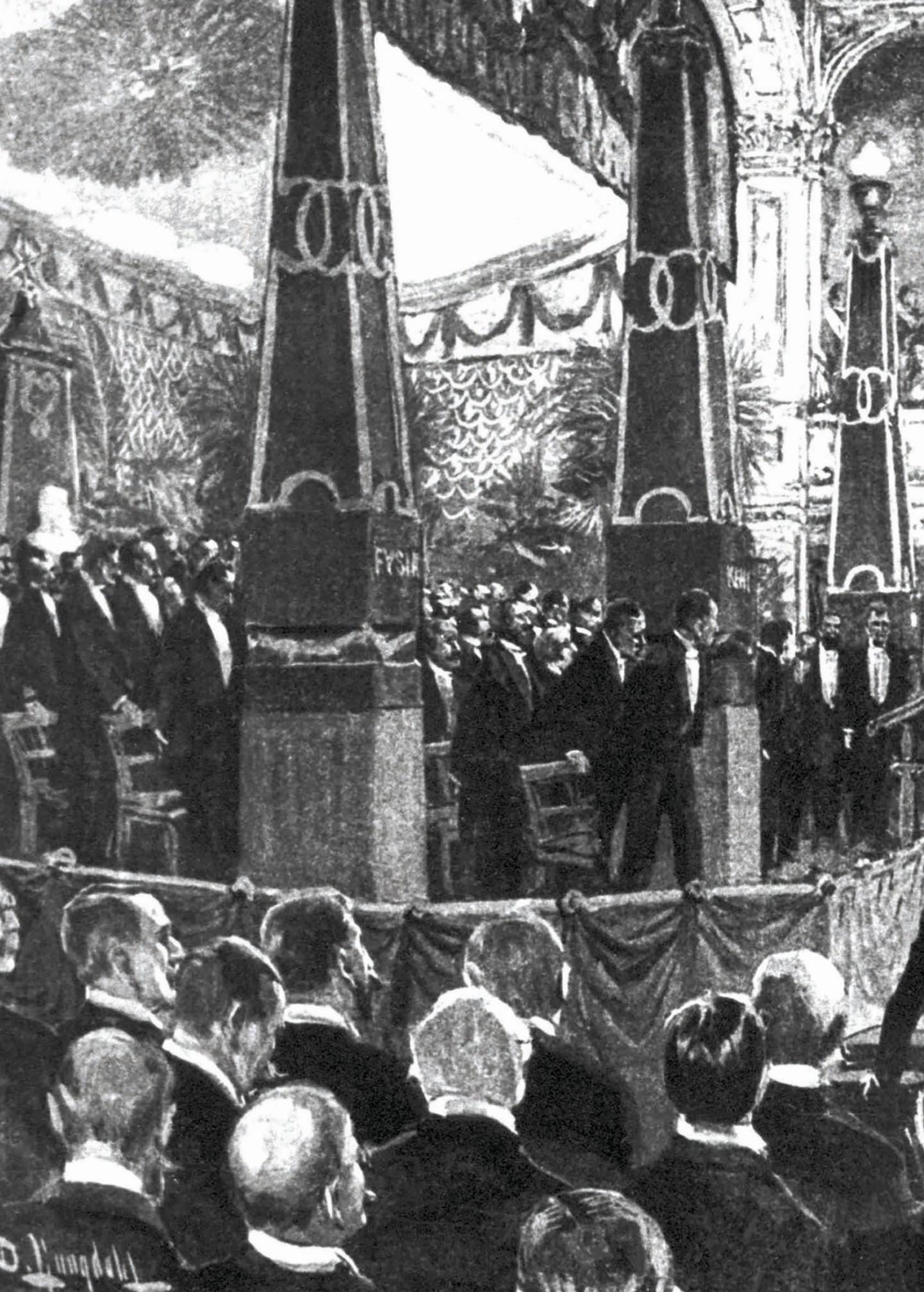


ADVANCING RIGHTS AND FREEDOMS

SCIENCE, HUMAN DIGNITY,
AND THE NOBEL PRIZE

Organized by the Committee on Human Rights of the National Academies of Sciences, Engineering, and Medicine in coordination with Cultural Programs of the National Academy of Sciences.



ADVANCING RIGHTS AND FREEDOMS

SCIENCE, HUMAN DIGNITY, AND THE NOBEL PRIZE

Many scientists awarded the Nobel Prize have, in their personal and professional lives, made significant contributions to the realization of human rights. This exhibit celebrates those contributions, highlighting some of the many efforts by Nobel Laureates to promote and protect rights recognized in the Universal Declaration of Human Rights and international human rights treaties. It honors Laureates in the sciences, together with members of the scientific community who have received the Nobel Peace Prize.

Several of the individuals profiled have defended internationally protected rights under attack and advocated for individuals suffering rights abuses, sometimes placing themselves at risk in the process. Others have spoken out against the misuse of science to perpetrate rights violations, and still others have used their knowledge and skill to help address pressing rights-related challenges.

Numerous Nobel Laureates have also been, and continue to be, deeply involved with organizations that serve as a bridge between the scientific and human rights communities, including the Committee on Human Rights of the U.S. National Academies of Sciences, Engineering, and Medicine and the International Human Rights Network of Academies and Scholarly Societies. Both of these organizations respond to attacks against professional colleagues, and to academic freedom more broadly, and raise public awareness of issues at the intersection of science and human rights.

The activities highlighted in this exhibit, which are only a small sampling of the human rights efforts of Nobel Laureates and the broader scientific community, demonstrate the profound and enduring connections between science and human rights and the important role for science in advancing human dignity worldwide.

ANDREI SAKHAROV

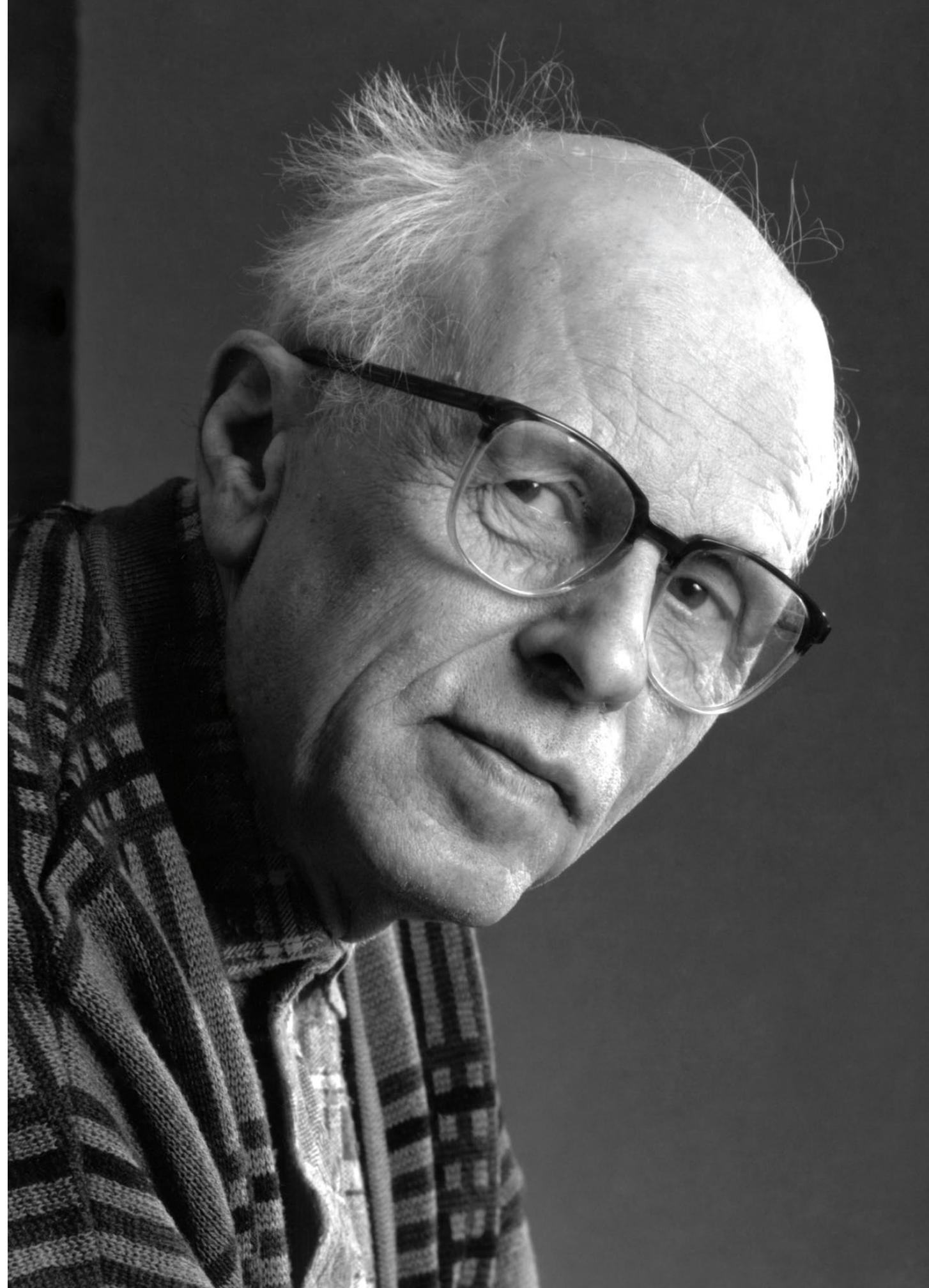
(Peace, 1975)

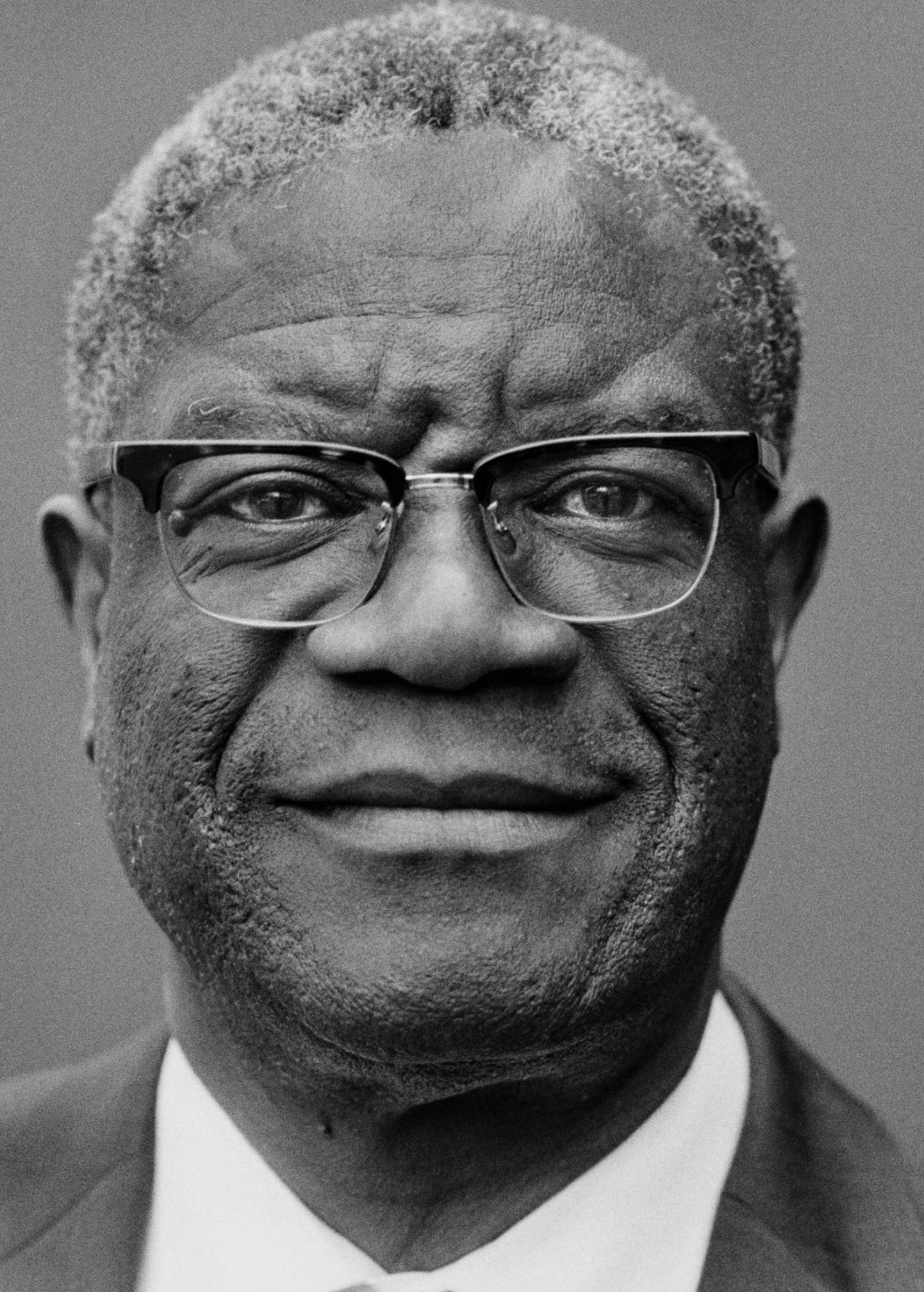
Dr. Andrei Sakharov was a Soviet nuclear physicist, who received the Nobel Peace Prize in 1975 for his efforts to promote peaceful coexistence and human rights. Instrumental in the development of the Soviet hydrogen bomb, he came to have grave concerns about the implications of thermonuclear weapons for humanity. Sakharov's warnings about nuclear proliferation and atmospheric testing helped persuade the Soviet Union to sign the Partial Test Ban Treaty in 1963.

Sakharov co-founded the Moscow Human Rights Committee in 1970 and became an unrelenting advocate for civil liberties in his country. He put forth the concept of human rights as essential for international security. His sustained struggle for human rights led to a government campaign to discredit and persecute him. In 1975, Sakharov was prohibited from traveling to accept the Peace Prize. His wife, Elena Bonner, delivered his Nobel Lecture on his behalf.

In January 1980, Sakharov was sent arbitrarily into internal exile, where he went on several hunger strikes. Released by Mikhail Gorbachev in December 1986, Sakharov was elected to the Soviet Parliament and became a driving force for democratic reforms. Sakharov, described by the 1975 Peace Prize Committee as "the spokesman for the conscience of mankind", died on December 14, 1989.

"...like faint glimmers in the dark, we have emerged for a moment from the nothingness of dark unconsciousness into material existence. We must make good the demands of reason and create a life worthy of ourselves."





DENIS MUKWEGE

(Peace, 2018)

Dr. Denis Mukwege is a Congolese obstetrician and gynecologist and tireless advocate for survivors of sexual violence. As the founder and medical director of Panzi Hospital in Bukavu, Democratic Republic of the Congo (DRC), he has treated tens of thousands of survivors since the start of the Second Congo War (1998). In 2018, Mukwege was awarded the Nobel Peace Prize for his “efforts to end the use of sexual violence as a weapon of war and armed conflict.”

The Panzi Foundation, also founded by Mukwege, helps women subjected to sexual violence in the DRC to obtain justice and rebuild their lives through access to legal, psychosocial, and economic reintegration services. In partnership with Physicians for Human Rights, Mukwege and Panzi Hospital have provided training on forensic evidence collection for clinicians, leading to the first conviction in the DRC for serial sexual violence as a crime against humanity.

Mukwege’s humanitarian efforts and his public calls for the accountability of those responsible for crimes in the DRC have made him a target for human rights abuse. In 2012, he survived an assassination attempt during which his collaborator was killed. He then fled the country with his family. Despite threats to his safety, Mukwege returned to his country the following year, where he continues his life-changing work.

“I call on the world to be a witness and I urge you to join us in order to put an end to this suffering that shames our common humanity.”

RITA LEVI-MONTALCINI

(Physiology or Medicine, 1986)

Dr. Rita Levi-Montalcini was an Italian neurologist, who championed human rights throughout her life. As a Jewish woman who began her research career in 1930s Italy, Levi-Montalcini's path to becoming a scientist was marked by discrimination and persecution. The enactment of race laws targeted at non-Aryan Italian citizens prevented her from taking up academic posts during World War II. Levi-Montalcini performed her research in makeshift labs as she and her family, following Italy's invasion by Germany, moved throughout Europe to evade bombings and capture by Nazi troops. Toward the end of the war, Levi-Montalcini worked as a medical doctor at a camp for displaced persons.

Levi-Montalcini's personal experience with inhumanity led to an enduring commitment to peace and human dignity. She mobilized scientists around the world to highlight the responsibilities of individuals for the protection of humanity and worked to develop a Declaration of Human Duties. Among Levi-Montalcini's primary human rights concerns was the continuing problem of gender inequality. Through a foundation in her name, she supported the education of thousands of girls and women, helping them to pursue a career in science. Levi-Montalcini, whose life exemplifies perseverance in the service of humankind, died on December 30, 2012.

"I tell young people: Do not think of yourself, think of others. Think of the future that awaits you, think about what you can do and do not fear anything."





PETER AGRE

(Chemistry, 2003)

Dr. Peter Agre is an American physician and molecular biologist, who served as Chair of the Committee on Human Rights (CHR) of the U.S. National Academies of Sciences, Engineering, and Medicine from 2005-2007. As CHR Chair, Agre headed interventions in support of colleagues subjected to serious human rights abuses worldwide. He also raised awareness of the responsibility of scientists, engineers, and health professionals to conduct their work in accordance with international human rights standards.

Recognizing the significant impact of conflict on human rights, Agre has guided and led numerous international efforts designed to reduce hostility through scientific engagement. As a member of the International Scientific Council of the Israeli-Palestinian Science Organization, he promoted dialogue and cooperation between Israeli and Palestinian scientists and scholars. Later, as President of the American Association for the Advancement of Science, Agre led a series of scientific missions to Cuba, Iran, Myanmar, and North Korea with the aim of forging international connections and promoting peace.

Agre's ongoing work in global public health reflects his dedication to scientific cooperation that transcends borders in the service of human dignity. As Director of the Johns Hopkins Malaria Research Institute, he works closely with colleagues in sub-Saharan Africa to ensure that those most vulnerable to malaria have access to the health care that they need.

"We have a fundamental responsibility to take care of the problems of all mankind...we're all in this together."

AMARTYA SEN

(Economic Sciences, 1998)

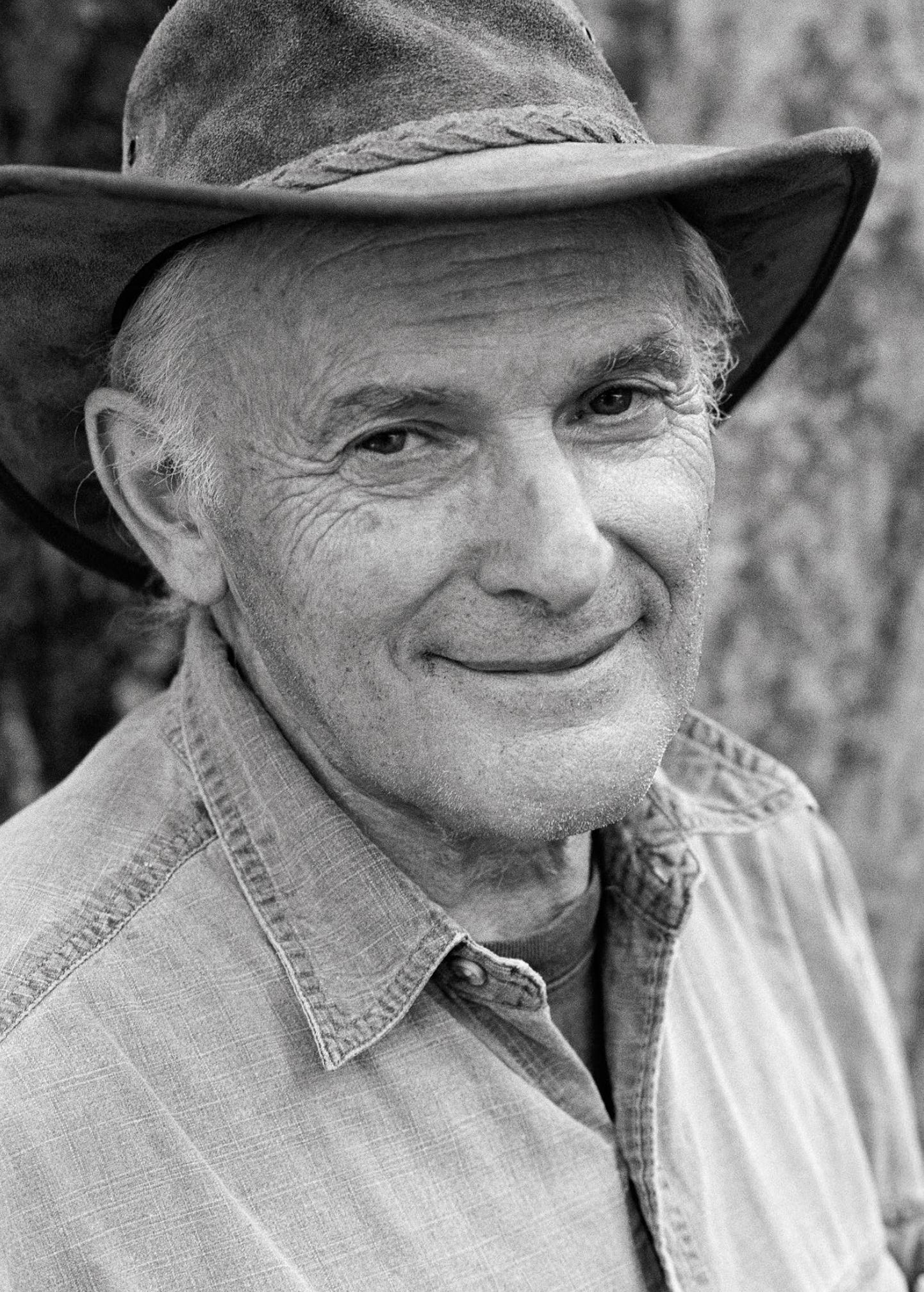
Dr. Amartya Sen is an Indian economist and philosopher, who received the Nobel Prize for his contributions to welfare economics and social choice theory. His path-breaking work has been instrumental in creating a bridge between human rights and economics and provides an important framework for addressing deprivation and oppression.

In his writings on development, inequality, and justice, Sen argues that expanding human freedom should be the primary goal of development. He also draws attention to the powerful role of individual freedom in promoting development and the importance of recognizing people as agents of change in society, rather than passive recipients of benefits. Sen challenges the notion that claims to civil and political rights are based on “Western values”, drawing attention to historical examples of advocacy for tolerance and individual freedom throughout the world.

With the Nobel Prize financial award, Sen established the Pratichi Trust (India and Bangladesh) in 1999 to work on many of the human rights-related issues that he has dedicated his career to studying, including uneven access to education, health care challenges, and gender inequality. The Trust expands opportunities for individuals through research, humanitarian action, and public engagement on social problems.

“...the notion of human rights builds on our shared humanity. These rights are not derived from the citizenship of any country, or the membership of any nation, but taken as entitlements of every human being.”





HAROLD KROTO

(Chemistry, 1996)

Sir Harold Kroto was an English chemist and passionate defender of the universal right to freedom of opinion and expression, which he viewed as vital for scientific endeavor and as the “bedrock” of society.

Recognizing the role of fundamental freedoms in the search for truth, and in combating dogma, Kroto was deeply involved in promoting their realization worldwide. Throughout his life, he advocated in support of fellow scientists and many other individuals persecuted for the peaceful expression of their views.

Kroto believed that, along with rights, scientists have responsibilities toward humankind. He was dedicated to expanding access to information and education, both as a means to realize human potential and to reduce societal injustice. During the latter part of his career, he explored ways to leverage technology to reduce inequality by providing free online access to educational materials worldwide. Kroto established the Vega Science Trust, a free platform allowing scientists to communicate directly with the public through digital media, with the aim of integrating science more fully into everyday culture. He also founded the educational initiative, Global Educational Outreach for Science, Engineering and Technology (GEOSET), to provide freely accessible online educational resources. Kroto, a humanitarian and champion of social justice, died on April 30, 2016.

“I believe in a secular, democratic society in which women and men have total equality, and individuals can pursue their lives as they wish, free of constraints.”

WANGARI MAATHAI

(Peace, 2004)

Dr. Wangari Maathai was a Kenyan biologist and founder of the Green Belt Movement (GBM), an organization dedicated to environmental conservation, poverty reduction, women's equality, and human rights.

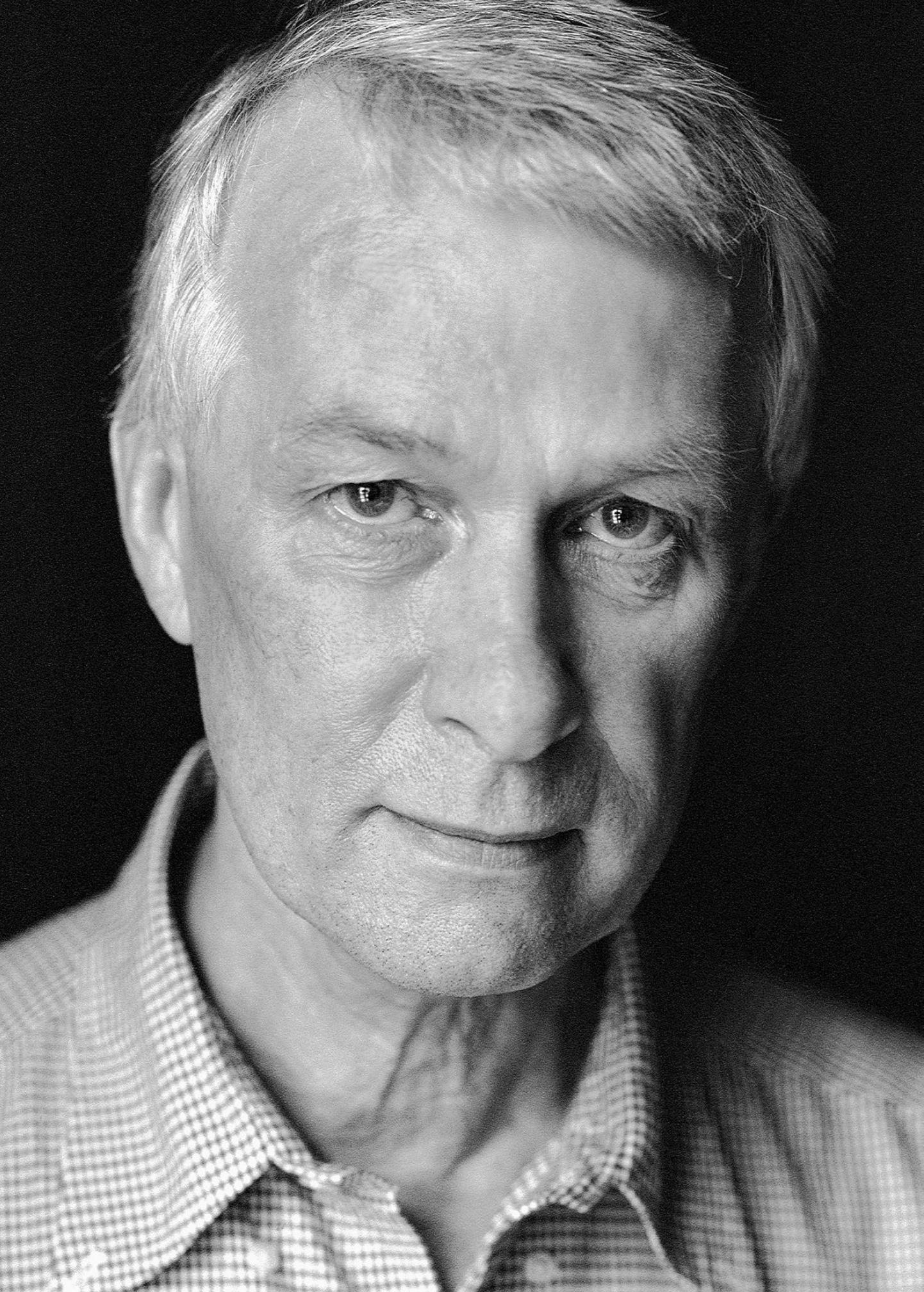
Maathai founded GBM in 1977 as a community empowerment and tree-planting program involving women's groups in Kenya to address deforestation, disenfranchisement, and economic insecurity in the country. Under her leadership, it emerged as one of the most prominent grassroots women's environmental organizations in the world. Since its founding, GBM has planted over 51 million trees and spearheaded environmental advocacy and community empowerment projects in Kenya, inspiring similar initiatives throughout Africa.

Recognizing that sustainable development requires peace and social justice, Maathai also led numerous campaigns to end ethnic violence, release political prisoners, and promote democracy in her country. She was repeatedly arrested, jailed, and subjected to severe ill-treatment as a consequence of her courageous activism.

Following her receipt of the Nobel Peace Prize, Maathai co-founded the Nobel Women's Initiative, which works to empower women working for peace, justice, and human rights around the world. Maathai, "the Mother of Trees", died on September 25, 2011.

"In the course of history, there comes a time when humanity is called to shift to a new level of consciousness, to reach a higher moral ground. A time when we have to shed our fear and give hope to each other. That time is now."





RICHARD ROBERTS

(Physiology or Medicine, 1993)

Sir Richard Roberts is an English biochemist, who has long been at the forefront of efforts by the scientific community to speak out against global human rights violations. Roberts has mobilized fellow scientists to appeal for justice in numerous cases involving individuals who have come under threat as a result of speaking freely, associating with others, and seeking to promote justice and human rights within their countries. Many of these individuals have been arbitrarily detained and subjected to torture and other forms of inhumane treatment.

Many of Roberts' efforts focus on addressing misunderstandings of science that threaten human rights and dignity. In one of the most high-profile cases, he marshaled the support of more than 100 Nobel Laureates and met repeatedly with Libyan authorities to argue for the introduction of independent science-based evidence in the 2006 trial of six foreign health professionals accused of deliberately infecting children with HIV at a Libyan hospital. The six individuals faced the death penalty, although independent experts had concluded that they were not responsible for spreading the infection. Following sustained international pressure, all six individuals were freed in 2007. A lawyer for the health professionals' international defense team, speaking to *Nature* following their release, emphasized the "fundamental role" played by the scientific community in altering the course of the case.

"We scientists can be effective if we are prepared to spend the time fighting for the issues in which we believe strongly."

YUAN T. LEE

(Chemistry, 1986)

Dr. Yuan T. Lee is a Taiwanese chemist and a prominent voice on the role of science in advancing human dignity. Through leadership positions internationally and within Taiwan, he has fostered understanding of the connections between science and human rights and worked to strengthen science for the benefit of society. A former President of the International Council for Science (ICSU, now International Science Council), from 2011 to 2014, Lee has been deeply involved in ICSU efforts to combat threats to freedom of speech, association, and other rights integral to the practice of science. With ICSU, and throughout his life, Lee has also helped to address discrimination within science and raise awareness of the responsibilities of scientists.

During his tenure as President of Taiwan's national academy, Academia Sinica, from 1994 to 2006, Lee helped strengthen the International Human Rights Network of Academies and Scholarly Societies. He has also ensured Academia Sinica's active involvement in addressing threats to scientific freedom worldwide.

Lee emphasizes the importance of respect for human rights principles as part of his ongoing global advocacy to combat human caused climate change. Pointing to the particular threat that climate change poses for many marginalized individuals and communities, he argues forcefully for a response to this global challenge that helps ensure a more equitable and democratic world.

“The fundamental rights of every individual are linked, one to another, civil, political, economic, social, and cultural.”





FRANÇOISE BARRÉ-SINOUSSI

(Physiology or Medicine, 2008)

Dr. Françoise Barré-Sinoussi is a French virologist known for her co-discovery of the human immunodeficiency virus (HIV). Former Director of the Pasteur Institute's Regulation of Retroviral Infections Unit and a past President of the International AIDS Society (IAS), she has long emphasized the need for a response to HIV that is rooted both in science and respect for human rights.

A self-described “scientist-activist”, Barré-Sinoussi advocates for universal access to prevention, treatment, and care for those living with HIV, and she has worked to ensure that patient representatives and individuals from resource-limited countries take part in global discussions about the infection and its impact. She is a world leader in developing capacity for science and has established numerous HIV research and training collaborations with scientists in Africa and Southeast Asia.

Including in her role as President of the IAS, Barré-Sinoussi has spoken out against the stigmatization of HIV-positive individuals and of populations that are at high risk of infection. She advocates for an end to discriminatory laws and policies that impair human dignity and interfere with comprehensive HIV prevention, care, and treatment.

“What we are fighting for is the non-negotiable fundamental right to health for all.”

TORSTEN WIESEL

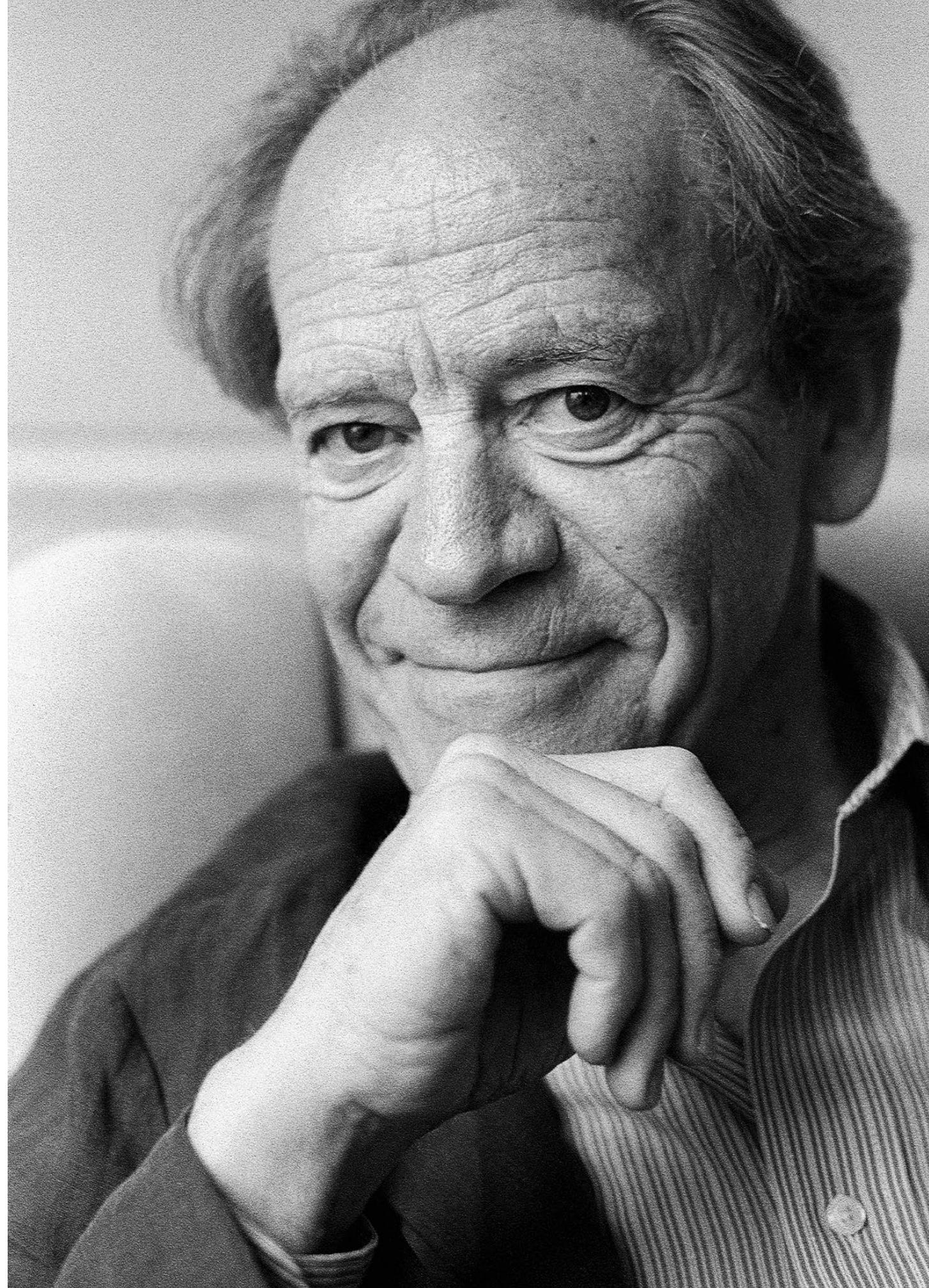
(Physiology or Medicine, 1981)

Dr. Torsten Wiesel is a Swedish-born neurobiologist, who has established and led several organizations dedicated to protecting human rights and strengthening international co-operation. In 1993, Wiesel co-founded the International Human Rights Network of Academies and Scholarly Societies (Network) to inform national academies of colleagues around the world suffering serious human rights abuses and to equip academies with the tools to respond effectively. National academy involvement with human rights has since increased substantially, and many academies now maintain formal structures that promote human rights awareness and assist colleagues under threat.

As an outgrowth of Wiesel's chairmanship of the Network, he co-founded the not-for-profit Israeli-Palestinian Science Organization (IPSO), together with Dr. Menahem Yaari, former President of the Israel Academy of Sciences and Humanities, and Dr. Sari Nusseibeh, former President of Al-Quds University. IPSO worked to promote dialogue and interaction among Israeli and Palestinian scholars and funded numerous high-quality joint scientific research proposals involving members of the two communities.

From 1994-2004 Wiesel served as Chair of the Committee on Human Rights (CHR) of the U.S. National Academies of Sciences, Engineering, and Medicine. Under his leadership, the CHR protested rights abuses in hundreds of cases worldwide. Throughout his human rights work, Wiesel has emphasized the importance of confronting violations of internationally protected rights wherever they occur—at home or abroad.

“Sometimes in life you have to do what you think is right in order to correct a situation, and you do it because it is the right thing to do and you have the means available to try and help resolve it.”

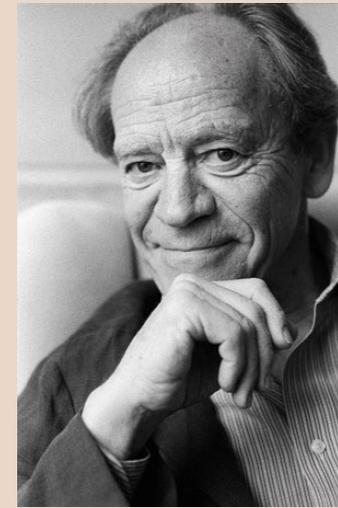


COMMITTEE ON HUMAN RIGHTS

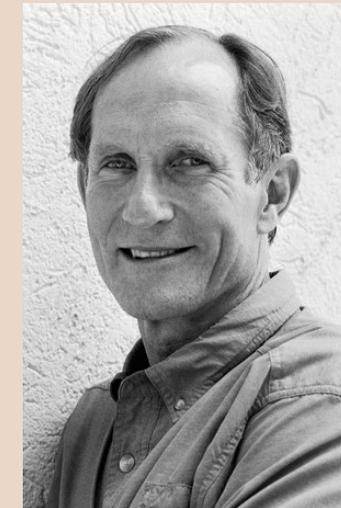
OF THE U.S. NATIONAL ACADEMIES OF
SCIENCES, ENGINEERING, AND MEDICINE

Since its creation in 1976, the Committee on Human Rights (CHR) of the U.S. National Academies of Sciences, Engineering, and Medicine (National Academies) has advocated in support of more than 1,000 scientists, engineers, and health professionals around the world. The CHR supports individuals who have been subjected to serious human rights abuses, including prolonged arbitrary detention and torture, solely for their non-violent exercise of internationally recognized human rights. It provides assistance to professional colleagues under threat, and their families, by connecting them to organizations that provide pro bono legal support and other services. The CHR has undertaken several missions to document and call attention to rights abuses involving colleagues and, where possible, to speak directly with persecuted individuals and their families. It also works to raise awareness of the important connections between human rights and science, technology, and health, including by convening experts on topics such as human rights and digital technologies and the role of the scientific community in helping to protect the rights of refugees. Dozens of U.S. National Academy members have served on the CHR during its nearly 45-year history, and thousands more have supported the Committee as “Correspondents”, who appeal for justice in cases involving persecuted colleagues.

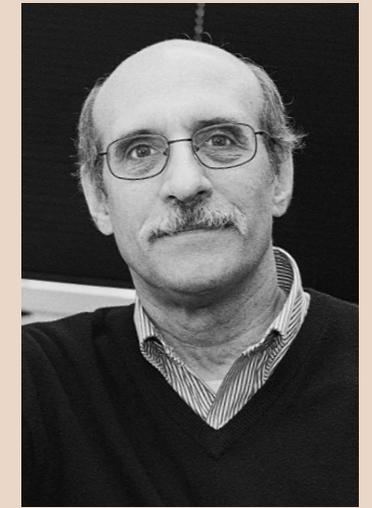
The following Nobel Laureates have chaired the CHR:



Torsten Wiesel
Chair, 1994-2004
(*Physiology or
Medicine, 1981*)



Peter Agre
Chair, 2005-2007
(*Chemistry, 2003*)



Martin Chalfie
Chair, 2015-present
(*Chemistry, 2008*)

Other Nobel Laureates who have served as CHR members:

Sidney Altman (*Chemistry, 1989*)

Christian Anfinsen (*Chemistry, 1972*)

Kenneth Arrow (*Economic Sciences, 1972*)

J. Michael Bishop (*Physiology or Medicine, 1989*)

Baruch Blumberg (*Physiology or Medicine, 1976*)

Robert Curl (*Chemistry, 1996*)

Gérard Debreu (*Economic Sciences, 1983*)

Gertrude Elion (*Physiology or Medicine, 1988*)

Paul Flory (*Chemistry, 1974*)

Leland Hartwell (*Physiology or Medicine, 2001*)

Jerome Karle (*Chemistry, 1985*)

Lawrence Klein (*Economic Sciences, 1980*)

Anthony Leggett (*Physics, 2003*)

Daniel Nathans (*Physiology or Medicine, 1978*)

Charles Townes (*Physics, 1964*)

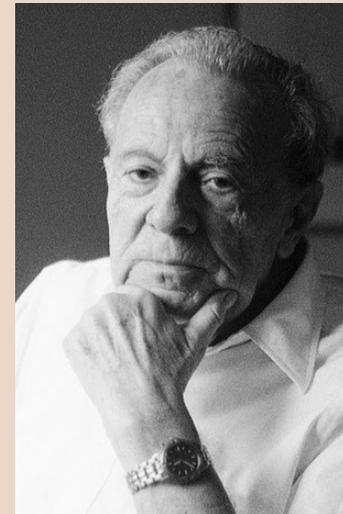
THE INTERNATIONAL HUMAN RIGHTS NETWORK

OF ACADEMIES AND SCHOLARLY SOCIETIES

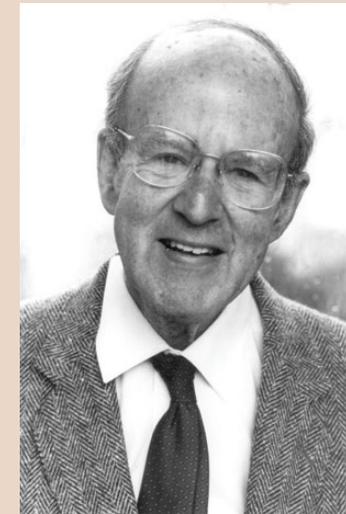
In 1993, Nobel Laureates François Jacob, Max Perutz, and Torsten Wiesel, together with international lawyer and judge Pieter van Dijk, founded the International Human Rights Network of Academies and Scholarly Societies. The Network mobilizes national academies throughout the world to assist colleagues under threat, promote the free exchange of ideas among scientists and scholars, and safeguard the independence of sister academies. Since the Network's creation, more than 90 national academies have participated in its activities, which include advocacy in support of scientists, engineers, and health professionals suffering rights abuses. The Network's Executive Committee, composed of academy members from a dozen countries, appeals for the just treatment of persecuted colleagues and provides an important and unified global voice on issues such as academic freedom and noninterference with medical services in times of conflict and unrest.

The Network holds biennial meetings on pressing science-related human rights issues. To date, 13 such meetings have been hosted by Network-affiliated academies in Europe, the Americas, Africa, and Asia.

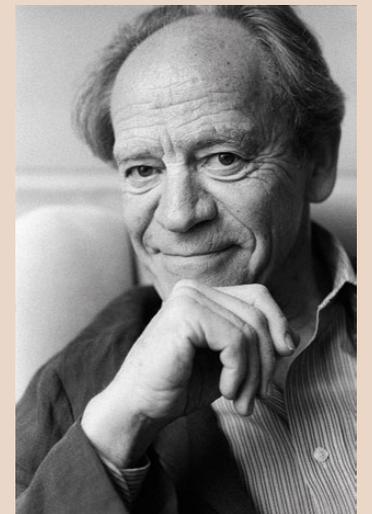
Among the Network's founding members are three Nobel Laureates:



François Jacob
(Physiology or
Medicine, 1965)

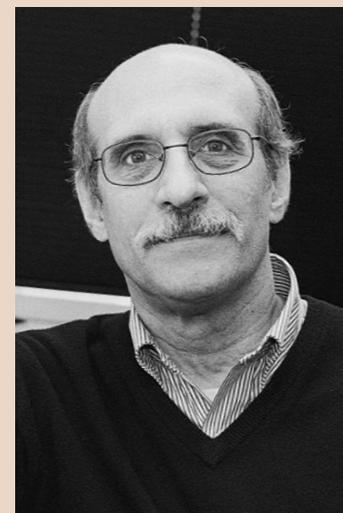


Max Perutz
(Chemistry, 1962)



Torsten Wiesel
(Physiology or
Medicine, 1981)

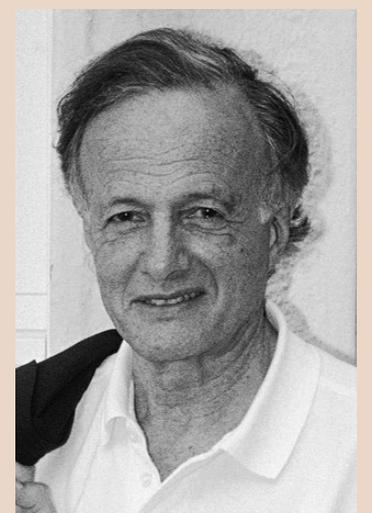
Other Nobel Laureates who have served on the Network's Executive Committee:



Martin Chalfie
(Chemistry, 2008)



Claude Cohen-Tannoudji
(Physics, 1997)



John Polanyi
(Chemistry, 1986)

Acknowledgments

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The MRC Laboratory of Molecular Biology
for providing the photograph of Max Perutz.

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Committee on Human Rights

The National Academies of Sciences, Engineering, and Medicine

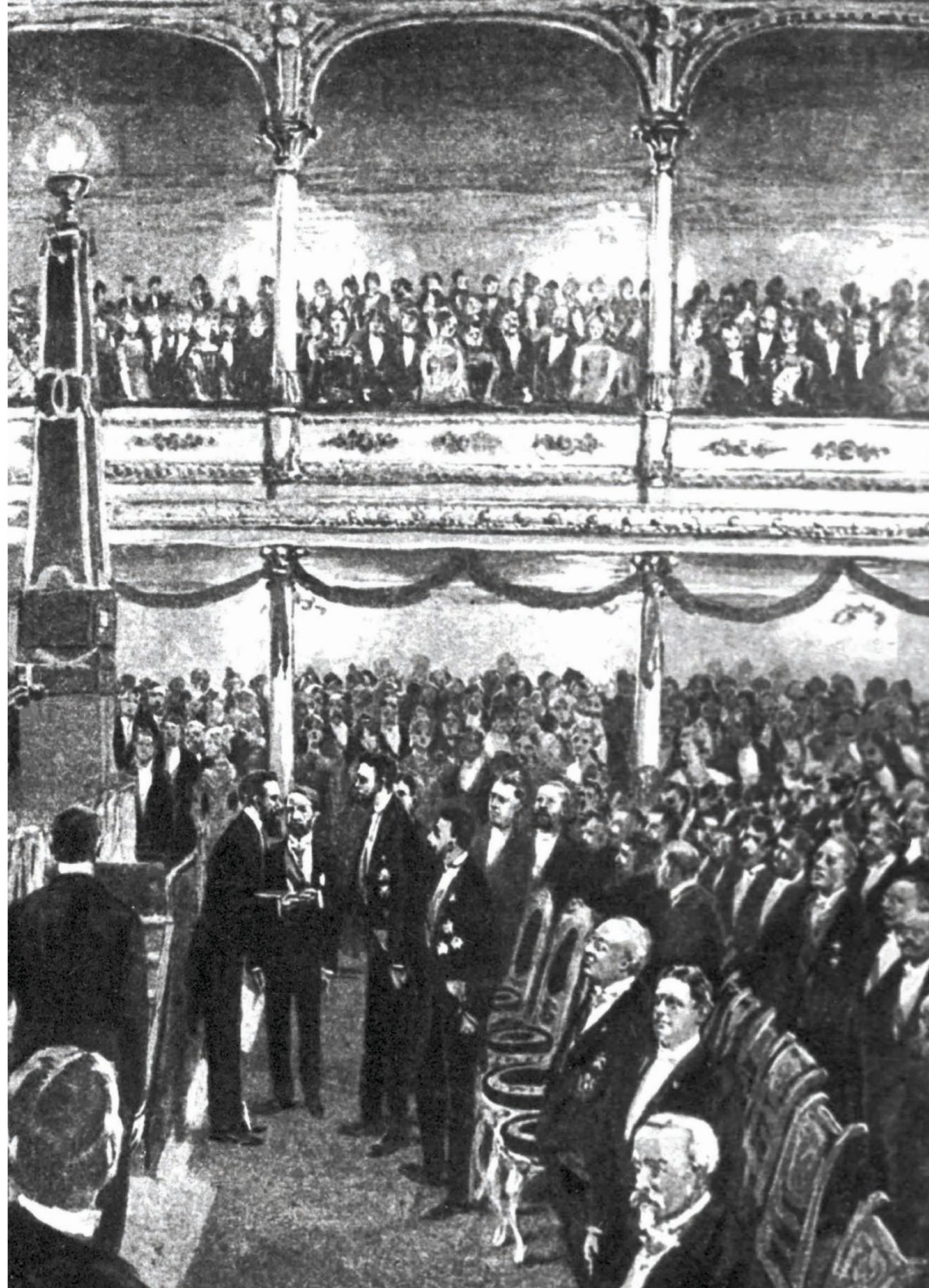
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