

PRESS RELEASE



December 7th, 2021

The Fondation L'Oréal and UNESCO are launching **THE FOR WOMEN IN SCIENCE FESTIVAL**



Paris, November 29th, 2021 – The Covid-19 crisis has caused important backlash for women's rights everywhere, including in science. The pandemic, and its accompanying lockdowns, have laid bare the existing disparities in the scientific system and widened the gender gap.

Several studies show that women scientists, particularly those with young children and in the earlier stages of their careers, have been disproportionately affected by the pandemic.¹

And female researchers have been made invisible in decision-making, leadership and the media, despite the fact that they have been on the front line of the fight against COVID-19, playing a pivotal role across the world, from advancing knowledge of the virus, to treating patients, and developing vaccines.

It's time for women scientists' voices to be heard and heeded.

To celebrate female scientific excellence and shed light on some of the world's leading and most inspiring women researchers, the Fondation L'Oréal and UNESCO are organizing an unprecedented event on December 7th: the *For Women in Science Festival*.

40 speakers from all over the world will speak about their career and work through talks, one-to-one interviews and panel discussions. A total of 40 original videos will be broadcast globally online on December 7th, 2021, on events.forwomeninscience.com.

¹ Female scientists reported a 5% larger decline in research time than their male peers. For some, with at least one young child, that decline went up to 17% <https://en.unesco.org/news/covid-19-pandemic-disproportionately-affecting-women-science-and-engineering>. In fact, these women may never make up for the time they lost: <https://theconversation.com/female-scientists-set-back-by-the-pandemic-may-never-make-up-lost-time-163630>

DECEMBER 7th, 2021: A FULL DAY DEDICATED TO WOMEN IN SCIENCE

A debate focused on two key issues in the context of the COVID pandemic

The *For Women in Science* Festival will tackle two central issues that have been put at the top of the global agenda by the COVID crisis:

- **Advancing global health:** what role will women scientists play in defining the new agenda for medical research and designing new health systems able to withstand major shocks and deliver care to all?
- **Decoding the digital revolution**, which has been accelerated by the health crisis and has had a strong impact on all areas of everyday life. In this context, how can we ensure that women scientists, engineers, and technicians fully contribute to our new sci-tech world (from artificial intelligence, robotics, to materials science and energy storage) – and how can we ensure that these breakthroughs work for everyone, without biases or discriminations built in?

The Festival will also include debates on what still holds women scientists back in their careers, and how to overcome bias and systemic inequalities preventing an inclusive science for inclusive progress.

A program organized by region

The *For Women in Science* Festival agenda is **organized by region**, to give a voice to the global community of women STEM researchers and to allow audiences from different time zones to watch tailor-made content:

- **8 am:** Asia and the Pacific (CET)
- **10:30 am:** Africa and the Arab States (CET)
- **1:45 pm:** Europe (CET)
- **5:30 pm:** North America (CET)
- **8:15 pm:** Latin America and the Caribbean (CET)

A digital platform to watch the Festival at any time: events.forwomeninscience.com

On December 7th, the five regional sessions will be broadcast on events.forwomeninscience.com, in English, with subtitles in local languages (Chinese and Japanese for Asia and the Pacific, Arabic for Africa and the Arab States, French for Europe, Spanish and Portuguese for Latin America). All **40 pieces of content will be available on demand as a free-streamed global event** from December 7th.

The audience will also be able to join the conversation by sharing the videos on their own social media pages and voting for their favorite contents on the website.

Ahead of the event, the digital platform will allow the audience to:

- learn more about the 40 inspiring speakers and the topics of their talks,
- discover the specific program for each of the 5 regional sessions,
- register to receive an email reminder the day before the event and download a calendar invite for December 7th, including a direct link to easily access the platform.

SCIENCE NEEDS WOMEN, BUT WOMEN SCIENTISTS REMAIN MARGINALIZED

Women remain underrepresented at the highest scientific levels

Despite some progress, **only 33% of researchers worldwide are women, according to the latest UNESCO Science Report.**² This evolution is still too slow, important barriers persist, and the glass ceiling remains a reality in research. Women's access to the highest levels of responsibility and recognition is still rare:

- 2.4% of patents in Europe were filed by women-only between 2013 and 2016,³

² UNESCO Science Report: "The Race Against Time for Smarter Development", UNESCO Publishing (2021).

³ European Commission 2018 She figures report.

- In 2019 women still made up just 19% of inventors,⁴
- In artificial intelligence, one of the most cutting-edge areas of research, **women represent only 22% of professionals**,⁵
- None of the 2021 scientific Nobel Prize Winners are female. Since the creation of the Prize in 1901, **women have represented less than 4% of scientific Nobels**.

This situation is the result of systemic barriers, of unconscious biases, of self-censorship but also of persistent sexism and discrimination at all stages of women scientists' careers.

This is not just a problem for women: it is a problem for research in general

To be relevant, research must be inclusive and needs to mobilize all its talents. To face current and future challenges, gender equality must be rooted in the solutions that are yet to be designed.

Experience shows that a lack of diversity in research teams has led to setbacks in innovation.

For instance, facial recognition technology was flagged as discriminatory when a study measured the accuracy of classification systems weighted by gender and skin type, which are used in high-stakes industries such as health care and law enforcement.⁶ Results showed that the systems performed much better for men than women, a discrepancy exacerbated by differences in skin color, making darker-skinned women often misclassified. While error rates were as low as 1% for lighter-skinned men, they reached 7% for lighter-skinned women and 35% for darker-skinned women. Poor results such as these have slowed significantly the adoption of this technology.

More inclusive research would bring huge opportunities

It is estimated that closing the gender gap in STEM education would contribute to an increase in GDP per capita in the EU of between 2.2 and 3.0% by 2050.⁷

The AI sector is expanding rapidly: from 2015 to 2017, the number of workers worldwide with AI skills increased by 190%.⁸

Last but not least, gender-diverse research teams are more likely to put radical new innovations on the market over a two-year period and a lot of women-led companies have historically performed three times better than those with male CEOs.⁹

The L'Oréal-UNESCO For Women in Science program: a longstanding commitment

Based on the conviction that the world needs science and science needs women, the Fondation L'Oréal and UNESCO have been committed for more than 20 years to the promotion of women in science to make them more visible, to make their talent known and to inspire careers for future generations.

Each year, the Fondation L'Oréal and UNESCO celebrate the scientific excellence of five eminent women researchers, each from a major region of the world, and support more than 250 young women scientists all over the world.

Since the creation of the *For Women in Science* program in 1998, **122 Laureates** and **more than 3,800 talented young scientists**, PhD students and post-doctoral fellows, have been supported and honored in more than **110 countries and regions**.

⁴ World Intellectual Property Organization, May 2020, cited in Figure 3.6 of the UNESCO Science Report

⁵ European Commission 2018 She figures report.

⁶ Buolamwini, J., & Gebru, T. (2018). Gender shades: Intersectional accuracy disparities in commercial gender classification. *Proceedings of Machine Learning Research*, 81, 77-91.

⁷ UNESCO Science Report: "the race against time for smarter development", 2021

⁸ World Economic Forum, 2018

⁹ Mathias Wullum Nielsen, Gender diversity leads to better science, PNAS, 2017;

<https://fortune.com/2015/03/03/women-led-companies-perform-three-times-better-than-the-sp-500/>

SOME OF THE SPEAKERS PARTICIPATING IN THE EVENT AND AVAILABLE FOR INTERVIEWS



At the heart of this event, discover speeches from eminent scientists to highlight women scientists, their careers, and their groundbreaking research.

ASIA AND THE PACIFIC



TALK: "DREAMING BIG FOR SCIENCE COMMUNICATION IN ASIA"

Dr. Juliana Chan – CEO, Wildtype Media Group. 2011 L'Oréal-UNESCO For Women in Science Young Talent

Dr. Juliana Chan is the publisher of Asian Scientist Magazine and CEO of Wildtype Media Group, Asia's leading STEM and healthcare media company, spanning digital, social media, video, print, custom publishing and events. She received a BA and MA degree in natural sciences from the University of Cambridge, UK, and a PhD degree in biology from MIT, USA. Awards received include the 2011 L'Oréal-UNESCO For Women in Science Young Talent Award, the 2013 Singapore Youth Award and the 2014 MIT Technology Review's 10 Innovators Under 35 from Asia Pacific.

Dr. Chan's research work into drug delivery and nanomedicine has been featured by The BBC and MIT Technology Review, and she is an inventor on four patents, one of which has been licensed for commercialization by Pfizer. She is a Young Global Leader of the World Economic Forum, and using that platform, she advocates for public scientific literacy, inclusion and diversity in STEM, and the science communication industry in Asia.

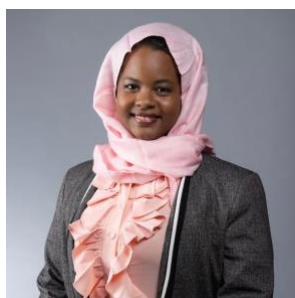


ROUNDTABLE: "UNBIASED HEALTH SOLUTIONS FOR THE FUTURE"

Dr. Mei Yang – Vice President, Innovative Healthcare Solutions Global, Happy Life Technologies

Dr. Mei Yang received her PhD from Boston University, School of Public Health. She has over 10 years of experience in real world evidence research, health economics and patient reported outcomes, working in companies like Merck and AbbVie. She has published about 40 articles in high tier medical journals, covering topics such as clinical development, epidemiology, real-world study, health, economic modeling, and machine learning. She is a lead with deep insights into evolving health care delivery and reimbursement systems and the evidentiary needs of diverse customer groups. Dr. Yang is devoted to this globally evolving environment and has broad interest in Big Data, AI technology, and healthcare policy.

AFRICA AND MIDDLE EAST



TALK: "THE CLIMB"

Nisreen Elsaïm – Chair, UN Secretary General Youth Advisory Group on Climate Change

Nisreen Elsaïm is an environmental and climate activist. She chairs the UN Secretary General Youth Advisory Group on Climate Change, composed of with 6 other young climate activists. She leads multiple youth initiatives. She is general coordinator for the Youth and Environment – Sudan (YES) platform, Chair of Sudan Youth Organization on Climate Change (SYOCC). She has mentored and led regional and international youth platforms including YOUNGO, PACJA, Abu Dhabi Youth Voices. Nisreen Elsaïm is a young negotiator for the African Group of Negotiators in technology transfer, and has written several policy papers in climate change, renewable energy, gender, and youth. She holds a bachelor's degree in physics from the University of Khartoum and is pursuing her master's degree in renewable energy.



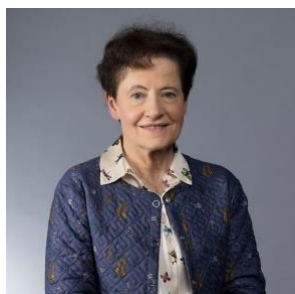
TALK: "HOW WE CAN EMPOWER AFRICAN CLIMATE ACTION"

Dr. Ndoni Mccunu – Bilateral Engagement Lead, Climate Change, Adaptation Research Alliance (ARA) at SouthSouthNorth, Founder and CEO, Black Women in Science

Dr. Ndoni Mccunu has been Bilateral Engagement Lead – Climate Change, with the Adaptation Research Alliance since January 2021. She is also the founder & Chief Executive Officer of Black Women in Science (BWIS) a registered non-profit organization which aims to deliver capacity development interventions that target young black women scientists and researchers.

She was selected as one of the top 200 Mail and Guardian 200 Young South Africans, under the education category in 2016. Among many other accolades, Dr. Mccunu was selected for the Mandela Washington Fellow 2017 for her contribution in Civic Leadership development in Africa for her work in BWIS. She is also currently pursuing a PhD (Doctor of Philosophy) at the Global Change Institute at Witwatersrand University.

EUROPE



ROUNDTABLE: "ADVANCING WOMEN IN STEM ALL AROUND THE WORLD"

Prof. Françoise Combes – Professor, Galaxies and Cosmology Chair, Collège de France. Laureate of the 2021 L'Oréal-UNESCO For Women in Science International Award

Prof. Françoise Combes is a French astrophysicist at the Paris Observatory and a professor at the Collège de France, where she has been the chair of Galaxies and cosmology since 2014. Her research works are about galaxy formation and evolution, in a cosmological context. This work includes galaxy dynamics, their spiral and barred structures, and interactions between galaxies, studied both through multi-wavelength observations and by numerical simulations.

Additionally, she has published extensively on the interstellar medium of galaxies. In particular, the molecular gas which gives birth to new stars in nearby galaxies, such as Andromeda, and which can be found in high redshift systems. She has published numerous reviews that range in her areas of interest. Prof. Combes has contributed to various models of dark matter, and is also interested in alternative solutions, such as modified gravity. She collaborated with Daniel Pfenninger in developing a model to account for a large fraction of the dark baryons, which have not yet been identified under the form of cold molecular gas.



INTERVIEW: "GENDER AND THE BRAIN, WHY IT'S TIME TO PUT AN END TO NEUROTRASH"

Prof. Gina Rippon – Professor Emeritus of Cognitive Neuroimaging at the Aston Brain Centre, Aston University

Prof. Gina Rippon is Emeritus Professor of Cognitive Neuroimaging at the Aston Brain Centre, Aston University, Birmingham. She is a past-President of the British Association of Cognitive Neuroscience and a Fellow of the British Science Association. Her research involves state-of-the-art brain imaging techniques to investigate developmental disorders such as dyslexia and autism.

She also investigates the use of neuroscience techniques to explore social processes including gender stereotyping and stereotype threat. She is an outspoken critic of "neurotrash", the populist (mis)use of neuroscience research to (mis)represent our understanding of the brain and, most particularly, to prop up outdated stereotypes. Her book on this topic, *The Gendered Brain*, published by Bodley Head and Penguin Random House, came out in the United Kingdom in February 2019 and in the USA in September 2019.



INTERVIEW: "CONVERSATION WITH PROF. KATALIN KARIKÓ"

Dr. Katalin Karikó – Biochemist and Senior Vice President at BioNTech SE. Laureate of the 2022 L'Oréal-UNESCO For Women in Science International Award

Dr. Katalin Karikó leads the mRNA-based protein replacement program for BioNTech SE. She has more than 30 years of experience working with RNA.

Prior to joining BioNTech SE, Dr. Karikó was on the faculty at the University of Pennsylvania Medical School for 25 years. There she investigated RNA-mediated immune activation and in groundbreaking research she discovered that nucleoside modifications suppress immunogenicity of RNA.

In 2006, she co-founded and served as CEO of RNARx. With the support of the National Institutes of Health NIH, her team demonstrated in animals, including macaques, the feasibility of using nucleoside-modified mRNA for protein replacement, thus opening a new field of therapy. She published more than 90 peer-reviewed papers and reviews many of them focusing on mRNA technologies. She is co-inventor on mRNA-related patents, including fourteen awarded for RNA non-immunogenic mRNAs.

NORTH AMERICA



TALK: "SPACE SCIENCES TRULY CONNECT US ALL"

Dr. Bonnie Prado Pino – Astrodynamics Engineer, Leolabs Inc.

Dr. Bonnie Prado Pino is an aerospace engineer with academic research experience in astrodynamics and space applications. She has industry experience in satellite operations as flight dynamics engineer and trajectory design intern. She is driven to improve her knowledge in a variety of domains including trajectory design and optimization, machine learning, and programming. Dr. Prado Pino has extensive experience in STEM summer programs, as well as in academic events planning and management.



ROUNDTABLE: "ADVANCING WOMEN IN STEM ALL AROUND THE WORLD"

Africa Flores – SERVIR-Land Cover & Land Use Change Lead, NASA Applied Science

Originally from Guatemala, Africa Flores is a research scientist at the Earth System Science Center at the University of Alabama in Huntsville (UAH). As a National Geographic Explorer, she is working with a team of scientists from UAH to forecast harmful algae blooms in Lake Atitlán, Guatemala using artificial intelligence. She also works with SERVIR, a joint initiative of NASA and the United States Agency for International Development (USAID), focused on strengthening the capacity of countries in Amazonia, West Africa, Eastern and Southern Africa, Hindu-Kush Himalaya and Lower Mekong regions to use Earth observation data and geospatial technologies for managing natural resources and environmental risks. Her research focuses on forest monitoring, water quality and ecological forecasting.

LATIN AMERICA AND THE CARRIBEAN



TALK: "HOW MODERN MEDICINE CAN EMBRACE TRADITIONAL KNOWLEDGE"

Prof. Susana Fiorentino – Research Director, Faculty of Sciences, Pontificia Universidad Javeriana. Entrepreneur, Main Shareholder, and Scientific Director of the DreemBio Spinoff

Prof. Susana Fiorentino Gómez is a Colombian biologist, recognized for her research aimed at the treatment of breast cancer through phytomedicines. Her lines of research have addressed topics such as chemoprevention, antitumor biomedicines and the mechanisms of regulation of the immune response. She has dedicated a large part of her career to researching possible treatments against cancer based on Colombian medicinal plants, especially Divivi and Anamú. She currently works as coordinator of the Immunobiology and Cell Biology Group at the Pontificia Universidad Javeriana de Bogotá. For her investigative efforts, Prof. Fiorentino has garnered a host of awards and

accolades. She has now taken her knowledge to entrepreneurship, developing plant-based drugs for the market and main shareholder and Scientific Director of the DreemBio spinoff.



ROUNDTABLE: "BUILDING TRUST IN SCIENCE AND TECHNOLOGY"

Dr. Denise Dresser – Writer, Political Scientist and Professor, Instituto Tecnológico Autónomo de México (ITAM).

Dr. Denise Dresser is a Mexican political analyst, columnist and academic. She is a professor of political science at the Instituto Tecnológico Autónomo de México (ITAM), where she has taught comparative politics, political economy, and Mexican politics since 1991. She writes a political column for the Mexican newspaper Reforma and the news weekly Proceso, and was the host of the political talk shows Entreversiones and El País de Uno. Dr. Dresser has been a member of the Research Council of the Forum for Democratic Studies, National Endowment for Democracy, the World Academy of Arts and Science, and the advisory board of Trans-National Research Corporation.

She also served on the Citizens' Committee in charge of investigating Mexico's dirty war. She was on the board of the Human Rights Commission for Mexico City for 8 years, and she has also worked as a consultant to the UN Development Programme, the Open Society Institute, Barings Research and the Bank of Montreal.

About the Fondation L'Oréal

The Fondation L'Oréal supports and empowers women to shape their future and make a difference in society, focusing on three major areas: scientific research and inclusive beauty and climate action.

Since 1998, the L'Oréal-UNESCO For Women in Science program has worked to empower more women scientists to overcome barriers to progression and participate in solving the great challenges of our time, for the benefit of all. For 23 years, it has supported more than 3,900 women researchers from over 110 countries and regions, rewarding scientific excellence and inspiring younger generations of women to pursue science as a career.

Convinced that beauty contributes to the process of rebuilding lives, the Fondation L'Oréal helps vulnerable women to improve their self-esteem through free beauty and wellness treatments. It also enables underprivileged women to gain access to employment with dedicated vocational beauty training. On average, around 16,000 people have access to these free treatments every year and more than 18,000 people have taken part in professional beauty training, since the beginning of the program.

Finally, women are affected by persistent gender-based discrimination and inequalities, exacerbated by climate change. While they are on the frontline of the crisis, they remain under-represented in climate decision-making. The Women and Climate program of the Fondation L'Oréal supports, in particular, women who are developing climate action projects addressing the urgent climate crisis and raises awareness of the importance of gender-sensitive climate solutions.

About UNESCO

Since its creation in 1945, UNESCO, the United Nations Educational, Scientific and Cultural Organization, has worked to create the conditions for dialogue among civilizations, cultures and peoples, based on respect for common values. UNESCO's mission is to contribute to the building of peace, the eradication of poverty, sustainable development and intercultural dialogue through its unique expertise in education, science, culture, communication and information. The Organization has two global priorities: Africa and gender equality.

UNESCO is the only UN specialized agency with a specific mandate in the sciences, symbolized by the "S" in its acronym. Through its science-related programs, UNESCO contributes to the implementation of the United Nations Sustainable Development Goals, helps developing countries build their scientific and technological capacities, and supports Member States in their efforts to develop science policies and programs. It also supports Member States in their efforts to develop effective public policies that integrate local and indigenous knowledge systems.

UNESCO promotes scientific research and expertise in developing countries. The Organization leads several intergovernmental programs on sustainable management of freshwater, ocean and terrestrial resources, biodiversity conservation, and the use of science to address climate change and disaster risk reduction.

With its national and regional offices on all continents, UNESCO supports international scientific cooperation and works with many partners at the global, regional, and national levels. Through its partners, the Organization can draw on resources, know-how and expertise to promote its ideals and values and to strengthen the impact and visibility of its action in all its fields of competence.

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