



RESEARCHERS IN

CANCER WARS

> THE BATTLE AGAINST CANCER <
DEPENDS ON SCIENCE

QUAN ZHOU & MECUSA

JUDITH AGUDO (BARCELONA) ALWAYS LIKED SCIENCE, HER FIRST INSPIRATION WAS "ERASE UNA VEZ" AN EUROPEAN SCIENCE CARTOON SHOW



IN HIGH SCHOOL, SHE ATTENDED A COURSE AT THE UB*



AFTER STUDYING BIOLOGY IN COLLEGE AND DOING HER PHD AT THE UAB*, SHE WON A FULBRIGHT SCHOLARSHIP AND SPENT 7 YEARS IN NYC

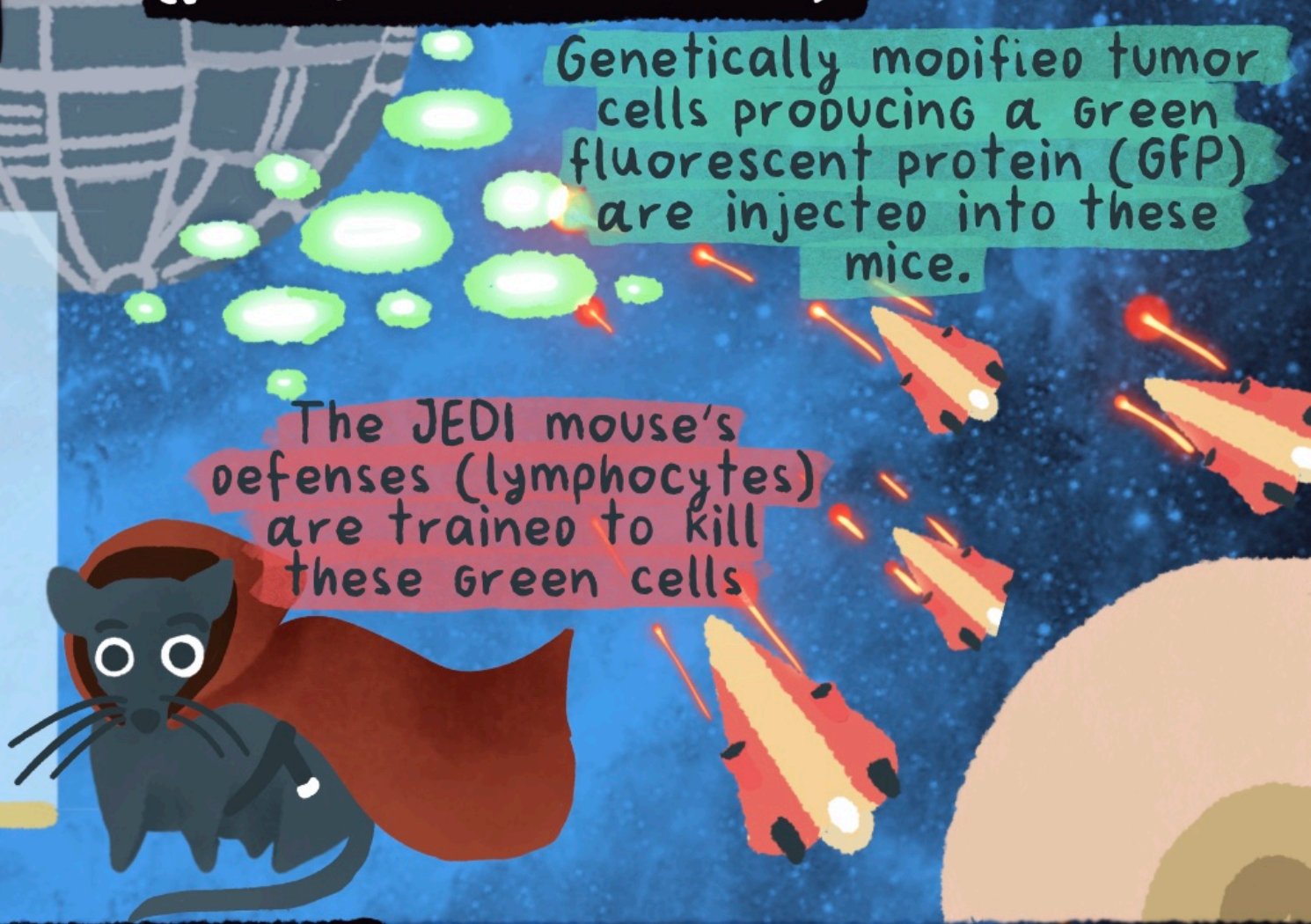


NOWADAYS, JUDITH IS A PROFESSOR IN THE DEPARTMENT OF CANCER IMMUNOLOGY AT THE DANA FARBER INSTITUTE, AND SHE IS AFFILIATED TO IMMUNOLOGY AT HARVARD MEDICAL SCHOOL, IN BOSTON



I study **Breast cancer immunotherapy**, i.e. how to use our **body's defenses** to kill cancer. If a **patients' defenses** are well **trained**, they could **replace chemotherapy**.

JUDITH DEVELOPED THE **JEDI MOUSE** (just EGFP death inducing)



THANKS TO THE JEDI SYSTEM, **TREATMENT-RESISTANT TUMOR CELLS** CAN BE EASILY IDENTIFIED (BATTLE SURVIVOR CELLS)

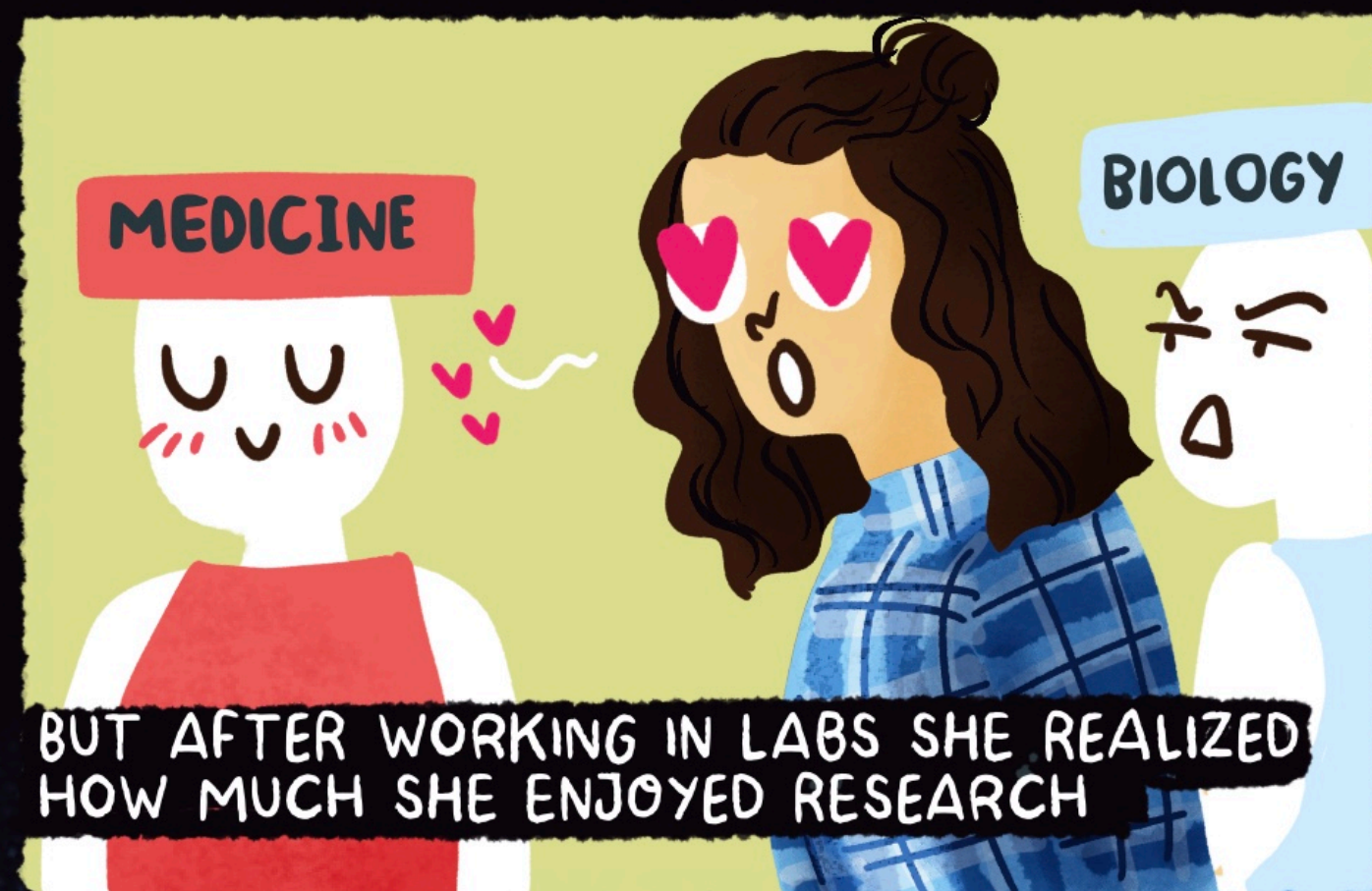
My dream is to be able to cure cancer, not just make it go into remission

We will beat you soon!

AND **ISOLATED** TO STUDY THEIR SPECIAL PROPERTIES

• • • JUDITH AGUDO & JEDI • • •

ALTHOUGH PILAR – BORN IN LEON– ALWAYS LIKED CLINICAL DEGREES, SHE STUDIED BIOLOGY



WHILE DOING HER PHD IN BIOMEDICAL ENGINEERING IN SALAMANCA (WESTERN SPAIN), SHE NOTICED SHE LIKED PARTICULAR AREAS OF MEDICINE, BUT...



AFTER APPLYING FOR SEVERAL POSITIONS SHE DECIDED TO TAKE ONE IN ST. LOUIS

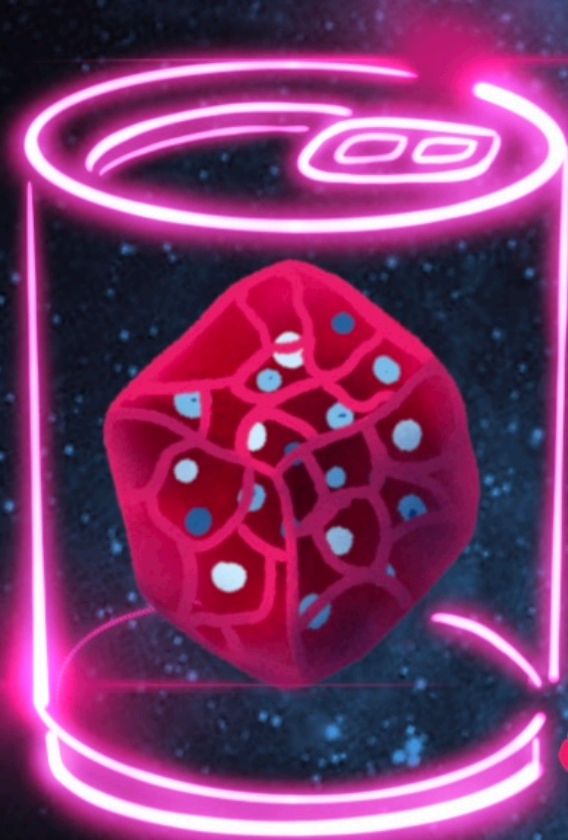


SHE'S CURRENTLY A PROFESSOR IN SOUTH DAKOTA UNIVERSITY AT SANFORD RESEARCH, AND RUNS HER OWN LAB IN THE DEPARTMENT OF CANCER BIOLOGY AND IMMUNOTHERAPIES



We do research on the cancer environment – Cancer is not just the tumor itself, but also what surrounds it and what it feeds on to grow

IN HER LAB THEY CAN MIMIC A PATIENT'S CANCER (TUMOR + ENVIRONMENT) WITH THE PATIENT'S OWN CANCER CELLS. THIS WAY, THEY CAN STUDY THE DISEASE IN A PERSONALIZED WAY, SINCE EACH CANCER IS DIFFERENT AND UNIQUE



A THIS ALLOWS TESTING DIFFERENT THERAPIES IN THE LAB, TO DETERMINE THEIR EFFICACY BEFORE USING THEM IN PATIENTS

CUSTOM CANNED CANCER OF JOE

THIS IS SUCH A PIONEERING METHOD THAT IS STILL UNDERGOING PRE-CLINICAL TRIALS

I am really proud of this ground-breaking model, which could be used in the future to predict how each individual patient responds to their own therapy



PILAR DE LA PUENTE...

LUCIA REGALES, FROM GIJON (NORTHERN SPAIN), GREW UP SURROUNDED BY NATURE



AFTER SEEING MANY OF HER FAMILY MEMBERS SUFFER FROM CANCER, LUCIA DECIDED SHE WOULD STUDY GENETIC DISEASES



HER PASSION FOR SCIENCE TOOK LUCIA TO DIFFERENT COUNTRIES, ALL THE WAY TO THE USA, WHERE SHE COULD DO WHAT SHE REALLY LIKED



AFTER A FEW YEARS IN ACADEMIA IN THE USA, SHE DECIDED TO JUMP TO INDUSTRY

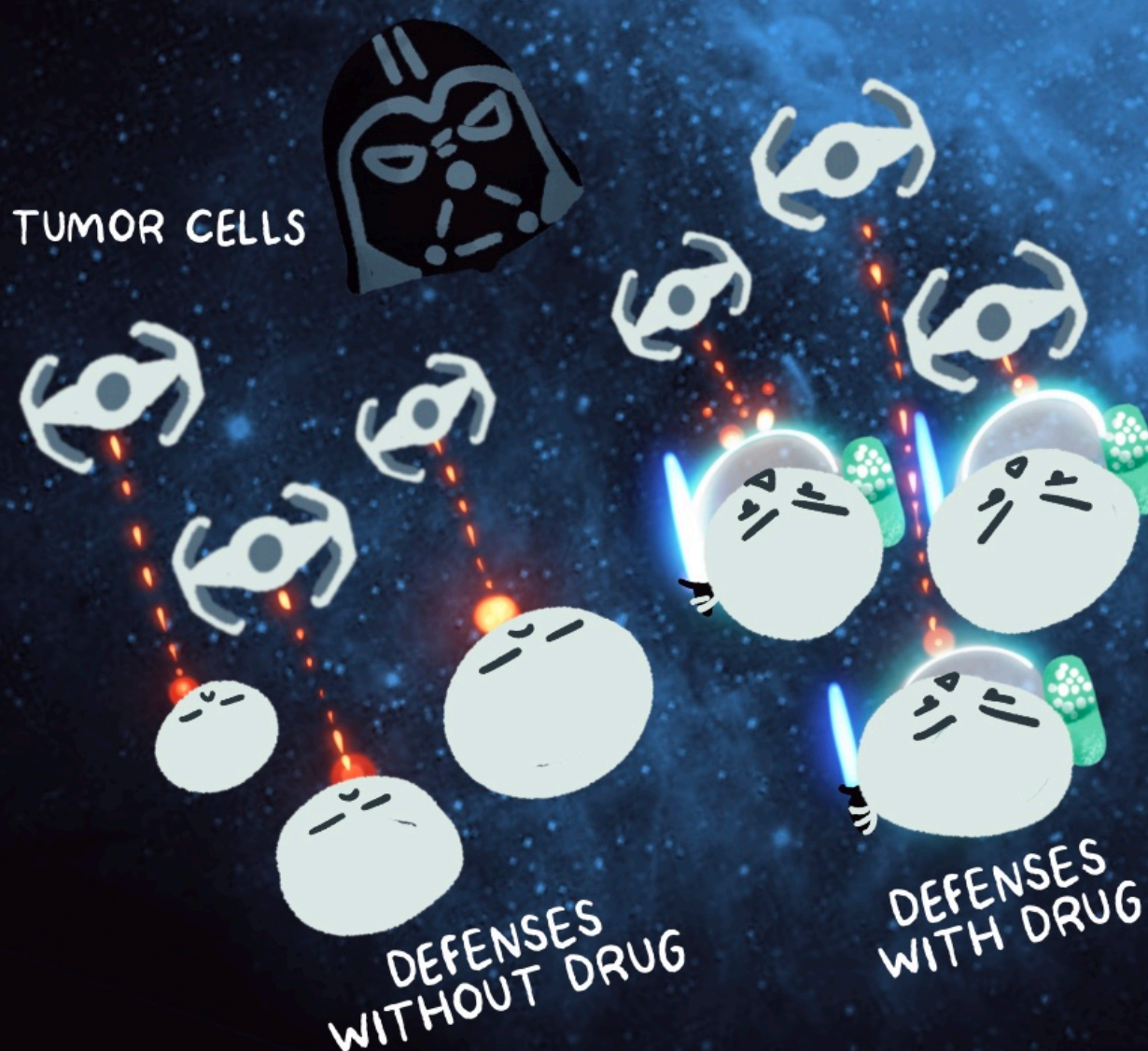


NOWADAYS, SHE IS THE SCIENTIFIC DIRECTOR OF ONCOLOGY IN THE BIOTECH COMPANY CURIS

I work on 2nd generation immunotherapies, to activate those body's exhausted defenses that are not able to attack the tumor anymore



SHE DEVELOPS DRUGS THAT HELP THE BODY'S DEFENSES BREAK DOWN TUMOR CELLS' BARRIERS, MAKING THEM VULNERABLE TO BE ATTACKED.



Learning about immunotherapy, and witnessing how patients can benefit from it motivates me every day

LUCIA REGALES



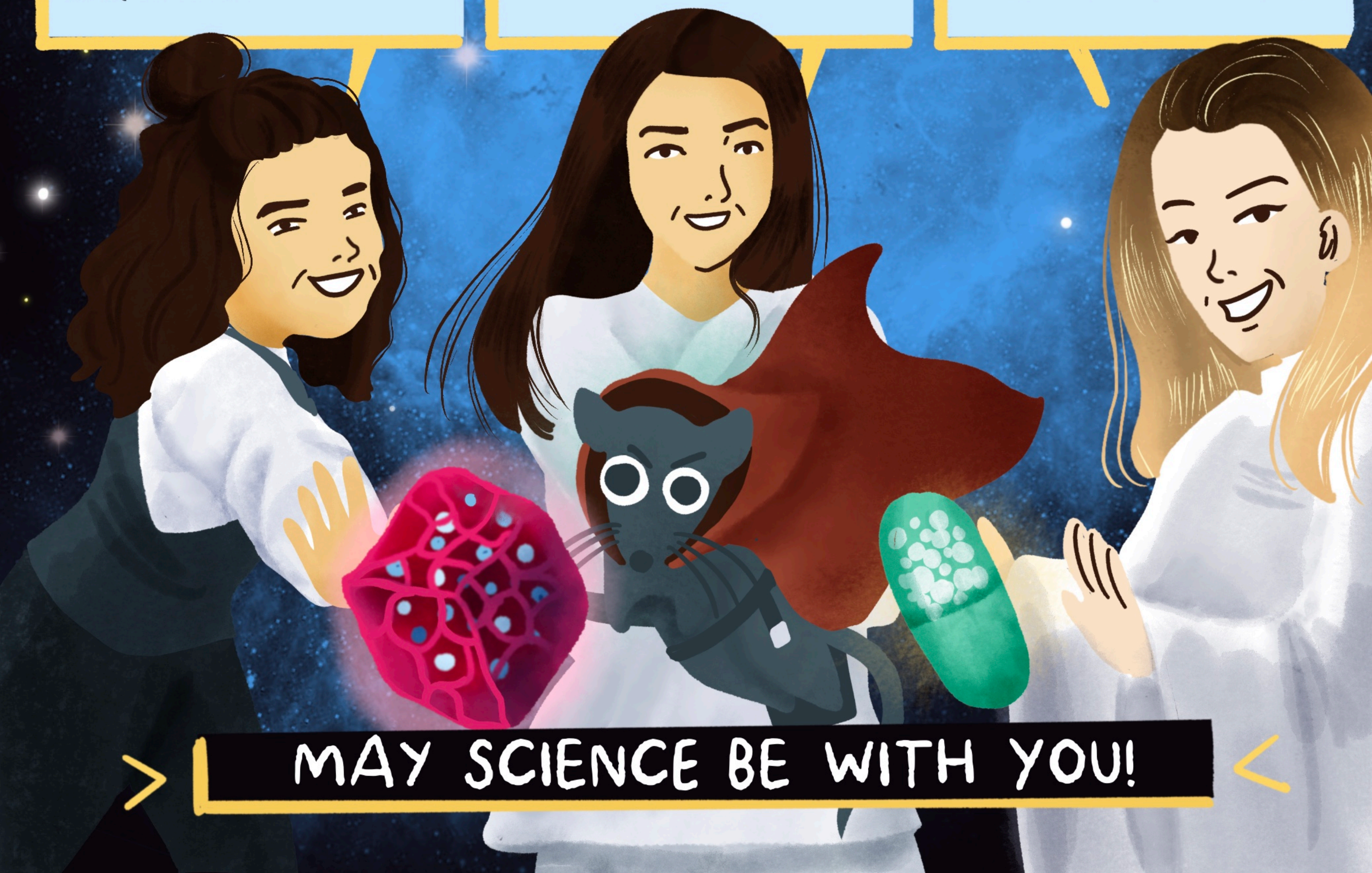
It is important to remember that **patients suffer from cancer**, but they are not responsible for "fighting" the disease

**THE REAL BATTLE DEPENDS ON SCIENCE,
AND WE HAVE GREAT FIGHTERS ON OUR SIDE**

Aiming to "End cancer" as if it was "one" disease is not possible. We need to perform very specific studies for each type of cancer, because every tumor is different.

We have to develop new genetic and cell engineering tools to manipulate the immune system.

Precision medicine is the future of healthcare. It is currently at an early development stage, but the goal for the future is to be able to analyze a patient's tumor and determine which particular therapy will work for them.



> MAY SCIENCE BE WITH YOU! <