

Is Snow White Really Sleeping?

The Secret Tool that Unlocks Her Glass Coffin From the Inside!

Silvia C. Carrau, MD, PhD ^{1,2,4}, Xinlei Li, PhD ^{1,2}, Manali Singha, PhD ³, Heather M. Costello, PhD ³, Benjamin J. Kelly, MS ³, David Brigstock, PhD ^{1,2}, and Sara K. Rasmussen, MD, PhD ^{1,2,4}

1. Department of Pediatric Surgery, Abdominal Transplantation and Hepatopancreatobiliary Surgery, Nationwide Children's Hospital
2. Center for Clinical and Translational Research, Abigail Wexner Research Institute, Nationwide Children's Hospital
3. Institute of Genomic Medicine (IGM), Abigail Wexner Research Institute, Nationwide Children's Hospital
4. Center for RNA Biology, The Ohio State University College of Medicine



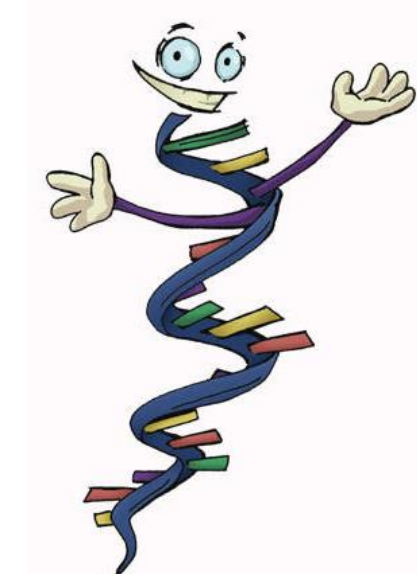
The Characters

HERVs, Human Endogenous RetroViruses believed to be asleep as "Snow White".



The Glass Coffin contains the genetic secrets. It is an analogy to the nucleus of a cell.

Double-helix **DNA** lives in the glass coffin and carries the cell genetic instructions.



Single RNA can be a messenger (mRNA) and carries DNA information out of the nucleus.

Dwarf scientist works in a mine (aka Lab), looking for the "jewel stone" that uncovers HERVs secrets.

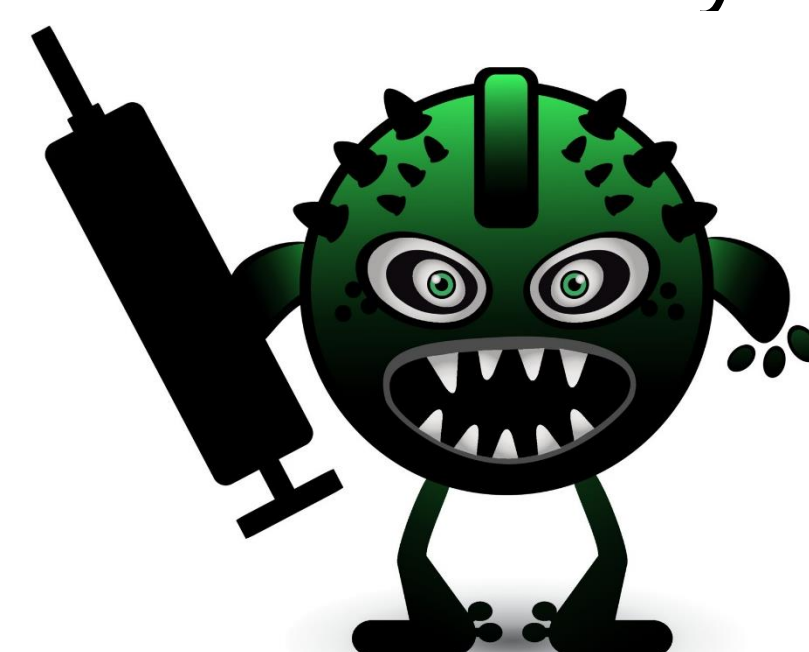
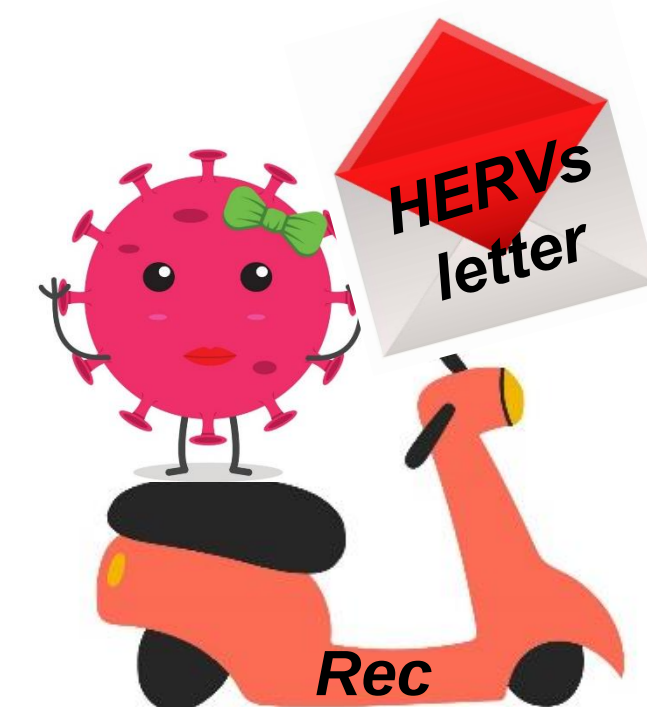


Dwarf Bioinformatics' scientist from the Institute of Genomic Medicine (aka IGM or the dwarfs' mine) sorts RNA sequences using a "pipeline" to find the addresses for HERVs of interest.



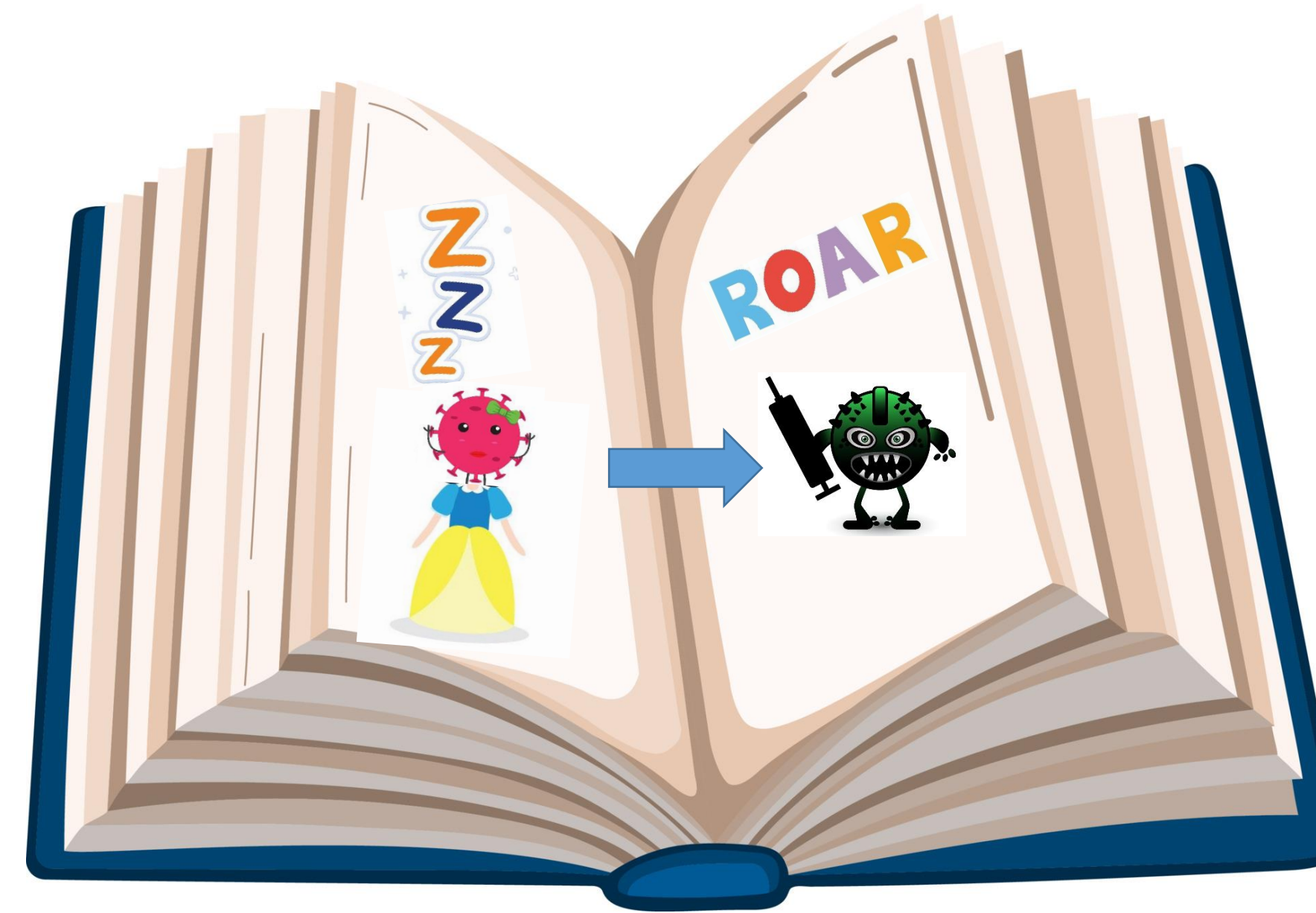
Chromosome 17, one of the 23 pairs of chromosomes in humans, is an important protagonist of our story.

Rec transport protein carries HERVs information from the nucleus to the cytoplasm of a cell.



In the Rasmussen's mine (aka **Her HERV's Lab**), we work with the assumption that "**angry**" **Rec** may "**wreck**" a cell.

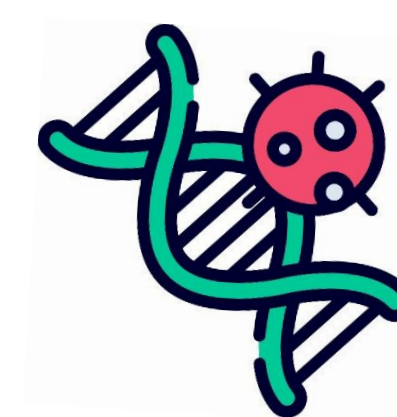
The Plot



Once upon a time, millions of years ago, **HERVs** infected the dwarfs and inserted viral genetic information into their **DNA**.

The event of "Snow White showing up in the dwarfs' houses" brought significant benefits in their evolution.

The new **DNA** code allowed mammals to form placentas, and carry their pregnancies effectively. Also, their saliva started digesting starch. Finally, they can eat potatoes!



As time passed by, dwarfs believed that **HERVs** were inactive and asleep inside the **glass coffin**.

Some **dwarf scientists**, however, suspicious that **HERVs** were awake and on the move, worked intensely in the mines.

They found precious evidence that deregulated **HERVs** were involved in a plague of diseases, blamed for inflammation, degeneration of nervous cells, and even cancers.

When the **dwarf scientists** looked specifically inside the **glass coffin**, they identified the **Rec transport protein** that allows more diverse protein expression.

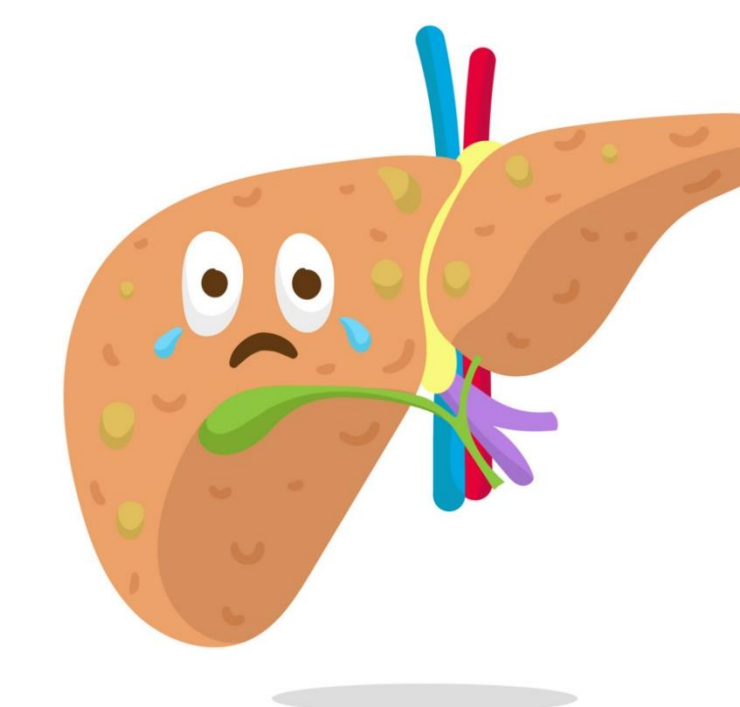
At **Her HERVs Lab**, research is carried assuming that "**Wrecking**" **Rec** unlocks the **glass coffin** from the inside!

STILL NOT THE END!

Our Story

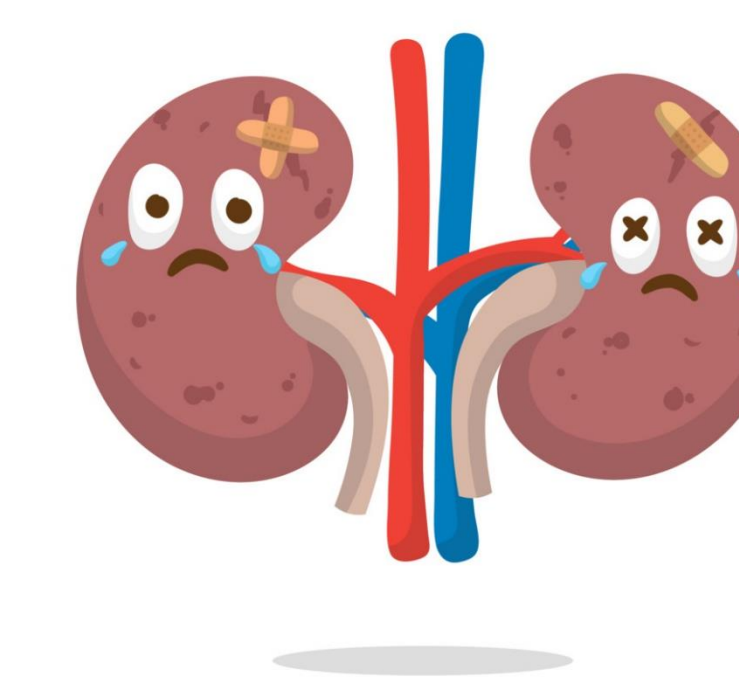
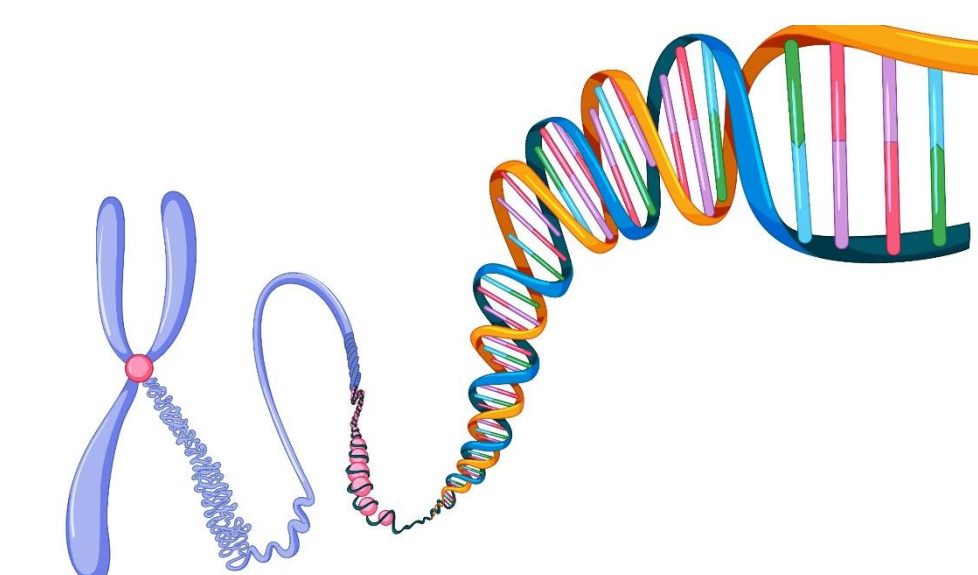
Dr. Rasmussen's group previously designed a **Bioinformatic pipeline** ¹ that highlights **91 HERVs addresses** (aka gene loci) in the human genome.

In 2020, their research showed **five gene loci** that intensely express HERVs information in **hepatoblastomas** - the most common liver tumor in the childhood ².



Currently, **Her HERVs Lab** is replicating those findings, now comparing tumor to normal tissue samples from the same individual.

We recently found that a specific location on **Chromosome 17 (17p13.1)** shows markedly higher **HERVs** activity, when we compare hepatoblastoma with normal liver tissue.



As our research continues, based on additional significant findings, we envision the development of a **screening test** for **liver** and **kidney** cancers in children.

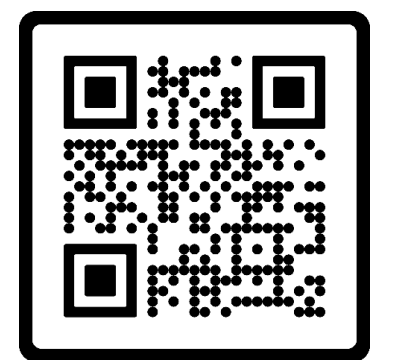
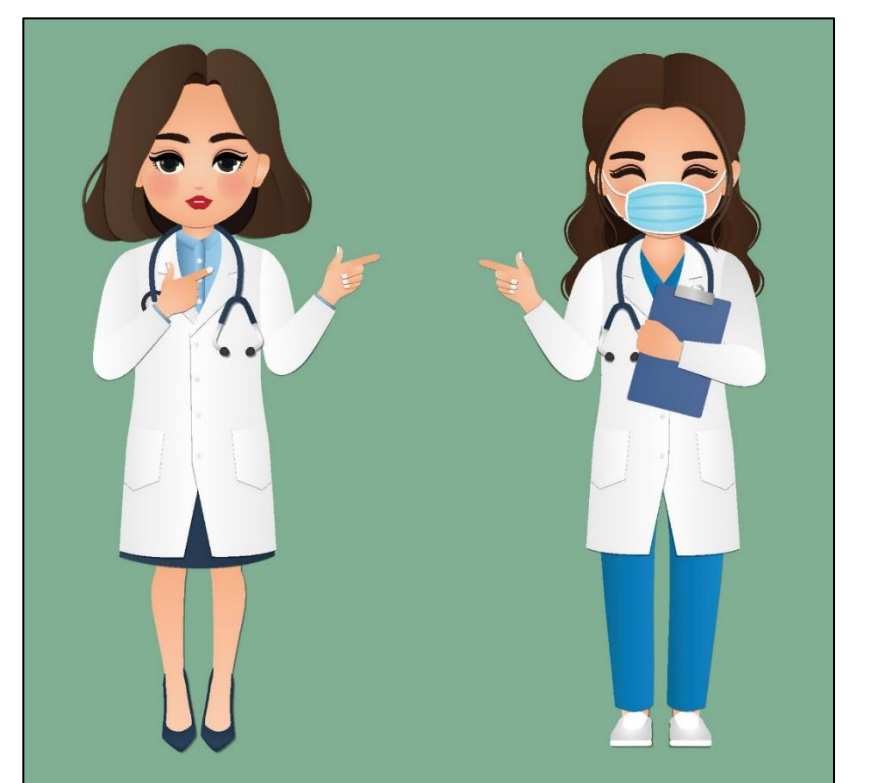
We also found that **deregulated Rec** was "wrecking" melanoma cells. We will continue studying the **Rec transport protein** and its potential deregulation in liver and kidney cells.



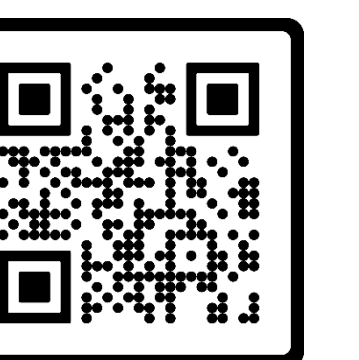
Keep tuned for the next chapter of our story!

**Her
HERV's
Lab**

Who we are:

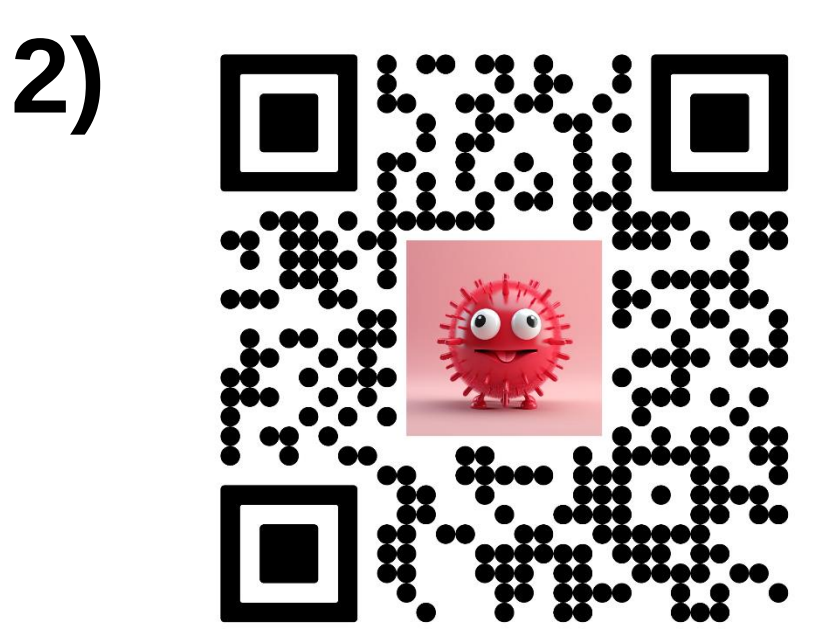
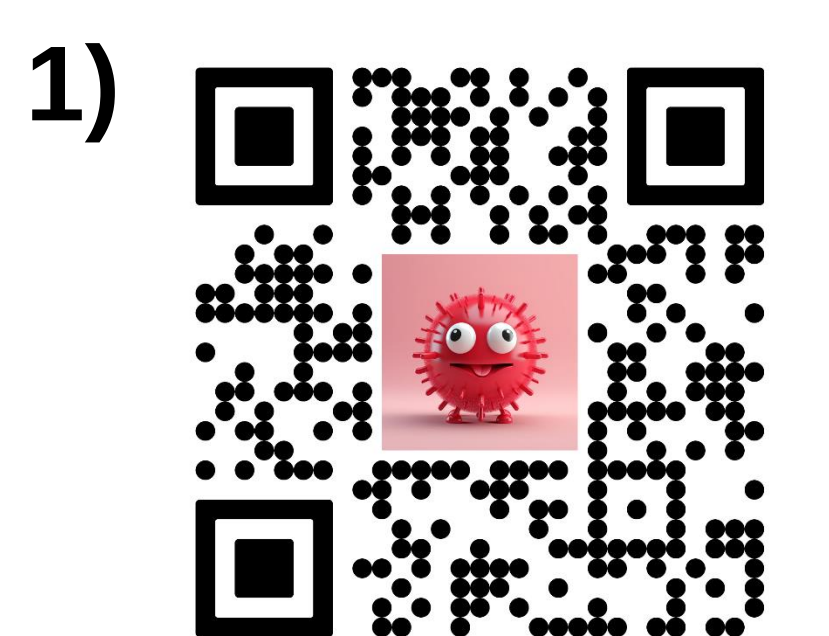


SCAN ME



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References:



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