From Organic Chemistry to Cutting-Edge Medicine: Shih-Wei's Perseverance and Passion in Peptides

Shih-Wei graduated from the Chemistry Department at National Taiwan University (NTU), but his career path didn't follow the typical academic route for chemists.

Due to his passion and aptitude for organic chemistry, he decided to pursue a graduate degree in pharmaceutical research so that he could apply his knowledge to drug synthesis.

At NTU, he focused on synthesizing a promising Kappa opioid ligand that contributed to the development of new pain medications with reduced risks of addiction. After graduating, Shih-Wei joined the Department of Small Molecule Drug Synthesis at ScinoPharm Taiwan . Later on, he took on the challenge of setting up their new peptide synthesis department, despite it being a completely unfamiliar field for him. Currently, he serves as the Chief Scientist for peptide synthesis at KriSan Biotech, responsible of peptide synthesis, oligonucleotide synthesis, and the manufacturing process of linker-payload for antibody-drug conjugates.

Shih-Wei aims to be a reliable leader who can offer practical advice and share his experiences.

"Coupling agents exhibit varying reaction rates. While some agents react rapidly, they can also form impurities. In contrast, other slow-acting agents may provide better. DIC in combination with OxymaPure is a relatively mild coupling reagent. With its cost-effectiveness, moderate reaction rate, and reduction in impurity formation, it presents an attractive option. Furthermore, DIC/OxymaPure is compatible with microwave peptide synthesis" said Shih-Wei.

He views himself as the coupling reagent DIC with OxymaPure that's required for peptide synthesis. He leads his peptide synthesis team with a gentle yet effective approach, ensuring that nobody is left behind as they tackle each task and overcome challenges together. Shih-Wei seeks to be a leader who offers real-world experience, not just theoretical suggestions. He enjoys being actively involved in laboratory work to build up know-how that he can then share with his team.

Shih-Wei and his crew have demonstrated their ability to tackle issues that other companies have been unable to handle.

Peptide synthesis and purification involve more steps than the synthesis of small molecules, but the reactions themselves are relatively straightforward. In theory, by understanding the reactions of each amino acid and providing the correct reactants and reagents, peptide synthesis can be achieved. However, current peptide synthesis has become more complex, with branching chains and the need to attach different chemicals such as Antibody-Drug Conjugates (ADC) linker-payloads – an entirely new challenge. Reflecting on past problem-solving experiences, Shih-Wei humbly shares, "When clients come to us after being turned away by two other companies, we initially faced difficulties as well. But by taking a step back, re-evaluating and consulting literature, we were able to identify the key points and successfully meet the clients' requirements." This demonstrates his team's perseverance and problem-solving abilities when facing new challenges.

Shih-Wei Li is a scientist with exceptional skills and experience. His work expands our understanding of pharmaceutical CDMOs and inspires the next generation of scientists to strive for challenge and innovation. We look forward to his future achievements and contributions.