

# Nobel Week Stockholm • 2024

Detailed information for the media 5 December 2024

### This year's Nobel Prize laureates

This year, 12 Nobel Prizes were awarded to 11 laureates and one organisation. Since 1901, the Nobel Prize has been awarded 627 times to 1,012 laureates. Because some have been awarded the prize twice, a total of 976 individuals and 28 organisations have received a Nobel Prize or the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel. All laureates whose prizes will be awarded in Stockholm and Oslo on the Nobel Day – 10 December 2024 – are presented below. Each laureate receiving their prize in Stockholm, and their significant other, may invite an official party of 14 people in addition to themselves to the Nobel Week.

### THE NOBEL PRIZE IN PHYSICS

THE 2024 NOBEL PRIZE IN PHYSICS has been awarded jointly to John J. Hopfield and Geoffrey Hinton "for foundational discoveries and inventions that enable machine learning with artificial neural networks".

**John J. Hopfield** was born on 15 July 1933 in Chicago, IL, USA. He is affiliated with Princeton University, USA.

**Geoffrey Hinton** was born on 6 December 1947 in London, United Kingdom. He is affiliated with the University of Toronto, Canada.

### THE NOBEL PRIZE IN CHEMISTRY

THE 2024 NOBEL PRIZE IN CHEMISTRY has been awarded with one half to David Baker "for computational protein design", with the other half awarded jointly to Demis Hassabis and John Jumper "for protein structure prediction".

**David Baker** was born in 1962 in Seattle, WA, USA. He is affiliated with the University of Washington, USA and the Howard Hughes Medical Institute, USA.

**Demis Hassabis** was born on 27 July 1976 in London, United Kingdom. He is affiliated with Google DeepMind, United Kingdom.

**John Jumper** was born in 1985 in Little Rock, AR, USA. He is affiliated with Google DeepMind, United Kingdom.

### THE NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE

THE 2024 NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE has been awarded jointly to Victor Ambros and Gary Ruvkun "for the discovery of microRNA and its role in post-transcriptional gene regulation".

Victor Ambros was born on 1 December 1953 in Hanover, NH, USA. He is affiliated with the UMass Chan Medical School, USA.

Gary Ruvkun was born in 1952 in Berkeley, CA, USA. He is affiliated with Massachusetts General Hospital, USA and Harvard Medical School, USA.

### THE NOBEL PRIZE IN LITERATURE

THE 2024 NOBEL PRIZE IN LITERATURE has been awarded to South Korean author Han Kang "for her intense poetic prose that confronts historical traumas and exposes the fragility of human life".

Han Kang was born on 27 November 1970 in Gwangju, South Korea.

### THE NOBEL PEACE PRIZE

THE 2024 NOBEL PEACE PRIZE has been awarded to the Japanese grassroots organisation Nihon Hidankyo "for its efforts to achieve a world free of nuclear weapons and for demonstrating through witness testimony that nuclear weapons must never be used again".

Nihon Hidankyo was founded in 1956.

### THE PRIZE IN ECONOMIC SCIENCES

THE 2024 SVERIGES RIKSBANK PRIZE IN ECONOMIC SCIENCES IN MEMORY OF ALFRED NOBEL has been awarded jointly to Daron Acemoglu, Simon Henry Roberts Johnson and James A. Robinson "for studies of how institutions are formed and affect prosperity".

**Daron Acemoglu** was born on 3 September 1967 in Istanbul, Turkey. He is affiliated with the Massachusetts Institute of Technology (MIT), USA.

**Simon Henry Roberts Johnson** was born in 1963 in Sheffield, United Kingdom. He is affiliated with the Massachusetts Institute of Technology (MIT), USA.

**James A. Robinson** was born in 1960. He is affiliated with the University of Chicago, USA.

### Earlier laureates

Every year, a number of earlier laureates are invited to the Nobel Week Dialogue, an international conference which is held during Nobel Week. This year, **Charles Rice**, medicine laureate 2020; **Michael Rosbash**, medicine laureate 2017; **Olga Tokarczuk**, literature laureate 2018; and **Drew Weissman**, medicine laureate 2023, will participate in the conference, which will discuss *The Future of Health*.

### The 2024 Nobel Week

The 2024 Nobel Week begins with a visit to the Nobel Prize Museum on Stortorget, the main square in Stockholm's Old Town (Gamla stan) on 6 December. At the museum, the laureates will be welcomed to an eventful week in Stockholm and will also get to meet each other for the first time. In keeping with tradition, the visit to the museum will end with the laureates autographing chairs at Bistro Nobel and donating an artefact to the museum's collection. It may be an artefact that tells us who they are, or that has a connection to the achievements for which they have been rewarded. These tangible objects help bring life to the laureates' stories, which are retold in exhibitions and by the guides at the museum.

### Press conferences

(Central European Time, CET)

### 5 December

08:45

The Nobel Foundation's press conference regarding the Nobel Week will be held at the Nobel Prize Museum. The chef and pastry chef for the Nobel Prize banquet will be presented. At the press conference, the creations by fashion students from Beckmans College of Design — inspired by this year's Nobel Prizes — will also be on display.

### 6 December

13:00

Press conference for the Nobel Prize laureate in literature at the Swedish Academy.

15:00

Press conference for the Nobel Prize laureates in medicine at the Nobel Forum.

#### 7 December

09.30

Press conference for the Nobel Prize laureates in physics and chemistry, and the recipients of the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel at the Royal Swedish Academy of Sciences.

The complete press programme with all times can be found at: https://www.nobelprize.org/ceremony/programme-for-nobel-week-2024/

### **Nobel Prize lectures**

During the Nobel Week, in keeping with the statutes of the Nobel Foundation, all the laureates will hold a Nobel Prize lecture regarding the discovery or achievements for which they have been rewarded. With a few exceptions, this has been done since the first Nobel Prizes were awarded in 1901. To attend the lectures, registration is required.

All Nobel Prize lectures will be live streamed via nobelprize.org: <a href="https://www.nobelprize.org/streams-during-nobel-week-2024/">https://www.nobelprize.org/streams-during-nobel-week-2024/</a>

### The Nobel Prize lectures in physiology or medicine

Venue: Aula Medica, Nobels väg 6, Karolinska Institutet, Campus Solna

7 December 14:00

### The Nobel Prize lecture in literature

Venue: Grand Hall (Börssalen), Swedish Academy, Källargränd 4, Old Town, Stockholm

7 December 17:00

### The Nobel Prize lectures in physics, chemistry and economic sciences

Venue: Aula Magna, Stockholm University

8 December 09:00–10:20 The Nobel Prize in Physics

10:50–12:40 The Nobel Prize in Chemistry

 $14{:}00{-}15{:}50$  The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel

### Nobel Week at the Nobel Prize Museum

On 5 December, the museum will hold the concluding conference of the 2024 Help a Scientist project. This year, Help a Scientist is about making quantum dots from carbon. The discovery and development of nanotechnology's smallest components – quantum dots – was awarded the 2023 Nobel Prize in Chemistry. More than 1,500 students in grades 7-9 from schools all over Sweden have manufactured their own variants of carbon quantum dots and tested their ability to detect heavy metals in water. The hope is to find the perfect solution for this purpose and be able to use this particular solution to locate metal-contaminated areas in nature. Two students from each class and their teacher will come to the museum. They will get to compete for great prizes and also meet Victor Ambros, one of this year's medicine laureates.

On 10 December, the Nobel Day will be celebrated at the museum with family activities and an exclusive three-course lunch inspired by the Nobel Prize banquets. (The lunch is sold out for this year.) The artefacts that this year's laureates donate to the museum and the chairs they autograph when they arrive in Stockholm will be on display during the Nobel Day. The award ceremonies from both the City Hall in Oslo and from Konserthuset Stockholm will be broadcast live on a big screen. During the day, the museum will offer guided tours of its permanent exhibition These things changed the world.

To recognise and honour the 2024 laureates and achievements, fashion students at Beckmans College of Design have interpreted this year's prizes in the form of fashion creations. These will be on display at the museum throughout the Nobel Week.

Read more at: https://nobelprizemuseum.se/en

### The Nobel Prize Concert

This year's Nobel Prize Concert will take place at 19:00 on 8 December at Konserthuset Stockholm (Stockholm Concert Hall).

Malin Byström, a Swedish Royal Court Singer, will be this year's soloist. She is one of the most sought-after sopranos of our time, and she has been named Female Singer of the Year at the International Opera Awards. With the rich colour and glowing stage presence of her lyrical-dramatic voice, she has moved and delighted audiences all over the world.

"I am very much looking forward to this extraordinary concert," says Malin Byström. "To be able to participate in the Nobel Week, when the eyes of the world are on Sweden, makes me both very proud and very humble. I will sing with all my heart."

Malin Byström made her debut with the Royal Stockholm Philharmonic Orchestra in 2006, with music by Richard Strauss. Strauss's operas have become something of a speciality for Byström, and at the 2024 Nobel Prize Concert we hear the fantastic final scene from the opera *Salome*.

The programme will also include wonderful Symphonic Dances by Rachmaninov. The Royal Stockholm Philharmonic Orchestra will be led by Czech conductor Petr Popelka – newly appointed Chief Conductor of the Vienna Symphony Orchestra and also Chief Conductor and Artistic Director of the Prague Radio Symphony Orchestra. Popelka will begin by conducting music from his homeland, by Vítezslava Kaprálová. Her Suita Rustica from 1938 was inspired by lovely Czech folk songs and dances.

The Nobel Prize Concert will not be broadcast live this year, but it will be broadcast in an edited version on Swedish Television's SVT1 network at 20:15 on 14 December. The Nobel Prize Concert is a collaborative project between Nobel Prize Outreach and Konserthuset Stockholm.

Read more at: https://www.nobelprize.org/nobel-prize-concert/

### Nobel Week Dialogue

Epidemics, mental health, medical breakthroughs and innovative ways to improve our well-being. This year's Nobel Week Dialogue, which will take place on 9 December in Stockholm, will explore many important aspects of global health. On site will be Nobel Prize laureates, Olympians, scientists and entrepreneurs.

This year's conference will feature three Nobel Prize laureates in physiology or medicine from previous years: Charles Rice, Michael Rosbash and Drew Weissman. In addition, Olga Tokarczuk, the literature laureate 2018, will be interviewed on stage.

Part of the day's programme will focus on the role that diet and nutrition play in our health. There will also be conversations about epidemics and lessons learned from previous outbreaks that can help us prevent future crises. The topic of mental health will be addressed by two sports personalities with Olympic and Paralympic medals. One panel discussion will address the state of the world's health, current threats and necessary solutions. Groundbreaking medical advances will also be highlighted, as well as how science and society can work together for a healthy future.

The conference, entitled *The Future of Health*, will be free of charge, but pre-registration is required. The first-come, first-served principle will apply. The programme will run from 10:00–15:30 at the Stockholm Waterfront Congress Centre. The Nobel Week Dialogue is held in Stockholm every other year and in Gothenburg (Göteborg) every other year.

Read more at:

https://www.nobelprize.org/events/nobel-week-dialogue/stockholm-2024/

### **Nobel Minds**

Since the 1960s, during the Nobel Week the laureates have gathered for a round table discussion for television, *Nobel Minds*. The programme has a popular science approach and examines general questions related to science, research and literature. Some of the 2024 laureates from the scientific disciplines will participate in the conversation. The programme will be recorded in the Bernadotte Library at the Royal Palace in Stockholm on 9 December in front of an invited audience. Crown Princess Victoria and Prince Daniel will also attend. The programme is produced by Swedish Television and BBC World News. The discussion will be hosted by Zeinab Badawi of the BBC.

This year Geoffrey Hinton, David Baker, Demis Hassabis, Gary Ruvkun, Daron Acemoglu and James A. Robinson will participate in the conversation.

# The Nobel Prize award ceremony in Stockholm

A complete programme and time schedule are attached

The Nobel Day, 10 December, begins with the traditional Nobel Prize award ceremony at Konserthuset Stockholm (the Stockholm Concert Hall), which will start at 16:00. There will be presentation speeches about this year's prizes before an audience of about 1,560 guests, who will then watch the laureates as they each receive their medals and diplomas from the hand of H.M. the King of Sweden. The seats closest to the stage are reserved primarily for the laureates' families, representatives of the prize awarding institutions, and members of the Swedish government and Riksdag (Parliament).

Seated on the stage will be about 90 people. In addition to the 2024 laureates, there will be laureates from earlier years. Also seated onstage, among others, will be members of the Royal Swedish Academy of Sciences, the Nobel Assembly of Karolinska Institutet, the Swedish Academy and the Board of Directors of the Nobel Foundation. Seated in front of them on the stage will be this year's laureates and members of Sweden's Royal Family: H.M. King Carl XVI Gustaf, H.M. Queen Silvia, H.R.H. Crown Princess Victoria and H.R.H. Prince Daniel. In the first row closest to the stage the following guests will be seated: H.R.H. Prince Carl Philip and H.R.H. Princess Sofia, as well as H.R.H. Princess Madeleine and Mr Christopher O'Neill.

The entire Swedish government is invited to the Nobel Prize award ceremony. Among those invited to both the award ceremony and the banquet are the speakers of the Riksdag (Parliament), the prime minister, the minister for foreign affairs, the minister for culture, the minister for finance and minister for education, as well as the chairperson of Sveriges Riksbank's General Council. The diplomatic corps will be represented by its Doyen, in other words the ambassador who has been in Sweden the longest and who, according to protocol, represents the entire diplomatic corps. This year it will be the ambassador of Hungary. In addition, the ambassadors representing the countries of the laureates (Canada, South Korea, Turkey, the United Kingdom, the United States and Japan) and the ambassador of Norway have been invited to both the Nobel Prize award ceremony and the banquet.

### Presentation speeches

The Chair of the Board of the Nobel Foundation, Professor Astrid Söderbergh Widding, will hold an introductory address. After that, the 2024 Nobel Prize laureates will be presented.

The presentation speeches will be held as follows:
Physics – Professor Ellen Moons
Chemistry – Professor Johan Åqvist
Physiology or Medicine – Professor Rickard Sandberg
Literature – Author Ellen Mattson
Economic Sciences – Professor Jan Teorell

### Musical interludes

The Royal Stockholm Philharmonic Orchestra, conducted by Johannes Gustavsson, will provide the music for the Nobel Prize award ceremony. Soprano Ingela Brimberg will perform as the vocal soloist. The programme will include music by Richard Wagner, Arnold Schönberg (whose 150th anniversary is being commemorated this year), Gunnar de Frumerie and Ruth Gipps.

### Ingela Brimberg

Celebrated Swedish soprano Ingela Brimberg is renowned for her interpretations of the most complex and demanding dramatic soprano heroines in opera. She has collaborated with many of the world's finest conductors, including Marc Minkowski, Esa-Pekka Salonen, Daniel Harding, François-Xavier Roth, and the late Leif Segerstam. This spring, she will perform as Brünnhilde in Wagner's *Die Walküre* at the Royal Swedish Opera.

#### Johannes Gusta∨sson

Johannes Gustavsson has conducted Sweden's and the Nordic region's leading orchestras, including the Royal Stockholm Philharmonic Orchestra, most recently in 2023. He was the first conductor to receive both the Swedish Conducting Prize and the Herbert Blomstedt Prize. In addition, he has won awards in the Solti Conducting Competition in Frankfurt and the Toscanini Competition in Parma.

### Magnificent floral donation since 1905

In homage to Alfred Nobel, who spent his last years in Sanremo, where he died on 10 December 1896, Italy - in collaboration with Regione Liguria, the City of Sanremo and the Chamber of Commerce of Riviere di Liguria - has donated flowers since 1905 to decorate Konserthuset Stockholm and the Stockholm City Hall.

### This year's floral decorations at the award ceremony

For two decades Helén Magnusson, chief florist at Hässelby Blommor, has designed the floral decorations for the Nobel Prize award ceremony. Together with her team of florists, she works to create the decorations that will embellish the main stage at Konserthuset. The flowers that have been selected to frame this year's Nobel Prize ceremony consist mainly of ranunculus, roses, mimosa flowers, orchids, olive branches, eucalyptus and several different kinds of green twigs.

# The Nobel Prize banquet in Stockholm

The time schedule for the banquet is attached

After the ceremony at Konserthuset Stockholm, it will be time for the evening's Nobel Prize banquet at Stockholm City Hall. The banquet programme will follow tradition and begin with the entry procession of the Royal Family and other guests of honour down the grand stairway and into the Blue Hall at 19:00 CET. Prior to this, the guests of honour will have been presented to the Royal Family in the Prince's Gallery of the City Hall. Behind the Master of Ceremonies will be two attendants, followed by H.M. the King with Professor Astrid Söderbergh Widding, Chair of the Board of the Nobel Foundation and the host of the evening's banquet, and H.M. the Queen with Professor Hans Ellegren, Secretary General of the Royal Swedish Academy of Sciences.

In 1901, the first Nobel Prize banquet, held in the Hall of Mirrors at the Grand Hôtel, had 113 guests. Today the Nobel Prize banquet is served to about 1,250 guests.

### Chef and pastry chef

A new duo will be cooking for the guests at the 2024 Nobel Prize banquet. Jessie Sommarström will be responsible for preparing the first course (starter) and the main course. Frida Bäcke is in charge of this year's dessert. They two chefs aim to highlight how important it is to choose the right ingredients, and they emphasise the role of food for the climate and public health.

Jessie Sommarström's food philosophy is about combining sustainability and health. She would like more people to understand the connection between our food choices and the challenges the world is facing. She wants this to be reflected both in institutional meals and at prestigious events such as a Nobel Prize banquet.

"Food is one of the great issues of our time," says Jessie Sommarström, referring to the fact that the food system is a significant source of global emissions and has a major impact on the climate. "What we put on our plates affects not only the environment, but also public health. As a chef, I want to show that it is possible to cook good food responsibly."

One of the components of this year's main course is cultured porridge made from Swedish grain. With this, Jessie wants to highlight the importance of whole grains and show that it is possible to create a banquet menu based on ingredients that almost everyone can afford.

"Lack of whole grains is a major cause of poor health in Sweden," says Jessie Sommarström. "We all need to eat a lot more whole grains to feel good. They are nutritious, tasty and filling."

Growing up in Dalarna province, Frida Bäcke learned to make use of what is in nature – she wants to ensure that the next generation will gain that knowledge. One of the ingredients in the banquet dessert is apples – a fantastic ingredient, not least because they are among the few Swedish ingredients that are in season all year round.

"In 2024 we have had a really good apple year, which makes them an especially great choice. I see the banquet dessert as an opportunity to highlight what grows wild in nature, in the hope that more and more of us will cherish it and want to spend time there," says Frida Bäcke.

#### Jessie Sommarström

Jessie Sommarström was adopted from India and grew up in Vaxholm, outside Stockholm. In 2022, she was named Sweden's Chef of the Year. She later received the gold medal of the Swedish Gastronomic Academy and was named Woman of the Year in Sweden's hospitality industry. In 2024, she received an honorary doctorate from the Faculty of Social Sciences at Umeå University. She has worked in restaurants such as Sturehof and Esperanto. Today, she is the head of food services at Sodexo AB. She has also hosted Swedish Radio P1's *Summer* programme.

### Frida Bäcke

Frida Bäcke will be in charge of the dessert. She grew up in Västerby outside Hedemora. She has been head pastry chef at restaurants such as Franzén and AIRA. For five years she was a member of the Swedish National Culinary Team, and she has competed in both the World Championships and the Culinary Olympics. For three years in a row, Frida has been named Sweden's Pastry Chef of the Pastry Chefs. Last year Socker Sucker, the Stockholm patisserie which she runs together with her colleague Bedros Kabranian, was also named Pastry Shop of the Pastry Chefs.

### Menu and table setting

The menu has been developed in close collaboration with the Nobel Foundation's gastronomic advisors: Fredrik Eriksson of Långbro Värdshus och Restaurang Nationalmuseum; Ulrika Karlsson of Krakas Krog; and Gert Klötzke, Professor of Gastronomy at Umeå University. Fredrik Eriksson and Ulrika Karlsson are also creative directors at the Restaurangakademien.

The menu will only be revealed when all the guests have sat down at their tables at 19:00 on 10 December.

The tables will be set with the Nobel tableware, created for the 90th anniversary of the Nobel Prize in 1991 by the three Swedish designers Karin Björquist (Rörstrand/Gustavsberg), Gunnar Cyrén (Orrefors) and Ingrid Dessau (Klässbols Linneväveri). The approximately 60 tables in the Blue Hall will be covered with some 800 metres of linen tablecloth, and the meticulous table setting will comprise no fewer than some 9,240 porcelain pieces, 5,230 glasses and 9,240 items of cutlery.

This will be the eleventh year that Stadshusrestauranger and its CEO Maria Stridh will be responsible for presenting the Nobel Prize banquet. Chef de Cuisine for his twentieth Nobel Prize banquet will be Gunnar Eriksson. During the evening, 44 chefs and 190 servers will be working.

The Nobel Prize Museum Tea Blend will be served at the banquet – the museum's own tea, whose flavours come from various places where Alfred Nobel lived and worked.

### Divertissement

Information about this year's divertissement, including the music and artists, will be presented on 9 December.

### Nature has inspired this year's flower decorations

Per Benjamin is responsible for the floral decorations at Stockholm City Hall for the tenth time. He won the Fleurop Interflora World Cup in 2002 and since then has worked all over the world with floral design and inspiration. Ahead of the Nobel Prize banquet, he enlisted the help of his team and florist students. More than 30 people will be working for a week, from morning to evening, to create floral magic.

The theme of this year's floral arrangements is our green life-giving nature. This year's floral decorations will be based on a mix of leaf shapes, textures and green colours. Green in rich hues, in sheer spring hues, in splendid summer hues and in saturated autumn hues. Flowers in gentle pastels will complement the leafy greenery. The Blue Hall will be decorated in various tree shapes, and the Tree of Knowledge will occupy the Table of Honour. Above the gold mirror in the middle of the Table of Honour will be a runner of greenery and flowers. All other tables in the Blue Hall will have a playful sprinkling of leaves decorating their middle.

The focus will be on the sustainability perspective. All structures are reused from year to year to ensure a healthy and minimal use of materials. Instead of floral foam, the florists will use kenzans (flower fakirs), other structures and water pipes. This year's flowers — a total of almost 25,000 stems that largely come as gifts from Sanremo — consist of a wide variety of leafy greens supplemented with both classic flowers and newer varieties from Sanremo such as ranunculus, poppies, mimosas, roses, carnations, lilies, alstromeria, statice, gerbera, germini, euphorbia and orchids includeing paphiopedilum and cymbidium. The leafy greenery will include a lovely mix of hues, shapes, sizes and textures of ruscus, olive, laurel, pistachio, eucalyptus, spider flowers, switch grass, asparagus, viburnum, aspidistra, salal and many more.

### Speeches of thanks

Towards the end of the banquet, students will assemble with massed standards on the grand stairway and the balustrade above the Blue Hall. Colleges and universities will be represented among the standards. When coffee and liqueurs are served, the 2024 laureates will hold speeches of thanks after being introduced by the evening's toastmaster, Kamila Marzynska.

Only one laureate from each prize category will speak, in "Nobel order", that is, in the order that Alfred Nobel listed the prizes in his will:

Physics: Geoffrey Hinton Chemistry: David Baker

Physiology or Medicine: Gary Ruvkun

Literature: Han Kang

Economic sciences: Daron Acemoglu

### End of the evening

The banquet will conclude at about 23:00. Dancing will then begin in the Golden Hall, with music by the Laszlo Royale Dance Orchestra, featuring Malena Laszlo and Niklas Gabrielsson Lind.

### Nobel Prize diplomas

Each Nobel Prize laureate receives a diploma and a Nobel Prize medal delivered in a case. Some of the diplomas include original artworks. The artworks on the diplomas for this year's physics laureates were created by Lars Eje Larsson and the artworks on the diplomas for the chemistry laureates by Catharina Bauer. The artist for the economic sciences diplomas was Elisabeth Biström.

The calligraphy for the physics and economics diplomas was created by Marie A. Györi, and the calligraphy for the chemistry diplomas was created by Marianne Pettersson Soold. The calligrapher for the medicine and literature diplomas was Susan Duvnäs. The diplomas and medal cases were produced by Leonard Gustafssons Bokbinderi in Stockholm. The Nobel Prize medals were made by Svenska Medalj in Eskilstuna.

The artwork in the peace prize diploma was created by Marie Buskov, and the calligraphy was created by Christopher Haanes. Kristine Bekkevold at Merkur Grafisk AS produced the diplomas and medal cases for the Nobel Peace Prize. Photo reproduction was done by Thomas Widerberg. The peace prize medals were made by Det Norske Myntverk.

### The design of the Nobel Prize diplomas and medal cases

During 2018 the Nobel Foundation launched a new, coherent graphic expression for the activities connected to the Nobel Prize. It is based on Erik Lindberg's medal from 1901 and its timeless typography. A word mark soon emerged - The Nobel Prize. Along with gold and a colour scale that has taken its inspiration from the era when the prize was established, the new typography created a visual identity that has now also been incorporated into the Nobel Prize diplomas and medal cases.

### The Nobel Week concludes

### The laureates visit the Nobel Foundation

On 11 and 12 December, the laureates will make individual visits to the Nobel Foundation. Here they will retrieve their medals and diplomas and discuss the details concerning the transfer of their prize money. On 12 December, the laureates will be invited to a concluding reception at the Nobel Foundation.

### Other activities during the week

### School visits

The Nobel Prize laureates have been invited to schools to meet students and teachers in and around Stockholm during the Nobel Week. For example, this year's literature laureate Han Kang will meet students in Tensta and Rinkeby, and Östra Gymnasiet in Huddinge will be visited by medicine laureate Victor Ambros. A number of other elementary, lower secondary and upper secondary schools around Stockholm will also be visited by laureates.

### Nobel Week Lights Stockholm

The Nobel Week Lights festival invites international and local artists, designers and students to create artistic light installations inspired by the Nobel Prize. These installations shed light on the laureates' scientific discoveries, literary works and peace efforts in new ways, while giving us the opportunity to see the city with new eyes. This year's festival runs during 7-15 December and features sixteen works in different locations in central Stockholm. The light festival is free of charge.

The light artwork that will be projected on the façade of Stockholm City Hall – *Leading Lights* – is a tribute to the discoveries and work of female Nobel Prize laureates. An image of this year's literature laureate, Han Kang, will be included in this installation. She will also be visible in the artistic light installation *De Aderton* (The Eighteen) on Klara Mälarstrand, a lakeside street.

The installation Nematode will be a glowing dynamic presence, inspired by this year's Nobel Prize in Physiology or Medicine, which rewards Victor Ambros and Gary Ruvkun for their discovery of how the activity of genes is regulated. STUDIO DUKTIG uses humour and playfulness to approach a complex phenomenon. They use and combine already existing materials to create something new; the work portrays how something very small – microRNA – affects larger processes in the body and how the same material can take on different forms.

Nobel Week Lights is presented by the Nobel Prize Museum and initiated and produced by Annika Levin, Alexandra Manson, Lara Szabo Greisman and Troika AB.

Read more at: https://nobelweeklights.se/?lang=en

### These things changed the world

On 9 March this year, the Nobel Prize Museum's permanent exhibition These things changed the world opened. For the first time, the museum is displaying a large selection of items from its collection of artefacts from Nobel Prize laureates. These objects tell stories of remarkable discoveries and life achievements. More than 250 artefacts bear witness to revolutionary inventions, courageous peace efforts, groundbreaking ideas and innovative literature.

In the exhibition These things changed the world, you can discover how your life and the world you live in have changed thanks to researchers, writers and activists who have worked in the fields of science, literature and peace. Their discoveries and accomplishments have been awarded the Nobel Prize and have given us new perspectives on our lives and our future.

Read more at:

https://nobelprizemuseum.se/en/these-things-changed-the-world/

### Follow the Nobel Prize

### Follow the Nobel Prize digital channels

The Nobel Prize digital channels aim to engage, inspire and inform people about the Nobel Prize and the major issues of our era related to science, humanism and peace. Their ambition is to achieve a global reach, and they have grown rapidly. The nobelprize org website contains official information from the prize awarding institutions, interesting stories, detailed biographies and in-depth information about the laureates since 1901. Other digital channels – Facebook, X (Twitter), Instagram, YouTube, LinkedIn and Threads – provide live broadcasts, exclusive video material, interviews, unique behind-the-scenes looks with a strong focus on telling the stories behind the laureates' discoveries and advances.

### Nobelprize.org follows the Nobel Week

The Nobel Prize award ceremonies in Oslo and Stockholm will be live streamed on the official website nobelprize.org at 13:00 and 16:00 CET, respectively, on 10 December. The complete presentation speeches at the award ceremonies will be published at the same times, and the menu from the Nobel Prize banquet at Stockholm City Hall will be published at 19:00. During the evening, press photos of the various dishes served at the banquet will also be published. The speeches of thanks held by laureates during the banquet will be posted later the same evening. However, the seating plan for the Table of Honour will be published earlier, at 13:00 on 9 December. The Nobel Prize lectures will be broadcast live on nobelprize.org at the times specified above under the above heading "Nobel Prize lectures". When the literature lecture and the peace lecture are live streamed, they will also be published in text form.

### **Broadcasts on SVT**

Swedish Television (SVT) will broadcast live from the Nobel Prize award ceremony and the Nobel Prize banquet on 10 December. SVT1 will also broadcast its Nobelstudion programme at 19:00-19:30 on 4, 5, 6 and 9 December. The Nobel Prize Concert will not be broadcast live this year, but it will be broadcast in an edited version on SVT2 at 20:15 on 14 December. Nobel Minds will be shown on SVT2 and on SVT Play at 20:00 on 12 December. In addition, portraits of the laureates, their Nobel Prize lectures and the Nobel Week Dialogue will be broadcast.

All the laureate portraits will be released on SVT Play on 1 December. The literature prize, peace prize and economic sciences prize portraits will be broadcast on SVT2 on Wednesday evening, 4 December.

### International distribution of the programs

International media that will broadcast television coverage from the Nobel Day will include the European Broadcasting Union (EBU).

### Historical background

### The Nobel Prize award ceremony

The Nobel Prize award ceremony assumed its fundamental shape as early as 1901. During the early years, the programme was the same as today in all essential respects, but there were differences in the format of the ceremony. Both the laureates and the Royal Family sat in the seats closest to the stage, and on the stage there was an orchestra or choir. There were also floral decorations and the same bust of Alfred Nobel that is still being used. In charge of the decorations was Palace Architect Agi Lindegren. Until 1925, the Nobel Prize was awarded at the Royal Swedish Academy of Music, but when Konserthuset Stockholm (Stockholm Concert Hall) was completed in 1926 the Nobel Prize began to be awarded there. This has been the case except in 1971 and 1972, when a renovation caused the award ceremony to move first to Filadelfiakyrkan, a large church in Stockholm, and then to Stockholmsmässan (Stockholm International Fairs, then called S:t Eriksmässan) in Älvsjö south of the city centre. In 1975 S:t Eriksmässan was used again, in conjunction with the 75th anniversary of the prize. In 1991 the Nobel Prize award ceremony took place at what is now Avicii Arena (then called the Stockholm Globe Arena). During the years 1914– 1919 and 1939–1944, the award ceremony was cancelled due to the world situation and in 1924 because no laureates came to Stockholm. In 2020 and 2021, the Nobel Prize medals and diplomas were presented to the laureates in their countries of residence due to the coronavirus pandemic. A ceremony with no audience present was held in the Golden Hall of the Stockholm City Hall in 2020. In 2021, an award ceremony took place with a small, invited audience on hand in the Blue Hall. No laureates participated in these ceremonies on-site; instead, video material was shown from when they received their medals and diplomas in their home countries.

In 1928 the Nobel Prize award ceremony was broadcast on the radio for the first time, and as early as 1950 a trial television broadcast took place, but the ceremony has been broadcast on TV regularly since 1959. At the early Nobel Prize award ceremonies, mainly Swedish music was played. Over time, the organisers tried to adapt the choice of music to the laureates' countries of birth, but today they look for a suitable theme in a varied repertoire. At the opening and closing, the same pieces of music recur: first the Swedish royal anthem *Kungssången* and then Mozart's *March in D major, KV 249* when the laureates enter. The ceremony closes with the national anthem *Du gamla, du fria* and then *The Queen of Sheba's Festivity March* by Hugo Alfvén.

### The Nobel Prize banquet

The banquet following the award ceremony has grown from a small dinner for the Nobel Prize laureates and representatives of the prizeawarding institutions into an internationally renowned celebration. During the early decades, between 100 and 300 people were invited, and the dinners consisted of five courses. They began with hors d'oeuvres or soup, then fish, meat and fowl, plus dessert. As the number of guests has increased, the number of courses has decreased, first to four and then to the current three. The menus have also followed increasingly wellthought-out themes based on Swedish cuisine.

Until 1933 the banquet took place at the Grand Hôtel in Stockholm. As early as 1930 the banquet was held in the Golden Hall of the City Hall, but it moved back to the Hall of Mirrors at the Grand. Starting in 1934, the banquet has been held at the Stockholm City Hall every year, first in the Golden Hall and since 1974 in the Blue Hall. The exceptions were in 1924, when the festivities were cancelled because all the laureates were prevented from attending; in 1956, when out of consideration for the political situation (the Soviet Union's military occupation of Hungary) the organisers chose to hold a smaller dinner at the Grand Hall (Börssalen) of the Swedish Academy; as well as during the war years 1914–1919 and 1939–1944. The Nobel Prize banquet was also cancelled in 2020 and 2021 due to the coronavirus pandemic.

### Alfred Nobel

Alfred Nobel (1833–1896) is best known as the inventor of dynamite. He was also a businessman with extensive international operations. He was born in Stockholm but spent most of his life outside the borders of Sweden, in such places as St. Petersburg, Hamburg, Paris and Sanremo. His life consisted largely of travel and work, and he never started a family. As a young man, Nobel was interested in literature, but his education focused on natural science. While staying in Paris, he encountered nitroglycerine, an effective but dangerous explosive. Dynamite, a mixture of nitroglycerine and kieselguhr (a kind of sand) was Nobel's way of making the explosive safer and easier to handle. This led to an industrial breakthrough, and Nobel established more than 90 factories in 20 countries. During his lifetime, Nobel was already a philanthropist. In particular, he was involved in the European peace movement. Nobel was influenced by the ideals of the Enlightenment – which was apparent from the will he signed in Paris on 27 November 1895. In the will, Nobel stipulated that his fortune should be transformed into a fund, whose interest should constitute prizes awarded to persons who "conferred the greatest benefit to humankind". The structure of the prize categories shows the breadth of Nobel's thinking. In order to create a more peaceful and prosperous world, progress was needed in both science and literature, as well as through political efforts.

### Selecting the laureates

The task of selecting Nobel Prize laureates is based on a nomination procedure whose principles were devised during negotiations in 1897–1900. For each prize category, there is a Nobel Committee, and in September this committee sends out invitations to Academy members, university professors, other researchers, parliamentarians, previous laureates etc. to submit nominations. These must be in the hands of the committee no later than 31 January. From February until early October, the prize awarding institutions work on evaluating the nominees. When a decision is made, the laureates are notified first and then the general public at press conferences in early October. In 1968 Sveriges Riksbank (Sweden's central bank) established the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, which is awarded at the same prize ceremony. The laureates are selected by the Royal Swedish Academy of Sciences, but the prize is funded by Sveriges Riksbank.

# Preliminary schedule for the 2024 Nobel Prize award ceremony

- 16:00 Drumroll, Royal Family proceed to their seats onstage, the Swedish royal anthem, Kungssången
   16:02 March in D major, KV 249 by Wolfgang Amadeus Mozart. Laureates proceed to the stage
   16:05 Speech by Professor Astrid Söderbergh Widding, Chair of the Board of the Nobel Foundation
- 16:10 Dich, teure Halle Elizabeth's Greeting from Tannhäuser WWV 70 by Richard Wagner

#### **PHYSICS**

16:14 Presentation of the 2024 Nobel Prize in Physics to Professor John J. Hopfield and Professor Geoffrey Hinton after a presentation speech by Professor Ellen Moons

### **CHEMISTRY**

- Presentation of the 2024 Nobel Prize in Chemistry to Professor David Baker, Sir Dr Demis Hassabis and Dr John Jumper after a presentation speech by Professor Johan Åqvist
- 16:28 Notturno for Strings and Harp by Arnold Schönberg

### PHYSIOLOGY OR MEDICINE

- 16:32 Presentation of the 2024 Nobel Prize in Physiology or Medicine to Professor Victor Ambros and Professor Gary Ruvkun after a presentation speech by Professor Rickard Sandberg
- 16:39 A Letter Arrived by Gunnar de Frumerie, lyrics by Pär Lagerkvist

#### **LITERATURE**

- 16:42 Presentation of the 2024 Nobel Prize in Literature to author Han Kang after a presentation speech by author Ellen Mattson
- 16:48 Ambarvalia A Dance op 70 by Ruth Gipps

### **ECONOMIC SCIENCES**

- Presentation of the 2024 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel to Professor Daron Acemoglu, Professor Simon Henry Roberts Johnson and Professor James A. Robinson after a presentation speech by Professor Jan Teorell
- 17:00 The Swedish national anthem *Du gamla, Du fria*, lyrics by Richard Dybeck, arrangement by Jari Eskola
- 17:02 *The Queen of Sheba's Festivity March* from *The Prodigal Son* by Hugo Alfvén. Played while the guests are leaving the auditorium

About

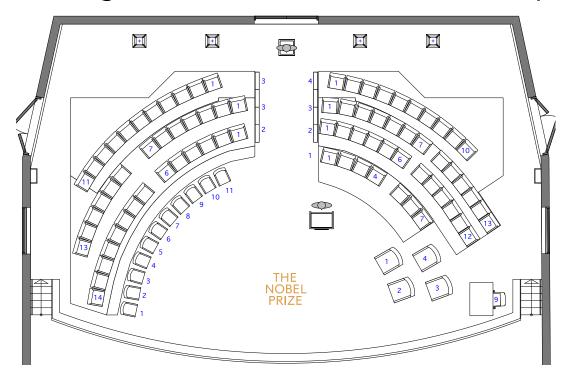
17:05 The ceremony ends

Music performed by:

The Royal Stockholm Philharmonic Orchestra

Conductor: Johannes Gustavsson Soprano Soloist: Ingela Brimberg

# Preliminary seating plan on the stage, Nobel Prize award ceremony



			Side	Row	Seat
	H.M. The King				1
	H.M. The Queen				2
	H.R.H. Crown Princess	s Victoria			3
	H.R.H. Prince Daniel				4
Chair	Söderbergh Widding	Astrid	Right	1	1
Acting CEO	Sjöström Douagi	Anna	Right	1	2
Lawyer	Reiss-Andersen	Berit	Right	1	3
Professor	Ellegren	Hans	Right	1	4
Professor	Perlmann	Thomas	Right	1	5
Professor	Malm	Mats	Right	1	6
Hon Dr of Business	Nyman	Sven	Right	1	7
Professor	Danielsson	Ulf	Right	2	1
Professor	Brzezinski	Peter	Right	2	2
Professor	Eriksson	Olle	Right	2	3
Professor	Olsson	E∨a	Right	2	4
Professor	Irbäck	Anders	Right	2	5
Professor	Moons	Ellen	Right	2	6
Professor	Åqvist	Johan	Right	2	7
Professor	Linke	Heiner	Right	2	8
Professor	Somfai	Peter	Right	2	9
Professor	Chabes	Andrei	Right	2	10
Author	Mattson	Ellen	Right	2	11
Professor	Henriques Normark	Birgitta	Right	2	12

			Side	Row	Seat
Professor	Pearce	Mark	Right	3	1
Professor	Johansson	Göran	Right	3	2
Professor	Haviland	David	Right	3	3
Professor	Ramström	Olof	Right	3	4
Professor	Zou	Xiaodong	Right	3	5
Professor	Wittung-Stafshede	Pernilla	Right	3	6
Professor	Kämpe	Olle	Right	3	7
Professor	Teorell	Jan	Right	3	8
Professor	Sandberg	Rickard	Right	3	9
Professor	Andersson	Tommy	Right	3	10
Professor	Hjalmarsson	Randi	Right	3	11
Professor	Enflo	Kerstin	Right	3	12
Permanent Under-secretary	Edvardsson	David	Right	3	13
Professor	Björkegren	Camilla	Right	4	1
Professor	Wiman	Klas	Right	4	2
Professor	Johansson	Janne	Right	4	3
Professor	Karlsson	Anna	Right	4	4
Professor	Larsson	Nils-Göran	Right	4	5
Professor	Strömblad	Staffan	Right	4	6
Professor	Wedell	Anna	Right	4	7
Professor	Wahren-Herlenius	Marie	Right	4	8
Professor	Östman	Arne	Right	4	9
Professor	Ernfors	Patrik	Right	4	10
Professor	Grandin	Karl	Right	6	9
Professor	Hopfield	John	Left		1
Professor	Hinton	Geoffrey	Left		2
Professor	Baker	David	Left		3
Dr Sir	Hassabis	Demis	Left		4
Dr	Jumper	John	Left		5
Professor	Ambros	Victor	Left		6
Professor	Ruvkun	Gary	Left		7
Author	Kang	Han	Left		8
Professor	Acemoglu	Daron	Left		9
Professor	Johnson	Simon	Left		10
Professor	Robinson	James	Left		11
Professor	Parisi	Giorgio	Left	2	1
Professor	L'Huillier Wahlström	Anne	Left	2	2
Dr	Horvitz	Robert	Left	2	3
Professor	Mello	Craig	Left	2	4
Professor	Szostak	Jack	Left	2	5
Professor	Schekman	Randy	Left	2	6
Professor	Rosbash	Michael	Left	2	7
Professor	Allison	James P.	Left	2	8
Professor	Rice	Charles	Left	2	9
Author	Tokarczuk	Olga	Left	2	10
Professor	Holmström	Bengt	Left	2	11
Justice	Runesson	Eric	Left	2	12
Professor	Ralph	Во	Left	2	13
Professor	Häkansson	David	Left	2	14

			Side	Row	Seat
Professor	Olsson	Anders	Left	3	1
Author	Carlberg	Ingrid	Left	3	2
Professor	Riad	Tomas	Left	3	3
Professor	Wikforss	Àsa	Left	3	4
Author	Svenbro	Jesper	Left	3	5
Professor	Englund	Peter	Left	3	6
Author	Wästberg	Per	Left	3	7
Author	Swärd	Anne	Left	3	8
Author	Sem-Sandberg	Steve	Left	3	9
Poet	Mossaed	Jila	Left	3	10
Author	Palm	Anna-Karin	Left	3	11
Author	Engdahl	Horace	Left	3	12
Author	Forsström	Tua	Left	3	13
Professor	Johansson	Per	Left	4	1
Professor	Boppart	Timo	Left	4	2
Professor	Werner	Ingrid	Left	4	3
Professor	Krusell	Per	Left	4	4
Professor	Fredriksson	Peter	Left	4	5
Professor	Hassler	John	Left	4	6
Professor	Svensson	Jakob	Left	4	7
Professor	Karlsson Hedestam	Gunilla	Left	4	8
Professor	Svenningsson	Per	Left	4	9
Professor	Linnarsson	Sten	Left	4	10
Professor	El Manira	Abdel	Left	4	11

# Preliminary time schedule for the 2024 Nobel Prize banquet

18:15	Guests are welcomed into the Blue Hall and requested to take their seats
19:03	<b>Fanfares</b> – Guests at the Table of Honour enter in procession to organ and trumpet music
19:13	Guests have taken their seats – champagne is served at the Table of Honour
19:16	<b>Fanfare</b> – His Majesty's toast is proposed by the host of the evening's events
19:18	<b>Fanfare</b> – A toast to Alfred Nobel's memory is proposed by His Majesty the King
19:19	Photo opportunity at the Table of Honour (2 x 2 min)
19:24	Divertissement I
19:29	The first course is served – parade via the grand stairway
19:48	Photo opportunity at the Table of Honour (2 x 2 min)
20:14	Divertissement II
20:27	The main course is served – parade via the grand stairway
21:10	The main course plates and cutlery are cleared
21:25	Dessert wine is served
21:39	Divertissement III and IV
21:45	Dessert parade via the grand stairway
22:14	Coffee and liqueur are served
22:30	Toastmaster takes the podium – students of Sweden parade flags on the balustrade and grand stairway
22:35	The laureates' speeches of thanks
About	A signal is given when the guests may rise from the table

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