

This year's International Women's Day campaign focuses on a Balance for Better.

The movement's website, <u>www.InternationalWomensDay.com</u>, states, "From grassroots activism to worldwide action, we are entering an exciting period of history where the world expects balance. We notice its absence and celebrate its presence. Balance drives a better working world. Let's all help create a **#BalanceforBetter**." International Women's Day is to be highlighted not just on one day, but all year.

The campaign theme is designed to be put into action all year long with the idea to achieve a unified direction to help guide continuous collective action, with **#BalanceforBetter** activities reinforced and amplified all of 2019 and not just International Women's Day.

Since Phenomenex is so ingrained in the <u>science community</u>, we wanted to highlight a few of the numerous women who are currently breaking new grounds, discovering new planets, and blazing the way for future women who wish to excel in the sciences to best celebrate this year's International Women's Day.

Maryam Mirzakhani - Award Winning Mathematician

Mirzakhani is one of the only four people to ever receive a <u>Fields Medal</u>, and the first woman. The award is regarded as the most prestigious award in mathematics, as there is no Nobel Prize for the category. Her studies focus on shapes and surfaces in several fields of abstract mathematics, including hyperbolic geometry. She tackle important questions in her field to help us understand the complex mathematical relationships that govern twisting and stretching surfaces.



Renée Hlozek - Cosmologist

As a cosmologist, Hlozek is studying the cosmic microwave background, which is the radiation left over from the Big Bang, to better understand the initial conditions of the universe and how it grew into structures, such as galaxies, we see today.

Cori Bargmann - Neurologist

Bargmann is dedicating her professional career to uncovering the causes of neurological conditions such as Alzheimer's and autism. She is doing this through her studies on roundworms, because many of the gene mechanisms in roundworms mimic those of mammals. Bargmann is able to manipulate certain genes and observe how that affects changes in behavior, getting her one step closer to discovering how neurons and genes affect behavior.

Sheila Ochugboji Kaka - Genetic Virologist

As a genetic virologist, Kaka is a science communicator and international development expert, promoting the intersection of art and science. She is currently researching baculoviruses at Oxford University and investigating genetic engineering as a way to produce commercially viable biopesticides.

Emily Levesque - Hubble Fellow, Astronomer



Levesque is working as a <u>Hubble Fellow</u> to improve our understanding of massive stars by building models of galaxies and analyzing wavelength data. She has already had breakthroughs in understanding immense stellar bodies, which enable researchers to take advantage in space technology. One of her and her team's recent contributions to the field was the updated models of star-forming galaxies, specifically focusing on how they are affected by rotation.

Holley Moyes - Anthropological Archaeologist

Through studying the artifacts left by ancient Mayans, Moyes hopes to both preserve Mayan culture and discover stories of the ancient people. She has spent the last two decades exploring more than 100 caves in Belize, finding everything from tools to sacrificial remains to everyday pottery, with the goal of uncovering how the Mayans' ideologies were created and maintained.

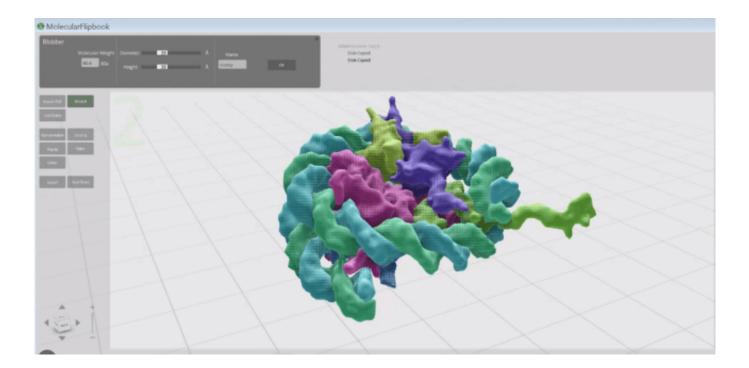
Moyes is focusing majority of her research on why Mayans performed human sacrifices deep inside of caves. Her developing theory is that the Mayans cared deeply about rain and left increasingly large scarifies to their god, Chac, to hopefully lift a devastating drought.

Janet Iwasa - Molecular Animator

As a molecular animator, Iwasa is working to illustrate how molecules look, move, and interact – allowing scientists to visualize their hypotheses and conveying complex scientific information to general audiences. She uses high-end animation software to create her work, but she has also changed the science community by creating the <u>Molecular Flipbook</u>, a free, open source 3D animation software tool that allows researchers intuitively and quickly model



molecular hypotheses.



Katherine Freese - Astonomer

As one of the first women undergraduate students to graduate with a physics major from Princeton University, Freese has developed a revolutionary theory about a new kind of star. She has since taken a position as the director for one of the most prestigious theoretical institutes in the world in Stockholm and is credited for her groundbreaking work to better understand dark matter. Freese's revolutionary theory of "dark stars" is that it could be a bizarre type of star powered not by nuclear fusion, but dark matter. If she is successful in viewing one of these dark stars, it could be the first time anyone has ever observed dark matter directly.



Katrin Amunts - Neuroscientist

The human brain is still no where near being completely understood, like what areas of the brain are responsible for consciousness and personality. To get one step closer to solving these mysteries, Amunts is leading a team of researcher in building a 3D map of the human brain. Just recently, the team announced that they had created the most detailed map of the brain ever, which could lead to insights into the construction and organization of the brain and how it drives our behavior.

Patricia Medici - Conservation Biologist

Medici has devoted her life to preserving the life and habitat of the South American lowland tapir, the largest terrestrial mammal of South America. Tapirs are an extremely important piece to their ecosystem as an umbrella species – protecting tapirs also protects iconic species like peccaries, jaguars, and pumas. Tapirs also help distribute the seeds of the foods they eat, shaping and maintaining the structure of forests. However, tapirs are threatened by deforestation, hunting, and roads.





Sara Seager - Astronomer

Seager has discovered more than 700 new planets, but she won't be satisfied till she finds another Earth. She has helped discovered so many exoplanets using the Kepler Space Telescope. Her research is focused on studying and understanding the composition and temperature of planets, which will allow scientists a step closer to being able to identify atmospheres similar to Earth's.

Kristin Marhaver - Coral Biologist

Marhaver is a marine biologist who is researching how corals reproduce and what their juveniles need in order to survive on today's reefs. This is an urgent task as corals are struggling against pollution, overfishing, and a changing climate. Marhaver and her colleagues are gathering coral spawn and raising larvae in the lab, which is allowing them to analyze corals' habitat preferences in substances, colors, and bacterial scents so they can eventually construct environments that encourage coral settlement int he wild. Marhaver's research team was recently able to harvest the spawn of and successfully breed the Caribbean pillar coral, which until now scientists worried had stopped reproducing.

Michele Koppes - Glaciologist

Koppes travels to the coldest places on Earth to study glaciers and see how they move, carve out valleys and mountains, and respond to the warming atmosphere, oceans, and rocks. She is researching to see how these changes affect the landscape, water resources, and biodiversity. Her one-of-a-kind research in the Himalayas fills the gaps of unrecorded glacial change, and may help vulnerable populations adapt to shifting weather patterns.



We hope that it was an informative and inspiring International Women's Day for everyone! Have an amazing story to share about the women in your life? Please let us know!

Want to keep the International Women's Day celebration going? Then you should definitely check out these articles:

"International Day of Women and Girls in Science 2019"

International Day of Women and Girls in Science

"International Women's Day - Celebrating Women in Science"

International Women's Day - Celebrating Women in Science

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International Women's Day – A Year of Balance for Better

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