

Japan to design universal vaccines targeting tropical infectious diseases

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Collaboration between NOI and Nagasaki University aims to harness the power of advanced AI to optimise vaccine designs



Japan-based Nagasaki University and NEC Oncolmunity (NOI), a leading artificial intelligence (AI) company, will collaborate to use NOI's AI platform to design universal vaccines against highly pathogenic and tropical infectious diseases.

The collaboration between NOI and Nagasaki University aims to harness the power of advanced AI to optimise vaccine designs to be universally and broadly protective against certain pathogen families prevalent in tropical regions. Under the scope of the collaboration, the AI technology from NOI will be used to design both T cell and B cell vaccines.

Nagasaki University will subsequently validate the designs using their extensive "wet-lab" capabilities and convalescent donor samples collected from their extensive network of tropical field stations.

This collaboration has also led to the establishment of the Vaccine Informatics Department at the Institute of Tropical Medicine, Nagasaki University. The department, led by Dr Trevor Clancy, Chief Scientific Officer of NOI, will employ its AI technology to support the Nagasaki University team in conducting basic research aimed at understanding the immune correlates of protection across a range of tropical diseases. Members of NEC's AI drug development team will also participate in this department.