

The background features several concentric red circles of varying radii. A dashed red line follows the path of one of these circles, starting from the left side and curving upwards and then downwards towards the right. A solid red downward-pointing triangle is positioned on the left side of the dashed line.

Academic Poster

By: Marie Desire

What is an academic poster?

- An academic poster is a visual way of communicating information.
- It needs to grab attention and convey a message in a clear and compelling way using a mixture of text and graphics.
- Academic posters are academic, this means they should be written in a formal style and referenced.
- Academic posters are designed so others can read and understand the information quickly.

What does and academic poster include?

- If reporting research:
 - Title
 - Introduction
 - Method
 - Results
 - Discussion
 - Conclusions
 - References

What does an academic poster include? Continued.

- **If providing a solution to a problem:**
 - **Title**
 - **Situation**
 - **Problem**
 - **Possible solutions**
 - **Evaluation of those solutions.**
 - **Implementation of the chosen solution**
 - **Conclusions**
 - **References**

Example of Academic poster



Smart Capsule

Targeted Drug Delivery System for Increased Drug Efficacy
ECE and CS Senior Design Project 2017

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The Problem

Ailments in the gastrointestinal tract such as Crohn's disease or cancer can be more effectively treated when the full drug dosage is administered directly to the damaged tissues. **Targeted drug delivery** is a method by which medication can be administered to specified regions of the body. As such, controlled drug delivery has been the focus of much research in recent years. However, many of the devices out there can be expensive, invasive, or impractical for use in human trials.

The Solution

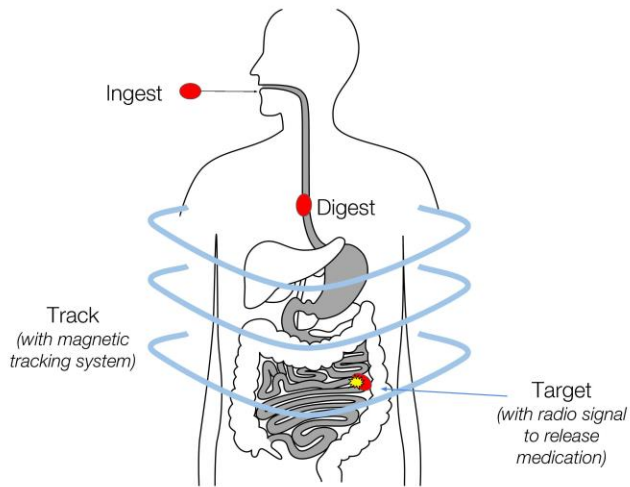
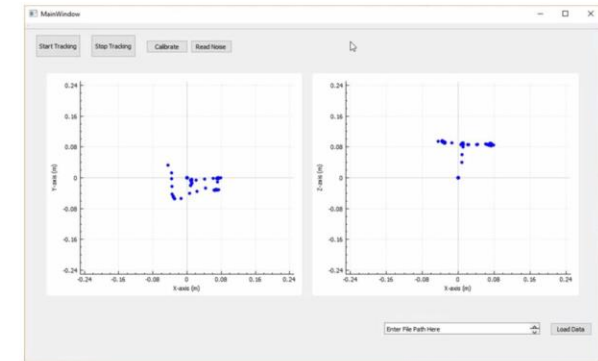
The "Smart Capsule" is a device that is capable of remotely releasing medications to programmed locations within the gastrointestinal tract. It does so by using a magnetic tracking system to externally monitor the location of the pill, and a radio-frequency triggering mechanism to externally initiate the release of the medication.

(1) Tracking System

The tracking system consists of eight magnetic field sensors and a digital acquisition board. The sensors measure the magnetic field at various distinct locations surrounding the smart capsule. These could be placed around the abdomen of a patient who recently swallowed the capsule. A computer program then calculates the location of the capsule from these measurements.

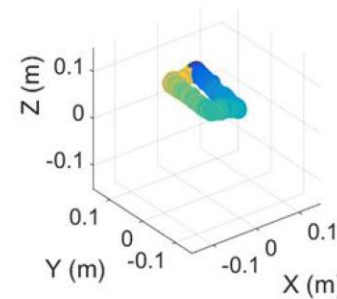
(2) Delivery System

The delivery system consists of a capsule containing an electrical system that will trigger the release of the capsule's medical contents when subjected to a specific radio frequency.



Results

Preliminary tests show that this system has great potential for the application of targeted drug delivery.



Future Work

- Molds of Capsule design for construction with biocompatible materials
- Integrated Circuit design for the RF module inside of the capsule
- Improvements of tracking system

Citations

“Academic Poster .” *Library and Learning Services*, Library and Learning Services at Staffordshire University, Nov. 2020, https://libguides.staffs.ac.uk/ld.php?content_id=3111812.