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NEC designs blueprints for COVID-19 vaccines using AI

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Accelerating efforts to create a vaccine to combat the COVID-19 pandemic to benefit the global population

Japan based NEC Corporation has announced analysis results from efforts using AI prediction platforms to design blueprints for SARS-CoV-2 vaccines that can drive potent T-cell responses in the majority of the global population.

This initiative by the scientific teams within the NEC Group to help combat outbreaks of COVID-19 and support international vaccine development efforts is led by NEC OncoImmunity (NOI) in collaboration with NEC Laboratories Europe (NLE).

These AI prediction platforms are based on the AI technology used by NEC and NOI in the development of personalized neoantigen cancer vaccines.

During the analysis, which is published at bioRxiv, the team analyzed thousands of sequences from the SARS-CoV-2 virus (responsible for causing COVID-19) and identified epitopes (potential vaccine targets) for the 100 most frequent HLA alleles (diverse immunological makeup) in the global population.

The analysis demonstrates the significant capabilities of the NEC Group to leverage their AI platforms to design blueprints for a vaccine that is safe and efficacious in a global population and could address the current and future divergent strains of the SARS-CoV-2 virus.

NEC is now publishing this research to support scientific advancements in the field and is ready to start partnering efforts to pursue the development of an effective vaccine targeting the global population.