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Quantum AI for developing models to study the response of vaccination of avian influenza H5N1 virus

Inhalt

Artificial intelligent models are being used to do different tasks in medicine. Similarly quantum computers are being developed as these computers are in the position to conduct the tasks million times faster than super computers available today. Supercomputers can need 100 years to conduct the difficult task, but quantum computer can do the same task in a few minutes.

The aim of this study is to develop the concepts by using quantum computers and artificial intelligence tools to create models that simulate the immune response to the avian influenza virus based on immunological datasets. Experiments are then conducted to proof these generated concepts in laboratory setting.

These models should be in position to predict the kinds of antibodies being generated after the vaccination as well as other immunological responses, but indicating the unwanted affects, if any. In this way, quantum computers can be used to prepare for better and safer vaccines for pandemic pathogens like avian influenza H5N1 strains in advance as well as also predict diversity of human antibodies generated with the vaccines. This work is a future vision of immunology using Quantum AI.

Keywords

Quantum computer, AI applications, Avian influenza H5N1 virus, Antibodies, Vaccine response

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Professional status of the speaker

Senior Scientist

Junior scientist status

No, I am not a junior scientist.

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