TISSUE ENGINEERING: THE BENEFITS AND APPLICABILITY IN THE FUTURE

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Research Problem

The research problem is to identify the uses of tissue engineering in the medical world and determine the advantages and disadvantages it has to come to a conclusion to see if tissue engineering is beneficial or not and its impact in the future.

Hypothesis

Tissue engineering can be beneficial on a global scale and can help the society of Qatar not only with decreasing it's fatality rates of lung and breast cancer, but also resolving issues concerning organ and organ donor shortages and waitlists for organs, financial matters and risky procedures, if implemented in the future.

Literature Review

- This research is driven by concerns based on organ shortage and the lack of organ donors to provide healthy tissues and organs to patients requiring transplants and portraying how tissue engineering can solve that problem in the future.

- Tissue engineering is an interdisciplinary work that implements engineering and biology together to replace, improve, or maintain body tissue using artificially constructed tissue.

- Vacanti mouse experiment led to the iconic breakthrough of tissue engineering.

- Tissue engineering sales in the US and China expected to increase significantly by 2022 and 2027.

Variables

- Independent variable: the two different experts

- Dependent variable: the answers given by both specialists to the questions asked.

- Controlled variables: number of questions and the contents of the question.

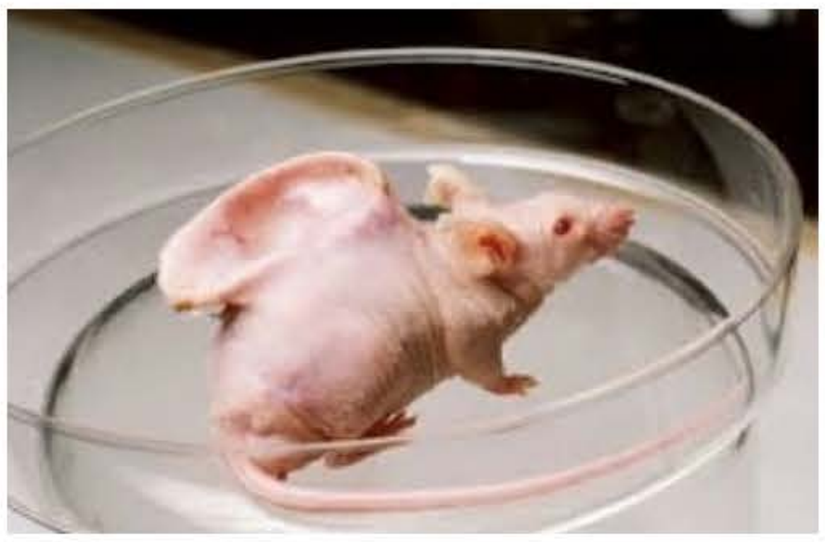
Procedures

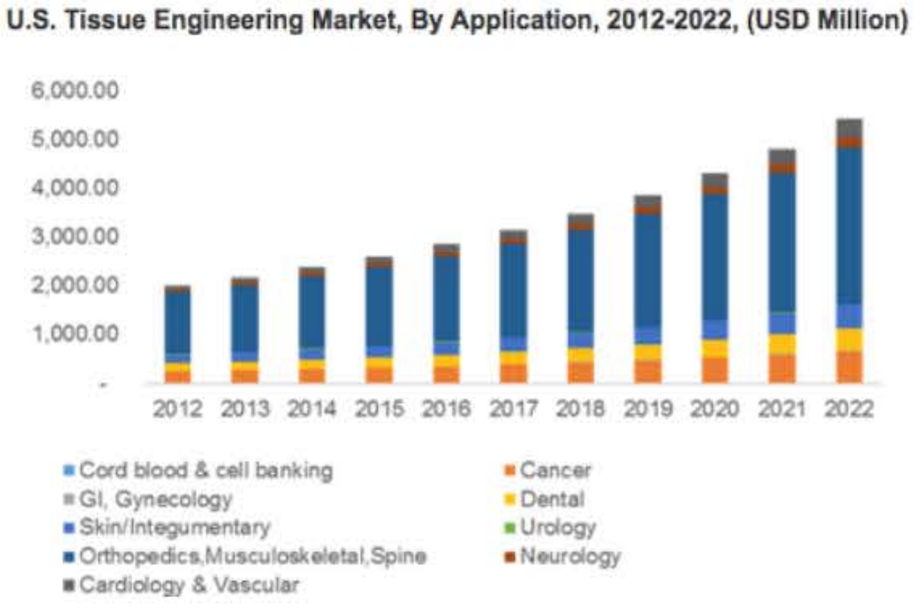
1. We interviewed our experts, Dr Greg and Ms Ozma. We used our phones to record an audio of both interviews that we could use for writing and observing later on in the research.

2. Once each interview was done, we documented all the results that would be important for discussing later on.

3. Once the in-person investigation was done, we moved onto the online research, which would assist us in gathering more crucial information needed to answer the hypothesis and see if it's true or false.

Graphs and Figures





Data Analysis and Conclusions

- According to the experts, tissue engineering is a beneficial and fascinating addition to science and medicine and can solve the problem of organ shortage and waiting lists, not only in Qatar but worldwide.

- Can cure many diseases and improve the overall quality of our lives.

- Tissue engineering would be considered an ideal cure for reviving damaged and dying biological tissue and eliminating the lengthy waitlists for organs and reducing the need for organ donors.

- To conclude, tissue engineering is indeed the "cure for tomorrow", with the potential to save and improve many lives.

Applications

- This research is important because it is a good way to raise awareness about what tissue engineering actually is and all the benefits it has to offer

- Determining the advantages and disadvantages of tissue engineering will be an addition to science and society by spreading awareness on the topic, and how it can benefit society in the near future.

- Allowing people to know about such treatments that tissue engineering is capable of doing aids the society of Qatar to make the advancements needed for revolutionary healthcare.

- Our goal is to broadcast this newly developed innovation and it's potential to cure thousands of people.

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