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W O M E N I N S C I E N C E

Walking in the footsteps of scientific pioneers.

The Women in Science series spotlights pioneering women who have made significant contributions in the sciences—often shattering social barriers and prejudices in the process. Our hope is that profiling the achievements of these determined researchers will help inspire the next generation of women in science.

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Barbara McClintock

American cytogeneticist and discoverer of genetic transposition

SHE DISCOVERED THE SECRETS OF LIFE IN A KERNEL OF CORN.

In the late 1920s, a young Ph.D. named Barbara McClintock wondered how chromosomes in corn change during reproduction. That simple question launched her groundbreaking work in cytogenetics, leading to discoveries that helped redefine our understanding of how genes work. Dr. McClintock produced breakthrough science that revealed the secrets of many fundamental genetic mechanisms, including how chromosomes express or repress genetic information. In 1983, Dr. McClintock was awarded the Nobel Prize for her discovery of genetic transposition.

2008

DECEMBER 2007

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MARCH

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January

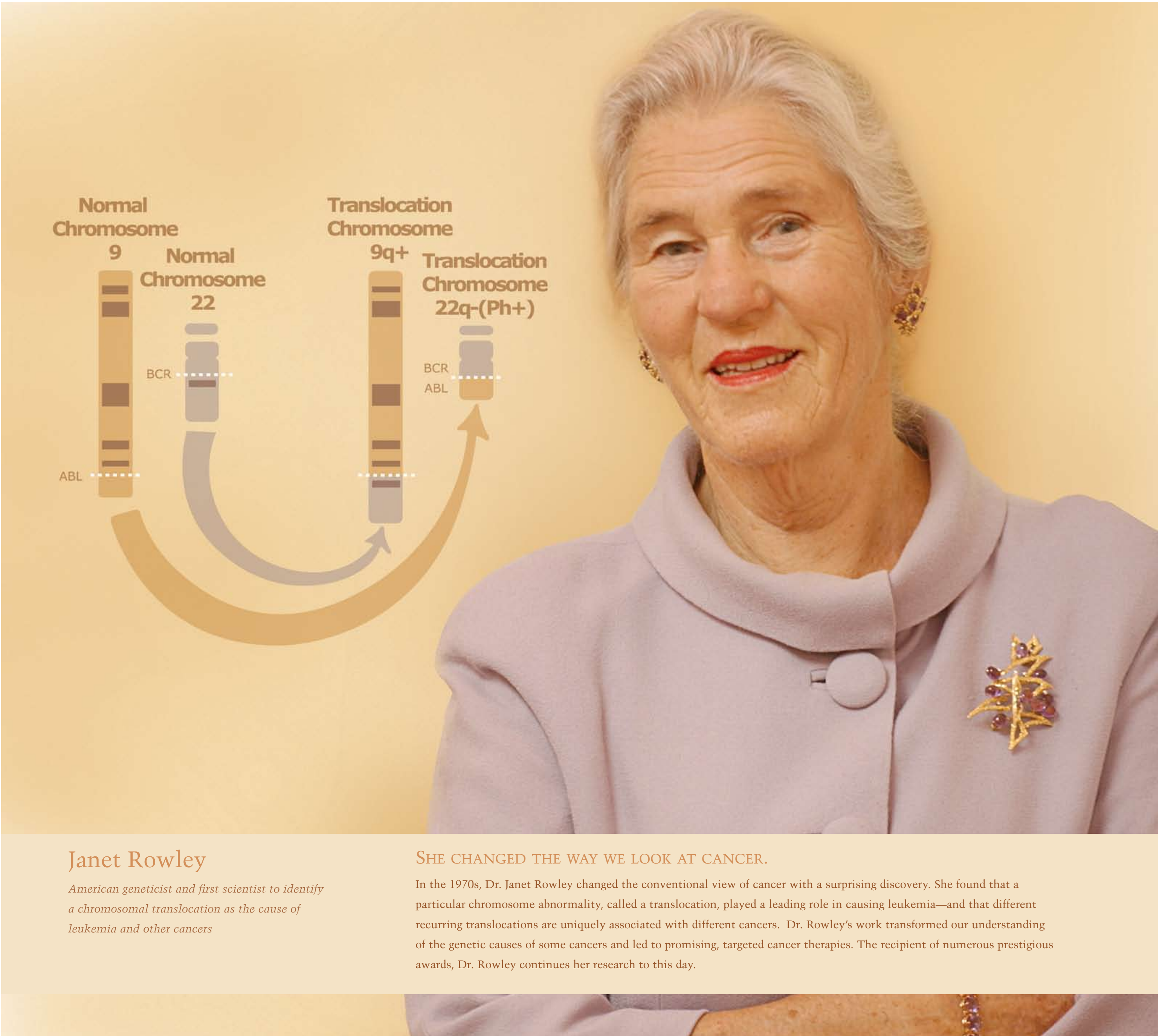
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| Jan 1 | New Year's Day |
| Jan 21 | Martin Luther King Day |
| Feb 14 | Valentine's Day |
| Feb 18 | Washington's Birthday |





Janet Rowley

American geneticist and first scientist to identify a chromosomal translocation as the cause of leukemia and other cancers

SHE CHANGED THE WAY WE LOOK AT CANCER.

In the 1970s, Dr. Janet Rowley changed the conventional view of cancer with a surprising discovery. She found that a particular chromosome abnormality, called a translocation, played a leading role in causing leukemia—and that different recurring translocations are uniquely associated with different cancers. Dr. Rowley's work transformed our understanding of the genetic causes of some cancers and led to promising, targeted cancer therapies. The recipient of numerous prestigious awards, Dr. Rowley continues her research to this day.

2008

| FEBRUARY | | | | | | | MAY | | | | | | |
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March

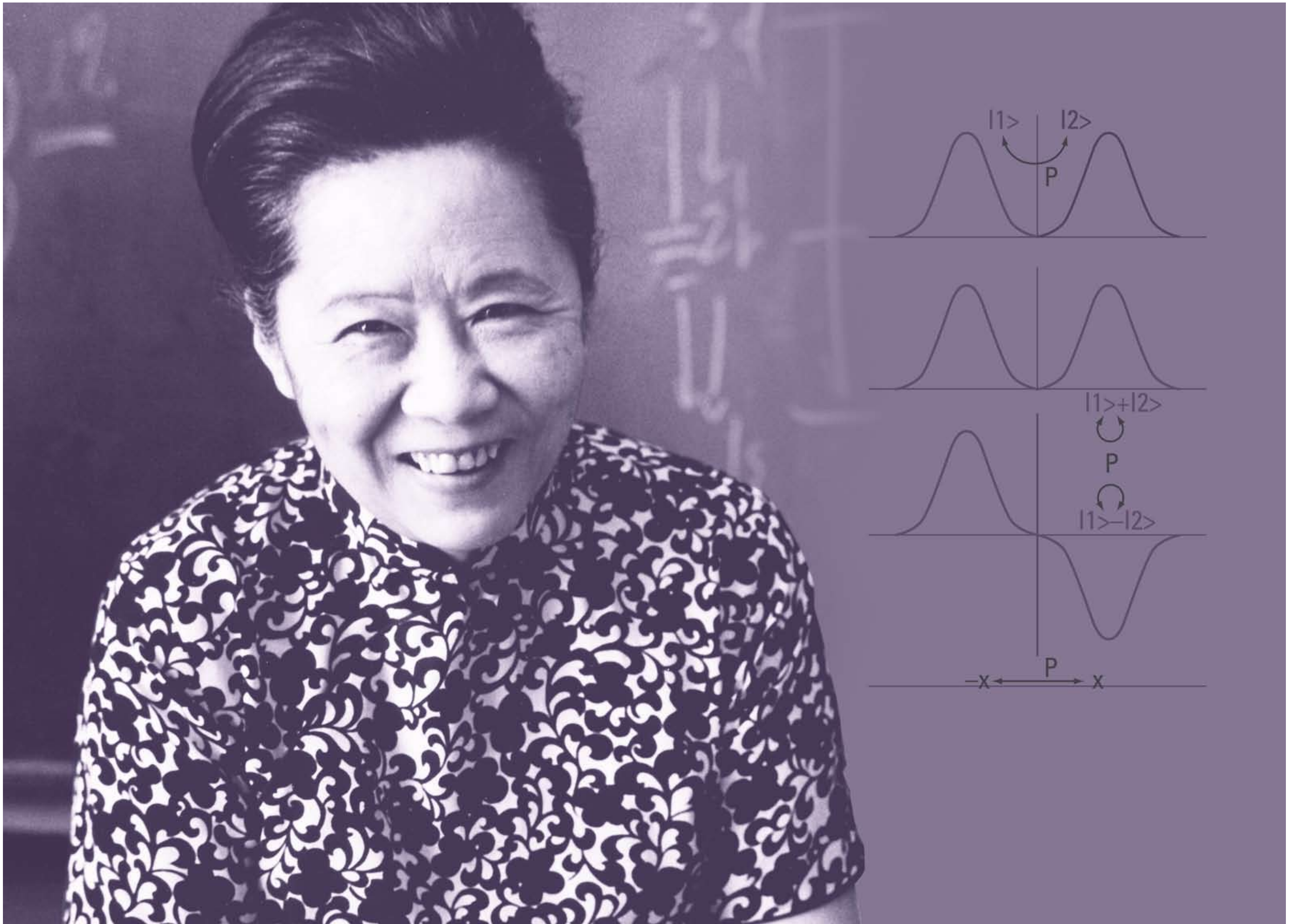
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| Mar 17 | St. Patrick's Day |
| Mar 20 | Vernal Equinox |
| Mar 23 | Easter Sunday |
| Apr 5 | Janet Rowley is born in New York, NY |





Chien-Shiung Wu

*Chinese-born American physicist
disproved the law of conservation of parity*

SHE PROVED HERSELF BY DISPROVING A LAW OF PHYSICS.

As an experimental physicist at the dawn of the nuclear age, Dr. Chien-Shiung Wu helped rewrite nuclear physics with her groundbreaking research into beta decay. In 1956, Dr. Wu proved that identical beta particles do not always act alike, disproving an accepted "law" of physics. Her research helped earn her colleagues a Nobel Prize and earned Dr. Wu the title of "First Lady of Physics."

2008

| A P R I L | | | | | | | J U L Y | | | | | | | |
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May

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June

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| May 5 | Cinco de Mayo |
| May 11 | Mother's Day |
| May 13 | Chien-Shiung Wu is born in Liu Ho, China, 1912 |
| May 14 | Mina Bissell is born in Tehran, Iran |
| May 26 | Memorial Day |
| Jun 15 | Father's Day |
| Jun 16 | Barbara McClintock is born in Hartford, CT, 1902 |
| Jun 20 | Summer Solstice |





Nancy Wexler

American neuropsychologist, contributed to the identification of the Huntington's disease gene

SHE TURNED PERSONAL LOSS INTO GENETIC DISCOVERY.

For Dr. Nancy Wexler, researching Huntington's disease is a personal mission: her mother died from this hereditary, progressive disease and she, herself, has a 50% chance of inheriting it as well. Dr. Wexler's celebrated research in Venezuela and around the world led to the discovery of the gene for Huntington's disease and to the development of a breakthrough test which makes it possible for individuals to discover if they inherited the gene which causes the disease. In addition to having a professorship at Columbia University, Dr. Wexler is President of the Hereditary Disease Foundation, an organization founded by her father, Milton Wexler, and dedicated to finding treatments and a cure for Huntington's disease.

2008

| JUNE | | | | | | | SEPTEMBER | | | | | | |
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July

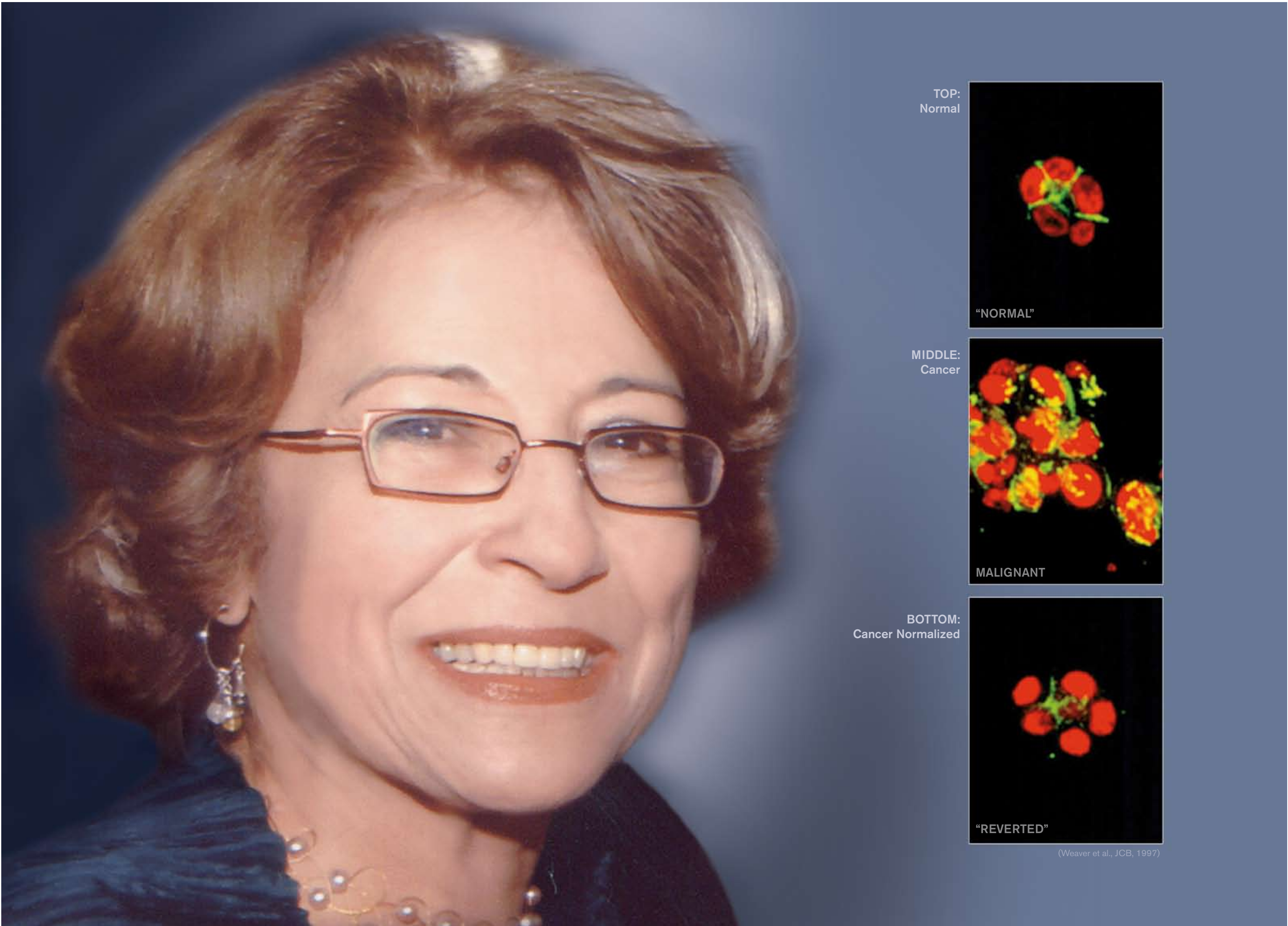
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August

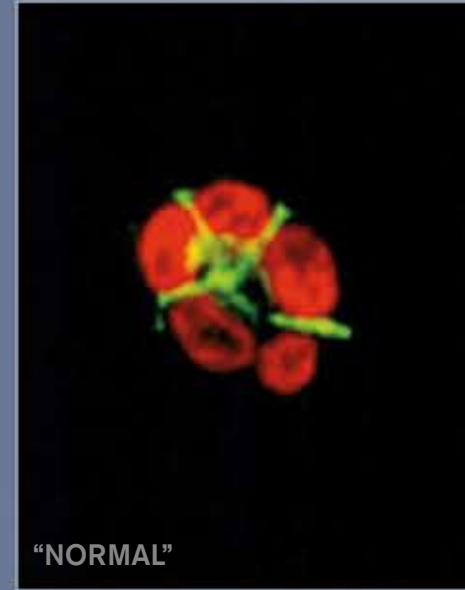
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| Jul 4 | Independence Day |
| Jul 19 | Nancy Wexler is born in Washington, D.C. |

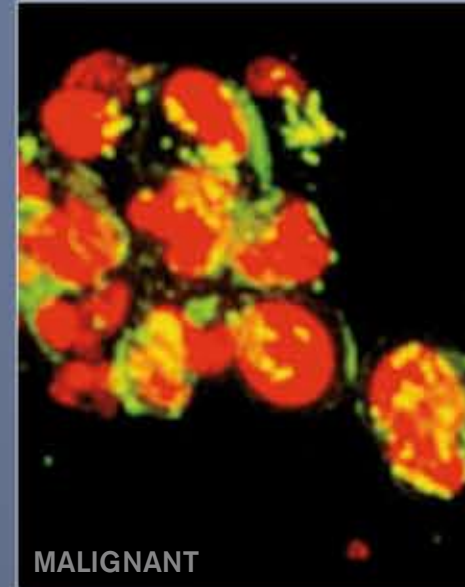




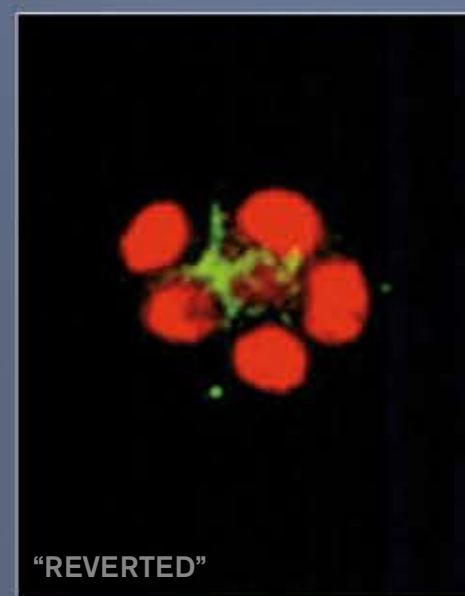
TOP:
Normal



MIDDLE:
Cancer



BOTTOM:
Cancer Normalized



(Weaver et al., JCB, 1997)

Mina Bissell

Iranian-born American cell and cancer biologist and a world leader in gene regulation in 3-D

SHE TOOK CANCER BIOLOGY TO THREE DIMENSIONS.

Researchers have typically studied cancer by growing cells in tissue culture plastic (2-D). Dr. Mina Bissell took a different approach. Her pioneering work explores how the physical and biochemical environment surrounding living tissues, called the extracellular matrix (ECM), regulates architecture and function in normal and cancerous cells, especially in breast cancer. Recipient of many honorary doctorates and awards, including the 2007 Pezcoller Foundation-AACR International Award for Cancer Research, Dr. Bissell is equally proud of her role as a parent and grandparent.

2008

| AUGUST | | | | | | | NOVEMBER | | | | | | |
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September

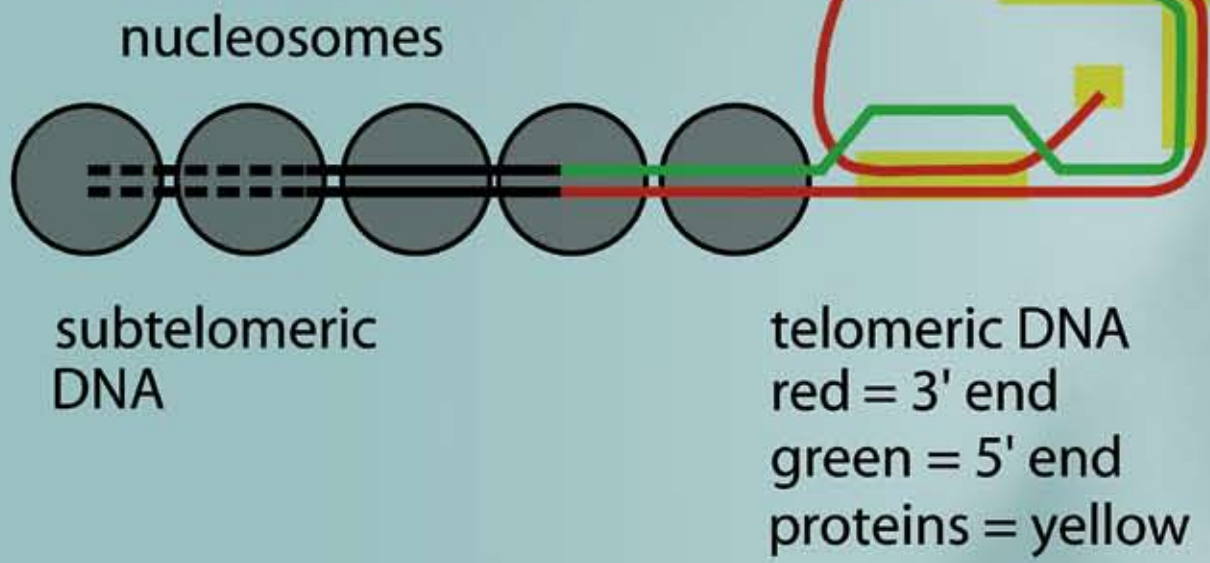
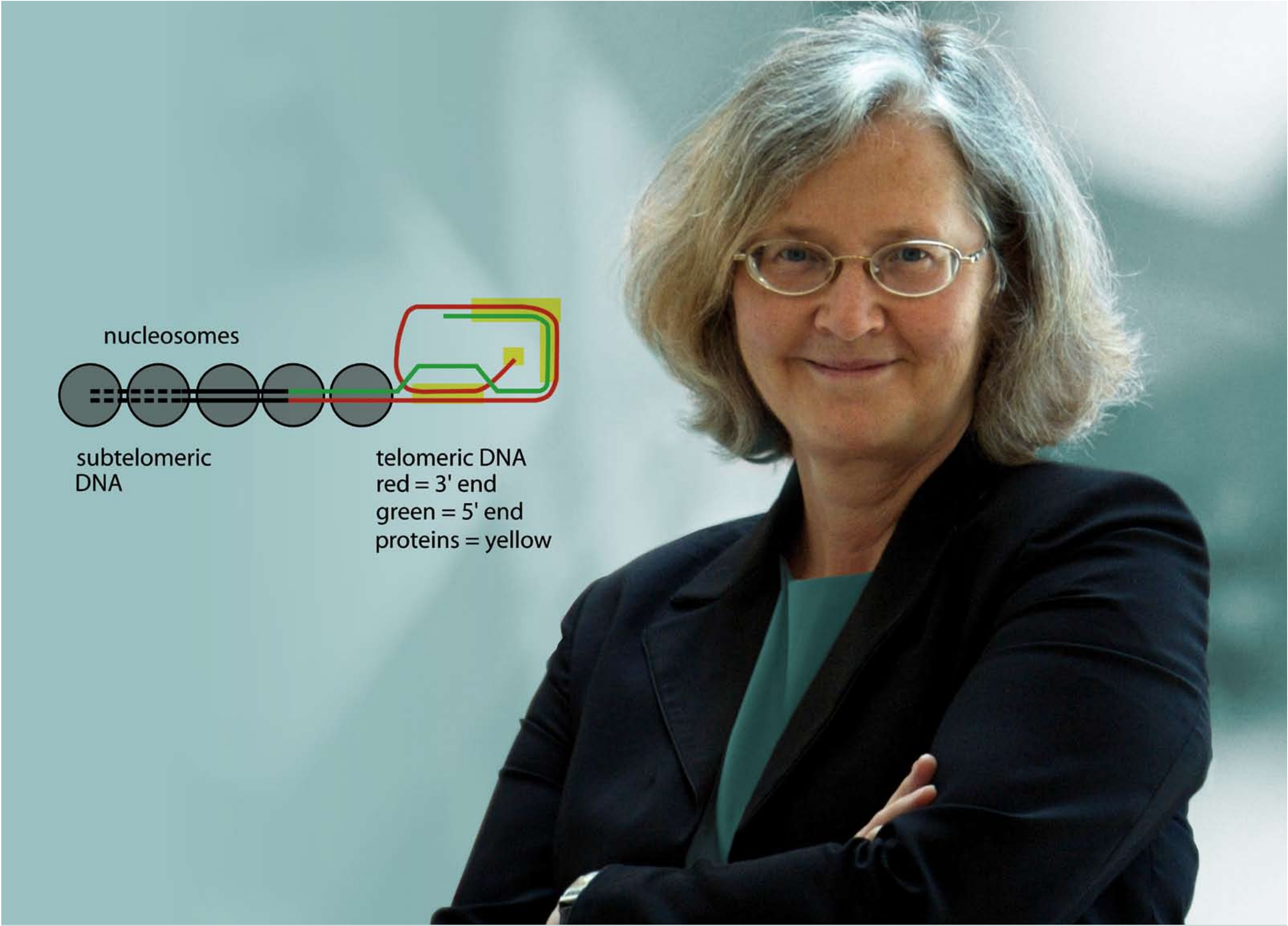
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October

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| Sept 1 | Labor Day |
| Sept 22 | Autumnal Equinox |
| Oct 13 | Columbus Day |
| Oct 31 | Halloween |





Elizabeth Blackburn

Australian-born American biochemist and discoverer of the ribonucleoprotein enzyme, telomerase

SHE DISCOVERED A KEY TO AGING INSIDE A CELL.

Exploring how cell functions affect aging and disease is a passion for Dr. Elizabeth Blackburn. Her innovative research on telomeres, protective DNA-protein complexes at the edge of chromosomes, and telomerase, the enzyme that helps restore telomeres, expanded understanding of the role of stress and other lifestyle factors on aging and health. In 2007, Dr. Blackburn was named one of the 100 Most Influential People in The World by Time Magazine.

2008

OCTOBER

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JANUARY 2009

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November

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December

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| Nov 1 | All Saints Day |
| Nov 11 | Veterans Day |
| Nov 26 | Elizabeth Blackburn is born in Hobart, Tasmania |
| Nov 27 | Thanksgiving Day |
| Dec 21 | Winter solstice |
| Dec 22 | Hanukkah (Chanukah) |
| Dec 25 | Christmas Day |
| Dec 31 | New Year's Eve |

