



(RESEARCH ARTICLE)



## Quantum computing will help in rationalizing clinical trials and respective Pharmacogenetics -processes

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### Abstract

Quantum computing at present is in keen focus across the globe in respect to the huge advantages it holds for the current and future generations. With the help of supercomputing powers we can achieve the unachievable in fraction of hours if not days or years. Quantum computing will help in advances in clinical research and medicine via rationalizing the practical outcomes from any given said trials or pharmacogenetical process. It will help in focusing on the better outcomes rather than secondary outcomes which may not be fruitful for us or future generations. Hence, the present letter has been written in order to bring in the notice the invention of quantum computing holds for the research industry.

**Keywords:** Quantum computing; Clinical research; Qubits; CR & CT

### 1. Introduction

Quantum computing which has been recently invented in the west holds huge scope for the research industries across the globe. With the help of qubit computing the calculations can be done with huge speeds which can help us further to make advances in research in any respective industry per se. As in focus for this paper the advantages to the medical research will be highlighted.

Clinical research and trials are keen focused to find the first in human drugs to make advances for the future medicines. Clinical research in the field of tuberculosis, AIDS, Cancer and recent Coronavirus will help in giving us tools and machines in order to counter with these chronic and yet complex diseases. Tuberculosis is in itself very hard to manage and tackle with the present molecules we have to manage this dreadful disease. With Xtra Drug resistant tuberculosis strains available in air, we have nothing but only old medicines in order to manage this level of tuberculosis disease.

Another example is of Coronavirus. Corona-virus is basically a type of SARS virus which is currently been known as major threat for human existence. As of date now, 2800 deaths haven reported globally, and many more to come. Research scientists are on verge of starting the first in human trials of corona virus vaccine within 6 weeks of time from now. But we are not sure whether such an effort would be helpful for us or not.

Voicing these two examples, Quantum computing power can help in running thousands of simulations of various combination therapies in research laboratories across the globe in order to find the suitable bulls eye medicine for treating such diseases and disorders. With the help of Qubits calculations precise and accurate drug therapies can be found out which will help in dealing the complexities of such ailments.

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The time will be no far when we could in fact develop the drugs along with faster approval rates, with the help of such powerful computing powers and can shorten the time span of drug discoveries from mere 12 years to 5 years down the lane. Not only this, qubit calculations will help in developing surplus drugs in order to tackle with any given said disorders of future which may come into limelight in near or far future.

Corona virus breakthrough vaccine can be possible with the help of quantum computers which can not only help in developing the right vaccine for right disorder but can also help in developing the combination drug therapies which could even tackle any given said future disease threat in not only humans but all living organisms.

Apart from this with the help of quantum computing we could even develop smarter drugs which will remain stable in the worst possible human living conditions. They can tackle and help in developing advances which would help in making us smarter than earlier in order to make us stronger and bolder in the garb of threats which holds us back in present and in future times.

In order to be stronger, the help of quantum computing will give us an insight in order to move ahead in the right manner to deal with the crisis of any sort and help us in coming out of the crisis in the real time basis. [1]

We must align ourselves towards our faith in science, and quantum computing respectively, as it will help in not only finding the complex problems solutions, but will also help in making us ready to face the crisis of the year 2020 and ahead.

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### **Compliance with ethical standards**

#### *Disclosure of conflict of interest*

There doesn't exist any kind of conflict of interest while publishing this manuscript.

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### **References**

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