

# UBC prof hopes to curb gene doping

## 2010 OLYMPICS: Human kinetics guru working on prototype test for illegal practice

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A key test for cheating athletes might come in time for the 2010 Vancouver Winter Olympics.

University of B.C. human kinetics assistant professor James Rupert hopes to have a prototype ready in about three years to catch "gene dopers." The World Anti-Doping Agency considers this area to be the likely next wave of illegal performance improvement for endurance athletes.

"The anti-doping people are interested in at least getting the groundwork in for a test before it becomes a problem," Rupert said yesterday. Rupert has received over \$300,000 from Montreal-based WADA to conduct his research. WADA's Dick Pound, the former No. 2 man in the International Olympic Committee, has been an out-spoken critic of many Olympic and North American team sports, saying performance-enhancing drug abuse is wide spread and tolerated by sports officials.

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— UBC assistant professor James Rupert

"People [cheaters] are less likely to invest time and resources in doing this if, simultaneously, the anti-doping agencies are investing time and resources in stopping it."

said Rupert. Still in early days as a performance-enhancing science, one type of sports gene doping involves introducing extra erythropoietin (EPO). A natural substance, EPO helps build red blood cells, which create more oxygen for the lungs to draw on. The doping scenario would see added EPO genes directly injected into cells to increase an athlete's stamina.

"If the EPO gene has been inserted into the person's cells, there will be a distinct pattern of changes in gene activity compared to natural

patterns," said Rupert.

"Natural" EPO doping would allow cheaters to bypass tests detecting synthetic EPO. Critics believe tests have not stopped Olympic endurance sports such as cross-country skiing, speed skating and cycling from being plagued by synthetic EPO abuse.

Complicating current detection, said Rupert, is the fallibility of synthetic EPO tests and the fact that high-altitude training produces naturally higher EPO levels.

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