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Skating toward the 'sports gene'

Athleticode wants to know what's inside players' DNA

San Francisco Business Times - by [Eric Young and Ron Leuty](#)

Jim Kovach has spent years seeking the secrets of aging as president of Marin County's **Buck Institute for Age Research**.

Now he's helped start a new Oakland company with a different quest: Finding the sports gene.

Kovach, a pro football linebacker before he was a scientist, has teamed up with a leading **Duke University** genetic researcher and two other **NFL** veterans, including venture capitalist Alex Bernstein, to found **Athleticode**. The Oakland startup's aim: Study athletes' DNA so players can improve performance and avoid injury.

Athleticode will scan the genetic code in a sample of a player's spit to test for myriad characteristics. They hope to indicate whether an athlete has a high propensity for concussions, heat stroke, heart arrhythmia, torn tendons or other injury. It also plans to identify whether the player has genes associated with advanced agility, endurance, nutrient absorption or flexibility.

Armed with this information, athletes can tailor workouts to minimize chances of getting hurt while boosting performance.

The data Athleticode gather from clients also could help answer larger questions about athletic performance. Why, for example, are some top athletes injury-prone with short careers while others seemingly can play forever?

"I'm interested in what constitutes good health," said Kovach, who played for the **New Orleans Saints** and San Francisco 49ers. "Why can some people, like (quarterback) Brett Favre, play 20 years and others seem to break down more rapidly than others? There's an interesting biology that certainly connects to genetics."

Huntington Willard, who heads the **Institute for Genome Sciences** at Duke, is a co-founder of Athleticode. So is Pete Koch, a former NFL defensive end who is now a fitness trainer and Bernstein, a partner at **North Venture Partners**, which has a stake in the company. Only Bernstein is full-time at Athleticode, which plans to hire a small number of full-time researchers. Kovach said he will keep his position at Buck Institute.

Some of the four founders knew each other before starting the company. But all their paths crossed last year when Willard and Kovach studied the genes of 100 NFL linemen seeking the variants that would mark out athletic prowess.

The new company is able to take advantage of major advances in genetic testing. Over the past decade, more and more companies have learned to decode DNA, pushing down the cost. Athleticode may charge around \$250 to analyze a player's genetic makeup, said Bernstein.

"This is barely the cost of athletic shoes. If you find out you have a significantly higher chance of blowing out your knee and you can employ training to reduce risk, you can overcome natural limitations," said Bernstein, a former defensive tackle with the **Baltimore Ravens**.

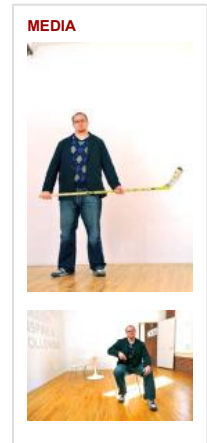
The company also hopes to add to existing knowledge about genes that influence athletic ability. Eighteen have been identified so far, Bernstein said. As Athleticode gets more data, it may be able to identify even more DNA combinations that are indicative of prowess — or pain.

Athleticode, which has funding in the "middle six figures," might seek other investors as it begins lining up clients. Bernstein said the firm is talking to pro and college teams around the country for pilot tests.

While pro and college clients could garner the company a high profile, its business model is built around consumers, company executives said. Athleticode wants to start offering its tests to players in recreational leagues and high school programs by the end of the year.

Koch said knowing about the potential for injury could help athletes avoid serious wounds. He recounted the story of a **University of Maryland** teammate whose tendon injury ended dreams of a pro career.

"Imagine had he taken this (Athleticode test) and identified in his freshman year that he didn't have a protective gene for tendon injury," Koch said. A training regimen, he said, might have meant his friend had a shot at the NFL.



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