# Women Heroes of Science

# Nuclear Physics

#### Maria Goeppert Mayer

#### The Onion Madonna

Goeppert Mayer began researching atomic nuclei and the "magic numbers" that puzzled scientists in 1948. Within a year, she'd developed a nuclear shell model of the atomic nucleus that would go on to win her the Nobel Prize in Physics in 1963. Maria Goeppert Mayer was once asked why girls needed to study science, to which she replied, "Do girls only have to learn how to read just to study cook books?"

### Genetics Neurophysiology Linda B. Buck

Linda B. Buck was the first to discover how our sense of smell works. In 2004, she was awarded the Nobel Prize in Physiology or Medicine, an achievement most scientists can only dream of. "I never imagined as a child that I would someday be a scientist," Buck once said. "As a woman in science, I sincerely hope that my receiving a Novel Prize will send a message to young women everywhere that the doors are open to them and that they should follow their dreams."

## Genetics & Developmental Biology

#### Christine Nüsslein-Volhard

Her research helps us understand how our bodies are formed and how birth defects occur. She decided to

#### Medicine Tu Youyou

Tu Youyou discovered a malaria treatment that led to the survival and improved health of millions of people. After contracting tuberculosis at the age of sixteen, Youyou chose to pursue medical research — "if I could learn and have [medical] skills, I could not only keep myself healthy, but also cure many other patients."

### **Biochemistry Cell Physiology** Rita Levi-Montalcini's

research led to the discovery of nerve growth factor, which plays a key role in the regulation of our neurons. Her ground-breaking discovery furthered our understanding of medical conditions like dementia and tumors. In 1968, she received the Nobel Prize for Medicine. Rita Levi-Montalcini passed away in 2012 at the age of 103, making her the longest-living Nobel Laureate.

#### Humanitarian work Wangari Maathai

In 1977 she started a movement aimed at counteracting the deforestation that was threatening agriculture. She encouraged women to plant trees and to think ecologically. This spread to other African countries, and contributed to over 30 million trees being planted.

become a biologist at the age of 12 and started by studying the development of fruit flies. She is the 6th woman awarded the Nobel Prize in Physiology or Medicine. Of the 201 individuals awarded the prize between 1901 and 2012, only ten are women.

#### Physics and Chemistry Marie Curie

Discovered radium and polonium and pioneered research on radiation. Of the 193 individuals awarded the Nobel Prize in Physics between 1901 and 2012, only two are women: Maria Goeppert Mayer and Marie Curie.

#### Physiology Rosalyn Yalow

She proved that Type 2 diabetes is caused by the body's inefficient use of insulin. Previously, it was thought that the disease was caused by a lack of insulin. Her interest in science started in 7th grade chemistry and led to a career in nuclear physics.

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