



February 2011 Feature Story:

“Forget the bloodletting: enjoy the world’s most beautiful berry instead!”

The following article is based on a presentation given to the Four Leaf Commons 2010 by the IBA General Manager, Bill Floyd.

Could taking a blackcurrant supplement or a berry-rich blackcurrant ‘smoothie’ be the modern equivalent of blood-letting or leeching? Were those medieval treatments (still practiced in some countries) based on some surprisingly sound science? And could medieval bloodletting explain why taking the blackcurrant today might be the perfect answer to people engaged in high contact physical sport?

In 2009 a major science review was published in the prestigious journal BMC Medical Genomics. It was titled **“Iron behaving badly: inappropriate Iron chelation as a major contributor to the aetiology of vascular and other progressive inflammatory and degenerative Diseases”** (reference www.biomedcentral.com)

To summarise: there’s good iron and rogue iron! Rogue iron is responsible for the creation of the hydroxyl radical. This radical has no redeeming merit in the body: it’s the “ultimate bad boy” and could be linked to all of the negative physiological activities that define aging itself!

And here’s the good news: in 2010, a research paper was published in the scientific journal Food Chemistry: **“Assay of the antioxidant capacity of foods using an iron(II)-catalysed lipid peroxidation model for greater nutritional relevance”** (Food Chemistry (2010), doi:10.1016/j.foodchem.2010.09.099)

This research was done at the New Zealand Honey Research Unit at the University of Waikato. Head of the Unit is Professor Peter Molan; internationally known for his work with Manuka honey. Early in the project the NZ Blackcurrant industry arranged with Professor Molan to have blackcurrants included in the assay. The results for blackcurrants were quite astonishing.

There’s a lot of research to be done but to summarise what we know so far:

Most antioxidants work by neutralising free radicals: the free radicals start damaging the body until antioxidants “bump” into them and neutralise them. But there is a special type of antioxidant that has a pre-emptive strike action: it neutralises the primary cause of free radicals before they are formed and before they can damage our cells (and damage our DNA). That primary cause is an “unbound” or rogue iron molecule: and the blackcurrant appears to have an exceptional pre-emptive strike capacity against it!

So, back to our medieval blood-letting.

Professor Molan believes that blood-letting would have reduced the amount of iron and “rogue iron” in the body. And because of the culinary culture of cooking in rough-form cast iron pots iron intake then would have been quite high.

Taking that one step further Professor Molan believes that this topic could explain why post-menopausal women start to experience the same statistical averages as men for a wide range of inflammation-based health issues. The monthly cycle is no longer removing excess iron and ‘rogue iron’ from the woman’s body.

This research is in its early days but could make a lot of sense for a wide range of inflammation-based oxidative stress issues: both physical and mental.

Extrapolating further, Professor Peter Molan believes that blackcurrants could help reduce inflammation in bruising resulting from physical contact sport such as karate, judo, boxing, and rugby football. This is because trauma such as that caused by a physical knock, whether in sport or an accident, can convert ‘safe iron’ into ‘rogue iron’.

This whole topic of blackcurrants and its special antioxidant ability to neutralise ‘rogue iron’ is an area that needs a lot more research but it signals a very exciting new frontier for blackcurrants and blackcurrant health supplements.

Declaration of interest: note that the editor of this article (Bill Floyd) is a Director of Floyd Marketing Ltd. Floyd Marketing Ltd is contracted to Waikato Link Ltd (the commercialisation division of Waikato University) for the commercial development of the Pre-emptive Antioxidant Capacity Assay developed by Professor Peter Molan MBE. Floyd Marketing Ltd is also the contract General Manager of the International Blackcurrant Association.