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Genetics might engineer path to successful aging

BY FRED TASKER

Rapid advances in using human genes to diagnose, prevent and treat diseases are bringing closer the time when many people can achieve their genetic potential to live 100 years or longer, said Dr. Pascal Goldschmidt, dean of the University of Miami Miller School of Medicine.

"In five or 10 years we will see diagnostic tools and therapies that will change the course of diseases such as diabetes, cancer and heart disease," said Goldschmidt, who spoke last week at the University of Miami "Masters of Pediatrics" conference that brought 750 doctors and other medical experts to Miami Beach from 40 states and nine countries.

Studies already have identified genes that predispose mice to heart problems, he said, and the science is rapidly advancing in humans.

The effect could be dramatic.

``People are genetically engineered to live 100 to 110 years. They don't reach that because of chronic diseases. If we can prevent them, more people can live longer."

Goldschmidt, formerly dean of medicine at Duke University, was instrumental in a $10 million deal that brought 20 Duke genetics researchers to Miami.

The group's leaders, Margaret Pericak-Vance and her husband, Jeffery Vance, are bringing to UM genomic research in autism, tuberculosis, infectious diseases, cardiovascular disease, cancer, multiple sclerosis and other diseases.

"And we're looking into the genetics of successful aging," said Pericak-Vance. ``Why some people live so long and well and healthy after 70. That ought to be popular in Miami."

Goldschmidt also praised Florida legislators who support a bill to require girls 11 and 12 years old to be vaccinated for the human papillomavirus (HPV), which prevents 70 percent of cervical cancers.

"I am not surprised or unhappy that there is opposition, but we must support the legislators who have the courage to do this," he said. ``You can never rule out the possibility of a few very rare individuals having side effects. But I believe the evidence is quite good that it's the best way to prevent cervical cancer."

"And there's the really unfounded fear that the vaccine might trigger autism," he said. ``It's unrelated."

Vaccines have come a long way since the first smallpox vaccine was created in England by a rural physician, Dr. Edward Jenner, Goldschmidt noted. He noticed that dairy farmers routinely exposed to the relatively benign disease cowpox seemed less likely to get deadly smallpox. So, in a radical experiment, he exposed a young boy to cowpox, waited a few weeks for immunity to develop, then exposed him to smallpox.

"He was immune," Goldschmidt said. ``But I dare you to try that experiment today."