Interview: Carol Cheng – COO, Taiwan Research-Based Biopharmaceutical Manufacturers Association (TRPMA) [Blockchain Focus]



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Carol Cheng, COO of the Taiwan Research-based Biopharmaceutical Manufacturers Association (TRPMA), the association gathering

28 Taiwan-based, R&D-driven biopharmaceutical companies, highlights the association's eye-catching initiative to boost international collaboration between academia and the global industry, thanks to the recent set up of the BioIPSeeds® platform, which proudly stands as the first application of blockchain technology in the biopharmaceutical field.

Further bolstering open innovation and an international collaboration culture is particularly high in the agenda of many public and private stakeholders in the healthcare field. What is the contribution of TRPMA to the fulfillment of this important objective?

There is a crucial need to develop Taiwan's Open Innovation culture, as such collaborative approach encompassing both academia and the industry hasn't yet been embedded deep enough in the roots of our healthcare sector. Taiwan undeniably holds world-class research and cutting-edge innovation capacities, while our biopharmaceutical ecosystem has also accumulated a considerable amount of expertise over the past decade. Nevertheless, the impact of these twenty years of intensive R&D efforts could be even further enhanced if local research institutions and

international companies were partnering more comprehensively and at an earlier stage of the drug development process.

Our strategy was to build a completely safe, user-friendly digital platform that would gather together all discoveries and innovation coming from Taiwan's research centers and universities. This vision became a reality with the set up of BioIPSeeds in February 2017, a groundbreaking platform that aims to foster the collaboration between Taiwan's individual researchers and research institutes (universities, industry-academia collaboration centers, and technology transfer offices) and the global industry (biopharmaceutical, medical devices, and all healthcare-related companies as well as venture capital companies).

Given that BioIPSeeds aims to gather all the most recent discoveries coming out of Taiwan's research centers and connect them to the global industry, building the safest digital environment possible must stand as one of your main priorities. **Is it the reason why you opted for the blockchain technology, rather than a traditional database?**

[Featured_in]

Exactly! As a matter of fact, our BioIPSeeds platform proudly stands out as the first application of the blockchain technology into the biopharmaceutical field.

Conceptually, blockchain stands as a distributed database that maintains a continuously growing list of ordered records, which means that, by design, blockchains are inherently resistant to modification of the data. Once recorded, the data in a block cannot be altered retroactively and becomes part of a permanent record.

Furthermore, thanks to its inherent peer-to-peer (P2P) network, a blockchain database is managed autonomously; hence, no middleman is needed. These specificities stand as particularly crucial assets when it comes to gathering early phase projects and world-class discoveries on the same platform. It also explains why we chose to invest in such a cutting-edge technology, which was described in 2015 by the Economist as *"a machine for creating trust".*

With our BioIPSeeds platform, both the IP summary (non-confidential data) and the IP Notary (confidential data, including a proof of ownership) are safely anchored on both Bitcoin and Ethereum public blockchains with timestamps. When a given IP draws the attention of a company, the latter can request more information about it from the researcher directly through BioIPSeeds. If interested, the IP's owner can then issue an online Non-Disclosure Agreements (NDAs) that is also anchored on blockchains, rendering this usually time-consuming part of the co-development

process tremendously easy and convenient.

Once the NDA is safely signed by the two parties, the researcher can then send and transfer the encrypted data to the designated receiver, who would be the only one holding the personal key needed to decrypt the data file.

It is very rare to see an industry association developing such an innovative platform to link local researchers and universities to the healthcare industry. Which companies will be able to benefit from BioIPSeeds?

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More than a simple tool, with BioIPSeeds we aim to create a new model of cooperation between academia and the global industry, triggering the launch of an increasing number of successful projects and facilitating technology transfer, authorization, and commercialization processes globally.

In terms of tangible, expected benefits, BioIPSeeds and decentralized peer-to-peer marketplaces will contribute to tremendously reducing the time and the cost invested by companies in innovation screening, while online NDA and IP exchange will bring more efficiency to the global co-development and commercialization process.

As a result, BioIPSeed’s target goes beyond Taiwanese companies and TRPMA’s members, which have naturally been the first ones to benefit from this innovative platform. Our overarching ambition is to narrow the gap between Taiwanese researchers and international companies, encompassing their executives, R&D-decision makers, as well as their regional and global business development leaders. As a matter of fact, we have already been rather successful in this regard, as – only a few weeks after we launched our BioIPSeeds platform – we are particularly glad to announce that a first international company has already joined the platform.

In the meantime, we already cover more than 15 universities and research centers in Taiwan, including some of the country’s most prestigious institutions involved in the pharmaceutical and healthcare fields, and this number keeps on increasing rapidly.

What is your final message to our international readers?

For the last fifteen years, Taiwan’s biopharmaceutical ecosystem has been tirelessly nurturing its continuous improvement, and we have already reached some critical milestones on the international stage, with locally- developed innovative products receiving FDA and EMA approval

and international licensing partnerships formed by some of our most advanced companies.

In the meantime, Taiwan also holds world-class research centers and experts in crucial therapeutic areas and pioneering drug development fields, while local research and development costs remain substantially lower than in Europe, North America or Japan.

If we combine these structural elements with the experience gained by our innovative companies and the new collaborative approach TRPMA strives to bolster with BioIPSeeds, I am confident Taiwan’s innovation-driven ecosystem will soon be widely recognized as a biopharmaceutical hub of reference in the world.

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