DNA Could Predict Physical Appearance Of Crime Suspects

By GRETCHEN FRAZEE

Posted January 23, 2015

Susan Walsh, an assistant professor at IUPUI, says a DNA computer program could help law enforcement narrow down suspects based on hair and eye color.

An IUPUI biology professor is developing a technique to determine what someone looks like, based solely on his or her DNA.

Here is how the process works.

In Susan Walsh’s lab on the IUPUI campus, research assistants take DNA sample and put them into a centrifuge. Next, they run the sample through a genetic analyzer and then put the data into a computer program Walsh helped develop while she was working at a university in Europe.
In just seconds, the program predicts whether the person had blue or green eyes and red or brown hair.

Walsh says in crimes, if law enforcement officials had a DNA sample but nothing to compare it to, these results could tell them what the suspect looks like.

“This will never be used in court, it will never be used to convict someone,” Walsh says. “So at the end of the day, we’re only telling you the direction to go and it’s up to investigators to take this information. It will basically narrow the pool of suspects, which is what we aim for.”

The program can also be used to recreate portraits of historical figures. Walsh was part of a team last year that helped identify what King Richard III looked like based on his remains that were found under a parking lot in Leicester.

Watch this video on how DNA helped identify the most accurate portrait of King Richard III:
The researchers also attempted to determine the features of Nostradamus.

Now, Walsh hopes to improve on that work. Over the next three years, she and her assistants will work backward, cataloging thousands of volunteers’ eye and hair colors and skin tones and match those up with DNA.

Walsh says that will allow the computer program to not only determine someone’s eye is blue, but the exact shade of blue.

“At the end of the day, we want police to have a color printout of what someone will look like,” Walsh says.

Walsh’s work is being funded by a $1 million grant from the National Institute of Justice over the next three years. She plans to recruit volunteers from IUPUI, IU Bloomington and Purdue.