



STEM Career Presentation

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The GigaBites



Career: Medical Scientist

The world we live in today is in great need of more doctors, scientists, and epidemiologists. Due to the Covid-19 pandemic, there is a shortage of available medical aid. The local hospitals and clinics are overcrowded with patients, and the outbreaks continue to worsen as the pandemic continues. While Covid-19 -more commonly called Coronavirus- sweeps the across the world, medical scientists are working day and night to find a cure. They conduct research to improve human health overall. They help to build the foundation to produce new vaccines, drugs, and treatments to new diseases such as the Coronavirus, Influenza, and the common Cold. A medical scientist is a STEM career path that can help many people.

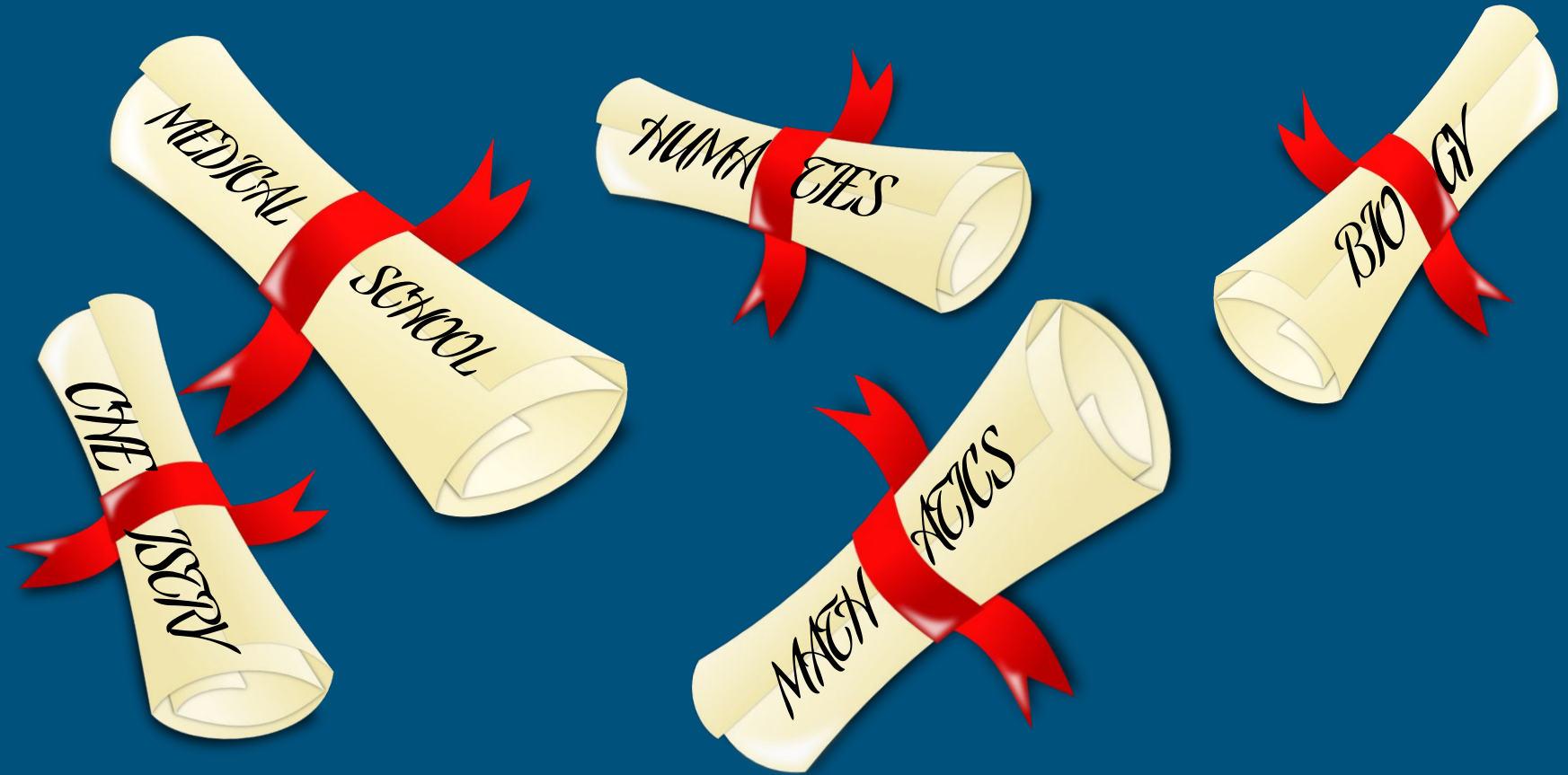


Medical Scientists at work

Required Degrees

Students who wish to become Medical Scientists have to work very hard in school. They are required, naturally, to have a Ph.D. in Biology or a similar life science. Some students also get a medical school degree as well as or instead of a Ph.D. In addition to those two mandatory courses, undergraduates are advised to study other helpful subjects such as chemistry, mathematics, engineering, physics, and computer science (STEM!). Humanities courses could also be recommended in becoming a medical scientist because writing and communication skills are needed, as they can be used to assist in publishing research results and other necessary documents.

DEGREES OF A MEDICAL SCIENTIST



Influential Scientist: Elizabeth Blackburn

Elizabeth Blackburn was born in Hobart on the island of Tasmania, Australia. Both of her parents were doctors. She took an early interest in animals and nature and went on to study biochemistry at the university in Melbourne. She later received her PhD from Cambridge University, England. Elizabeth Blackburn has taken an interest in the ethical implications of research and has contributed to the creation of a code regulating the field. She, along with Carol W. Greider and Jack W. Szostak, won the Nobel Prize in Physiology or Medicine in 2009 for the discovery of how chromosomes are protected by telomeres and the enzyme telomerase. The majority of Blackburn, Greider and Szostak's work used human and yeast cells, and some other unicellular organisms. Their findings have now been tested across a range of animals, including mice and frogs.



Jack W. Szostak



Carol W. Greider



Elizabeth Blackburn

Evolution of Medical Science

This STEM career path will most likely evolve considerably in the next 10 years. We predict that the level of work involved will stay relatively the same because while the equipment and technology will become more advanced, and the work will become easier, it will also become more difficult owing to the new diseases and viruses that will undoubtedly also evolve and get discovered over the years. Actually, the work might very well get easier as AI (Artificial Intelligence) develops and robots begin to take over simple occupations such as Telemarketing, proofreading, and receptionists. As robot AI grows more advanced, it might be able to replace human medical scientists. Since robots are computers, and think faster, they will surpass the work quality and speed that humans could do, thus they are far more efficient and the workload on the rest of the human scientists becomes lighter.

Citations

- <http://www.animalresearch.info/en/medical-advances/nobel-prizes/chromosome-protection-telomeres-and-telomerase/#:~:text=Greider%20and%20Blackburn%20identified%20the%20telomeres%20to%20be%20copied%20efficiently>
- <https://www.nobelprize.org/prizes/medicine/2009/blackburn/facts/>
- https://studentscholarships.org/salary/486/medical_scientists.php
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