

Media release

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Geneticists to play large role in reducing obesity epidemic

Half of Australia's population is now either obese or overweight, costing the country around \$58 billion a year. In response to this growing epidemic, researchers at the Garvan Institute of Medical Research are investigating the genetics of obesity and how to control it.

In May's edition of ePathWay, the online publication for the Royal College of Pathologists, obesity is revealed to be partially the result of a complex biochemical feedback loop that dates back to our hunter-gatherer days.

Garvan Institute of Medical Research Executive Director, Professor John Shine, says the medical fraternity is aware of the environmental factors related to obesity, but says the lesser known area of genetics is where the breakthroughs will come.

"We are going to be able to identify individual genes and individual biochemical pathways with respect to appetite, preference for foods such as protein, carbohydrates or fat, and metabolic rate, and then look at the complex matrix of these biochemical pathways."

Genes of interest include neuropeptide Y (NPY) which controls hunger and satiation, and leptin which regulates body fat.

Professor Shine says scientists are using this sort of information to develop a system of delivering treatment targeted to an individual's genetic make-up in the form of anti-obesity medication.

"This ability to provide treatment based on an individual's genetic makeup will happen in the next decade."

Molecular pathologists will be key players in this process, as they will map the individual's complete genome sequence and identify the genes that will determine the treatment.

The full article can be found in the [current edition](#) of ePathWay.

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