NEWS BRIEFS

Public television takes on the story of genes

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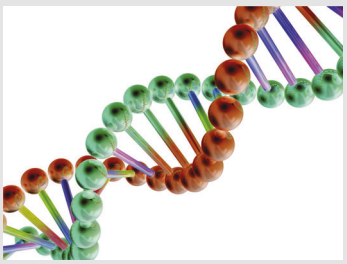
Finally, genomics gets to experience the "Ken Burns effect." The acclaimed documentary filmmaker, most famous for his public television series *The Civil War*, will take on the subject of genomics in a collaborative adaptation of Pulitzer Prize–winning author Siddhartha Mukherjee's book *The Gene: An Intimate History*. "From the story of the remarkable achievements of the earliest gene hunters and the bitterly fought race to read the entire human genome, to the unparalleled ethical challenges of gene editing, the documentary will journey through key genetics discoveries that are some of the greatest achievements in the history of science," according to the PBS announcement. The three-hour documentary will premiere over three nights in the spring of 2020 on PBS stations in the United States. The Washington, DC–based public station WETA will coproduce the project, which includes a multimedia educational component that will also serve as a teaching tool. The project is expected to follow the formula of Burns's previous projects, weaving personal stories and history with the science underpinning modern genetics. The television station has assembled an advisory committee of leading scientists and National Academy of Sciences members for *The Gene*. The National Human Genome Research Institute is a leading partner, as are leaders of the Human Genome Project, such as current National Institutes of Health (NIH) director Francis Collins and former NIH director Harold Varmus, as well as an array of science luminaries. Prior to the national broadcast premiere, a large group of funders will arrange both screenings and public discussions in cities across the country, working with local public television stations and educational, medical, and scientific organizations. *—Karyn Hede, News Editor*

Repeated DNA elements unique to humans may predispose us to psychiatric disorders



Individual variation in the number of repeated DNA sequences at certain locations in the genome has previously been tied to the risk of developing a number of diseases. But because an accurate count of repeats is difficult to obtain in conventional sequencing, there may be genetic diseases that fly under the detection radar. Now, Howard Hughes Medical Institute investigator David Kingsley and colleagues at Stanford University have tied just such an elusive set of repeats to schizophrenia and bipolar disorder. Published on 9 August 2018 in the *Journal of Human Genetics*, the study illuminates a set of repeats that seem to be uniquely human. The research team suggests that the rapid evolutionary changes that led to the human brain may have predisposed our species to psychiatric diseases not found in other animals. Although the gene, *CACNA1C*, which encodes a calcium channel, had previously been associated with schizophrenia and bipolar disorder, the repeats themselves remained hidden from conventional sequencing methods. It turns out that a 100,000-nucleotide stretch in an intron held the answer. "The human genome reference sequence shows only 10 repeats of this 30-nucleotide sequence, but we've found that individuals actually have from 100 to 1000 repeats, and that the sequence itself can vary," Dr. Kingsley said. "In contrast, chimpanzees and other primates have just one repeat of the sequence. Human evolution has given us big and active brains and a remarkable cognitive capacity. But a side effect of this could be an increased risk for other, less desirable outcomes." While research found an association, it is not yet clear how changes in *CACNA1C* expression affect disease risk. Regardless, the involvement of a calcium channel gene may make testing new drugs easier since calcium channel blockers are already widely available. *—Karyn Hede, News Editor*

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