

THE
NOBEL
PRIZE

CHEMISTRY PRIZE 2020

•

Genetic scissors: a tool
for rewriting the code of life

The Nobel Prize in Chemistry

“to the person who made the most important chemical discovery or improvement”



Who is rewarded with the Chemistry Prize?

People who have made discoveries or improvements that have given us knowledge about the structure of various substances and how they are created and changed.



2020 Chemistry Prize

The prize is awarded for the discovery of one of gene technology's sharpest tools.



The 2020 Chemistry Laureates

"for the development
of a method for
genome editing"



Emmanuelle Charpentier
Born: 1968, France



Jennifer A. Doudna
Born: 1964, USA

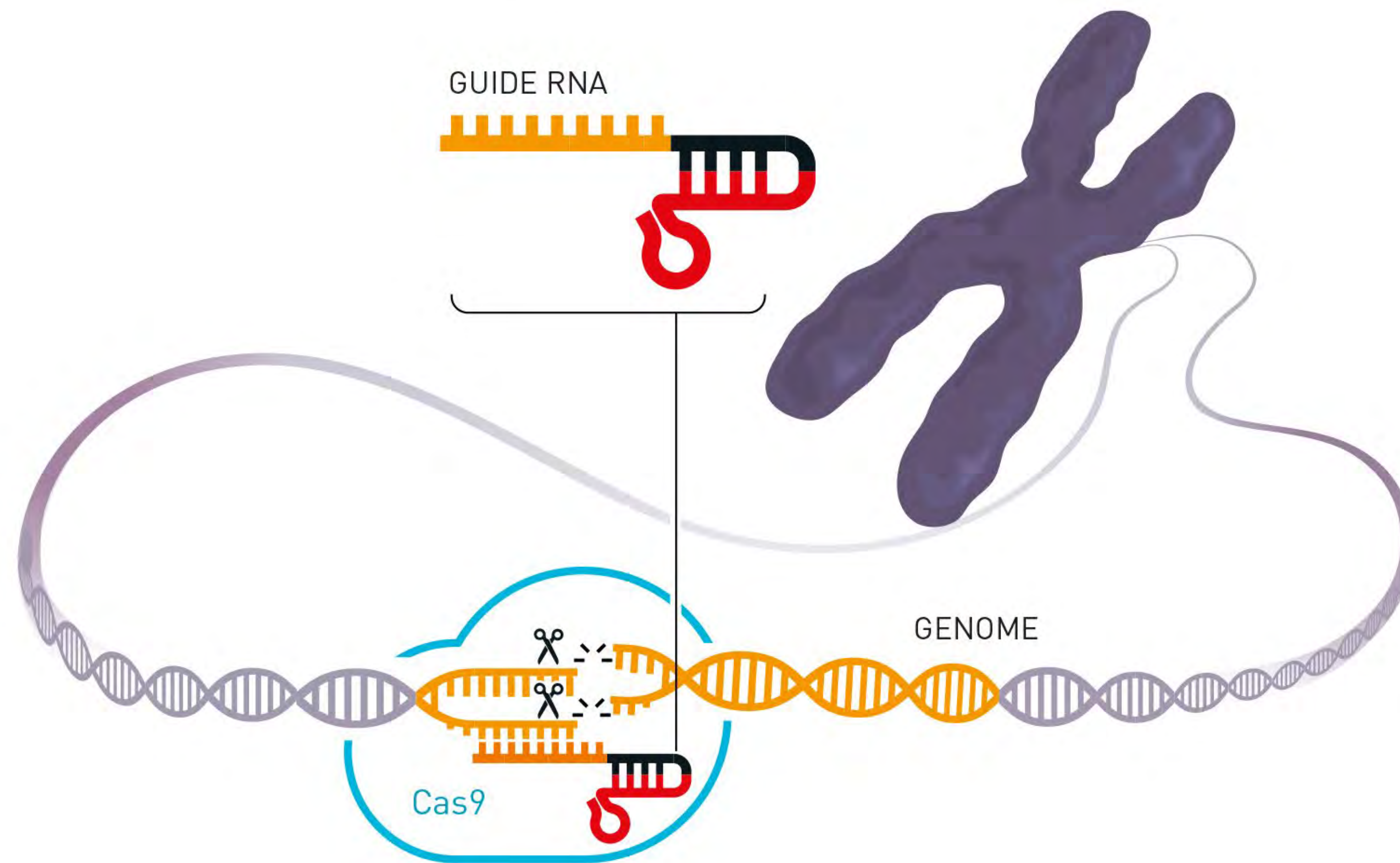
Bacteria have an ancient immune system

Emmanuelle Charpentier, one of the laureates, in her laboratory.

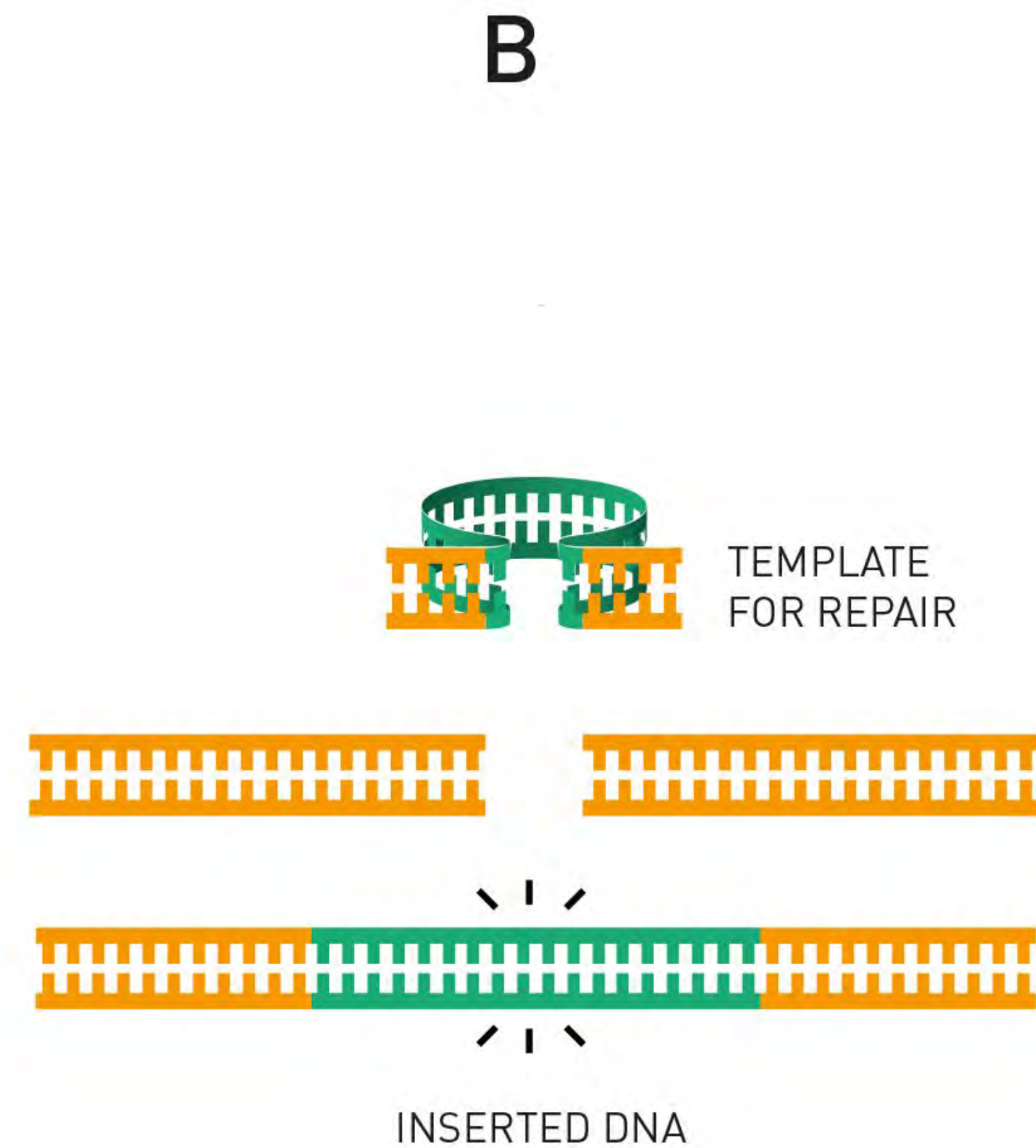
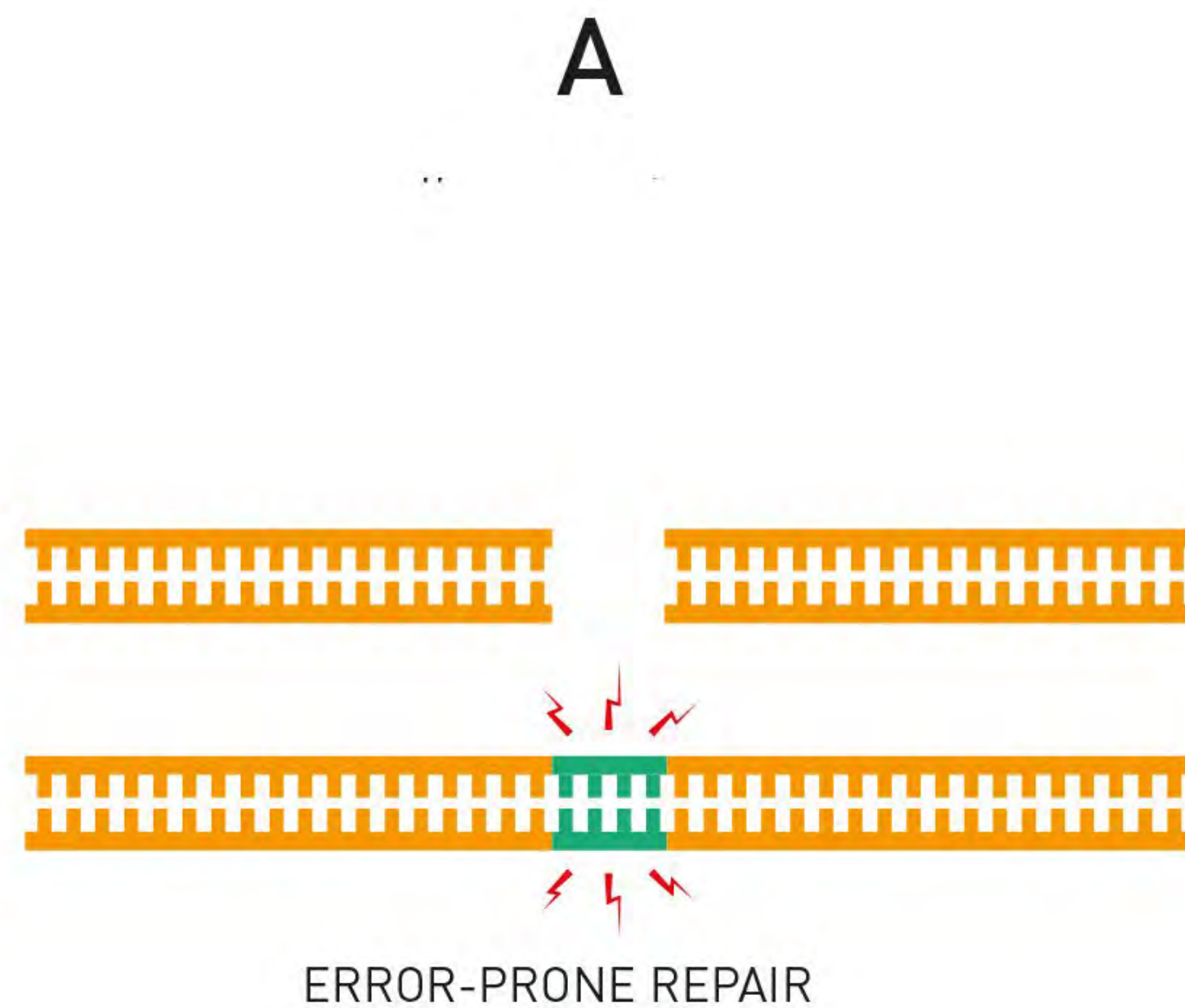


PHOTO: HALLBAUER & FIORETTI

The CRISPR/Cas9 genetic scissors



How do the researchers use the genetic scissors?



New technology that affects us all



Thanks to the genetic scissors, researchers have developed varieties of rice that do not absorb poisonous heavy metals from the soil.

Unlimited possibilities – but also risks

Jennifer A. Doudna, one of the laureates, holding a model of the genetic scissors. The laureates' discovery offers hope of curing serious diseases.



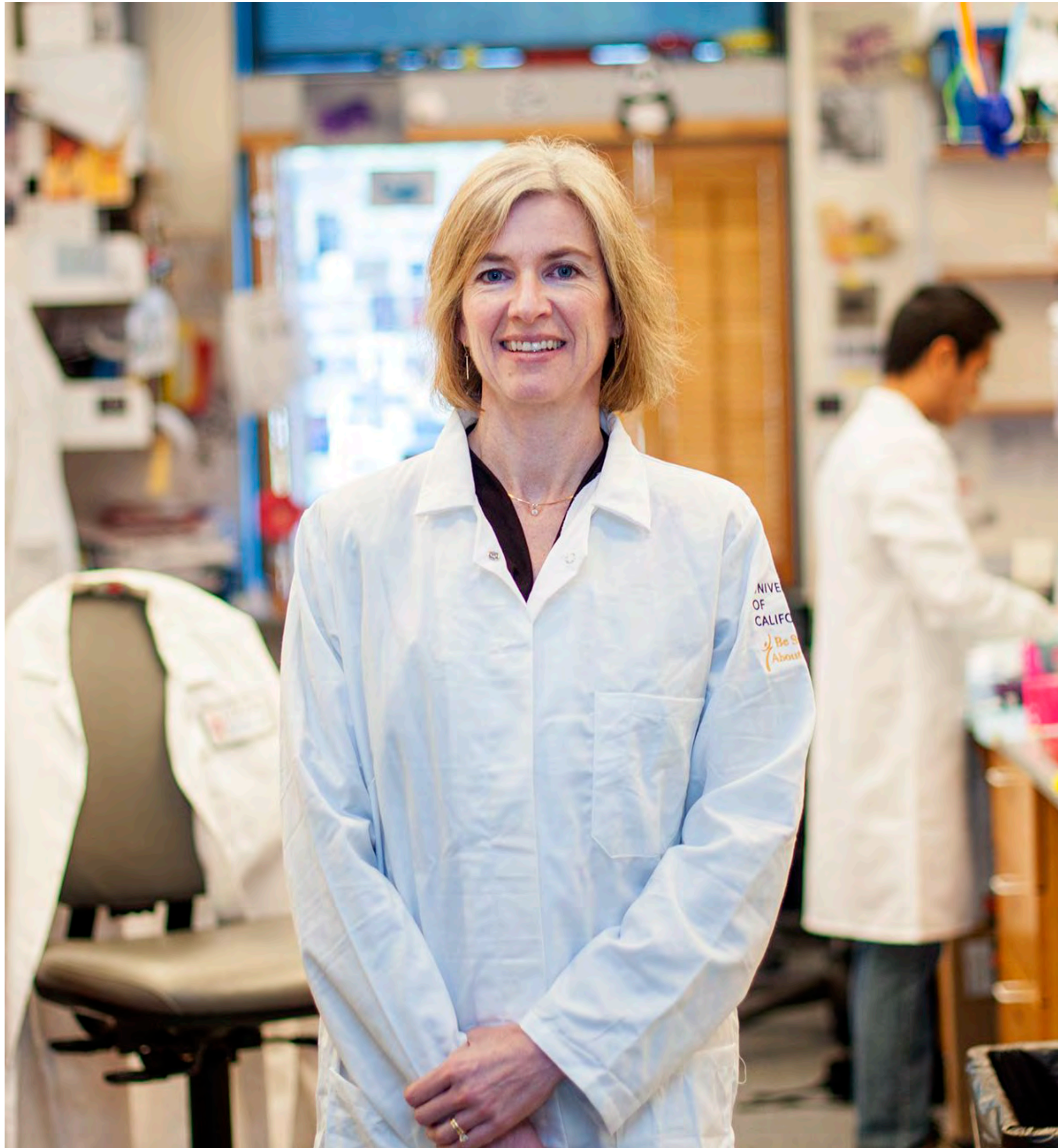


PHOTO:UC BERKELEY/KEEGAN HOUSER

“We had a sense that we were onto something big – I think we had no idea how big.”

Jennifer A. Doudna, 2020 Chemistry Laureate

THE
NOBEL
PRIZE

FOR THE GREATEST
BENEFIT TO
HUMANKIND

Nobel Prize Lessons