



ApopBot

The future of cancer cures

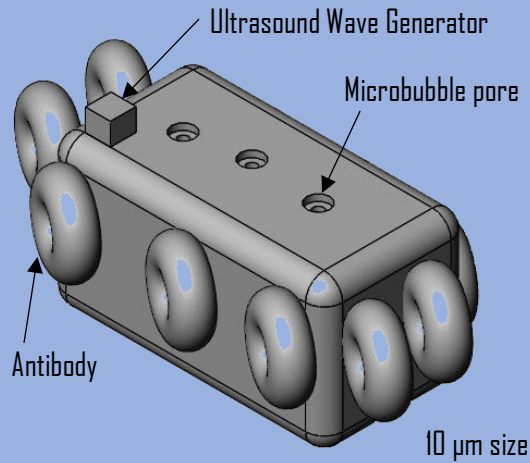
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Underlying Technologies

- Covalently Bonding Gold Carbon Nanotubes to antibodies for Cancer STEM Cell (CSCs) surface markers
- Identification of CSCs and microbubble technology
- Ultrasound Mediated Tumor Destruction through use of 3 MHz ultrasound waves on microbubble.



Statistics

- In 2017 12.7 million people were diagnosed with cancer, and there were 7.6 million deaths related to cancer
- Cancer STEM Cells has a 70% - 90% success rate accumulated by researchers (Roswell Park Cancer Institute)
- ApopBot's proposed technology works on 8 general types of unique cancers.

How it Works

Covalently bonding antibodies of CSC surface markers to ApopBot, and microbubbles are loaded.

Injecting ApopBot into the bloodstream, and ApopBot searches for antigen on surface of CSC.

ApopBot releases microbubble, and ultrasound frequency is triggered for bubble to form a cavity in the cell membrane.

Second trigger activates for destruction frequency, causing artificial 'apoptosis', and ApopBot naturally exits body.

Benefits



Harmless

Gold nanoparticles are not harmful to human bodies and post treatment, all particles will exit the body via natural processes involving the body's immune system. The process also has near zero side effects compared to traditional treatment methods such as through drugs



Innovative

The technologies utilized in the bot are of the latest research and features the many disciplines of study in the field of nanotechnology. Coupled with this, the bot has multiple purposes as microbubbles can be used for drug delivery, ultrasound image enhancements, and lots more.



Non-Invasive

The injection method of microneedles for the nanobot is non-invasive, this also allows for medical information to be transported out at the same time, by identifying bio-markers. The robot's presence in the body is also non-invasive as it carries biological elements.



"A HERO is an ordinary individual who finds the strength to persevere and endure in spite of overwhelming obstacles"

- Christopher Reeves

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Eliminating cancer, once cell at a time