

Barbara McClintock 100 Greatest Discoveries Episode Scripts Genetics

100 Greatest Discoveries (2004) Episode Scripts N/A - Genetics

Fragment

"....But our next great discovery revealed a brand new surprise about what else genes can do.

And it came from a surprising source To learn more about McClintock, I paved a visit to David Kirk Professor of biology at Washington University in St.

Louis at Missouri.

There are many many things I want to ask you, let me start with Barbara McClintock She's a fabulous scientist, one of the world's best.

But she faced a lot of challenges right Oh, she sure did.

Partly because she was just too bright for most people And her mind went to fast.

But even though she is a member of academy She couldn't, she was never offered an academic position.

Primarily because she is a woman.

Also because she is somewhere brighter than any of her male colleagues.

Many people were afraid of her, afraid of her brain.

In 1942, disenchanted by her lack of career advancement in the male dominated field of genetics McClintock went to work at cold spring harbor lab in New York It was here that McClintock made history.

Working alone, she chose to search the genetic of mains.

Of special interest to her was the genetic mechanism underlying the unique mosaic of color kernels It was while studying these that McClintock began to notice a correlation between the color of kernels and the break that occurred in of its chromosomes The color of the corns correspond to where on the chromosome's break occurred A break in the chromosome occurred she said, when the gene went jump or transposed from one chromosome to another.

When this happened, it disrupted the activity of the other genes responsible for producing the pigment of the kernel Everybody at that time thought of chromosome in genes as being very stable things, just transmitted from one generation to another.

She found that certain genes she was trying to locate on the chromosome was being at different composition at different times In one corn plant, it will appear in one position of the chromosomes And in another corn plant, it goanna different position At the third plant might be a third position.

How could this be A single gene different location on different plants And she made the intuitive way that these genes were leaping, going from one place to another, which was totally unheard of at that time.

She was the first person who really saw the kind of detail of the presence of every chromosome Literally the first person She could look at the single kernel and corn and see the genes, see the chromosomes She could look like the chromosome and see the whole plant.

She was incredible.

Barbara McClintock's discovery of transposon was as evolutionary as it was revolutionary While some genetic mutations caused by transposon that linked to caner or other diseases Transposon may also be mechanism that causes genes to mutate and response to changes

and environment and spur the evolution of species.

Today, we know the transposon existed in the genes of all living things Everything from algae to human beings So, my postdoctoral fellow whose name is Steve Miller came here specifically to try to find a transposon That could do what McClintock had shown the transposon to do.

He finally found one that he could control the jumping of And jumps well when he was interested in it, that he named after that basketball hero Michel Jordan.

So we always keep a big Michel Jordan on laboratory slam dunking with an algae.

Every basketball dream to dunk algae While Barbara McClintock never gained the fame of Michal Jordan.

She did she even own notoriety This experiment made her so bitter that she never gave another lecture there Though she continued working in the lab until her death in 1992 with the age of 89 She did live long enough to be vindicated 30 years after the pioneering discovery, McClintock was awarded the 1983 Nobel Prize for medicine....”

http://www.springfieldspringfield.co.uk/view_episode_scripts.php?tv-show=100-greatest-discoveries-2004&episode=s01e06

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"David Kirk Professor of biology at Washington University in St. Louis at Missouri.
(says)....

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She did live long enough to be vindicated McClintock was awarded the 1983 Nobel Prize for medicine"

("David Kirk profesor de Biología en la Universidad de Washington en St. Louis Missouri
(dice)....

Ella fue la primera persona que realmente vio el tipo de detalle presente en cada cromosoma. Literalmente, la primera persona. Ella podía mirar el núcleo de maíz y ver los genes, ver los cromosomas. Podía mirar el cromosoma y ver toda la planta .

Ella era increíble.

...

Ella vivió lo suficiente como para ser vindicada. McClintock fue galardonado con el Premio Nobel de medicina de1983"

Fragment of

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McClintock in

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