CHROMOSOME 2

I live my life in widening circles
that reach out across the world.

Rainer Maria Rilke,
Widening Circles, Book of Hours 1-2

Our genes are the blueprint of what makes us who we are. They connect us to all those who have come before us and all those yet to be born.

Our genes are held on our chromosome inside each of our 50-100 trillion cells in our bodies. Humans normally have 46 chromosomes in each cell, divided into 23 pairs. Two copies of each chromosome, one copy inherited from each parent, form one of the pairs.[1]Chromosome 2 is the second largest human chromosome, spanning about 243 million building blocks of DNA (base pairs) and representing almost 8 percent of the total DNA in cells.

Chromosome 2 likely contains 1,200 to 1,300 genes that provide instructions for making proteins. These proteins perform a variety of different roles in the body. Essentially, proteins are the software that tells our DNA hardware what to do, they have an enormous range of crucial functions in an organism. Proteins build, regulate and maintain your body. For instance, they build bones, enable muscles to move, control digestion, and keep your heart beating.

Changes in chromosome 2 have been identified in several types of cancer. These genetic changes are somatic, which means they are acquired during a person's lifetime and are present only in cells that give rise to the cancer. 140 types of cancer have been associated with the translocations that occur on Chromosome 2.[2] Research into somatic Cancers and Chromosome 2 is an important and growing area of research.[3]

ABOUT THE ARTIST

Geraldine Ondrizek is a Professor of Art and artist at Reed College in Portland Oregon. For the last twenty-five years she has created architectural installations and artist books based on medical and genetic information to explore personal and political issues. Each piece results from lengthy collaborations with scientists and medical researchers with the goal of producing work that incorporates and comments on medicine, genetics and ethics. She has had over 40 solo exhibitions internationally and is the recipient of several grants and residencies including an Individual Artist Fellowship from the Ford Family Foundation, the Oregon Arts Commission Individual Artist Fellowship, University of Washington Genetic Medicine Commission, NASA at the Johnson Space Center, the Houston Foundation, the Mellon Foundation, and a NEA exhibition support grant. Residencies include UNESCO Artist in Residence Amman Jordon and Marnay sur Seine France, Gasworks London, Momentum AIR and the Max Plank Archive, Berlin.

She received her BFA from Carnegie-Mellon University and an MFA from the University of Washington.
Her work can viewed on the website, https://www.reed.edu/art/ondrizek/

[1] US National Library of Medicine
[2] Cancer Genetics
[3] American Association of Cancer research