

Eric Yang - Secretary General, PMMD, Taiwan



Taiwan lacks a truly nationwide, government-driven precision medicine initiative

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Eric Yang, secretary general of the Taiwan Precision Medical and Molecular Diagnostics Industry Association (PMMD), speaks about the key challenges facing the sector and the top priorities of the organization and its member companies. Yang goes on to share his insights on the opportunities that exist for precision medicine and delivers a hopeful message about its future development.

What was the motivation for finally forming an association for precision medicine and what is the mission of the PMMD?

The main reason for forming PMMD was that no existing association was dedicated to assisting the development of precision medicine industry in Taiwan. One way of accomplishing the goal is to foster collaboration between the industry, academia, hospitals and the government. Other ways we can assist are to push for regulations that are favourable to the development of the industry and to help venture capitalists understand that there are many wonderful biotech companies in Taiwan. For the past year and a half, we have been focusing on how to get the National Health Insurance (NHI) to reimburse molecular diagnosis for patients with cancer. Using next-generation sequencing (NGS) and potentially other novel technologies in cancer diagnosis would help improve treatment regimens while reducing overall medical costs. We are hoping that the government would support a co-pay system for cancer panels, where patients and the government would split the cost. However, this is an ongoing effort as the government has not yet accepted the idea of a co-pay mechanism. So far, the NHI has only been operating under a model where products or services are

either reimbursed fully or not at all.

The PMMD is actively working to promote the connection of industry, government, research and development, and international community exchange. How open are health authorities to these discussions?

Stakeholders are actually very receptive to our thoughts and proposals during meetings. The stakeholders with whom we meet are truly the ones who want to listen and improve the health system. Even though the promotion of precision medicine industry has been difficult at times, there is still much consideration from the authorities behind the scene.

Precision medicine comprises screening, diagnosis, treatment and monitoring to provide a more tailored approach to healthcare and is one of the fastest-growing trends in recent years. What are the major challenges being faced by the precision medicine sector currently?

Unfortunately, many in the medical field are still sceptical about the effectiveness of molecular diagnostics in guiding treatment. Some are still unconvinced of the efficacy of cancer panels, for example. Part of the PMMD's mission is to help build awareness and educate health professionals about the capabilities of newer methods.

Taiwan lacks a truly nationwide, government-driven precision medicine initiative. Over the past several years, the government has passed out about several grants between USD five to ten million which is a significant step in the right direction. However, there is still a need for a government-sponsored program such as the 100,000 Genomes Project in the UK. Having a precision medicine initiative would really help translate research data into real products and opportunities, which would provide economic growth for the industry.

Further strong funding opportunities for precision medicine industry is still lacking. There are only a few companies which are relatively mature while the majority are still R&D stage start-ups. Taiwan has several main sectors in precision medicine – cell therapy, NGS diagnostics, drug development, and AI imaging. There have been talks for allocating more resources to support these areas, but we have yet to see any major action or developments in terms of funding from the government side.

How is the PMMD generating conversation around precision medicine among the industry and health stakeholder?

This June, the PMMD will hold its second annual general assembly meeting which will focus on creating a nationwide cancer screening program in Taiwan. As we do not have any experience doing this, we have invited Dr Koichi Goto, a member of the National Cancer Center in Japan, to share his experience of establishing such a program in his country. The SCRUM program was started in 2015 studying gastrointestinal and lung cancer. Now in its second phase, the program is collaborating with major pharmaceutical players. Therefore, the program now has both government and private industry sponsorship. The goals of the program are to connect cancer patients with existing clinical trials, improve the turnaround time for diagnosis, and leverage government support for precision medicine – something Taiwan can learn from.

How collaborative is academia and the industry when it comes to the translation of research being done in the precision medicine field?

I would say currently this is still lost in translation. However, there are a number of recently government-funded programs, such as the Cancer Moonshot program, that might bring renewed translational opportunities. As the industry association, PMMD and its members are very keen on seeing how the results of these programs will be translated outside of the laboratory in a way that can concretely benefit society. This is why having a defined precision medicine initiative or a nation-wide cancer screening program is so essential, it would be key in facilitating the movement of research to the private sector in a way which can ultimately touch the lives of patients.

China is aggressively investing in the field with China including precision medicine as part of its 13th 5-year plan, in which USD 8.71 billion will be invested in the industry. How can Taiwan leverage its neighbour as an asset to develop precision medicine?

It is very easy for Taiwan to send genetic samples out of the country, but very difficult for us to receive them back. In general, China is very interested in collaborating with Taiwan in terms of data, technology, and medical activity. However, due to current political conditions, sharing resources from the medical and pharmaceutical industries can be a bit difficult. It is very complicated to foster collaborations on a national level, but the private sector has a slightly easier time to do so. Nevertheless, companies have to establish a direct presence in China in order to get

data and samples, which is a challenge to do for a start-up.

What are the strategic objectives that the PMMD is aiming to achieve with the upcoming five years?

Our primary objective should be the formulation of a NHI policy regarding molecular cancer diagnosis, which will be crucial in spurring industry growth. Without government support, precision medicine industry will struggle to mature as a sector. That is why having a national program would be a turning point for not only Taiwan and its patients but also the industry.

I would also like to see more collaboration with China between private companies. Taiwan is a very small market, so tapping into foreign resources and market pools is essential for the growth of our members. Therefore, we also hope to see our member companies create ties with other markets like the US and Europe as well, not just keeping a regional scope.

As an internationally experienced professional, what new perspective can you personally bring to Taiwan's business environment table?

I have a global view of the life science and innovation industries. Taiwan is very strong in manufacturing, semiconductors for instance, but we lack branding, creating a product of our own that meets customer needs. Like China, our initial growth was based on manufacturing, which put us in a comfortable position. But China now has its own brands and Taiwan must start branding itself more - creating a fantastic customer experience and meeting market demands. Focusing on higher-profit margin, value-added companies will improve the business life of Taiwan.

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