



PHOTO: DAN HANSSON/TT

Each year, King Carl XVI Gustaf personally presents a diploma to the winners during a stately ceremony in the Stockholm Concert Hall.

NOBEL PRIZE:

THE PRESTIGIOUS AWARD THAT CAPTURES THE WORLD'S ATTENTION

The Nobel Prize is considered the most prestigious award in the world. Prize-winning discoveries include X-rays, radioactivity and penicillin. Peace Laureates include Nelson Mandela and Barack Obama. Nobel Laureates in Literature, including Rudyard Kipling and Doris Lessing, have thrilled readers with works such as 'The Jungle Book' and 'The Grass is Singing'.

Every year in early October, the world turns its gaze towards Sweden and Norway as the Nobel Laureates are announced in Stockholm and Oslo. Millions of people visit the website of the Nobel Foundation during this time.

The Nobel Prize has been awarded to people and organisations every year since 1901 (with a few exceptions such as during World War II) for achievements in physics, chemistry, physiology or

medicine, literature and peace.

Nobel Day is 10 December. For the prize winners, it is the climax of a week of speeches, conferences and receptions.

At the Nobel Prize Award Ceremony in Stockholm on that day, the Laureates in Physics, Chemistry, Physiology or Medicine, and Literature receive a medal from the King of Sweden, as well as a diploma and a cash award. The ceremony is followed by a gala banquet.

The Nobel Peace Prize is awarded in Oslo the same day.

Prize in Economic Sciences

In 1968, Sweden's central bank (*Sveriges Riksbank*) established the Prize in Economic Sciences in Memory of Alfred Nobel. The prize is based on a donation received by the Nobel Foundation in 1968 from the central bank to mark the bank's 300th anniversary. The Prize in Economic

DID YOU KNOW?

44 WOMEN

The Nobel Prize and the Prize in Economic Sciences have been awarded to women 45 times from 1901 to 2013. One woman, Marie Curie, has been honoured twice, receiving the 1903 Nobel Prize in Physics and the 1911 Nobel Prize in Chemistry. This means a total of 44 women have received Nobel Prizes to date: two in Physics (including Curie), four in Chemistry (including Curie), ten in Physiology/Medicine, 13 in Literature, one in Economic Sciences and 15 receiving the Peace Prize.

25 YEARS YOUNG

The youngest Nobel Laureate to date is Lawrence Bragg, who was 25 when he was awarded the Nobel Prize in Physics with his father in 1915.

90 YEARS OLD

The oldest Laureate to date is Leonid Hurwicz, who was 90 when he was awarded the Prize in Economic Sciences in 2007.

TWO HAVE DECLINED

Two Nobel Laureates have declined the Nobel Prize. Jean-Paul Sartre, awarded the 1964 Nobel Prize in Literature, declined the award because he had consistently declined all official honours.

Le Duc Tho was awarded the 1973 Nobel Peace Prize jointly with US Secretary of State Henry Kissinger for negotiating the Vietnam peace agreement. Le Duc Tho said he was not in a position to accept the Nobel Peace Prize, due to the situation in Vietnam.

FORCED TO DECLINE

Four Nobel Laureates have been forced by authorities to decline the Nobel Prize. Adolf Hitler forbade three German Laureates – Richard Kuhn (Chemistry), Adolf Butenandt (Chemistry) and Gerhard Domagk (Physiology/Medicine) – from accepting their prizes. The Nazi regime banned all Germans from accepting Nobel Prizes after the 1935 Nobel Peace Prize was awarded to Carl von Ossietzky, a German writer who publicly opposed Hitler and Nazism. The three later received their awards, but not the prize money.

Boris Pasternak, the 1958 Nobel Laureate in Literature, initially accepted the prize but was later coerced into declining by Soviet authorities.

- Sciences is awarded by the Royal Swedish Academy of Sciences, following the same principles as the Nobel Prizes.

Legacy of Alfred Nobel

The Nobel Prize is the legacy of Sweden's Alfred Nobel (1833-1896). Prizes are awarded to 'those who, during the preceding year, shall have conferred the greatest benefit on mankind.' When he signed his last will in 1895, Nobel declared that the bulk of his estate should be converted into a fund and invested in safe securities. The four institutions in Sweden and Norway (the two countries were united between 1814 and 1905) conferring the prizes were to be 'the Swedish Academy of Sciences, Karolinska Institutet in Stockholm, the Academy in Stockholm' and 'a committee of five people to be elected by the Norwegian parliament (*Storting*).'

The Nobel Foundation

In 1900, the four institutions awarding the prizes agreed to create the Nobel Foundation, a private institution based on Alfred Nobel's will. The Nobel Foundation would administer Nobel's estate, totaling SEK 31 million (EUR 3.4 million, USD 4.4 million), make public announcements and arrange the prize ceremonies. The total amount awarded each year is based on the most recent return on investment. The capital is currently worth around

SEK 3.1 billion (EUR 354 million, USD 474 million), almost double the value of the original estate when adjusted for inflation.

The Nobel Prize in each category is currently worth SEK 8 million (EUR 0.9 million, USD 1.2 million). There can be up to three recipients for each prize, who share the sum between them.

Organisations affiliated with the prize

The Nobel Prize is affiliated with several organisations and institutions entrusted with different tasks related to the prize. The Nobel Foundation Rights Association was established in 1999 to provide information through a variety of media about the Nobel Laureates and their achievements.

This non-profit association serves as an umbrella organisation for three other entities:

- Nobel Media AB, which manages media rights for the Nobel Prize in connection with TV and web production, distribution, publishing and events.
- The Nobel Museum AB, housed in the Old Stock Exchange Building (*Börshuset*) in Stockholm's Old Town, which depicts a century of creativity through the Nobel Prize and the achievements of the Nobel Laureates.
- The Nobel Peace Center, at Rådhusplassen in Oslo, Norway, which presents the Nobel Peace Prize and the work of the Nobel Peace Prize Laureates. ■

THE FATHER OF DYNAMITE

Alfred Nobel was a chemist, engineer, inventor and entrepreneur. He was born on 21 October 1833 in Stockholm, and died on 10 December 1896 in San Remo, Italy. He was devoted to the study of explosives, and his inventions include a blasting cap, dynamite and smokeless gunpowder. Nobel became famous across the world when the St. Gotthard Tunnel in the Swiss Alps was completed in 1881 and dynamite was used for the first time on a large scale.

At the time of his death, Nobel held 355 patents in different countries. There were Nobel companies in more than 20 countries, with explosives of all kinds being manufactured under his patents in around 100 factories worldwide. Nobel lived and worked in many countries, including Sweden, Russia, France, the United Kingdom, Germany and Italy. He spoke five languages, had a passionate interest in literature, and wrote poetry and drama. He could



PHOTO: NOBEL MUSEUM

Alfred Nobel.

never have imagined how important his prize would become, or how much media attention future Nobel Laureates would attract. ■

THE NOBEL PRIZE-AWARDING INSTITUTIONS

Four institutions select the Nobel Laureates:

The Royal Swedish Academy of Sciences (Nobel Prize in Physics, Nobel Prize in Chemistry and Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel). An independent organisation that aims to promote the sciences and enhance their influence in society. Founded in 1739, it currently has around 615 members.

The Swedish Academy (Nobel Prize in Literature). Founded in 1786, it consists of 18 Swedes, all elected for life.

The Nobel Assembly at Karolinska Institutet (Nobel Prize in Physiology or Medicine). Dating from 1977 in its current form, the assembly consists of 50 professors at Karolinska Institutet.

The Norwegian Nobel Committee (Nobel Peace Prize). Founded in 1897, with five members appointed by the Norwegian parliament.

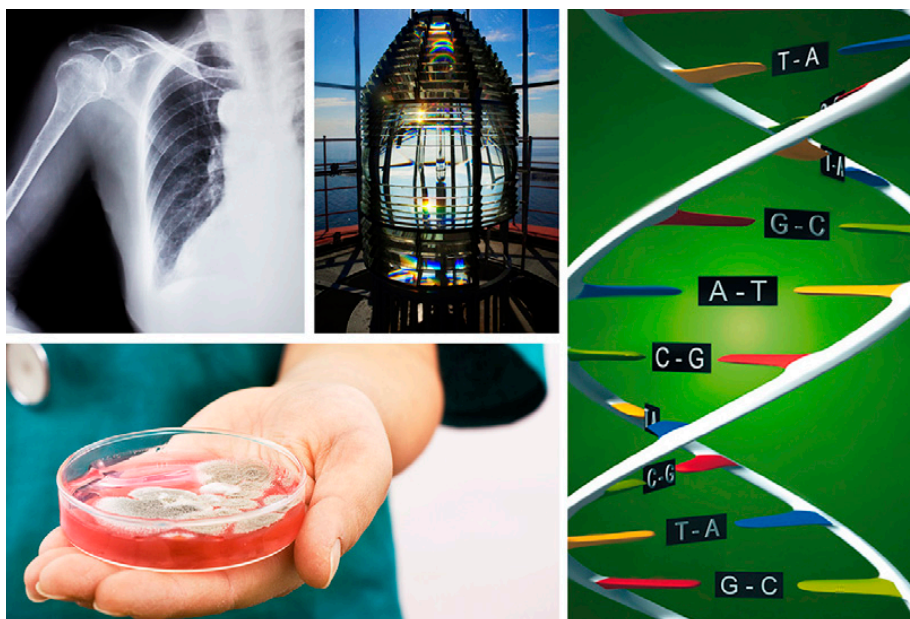


PHOTO: GETTY IMAGES

Prize-winning discoveries (clockwise from left): X-rays; AGA lighthouse, a type of automatic lighthouse that runs on acetylene gas; the molecular structure of DNA – the double helix; Penicillin.

ONE HUNDRED AND TWELVE YEARS OF NOBEL PRIZES

Between 1901, when the first Nobel Prize was awarded, and 2013, a total of 876 Nobel Prizes have been awarded to individuals and organisations. Together, they represent a major contribution to the cultural and scientific history of the world.

There have been 851 prizes awarded to individuals and 25 to organisations. Only a few recipients have been honoured more than once, which means that a total of 847 individuals and 22 organisations have received prizes to date.

The first Nobel Prize in Physics, in 1901, went to Wilhelm Conrad Röntgen for his discovery of X-rays, used every day by health care providers around the world.

In 1903, Marie Curie became the first female Laureate when she was named a joint winner of the Nobel Prize in Physics for her research into radioactivity. She received her second prize in 1911 – this time in chemistry – for isolating and studying the new element radium.

In 1905, Austrian baroness and author Bertha von Suttner became the first woman to win the Nobel Peace Prize, in recognition of her work with the pacifist movements in Germany and Austria. She was also widely seen as helping inspire Alfred Nobel, with whom she corresponded, to create the Peace Prize.

In 1912, Swedish inventor and industrialist Gustaf Dalén won the Nobel Prize in Physics for his contributions to lighthouse technology. In the early 1900s, he invented the AGA lighthouse, a type of automatic lighthouse that ran on acetylene gas. The gas supply was controlled by a sun valve that shut off the gas in daylight, and a revolving light apparatus that allowed the beacon to flash by switching the gas off and on at brief, regular intervals. The two innovations made it possible to reduce gas consumption by 90 per cent compared with earlier constructions.

In the autumn of 1945, the Nobel Assembly of professors at Karolinska Institutet gathered to select a Nobel Laureate in Physiology or Medicine. They chose three Laureates, including Alexander Fleming, for their discovery of penicillin, which saved millions of lives in the second half of the 20th century.

In 2007, the Nobel Peace Prize was awarded to the UN Intergovernmental Panel on Climate Change and Al Gore. Gore has made a significant contribution in pushing climate

Around 1,300 guests are invited each year to the grand banquet.

THE BANQUET OF BANQUETS

The Nobel Banquet is a magnificent party held in the Blue Hall at Stockholm City Hall. The preparations are meticulous. Hundreds of cooks, waiters and attendants ensure that everything runs smoothly. Some 1,300 guests are invited, with each Laureate entitled to bring 14 guests beside their spouses.

Sweden's royal family is always present, as are the prime minister and other members of the government. The Nobel family is always represented. The remainder of the guest list should reflect the cultural and scientific community of Sweden and the world.

PHOTO: FREDRIKA BERGHULT/NOBEL MEDIA AB

2013 NOBEL PRIZES

Chemistry

Martin Karplus, Austria;
Michael Levitt, South Africa;
Arieh Warshel, Israel.
'For the development of
multi-scale models for complex
chemical systems.'

Literature

Alice Munro, Canada.
'Master of the contemporary
short story.'

PHOTO: PETER MUHLV/TT

Alice Munro.

Peace

Organisation for the Prohibition of
Chemical Weapons (OPCW).
'For its extensive efforts to
eliminate chemical weapons.'

Physics

François Englert, Belgium;
Peter W. Higgs, Great Britain.
'For the theoretical discovery of
a mechanism that contributes to
our understanding of the origin
of mass of subatomic particles,
and which recently was confirmed
through the discovery of the pre-
dicted fundamental particle, by the
ATLAS and CMS experiments at
CERN's Large Hadron Collider.'

Physiology or Medicine

James E. Rothman, USA;
Randy W. Schekman, USA;
Thomas C. Südhof, Germany.
'For their discoveries of machinery
regulating vesicle traffic, a major
transport system in our cells.'

**The Prize in Economic Sciences in
Memory of Alfred Nobel**

Eugene F. Fama, USA;
Lars Peter Hansen, USA;
Robert J. Schiller, USA.
'For their empirical analysis of
asset prices.'

► change to the top of the international political
agenda, largely as a result of his book and
film *An Inconvenient Truth*.

Other Nobel Peace Prize Laureates include
Martin Luther King (1964), Nelson Mandela
(1993) and Barack Obama (2009).

Nobel Laureates in Literature include
Ernest Hemingway (1954), Toni Morrison
(1993), Dario Fo (1997) and Harold Pinter
(2005). The oldest Laureate in literature was
Doris Lessing, who won the prize in 2007 at
the age of 87. ■

THE NOBEL PRIZE CALENDAR

The Nobel Prize Award Ceremony in Stockholm is held on
10 December, the anniversary of Alfred Nobel's death. On the
same day, the Nobel Peace Prize is awarded in Oslo, Norway.

Several other activities take place the
same week, with receptions and dinners
hosted by the institutions awarding prizes,
the Nobel Foundation and the Swedish
royal family. The Laureates deliver lectures
and talk about their work, with panel dis-
cussions and other public appearances
usually arranged. Traditionally, the Laure-
ates and their spouses sit with the royal

family at the Nobel Banquet. They are also
invited to a more intimate dinner at the
Royal Palace, where they meet the royal
family again. The visit to the Nobel Foun-
dation is a great symbolic event.

The Laureates receive a document
confirming the prize amount and sign their
names in a guestbook, thereby joining
hundreds of famous predecessors. ■

NOBEL WEEK IN STOCKHOLM

5 December

The Laureates (except for the Nobel Peace
Laureate) arrive in Stockholm.

6-8 December

The Laureates deliver their lectures. The
institutions awarding the prizes arrange press
conferences, receptions and dinners.

9 December

The Nobel Foundation and the Royal Swedish
Academy of Sciences host a joint reception
for all the Laureates at the Nordic Museum.

10 December

The Nobel Prize Award Ceremony is held in
the Stockholm Concert Hall, where the King
of Sweden presents each Laureate with a
Nobel Prize Medal and a Nobel Prize Diploma.
A televised banquet is then held at Stockholm
City Hall.

11 December

The festivities conclude
with dinner at the Royal
Palace.

USEFUL LINKS

www.kva.se The Royal Swedish Academy of Sciences

www.mednobel.ki.se The Nobel Assembly at Karolinska Institutet

www.nobelpeacecenter.org Nobel Peace Center

www.nobelpeaceprize.org The Norwegian Nobel Committee

www.nobelprize.org The official website of the Nobel Prize

www.svenskaakademien.se The Swedish Academy

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