Wen-cherng Tsai – Founder and Chairman, SuperLab, Taiwan



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Dr. Wen-

cherng Tsai, founder and chairman of SuperLab, explains the company's unique business model as the only third-party fair testing organization and pre-clinical CRO across the medical, chemical and biological related fields. Dr. Tsai goes on to highlight SuperLab's competitive offering and top-tier accreditation as a premier service partner in Asia.

Can you begin by introducing yourself and SuperLab to our readers?

A majority of my higher education was carried out in the US where I received my M.S. from Utah State University and Ph.D. in microbiology from South Dakota State University. Afterward, I conducted my post-doctorate fellowship at the University of Texas, Arlington department of chemistry. In 1977, I returned to Taiwan and became a professor at National Yang-Ming University (NYMC) for 36 years. I also held the position of Director of Microbiology in NYMC and Director of Clinical Microbiology in Taipei Veterans General Hospital. Additionally, I have published many books including the Practical Clinical Microbiology textbook. After returning to Taiwan from the US, I realized that Taiwan's ability was very poor in this area. Therefore, in 1983 I wrote the book to help teach clinical microbiology – today it is the only book in Chinese on the subject and is in its 11th

edition. I did the same for food safety this year by publishing Methods for the Microbiological Examination of Foods.

Before my retirement from NYMC, I founded SuperLab 18 years ago in 2001. The business model is divided into two parts; third-party testing laboratory services and medical device manufacturing. Our business activities are balances about two-to-one with a greater focused on medical device development. In the beginning, we focused on the manufacturing of reagents, then microbiology testing, and later entered into the preclinical CRO space. 20 years ago, there were very few pre-clinical CROs in Taiwan, so we saw this as a good opportunity.

Nearly two decades after its establishment, how is SuperLab positioned in Taiwan's market?

SuperLab has over 230 employees today and we are the largest domestically founded testing lab in Taiwan. In our tuberculosis lab, we process over 5000 specimen per month and our services have been ranked the highest by the Center for Disease Control (CDC) among 36 hospitals across Taiwan. Furthermore, our toxicology offering is also top-ranked thanks to our REACH (research, evaluation, authorization, and restriction of chemicals) services which aim to provide the protection of human health and the environment – we are the only lab with this offering in Taiwan. Finally, we are also the only ISO 17043 lab proficiency testing provider in Taiwan.

To what extent is SuperLab in line with the most recent operation standards?

Our laboratory has received numerous accreditations from top regulatory bodies in Taiwan. We have been inspected by the Taiwan Accreditation Foundation (TAF), Center for Disease Control (CDC) for infectious disease, the Taiwan Food and Drug Administration (TFDA) for food testing, medicine and cosmetic testing, and registered by its export public inspection system, and finally the Environmental Protection Administration (EPA) as an environmental testing organization. We are familiar with domestic and international standards in the field of testing methods paired with a wealth of experience to provide clients with the most professional advice.

What are SuperLab's specific capabilities in its third-party testing and preclinical CRO services?

SuperLab is a third-party company that provides objective data for reliability testing, which is required in commercial transactions, hygiene auditing, product R&D, quality management, and listing applications. We are equipped with thousands of test items plus a full set of accreditation items, and as I mentioned earlier, we are recognized locally and internationally for our professional testing technologies and stringent quality standards. Our testing services range from food safety, cosmetics, medical device, pharmaceuticals, clinical trials, and environmental inspection.

Moreover, SuperLab is the international preferred partner for clinical research solutions in Asia. We are committed to providing high-quality preclinical testing services around the world to help clients to understand the characteristics of their products, reduce development time, listing or export costs, and risks, and also provide any immediate advice to help seize market opportunities. SuperLab has GLP laboratory configuration equipment and even specially established an experimental animal center to provide a full set of safety toxicology tests, from microbiology, cell genes to rodent experiments. These services span the chemistry, medical device, pesticide, and food industries.

In Taiwan, proficiency testing is a requirement to apply for ISO-17025 certification from the TAF. Each year, we conduct over 500 lab proficiency exams. From this figure, about 100 of our clients come from China. In addition to testing, we also offer proficiency training consultation. Our proficiency testing reports are only offered in Chinese although the rest of our CRO services are available in English. All in all, SuperLab is a one-stop service provider beginning from regulatory advice to test design and quotation, project management, and finally, inspection and registration.

How does the overall health and safety quality of Taiwan’s life science laboratories compare to its neighbor China?

Compared to China, the quality and safety of Taiwanese laboratories are much better. Over the past decade, the Taiwan FDA (TFDA) has paid attention to keeping up with international standards. In China there are not many clinical microbiologists, so they do not always understand the importance of certain nuances such as specimen transport mediums. For example, when using swabs there is a high potential for the sample to dry out, killing the microbes and ultimately making any pathogen undetectable.

Can you elaborate on the company’s medical device offering?

Besides just testing, SuperLab also offers research and development services for medical device products. Two years ago we developed an anti-CON supplement for tuberculosis detection which reduced laboratory contamination by 50 percent, improving the efficiency and accuracy of TB detection. This has been developed exclusively for our local partners.

SuperLab has established a subsidiary in China for the manufacturing of Group B *Streptococcus* (GBS) detection kits and specimen transport products. SuperLab is the biggest domestic producer of microbiology reagent compounds and culture media in Taiwan. More than 80 percent of Taiwanese pharmaceutical companies use our culture media. We are also performing R&D for environmental monitoring media such as triple wrapped SteriPacks. Companies use our products to monitor their production environment during manufacturing.

What makes SuperLab a partner of choice to the life science industries?

SuperLab is very sensitive to market needs and we always make an effort to introduce the newest innovations in our offering. With my experience as a professor, I am always engaged in external research and have a strong focus on the industry applications of emerging trends. SuperLab acts as a bridge between Taiwan and what is happening in the international industry. Moreover, we have over 40 years of experience in clinical expertise. SuperLab has very deep knowledge in the space with a strong product portfolio. For example, we were the first lab in Taiwan to complete hepatitis B disinfection efficacy testing for glucose blood monitors and our SOP has been accepted by the USFDA.

What vision do you have for SuperLab’s development in the upcoming five years?

Creative Co., the medical devices manufacturing section of SuperLab, has been present in China for three years now so one of my key priorities is to continue building our positioning in this strategic market. So far, we have had a successful entrance into China and our Creative Co. has worked well with several multinational pharmaceutical and food companies who are interested in our environmental monitoring prepared media products.

Looking forward, our goal in the China market is to enter the biopharmaceutical quality control and environmental monitoring areas, for example, provided various kinds of media for pharmaceutical microorganism detection and identification. Creative Co. has been successful launch its clinical application products, e.g., GBS detection kits, aerobic and anaerobic transport media, GBS

TransCultSwab, GBS carrot broth, enriched media for anaerobic bacteria, GermBank for preserved microorganisms, etc. China is a very promising prepared media market for industries with massive opportunity and we are excited to see how we will be able to further tap into the ecosystem.

SuperLab is now looking for some partners in ASEAN to establish TB (tuberculosis) laboratory for total solution of TB testing (from specimen treatment to final report).

What has been your proudest achievement in your career?

I think of myself as an educator. I want my local biotechnology to continue to grow through the recruitment and development of fresh talent. SuperLab has a university internship where students can come learn new skills from us, whether or not they work for the company in the future. Additionally, we offer laboratory workshops several times each year to train students or new lab workers on food, clinical, pharmaceutical and cosmetics microbial identification. I am very dedicated to the merging of science and business and my hope is that the next generation of Taiwan scientists and entrepreneurs can even succeed more than me!

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