioanalysis tools to support companies like Synplogen and the rapidly growing bioeconomy at large.

Tupac.Bio CEO Eli Lyons says, “Synthetic biologists are working on life-changing technologies, such as revolutionary bio-based materials, more sustainable food production methods, and more effective therapeutics. Advanced biodesign software and long, error-free synthetic DNA is needed for the R&D required to accelerate the development of these technologies. That’s why our partnership is so important.”

This all-encompassing development collaboration between Synplogen and Tupac.Bio will result in proprietary software tools that optimize and automate Synplogen’s DNA synthesis processes. Tupac.Bio will also provide licenses for its BioDesigner™ and other existing software tools. Synplogen expects this collaboration to further expand its capabilities to produce highly challenging DNA sequences at industry-leading prices. In order to drive a strong relationship and long-term collaboration between the two companies, the partnership also includes investment in Tupac.Bio by Synplogen.

[1] www.reuters.com/brandfeatures/venture-capital/article?id=127877

[2] www.oecd.org/futures/long-termtechnologicalsocietalchallenges/thebioeconomyto2030designingapolicyagenda.htm

[About Synplogen]
Founded: February 2017
Location: 1-1 Rokkodaicho, Nada-Ku Kobe-shi, Hyogo, 657-0013, Japan
CEO: Junichi Sugahara
Paid-in Capital: 1.118 billion JPY (incl. capital reserves)

Synplogen (synplogen.com/en) designs and manufactures long, complex synthetic DNA for cutting-edge applications ranging from novel drug targets to spider silk bioproduction. Synplogen's patented technology is the culmination of more than a decade of cutting-edge research supported by the Japanese government, and positioned to create a new market segment around complex, high-value gene synthesis. In May of 2019, Synplogen closed its recent financing round of approximately $10M USD by JAFCO Co., Ltd. Synplogen continues to move forward in its mission to use the power of DNA to unlock a better tomorrow.

[About Tupac.Bio]
Founded: October 2015
Location:
717 Market Street, San Francisco, CA, USA
1-6-5 Jinnan, Shibuya-ku, Tokyo
CEO: Eli Lyons

Tupac.Bio (tupac.bio) develops biodesign and analysis software for synthetic biology companies. Their proprietary cloud software, Tupac.Bio BioDesigner, enables synthetic biologists to create complex genetic designs for realization in synthetic DNA. Tupac.Bio BioDesigner is the first in a growing ecosystem of intuitive, collaborative, and essential biodesign tools. In addition to its collaboration with Synplogen, Tupac.Bio has recently sold licenses for its biodesign software in the US and Singapore.

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