

THE
NOBEL
PRIZE

All Nobel Prizes 2019

Nobel Prize Lessons

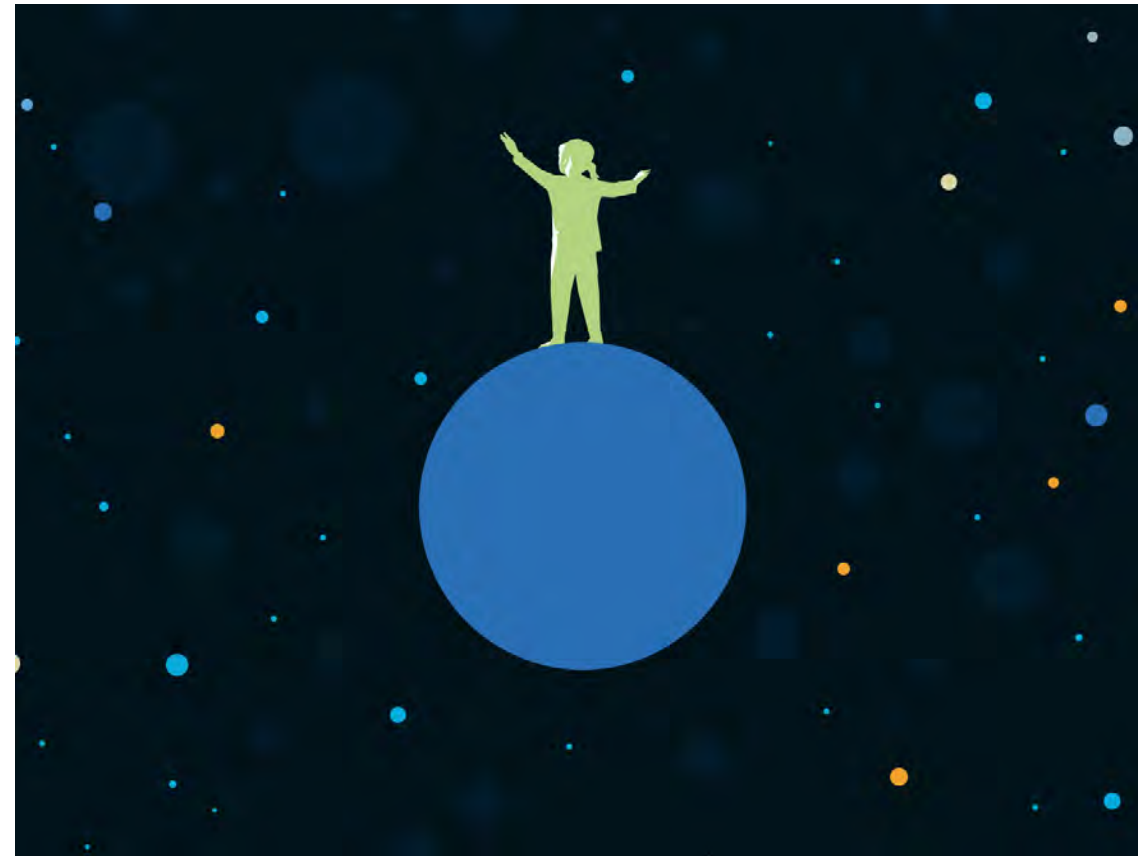
The Nobel Prize

“to those who, during the preceding year, shall have conferred the greatest benefit to humankind”

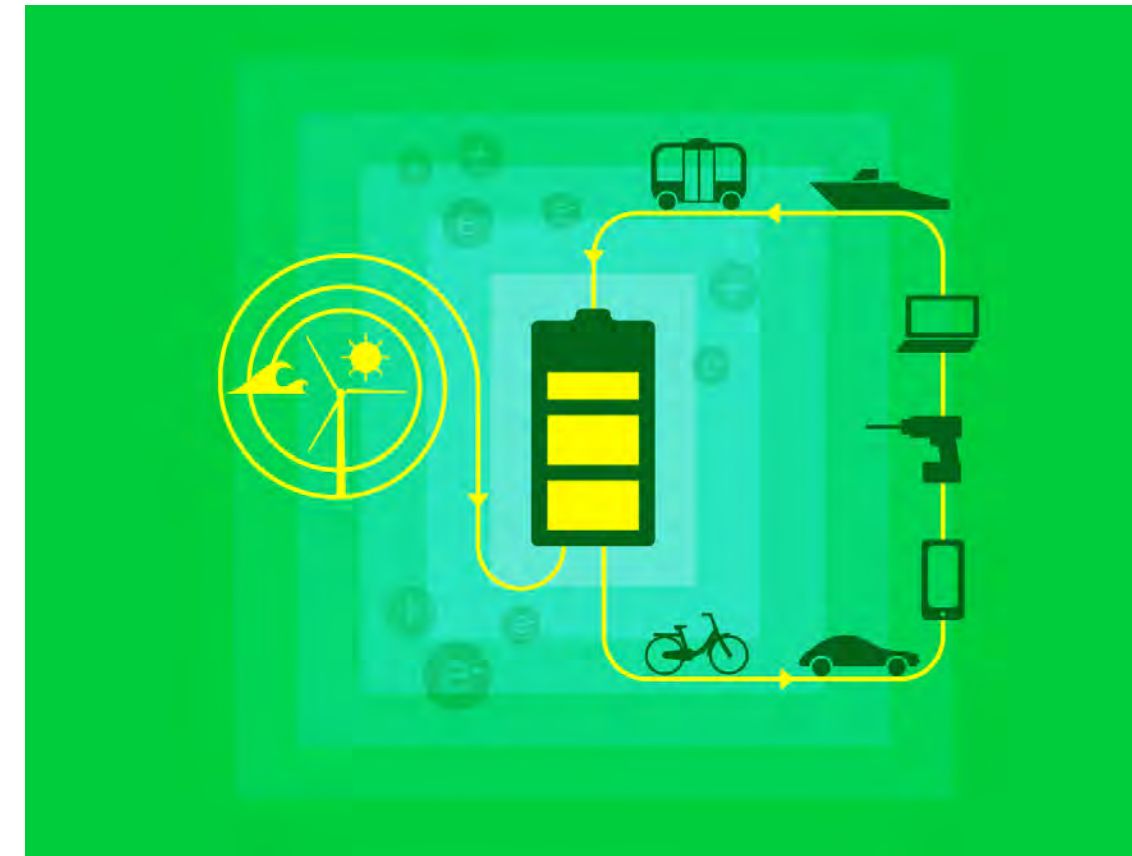
Alfred Nobel
(1833-1896)



All Nobel Prizes 2019



Physics Prize: New perspectives on our place in the universe



Chemistry Prize: Developing the world's most powerful battery



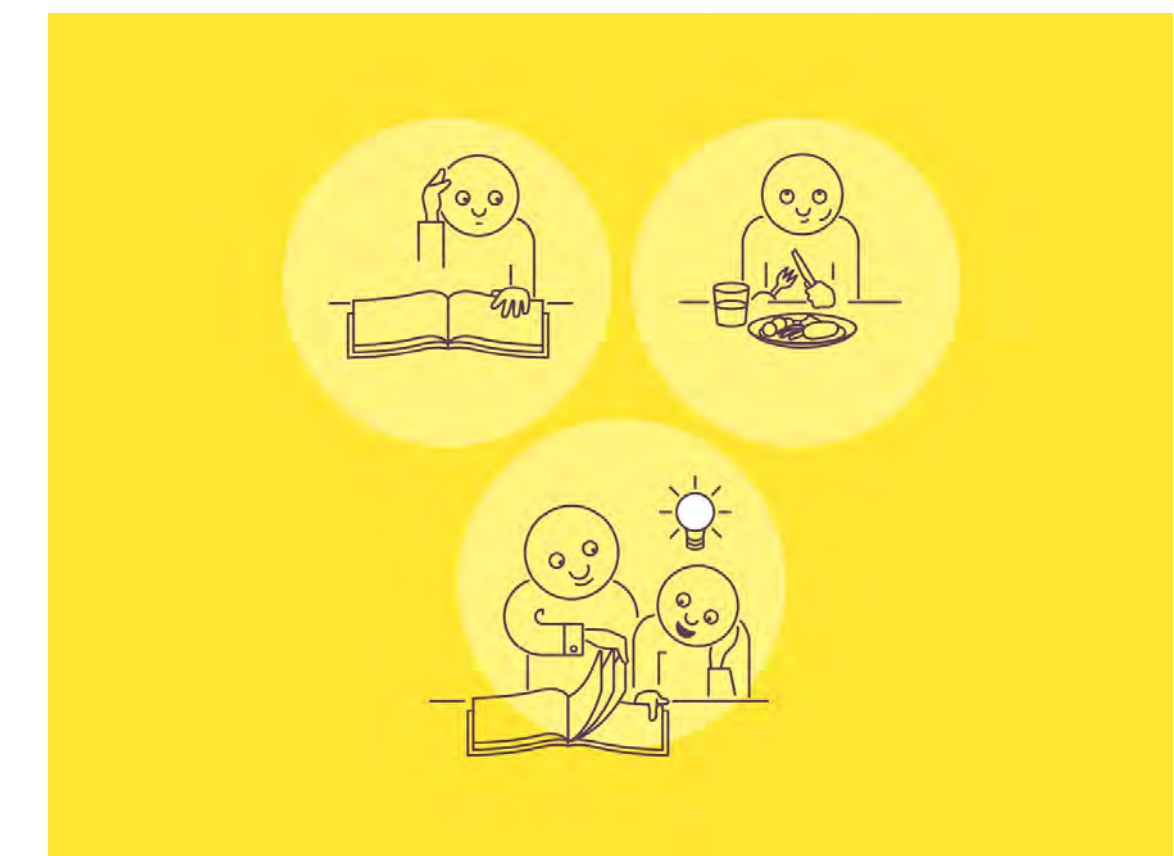
Medicine Prize: How cells adapt to oxygen availability



Literature Prize: Olga Tokarczuk (2018) and Peter Handke (2019)



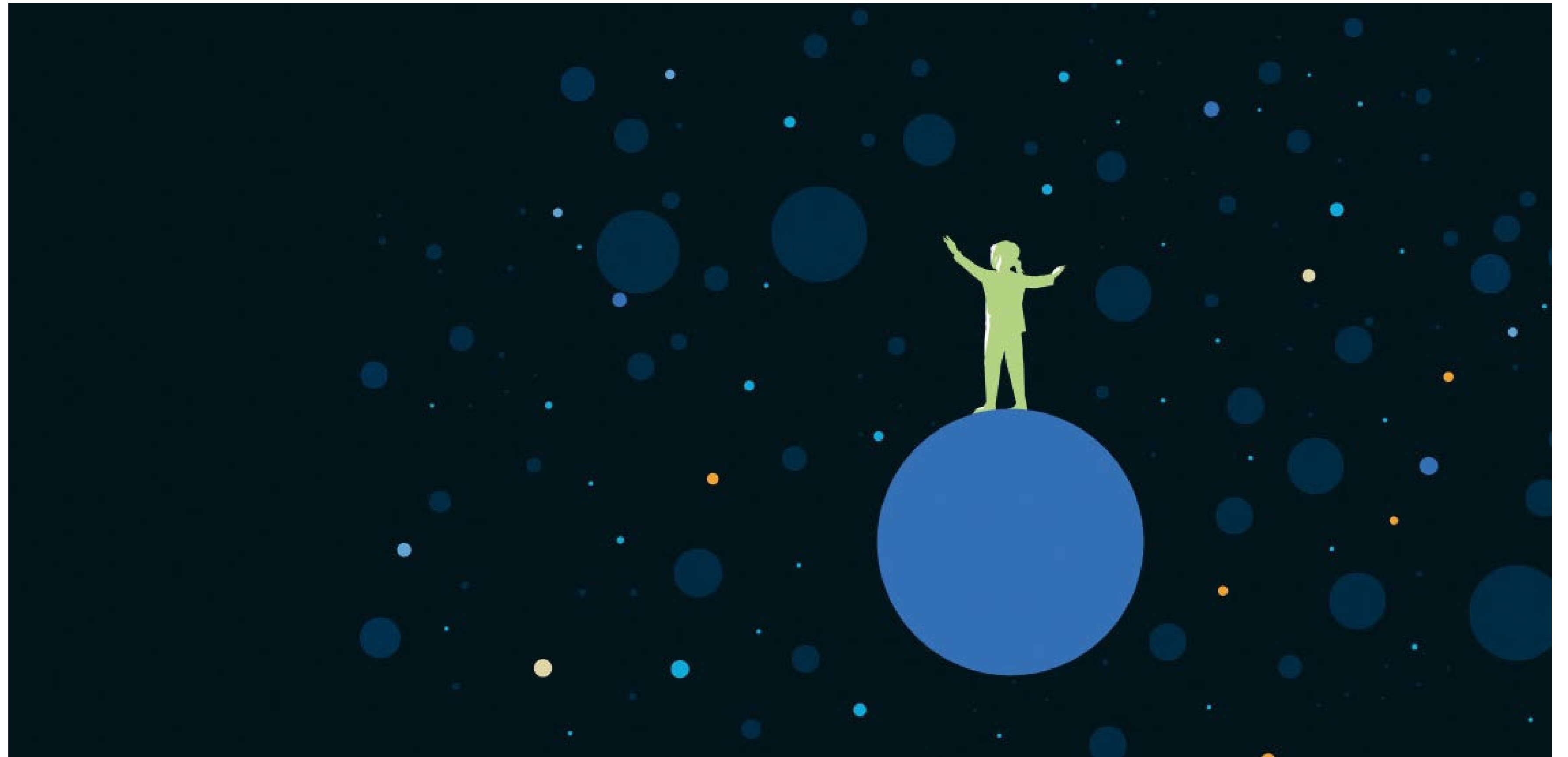
Peace Prize: Ethiopian Prime Minister Abiy Ahmed Ali



Economic Sciences Prize: Research that helps us fight global poverty

The Nobel Prize in Physics 2019

New perspectives on
our place in the
universe.



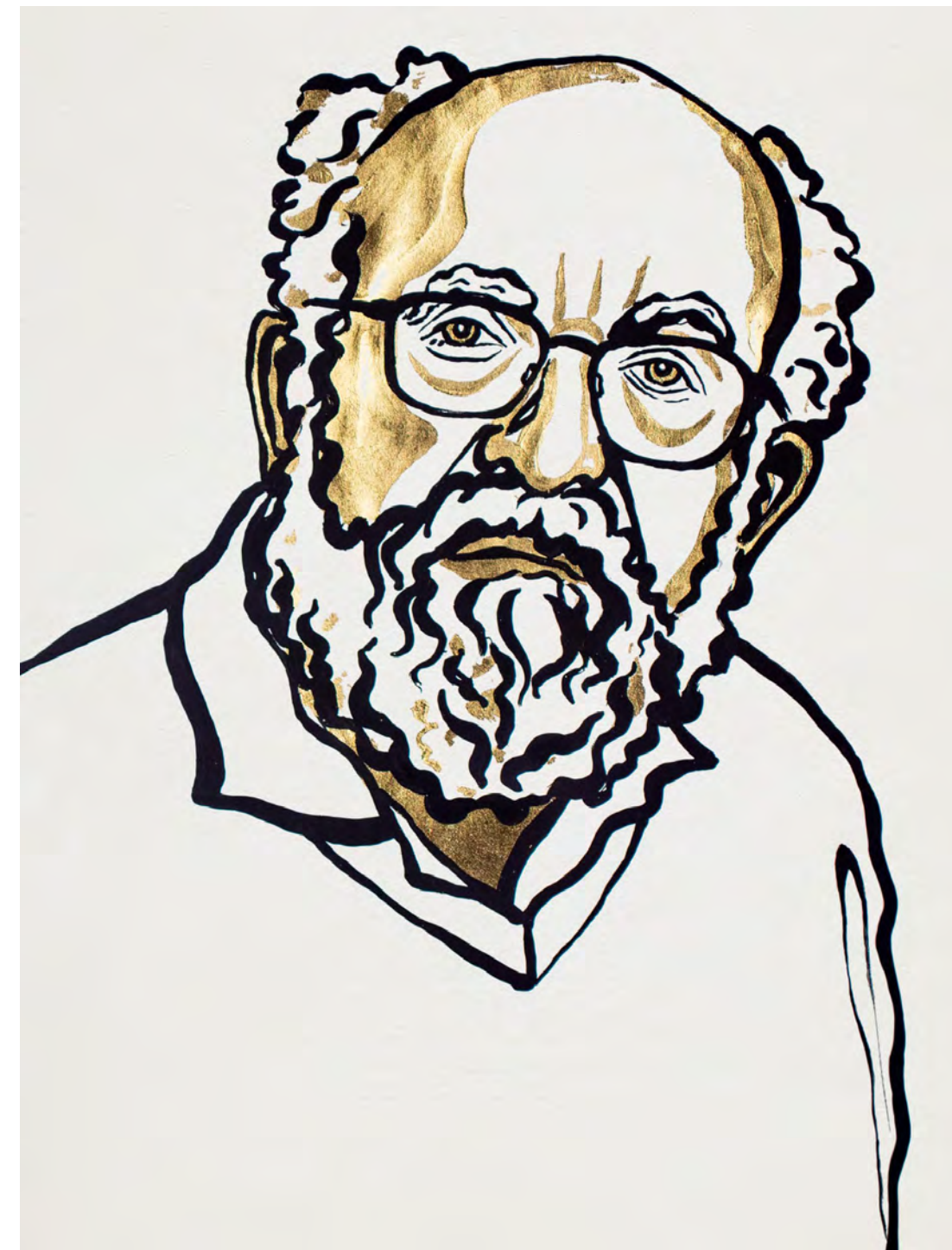
The Nobel Laureates

“for contributions to our understanding of the evolution of the universe and Earth’s place in the cosmos”

James Peebles “for theoretical discoveries in physical cosmology”



James Peebles
Born: 1935, Canada

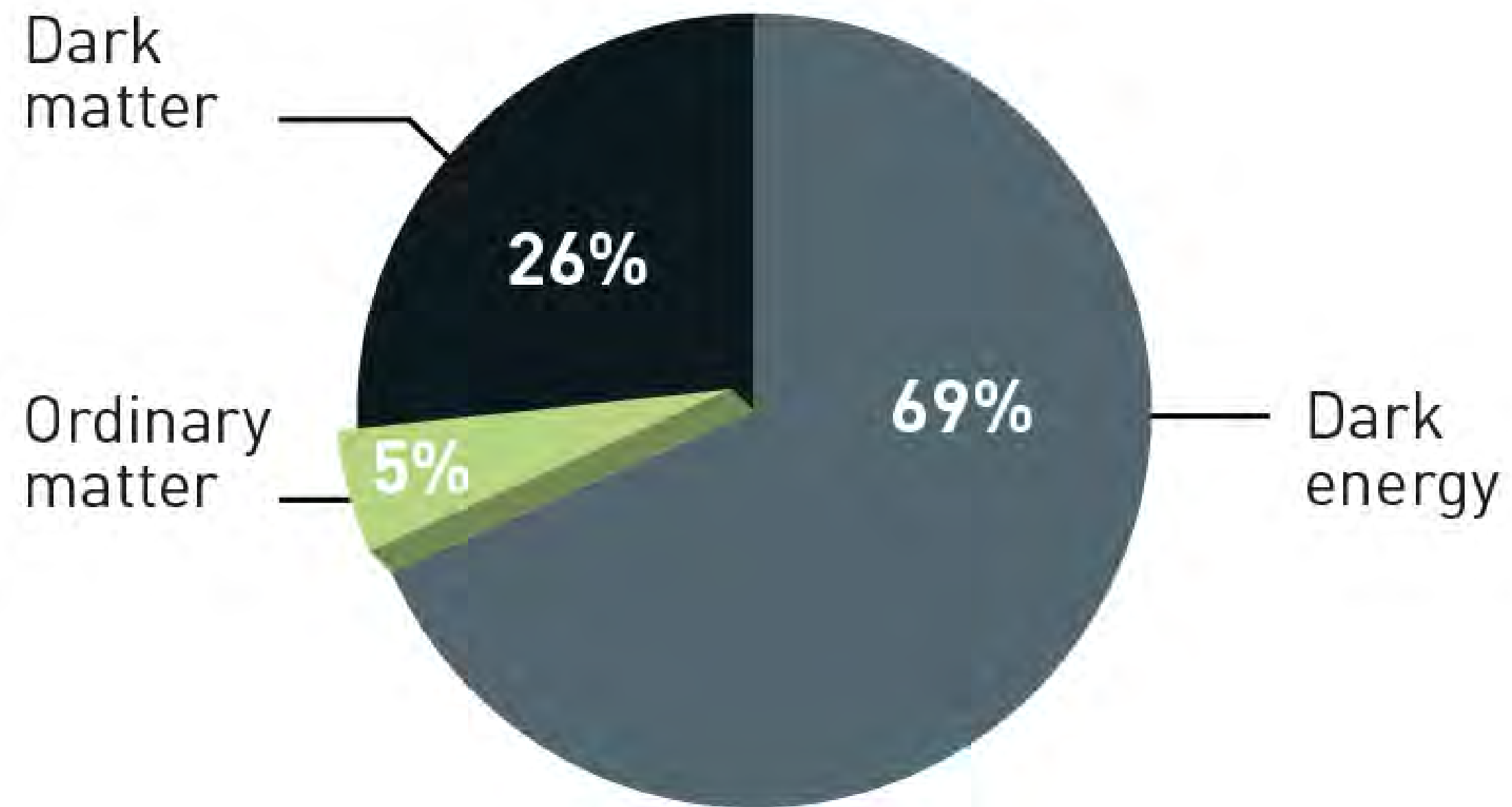


Michel Mayor
Born: 1942, Switzerland



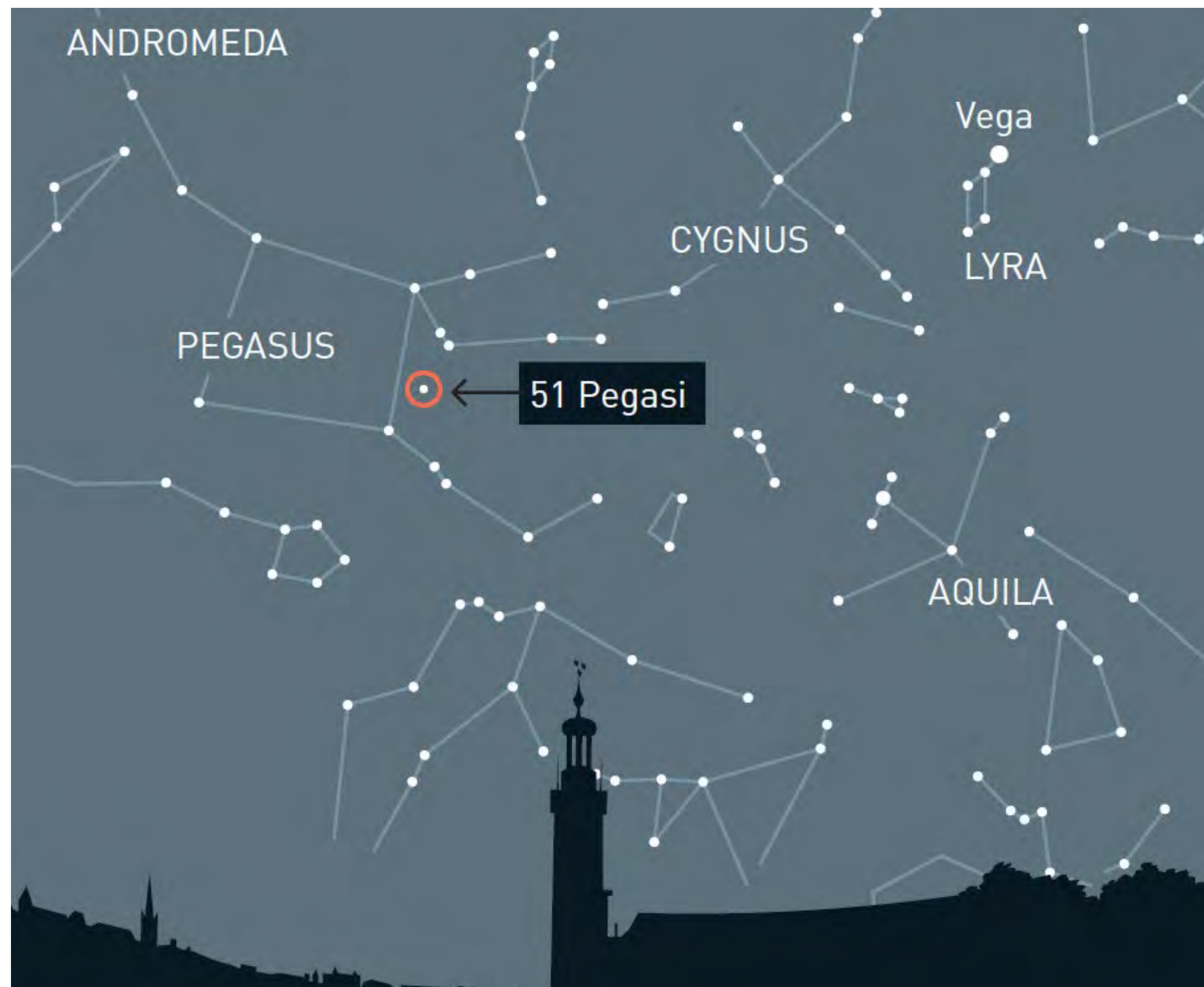
Didier Queloz
Born: 1966

Dark matter and dark energy



Only 5% of the matter and energy in the universe is known today. The rest is "dark matter" and "dark energy".

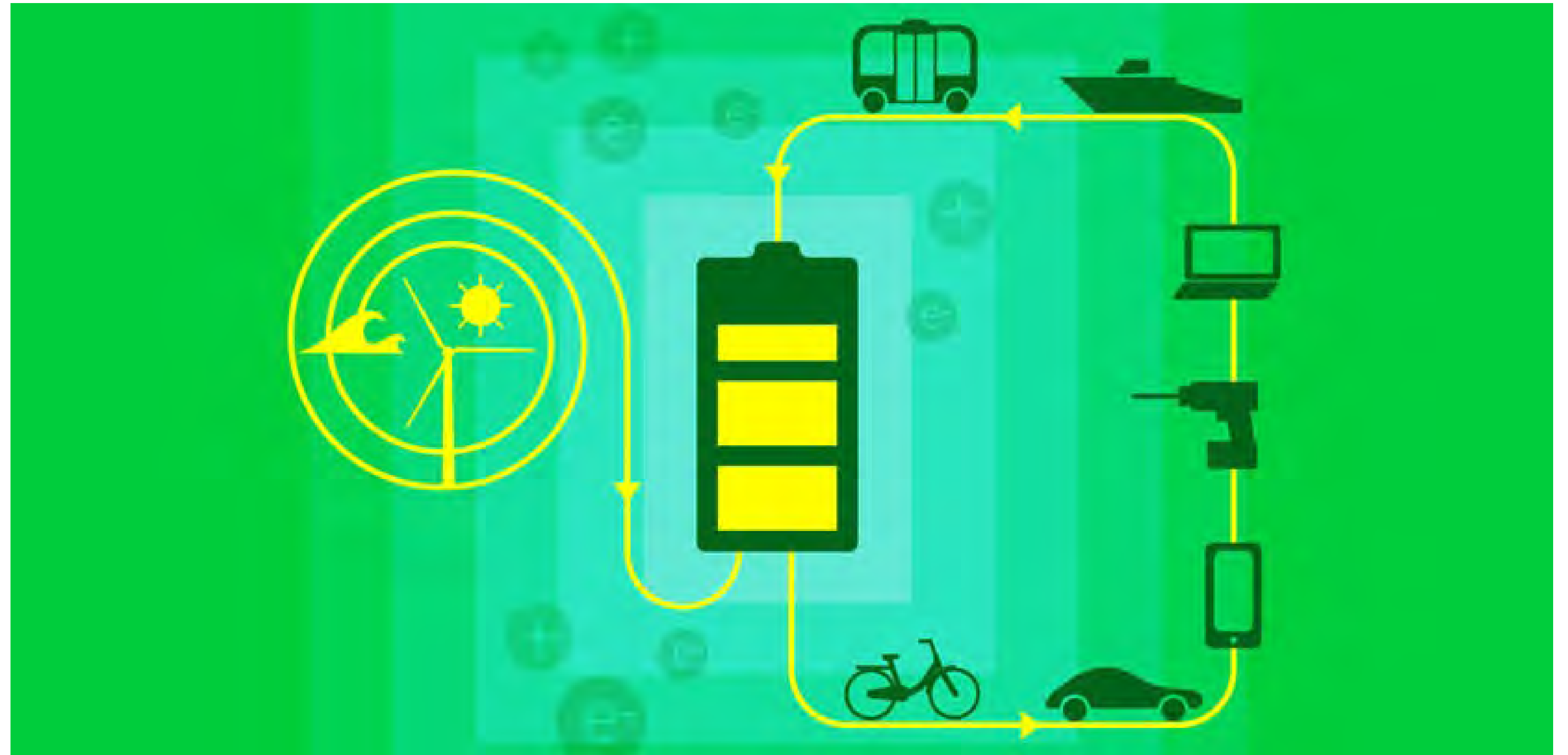
The exoplanet 51 Pegasi b



51 Pegasi b orbits around a star that resembles our sun.

The Nobel Prize in Chemistry 2019

Developing the
world's most
powerful battery.



The Nobel Laureates

"for the development
of lithium-ion
batteries"



John B. Goodenough
Born: 1922, Germany



M. Stanley Whittingham
Born: 1941, United Kingdom



Akira Yoshino
Born: 1948, Japan

Developing the lithium-ion battery

In 1985, Akira Yoshino builds the first commercially viable lithium-ion battery.



PHOTO : ASAHI KASEI

The benefits

Lithium-ion batteries enabled the creation of modern portable electronic devices. But perhaps most importantly, they contribute to more sustainable energy use.



The Nobel Prize in Physiology or Medicine 2019

How cells adapt
to oxygen
availability.



The Nobel Laureates

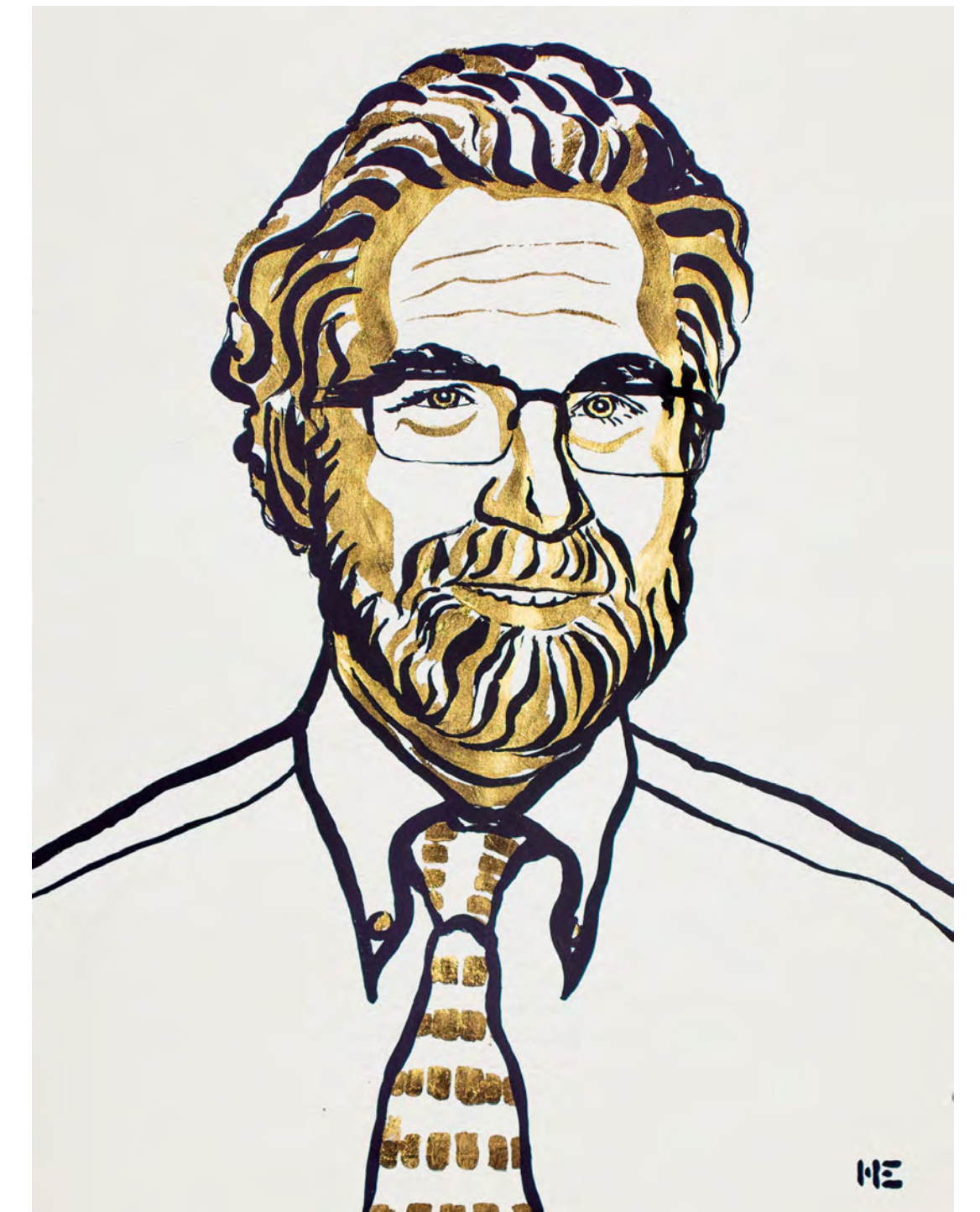
"for their discoveries
of how cells sense
and adapt to oxygen
availability"



William G. Kaelin Jr
Born: 1957, USA



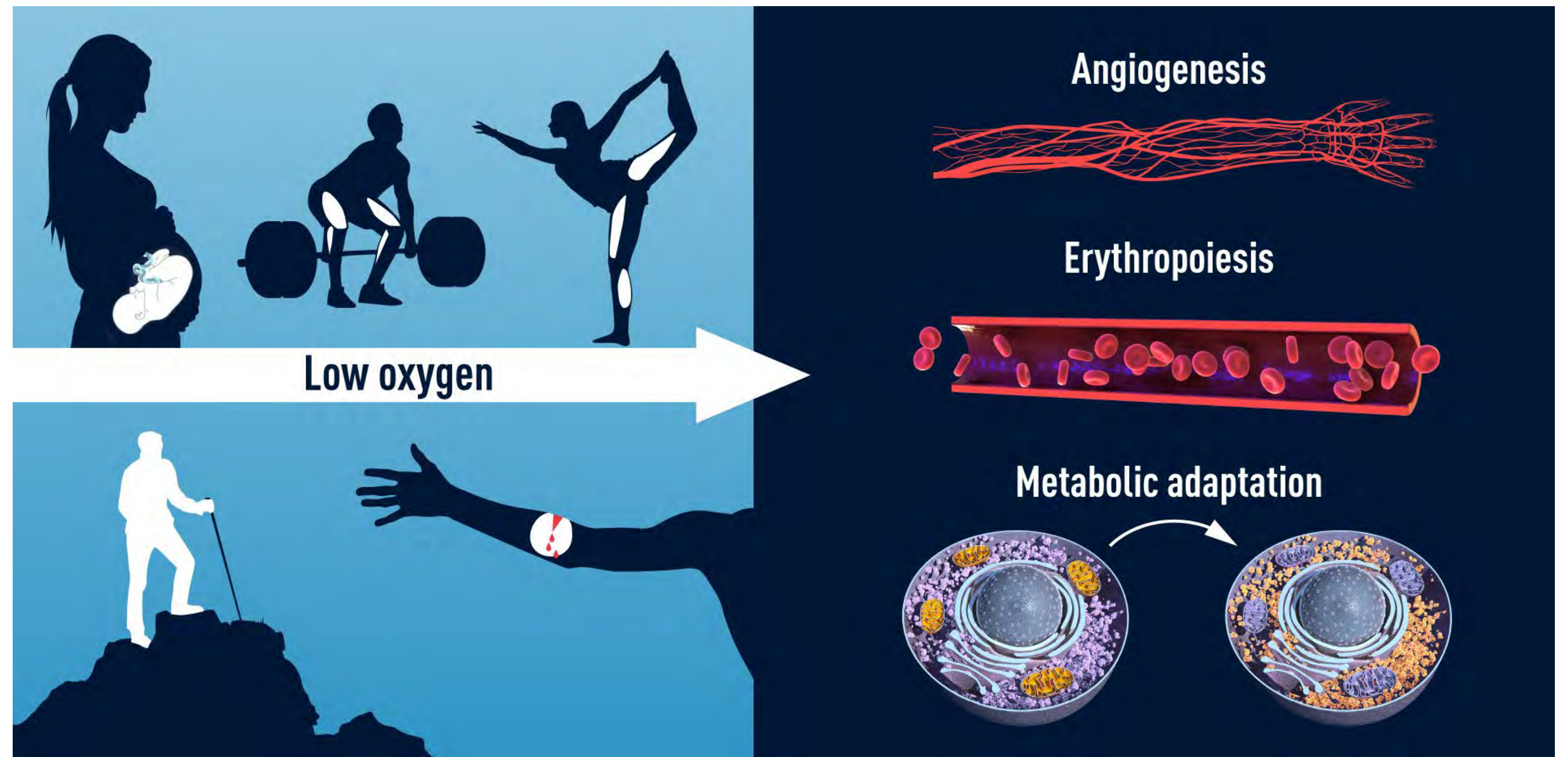
Sir Peter J. Ratcliffe
Born: 1954, United Kingdom



Gregg L. Semenza
Born: 1956, USA

Variations in oxygen availability lead to adaptation

The body must adapt quickly if oxygen levels change inside the body, or in the atmosphere.



The benefit

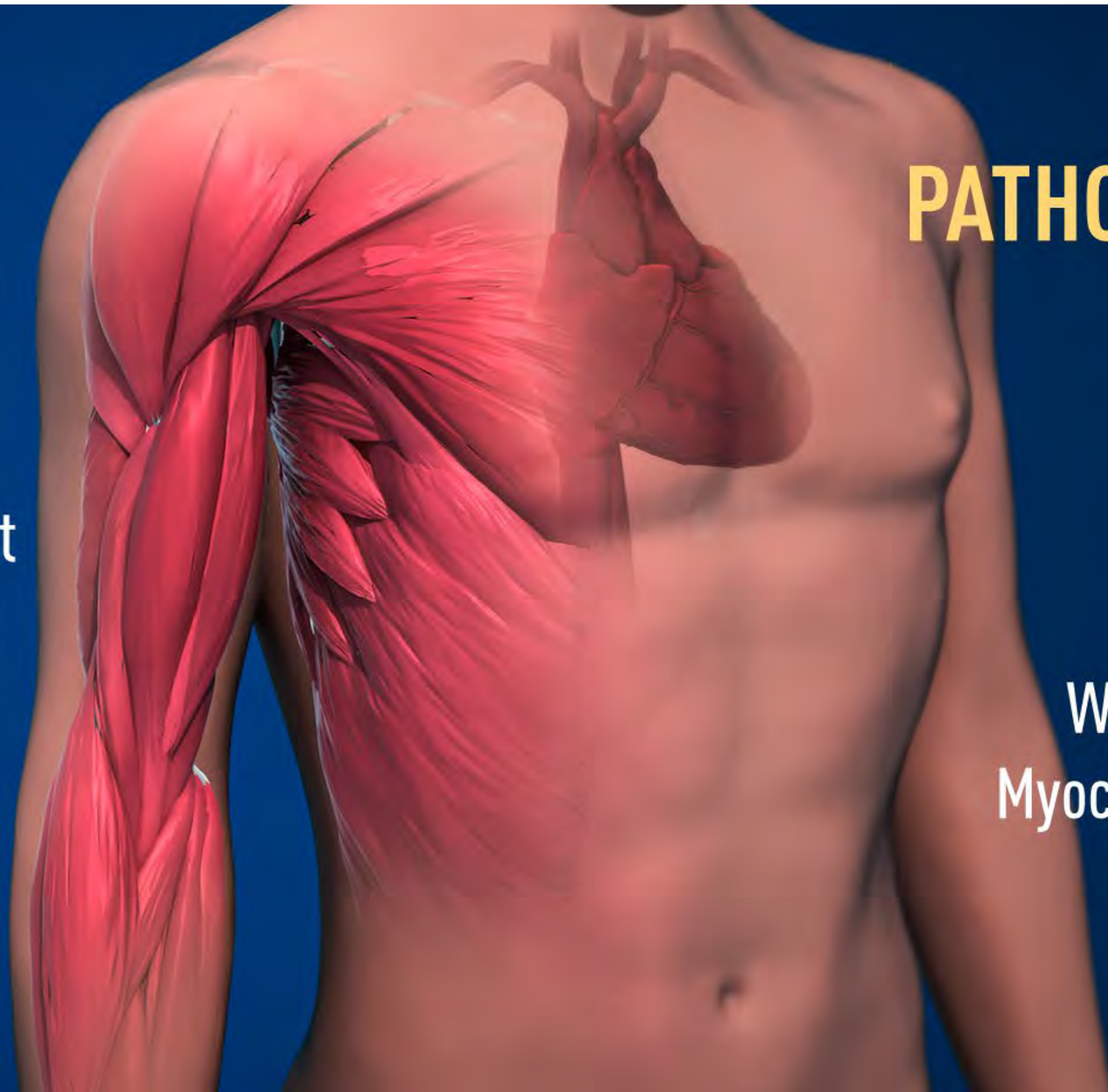
The Nobel Laureates' discoveries have given us new knowledge about human physiology – that is, how our organs and tissues function.

PHYSIOLOGY

Metabolism
Exercise
Embryonic development
Immune response
Altitude adaptation
Respiration

PATHOPHYSIOLOGY

Anemia
Cancer
Stroke
Infection
Wound healing
Myocardial infarction



The Nobel Prize in Literature 2018 and 2019



PHOTO: ALEXANDER MAHMOUD

In 2019 the Swedish Academy announced the Nobel Prizes in Literature for both 2018 and 2019.

The Nobel Laureates 2018 and 2019



ILL. NIKLAS ELMEDHED. © NOBEL MEDIA

Olga Tokarczuk

Born: 1962, Poland

"for a narrative imagination that with encyclopedic passion represents the crossing of boundaries as a form of life."

Peter Handke

Born: 1942, Austria

"for an influential work that with linguistic ingenuity has explored the periphery and the specificity of human experience."

Viewing the world from above



PHOTO: LUKASZ GIZA

Olga Tokarczuk is inspired by maps. In some of her stories, places are almost like main characters.

Peter Handke – a long and varied literary career



PHOTO: DONATA WENDERS

Peter Handke's works are often about remembering the dead – but also about rediscovering the world.

The Nobel Peace Prize 2019



Ethiopian Prime Minister Abiy Ahmed Ali.

The 2019 Peace Prize Laureate



ILL. NIKLAS ELMEDHED. © NOBEL MEDIA

Abiy Ahmed Ali
Born: 1976, Ethiopia

“for his efforts to achieve peace and international cooperation, and in particular for his decisive initiative to resolve the border conflict with neighbouring Eritrea”

The conflict between Ethiopia and Eritrea



Ethiopia and Eritrea fought a war in 1998-2000. After the war, the two countries were isolated from each other.

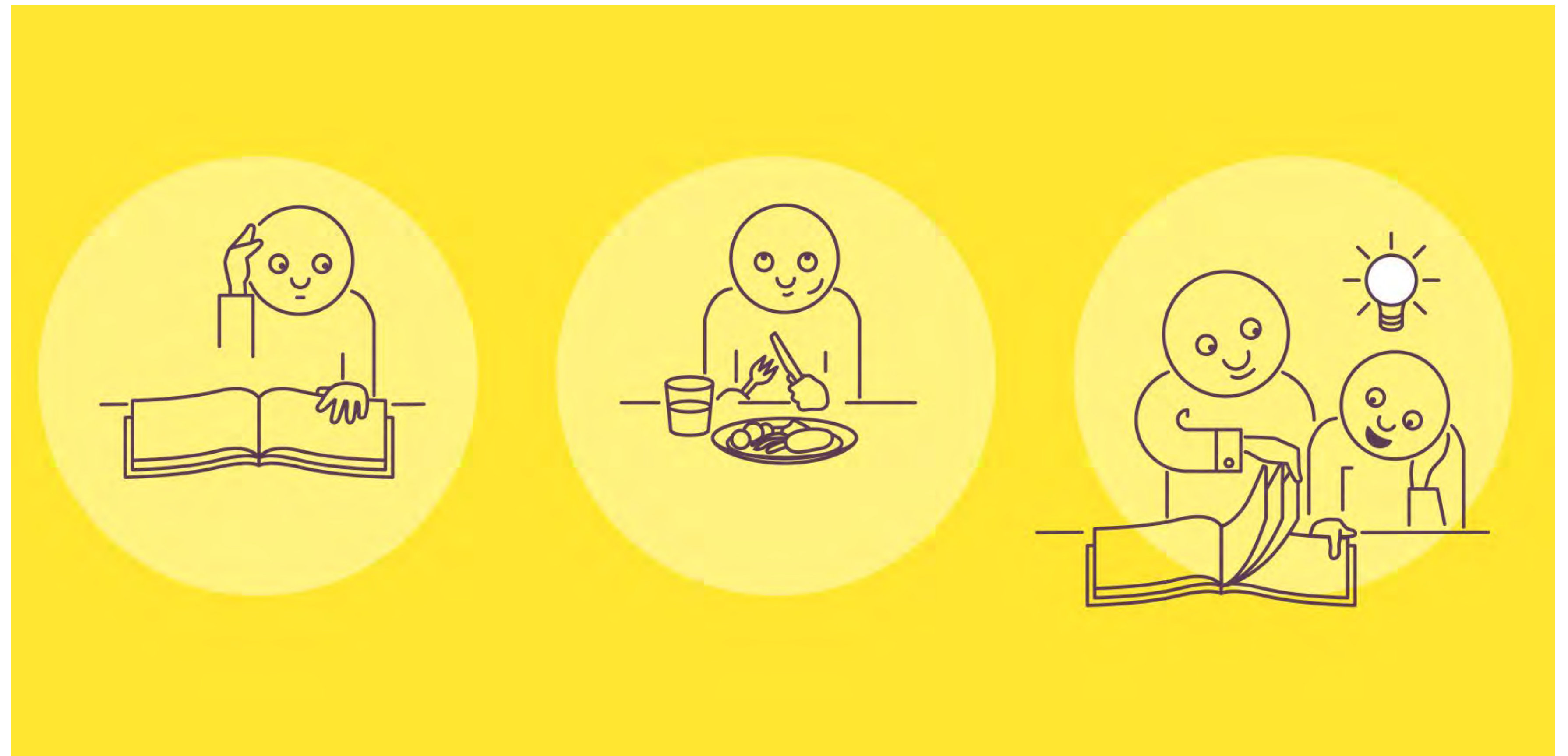
Peace agreements and reforms



Abiy Ahmed took the initiative to resolve the border conflict. In the summer of 2018, the leaders of Ethiopia and Eritrea signed a new agreement.

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2019

Research that helps
us fight global
poverty.

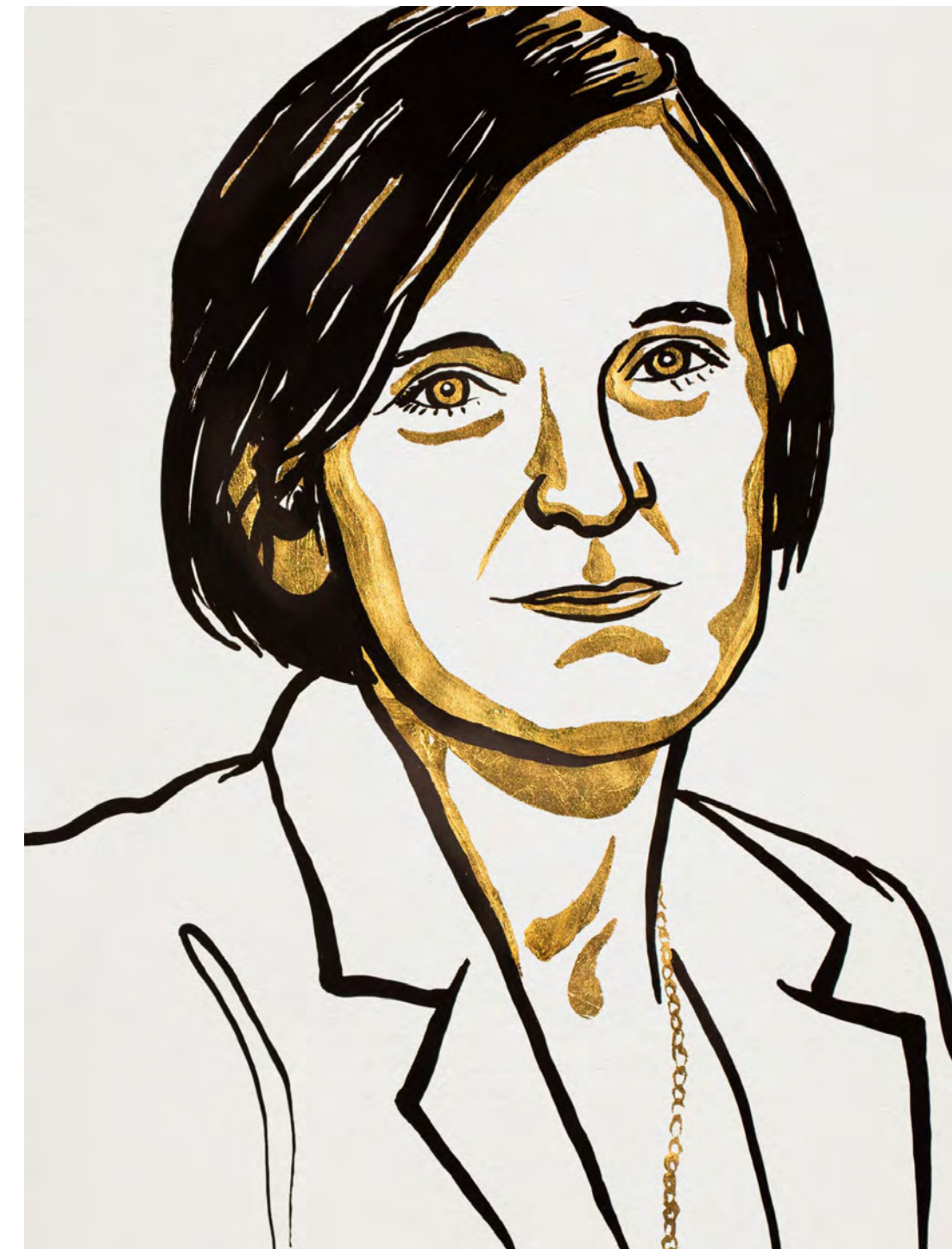


The 2019 Laureates in Economic Sciences

“for their
experimental
approach to
alleviating global
poverty”



Abhijit Banerjee
Born: 1961, India



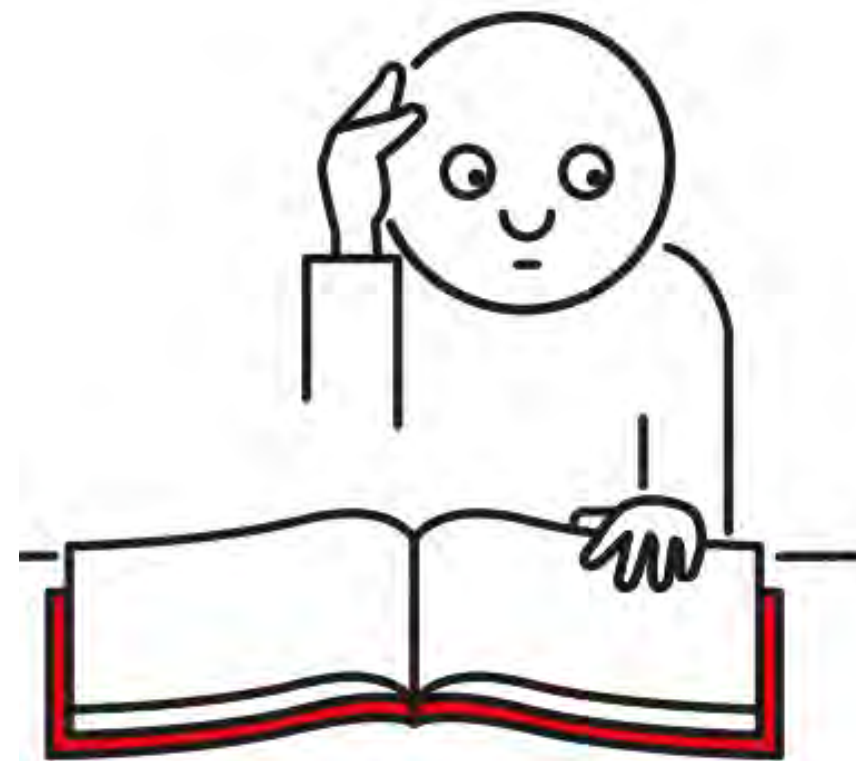
Esther Duflo
Born: 1972, France



Michael Kremer
Born: 1964

Education, health and medical care

Half of the world's children leave school without having received basic literacy and numeracy skills.



Their research has influenced public policy

Den nya forskningen har hjälpt regeringar och organisationer att välja mer effektiva metoder för att bekämpa fattigdom.



Awarding the Nobel Prize

On 10 December each year, the Nobel Prize is presented.



PHOTO: ALEXANDER MAHMOUD

THE
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FOR THE GREATEST
BENEFIT TO
HUMANKIND

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