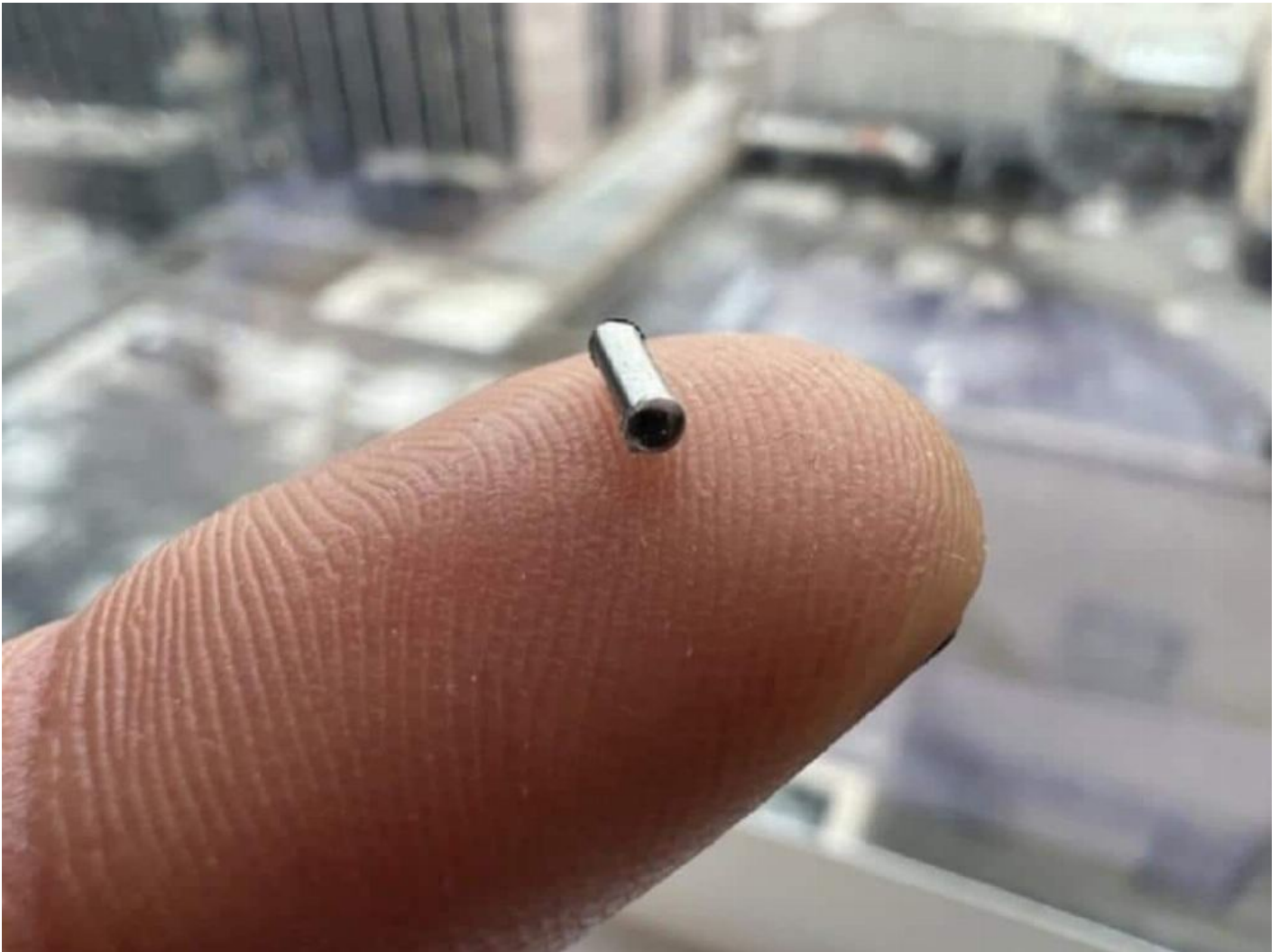


Nano Fluidic Drug-Eluting Seed Device

April 18, 2023 • vajiramandravi.com



About Nano fluidic Drug-Eluting Seed device:

- It is an implantable nanofluidic device invented to deliver **CD40 monoclonal antibodies**.
- This device is a viable approach to penetrating the pancreatic tumour in a minimally invasive and effective manner.
- The device **consists of a stainless steel drug reservoir** containing nanochannels, thus creating a membrane that allows for sustained diffusion when the drug is released.

What is Pancreas?

- It is located behind the **stomach in the upper left abdomen**.
- It is surrounded by other organs including **the small intestine, liver, and spleen**.

- It plays an essential role in converting the food we eat into **fuel for the body's cells**.
 - The pancreas has **two main functions**:
 - **Exocrine function:** Pancreas contains exocrine glands that produce enzymes important to digestion.
 - These enzymes include trypsin and chymotrypsin to digest proteins; amylase for the digestion of carbohydrates; and lipase to break down fats.
 - **Endocrine function:** The endocrine component of the pancreas consists of **islet cells** (islets of Langerhans) that create and release important **hormones directly into the bloodstream**.
 - Two of the main pancreatic hormones **are insulin**, which acts to lower blood sugar, and **glucagon**, which acts to raise blood sugar.
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Q1) What are Hormones?

Hormones are chemical messengers that are produced by the endocrine glands and transported through the bloodstream to target cells in various organs and tissues throughout the body.

Source: [An implantable device, smaller than a rice grain, can shrink pancreatic tumours](#)

Source: <https://vajiramandravi.com/current-affairs/nano-fluidic-drug-eluting-seed-device/>

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