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Standigm and Institut Pasteur Korea identify drug candidates for resistant tuberculosis

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Research achievements enabled by a combination of advanced AI platforms, research capabilities, and drug discovery technologies



Standigm, a South Korea-based startup using artificial intelligence (AI) technology for drug discovery and development, and Korean non profit research institute Institut Pasteur Korea have jointly developed new lead compounds effective in treating resistant tuberculosis (TB).

The two organisations conducted a technology acceleration grant project supported by the Right Foundation from 2021 to 2022. They achieved encouraging results by combining their core competencies of artificial intelligence (AI) platforms, infectious disease research capabilities and drug discovery technologies. This breakthrough demonstrates that AI technology can effectively address unmet medical needs for low and middle-income countries that tend to have higher than normal rates of resistant TB.

Standigm utilised its drug design artificial intelligence platform, Standigm BEST, with a scaffold-based molecular generation model and a deep learning prediction model that learned the features of three-dimensional molecular structures.

The collaborating institute, Institut Pasteur Korea, utilised its drug discovery platform in a biosafety level 3 laboratory to evaluate the efficacy of new compounds against drug-sensitive and multi-drug-resistant TB (MDR-TB)/extensively drug-resistant TB (XDR-TB) and incorporated the compound information and efficacy evaluation results into Standigm BEST.

The main objective is to accelerate the subsequent development of new drug candidates derived from this research collaboration and contribute to the global effort to end TB.