

# Scientifically taking the guilt out of guilty pleasures

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Dr. Aaron Micallef has designed new compounds that mimic the activity of antioxidants found in wine and chocolate.

Red wine and chocolate are part of the working week for Australian Institute for Bioengineering and Nanotechnology researcher Dr. Aaron Micallef.

More specifically, Dr. Micallef has designed and prepared new compounds that mimic the activity of [antioxidants](#) found in wine and chocolate.

He hopes the compounds can promote the body's natural antioxidant defences, neutralise damaging [free radicals](#) in the body and fight the onset of diseases associated with free radical damage, such as [heart](#)

[disease](#) and arthritis.

To mark National Science Week, Dr. Micallef will explain the research as part of a wine and chocolate tasting event at the Queensland Museum at South Bank on August 26.

He will talk about antioxidants, wine and chocolate; their relationship to his AIBN research; and his role as a free radical [chemist](#) and associate investigator for the ARC Center of Excellence for Free Radical Chemistry and Biotechnology.

“I want people to realise there are links between chemistry, chemical research, the foods we eat and our health,” Dr. Micallef said.

“Free radicals are implicated in many processes in the body, such as inflammation, ageing and cancer. They can be very damaging, but we are conducting research into how we can use antioxidants to neutralise free radicals and prevent this damage,” he said.

“Eating foods rich in antioxidants can help mop up damaging free radicals in the body. It means we are taking the guilt out of pleasures such as [red wine](#) and chocolate.

“I have a soft spot for a good glass of red wine and dark chocolate myself, so the research is definitely very appealing.”

Reactive free radicals are believed to be the cause of the accumulated damage in cells that contributes to ageing and degenerative diseases. Antioxidants can protect against this damage, either neutralising the radicals directly or promoting the body's [natural antioxidant](#) defences.

Dr. Micallef said his synthetic compounds would have potential applications in fighting disease if they were found to mimic the

protective properties of the antioxidants found in red wine and chocolate.

Called Radical Wine and Chocolate, the tasting event will be held at the Queensland Museum from 5.30pm on August 26, with three guest speakers and tastings and sales of wines from Ballandean Estate and Sirromet Winery. Chocolates to taste and buy will be from Bittersweet, Mayfield and Ballandean Estate.

Provided by University of Queensland

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