

MEDIA RELEASE

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New treatments designed to lower levels of Lipoprotein (a) – a major risk factor of cardiovascular disease

Associate Professor David Sullivan, a speaker at the [Royal College of Pathologists of Australasia's](#) (RCPA) annual conference 'Pathology Update 2018 – A Bridge to the Future' will discuss new insights into Lipoprotein (a), a cardiovascular risk factor that affects 20% of the population. A/Prof Sullivan explains that there is now an increasing understanding of Lipoprotein (a), how it is measured, and recently there has been a breakthrough in newly created, effective treatments.

A/Prof Sullivan, Head of Chemical Pathology at Royal Prince Alfred Hospital, said,

“We have known for a long time that Lipoprotein (a) is a very strong source of cardiovascular disease. There are six or seven mechanisms where lipoprotein (a) can cause substantial harm to an individual. This damage, which is associated with blood clotting, is known to cause the blockage of arteries and heart valves, including the aortic heart valve. These complications are proportional to an individual's levels of the entity, lipoproteins (a). Over the past 30 years, we have had a limited scientific understanding of lipoprotein (a) and, typically, it was very difficult to measure for a variety of reasons.

“With such a significant proportion of the population affected by this (20%), it is an issue of great interest in Australia and around the world. The presence of lipoprotein (a) appears to be determined by an individual's gene inheritance. In the past, we have been able to inform patients of their levels of lipoprotein(a), however it was very difficult to provide any effective treatment. Cholesterol treatments such as statins did not reveal any beneficial results at lowering levels of lipoprotein (a). When necessary, we provided a very old treatment called nicotinic acid which is a huge dose of vitamin B3, which can be very unpleasant in itself.

Now, for the first time, A/Prof Sullivan explains that newer anti-heart disease, cholesterol lowering drugs are showing successful results at effectively lowering lipoprotein (a). Also, using some of the lessons learned with these drugs, new treatments have been developed which are specifically designed to reduce the levels of this material quite considerably.

“A newly invented treatment called PCSK9 antibody treatment has proven to be highly effective in lowering cholesterol and preventing heart disease. It also happens to be useful at reducing lipoprotein (a) by around 20-30%, which is a useful start. By using some of the very advanced techniques for lowering blood fats, we should be able to lower the specific blood fat carrying material by up to 90% using a technique called antisense oligonucleotides.”

To receive the new treatments, an individual would be selected due to history of heart disease and the need to lower cholesterol levels. Individuals who could benefit from this are those who have had a heart attack or a stroke at a young age and the usual causes have been excluded. If an individual is not a smoker and they do not have particularly high blood fats, then it would be worthwhile to assess the situation for lipoprotein (a). Secondly, we are aware of families with an inherited high cholesterol level. This could also cause high lipoprotein (a) levels.

A/Prof Sullivan explains that further research of lipoprotein(a) is required in order to provide a deeper understanding into its effects, which will result in more accurate measurements, and more, effective treatments specific to lowering the levels of the material in patients.

“Despite this success, we still don’t know enough about lipoprotein (a). We sometimes find that it’s elevated in people who don’t have any other explanation for any of their heart attacks and strokes but at the same time, we clearly find that some people tolerate high levels without becoming unwell, so we need to have a much better opportunity to understand exactly how its working and to try and attend to that.”

“The new treatment is not currently available on the Medicare Benefits Schedule. We are dedicated to developing more accurate measurements, which are based on the work that has evolved over the years.”

A/Prof Sullivan is a speaker at the RCPA’s Pathology Update 2018 conference, ‘A Bridge to the Future’, which takes place at the ICC Sydney from 2nd until 4th March 2018.

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About the Royal College of Pathologists of Australasia:

The RCPA is the leading organisation representing pathologists in Australasia. Its mission is to train and support pathologists and to improve the use of pathology testing to achieve better healthcare.

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