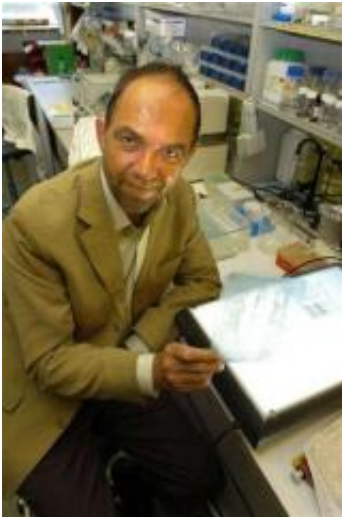


# DNA pioneer appeals for cuts to criminal database

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This is a Sept. 2004 file photo of British scientist Alec Jeffreys, the man who discovered DNA fingerprinting. Twenty-five years ago Thursday, British scientist Alec Jeffreys realized that individuals have "DNA fingerprints," unique patterns of genetic material that can be used to identify them. The discovery has solved thousands of crimes, put murderers behind bars, split and reunited families \_ and launched a fierce debate about privacy and human rights. On the anniversary of his discovery, Jeffreys worried that police are using a database of DNA samples taken from suspects to brand innocent people "future criminals." (AP Photo/Rui Vieira/PA/file)

(AP) -- Like so many great discoveries, it was an accident. British scientist Alec Jeffreys realized 25 years ago Thursday that individuals have "DNA fingerprints," unique patterns of genetic material that can be

used to identify them. The discovery has solved thousands of crimes, put murderers behind bars, split and reunited families - and launched a fierce debate about privacy and human rights.

On the anniversary of his discovery, Jeffreys worried that police are using a database of DNA samples taken from suspects to brand innocent people "future criminals."

Britain's [DNA database](#) is the largest in the world, containing genetic profiles of more than 5 million people. Samples are taken from everyone arrested for a crime - and the information is usually retained even if the person is acquitted or freed without charge.

Jeffreys, 59, said about 800,000 innocent people were on the database, raising fears of "discrimination, breach of genetic privacy, stigmatization - there's a whole host of issues here."

"Innocent people do not belong on that database," Jeffreys, a geneticist at the University of Leicester in central England, told the BBC.

"Branding them as future criminals is not a proportionate response in the fight against crime."

British police can take DNA samples from anyone who is arrested, and keep the profiles even if the suspect is never charged - although the original blood, saliva or other [genetic material](#) is destroyed. The information is stored on one of the world's largest DNA databases, which was set up in 1995 and now holds information on 8 percent of the country's population. The FBI's national U.S. database, although larger, has information on about 0.5 percent of Americans.

Last year, the European Court of [Human Rights](#) ruled that Britain's "blanket and indiscriminate" policy of retaining [genetic information](#) breached the right to privacy.

In response, Britain agreed to remove hundreds of thousands of innocent people from the database, but said it would still keep the profiles of those cleared of serious crimes for up to 12 years. Critics, including Jeffreys, say the decision flouts the spirit of the court ruling.

Jeffreys and his colleagues made their discovery by accident on the morning of Sept. 10, 1984, while researching inherited diseases. They developed a way of isolating bits of DNA and turning them into X-ray images. Looking at the first such images, from three members of one family, Jeffreys realized the individual patterns were different, but also that parent-child relationships could clearly be seen.

In effect they were genetic bar codes, maps of sequences within the strands of DNA that are unique to each individual - except identical twins, who share the same pattern.

"Within seconds it was obvious that we'd stumbled upon a DNA-based method not only for biological identification, but also for sorting out family relationships," he told the BBC. "It really was an extraordinary moment."

Within a couple of years the knowledge was being used to convict murderers and clear the wrongly accused, to identify the victims of war and settle paternity disputes.

It also proved that Dolly, the world's first cloned mammal, really was a genetic copy of another sheep.

The government says that last year DNA matches solved more than 17,000 crimes in Britain, including 83 killings and 184 rapes.

Jeffreys said the discovery - which brought him fame and, in 1994, a knighthood - showed that scientists must be given freedom to conduct

research driven by nothing but curiosity. He said "unfettered, fundamental, curiosity-driven" research was just as important as science aimed at solving specific problems.

"I am saying you have to have a mixed economy," Jeffreys said in an interview released by the university to mark the anniversary of the discovery.

"You don't have to put all your eggs into this great common basket that will deliver answers to questions that you can define, because the far more exciting thing is that it delivers questions that you never knew existed - and that to me is infinitely more valuable because that sets the future agenda."

And what discovery would Jeffreys most like to see in the next 25 years?

"No-brainer," he said. "Extraterrestrial life. I would love to see that before I die."

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