Berry Polyphenol



Nutrition science shows that non-nutrient components of plant foods improve health

WHAT?



KEY CLASSES?



KEY SOURCES?



- Polyphenols are the main type of bioactives (non-nutrients) in plant foods
- · Protects plants from environmental stressors & pathogens
- Contributes to their colour, flavour & smell
- Flavonoids
- Lignans
- Phenolic acids
 Stilbenes
- Fruits & vegetables
 Nuts & seeds
 - Oils
- Grains Legumes
- Tea, coffee & wine

The rise of polyphenols

Evidence of plant foods being used as medicine

Vitamins first discovered to explain health benefits of food

Many polyphenols in plants first identified as health promoting

Antioxidant capacity in fruits shown to correlate to their polyphenol content

Health benefits established with 8000+ polyphenol compounds identified







1912



1980s



19909



TODAY

Common sources of polyphenols

Total polyphenol content per serve (mg)¹

- Berries are the highest food source of polyphenols per serve
- Anthocyanins represent up to 70% of their total polyphenol content²
- Some berries have been associated with lower Type 2 Diabetes risk³ and weight gain⁴ than for total fruits, possibly due to their high polyphenol content



lueberries

806



408



390



374



310



283



197



146



126

Polyphenols are much more than antioxidants



CARDIOPROTECTIVE

- Anti-platelet effects
- Anti-inflammatory effects
- ✓ Inhibits LDL oxidation✓ Lowers incident of CVD



ANTI-DIABETIC

- Can enhance insulin production
- Improves insulin sensitivity



PREBIOTIC

- ✓ Prebiotic-like effects
- Increases Bifidobacterium & Lactobacilllus



ANTI-CANCER

Protective effect in human cancer cell models



ANTI-AGEING

Antioxidant & antiinflammatory effects may result in anti-ageing benefits



NEUROPROTECTIVE

- Improves brain plasticity
- Supports memory
- May reduce cognitive decline

1. Perez-Jimenez et al. EJCN. 2010 2. Olas. Front. Pharmacol. 2018 3. Bertoia et al. PLoS Med. 2015 4. Muraki et al. BMJ. 2013





The project has been funded by Hort Innovation using the blackberry, blueberry and raspberry research and development levies and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.