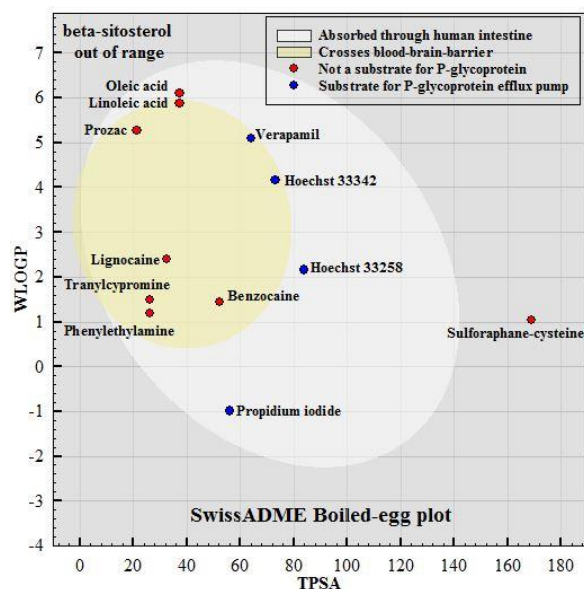


*OliveNet™ Newsletter***Molecule of the month** **$\beta$ -sitosterol**

$\beta$ -sitosterol, is a phytosterol, with a chemical structure similar to that of cholesterol. It is found in nuts, avocados, and vegetables and has a wide range of reported health benefits, particularly, lowering cholesterol (due to competition for absorption), and for benign prostatic hyperplasia.

It is a widely investigated phytosterol with over 5000 professional publications. We analysed  $\beta$ -sitosterol using SwissADME and the results indicate that squalene is poorly absorbed through human intestines, and not predicted to cross the blood-brain-barrier; it is not projected to be a substrate for P-glycoprotein, and not predicted liver enzymes.



The metabolism of  $\beta$ -sitosterol has been widely investigated with an early paper appearing in the Biochem J in 1941 (Otto Rosenheim and Thomas Arthur Webster, "Metabolism of  $\beta$ -sitosterol", Biochem J, 35:928-931, 1941). T

The effect of  $\beta$ -sitosterol on cholesterol metabolism, cholesterol-induced atherosclerosis was the topic of intense investigations in the 1950s and 60s, and is still ongoing.

The complex associations between plant sterols, cholesterol, and cardiovascular disease risk are still largely unresolved.

**Julia Liang's recipe of the month****Carrot Cake**

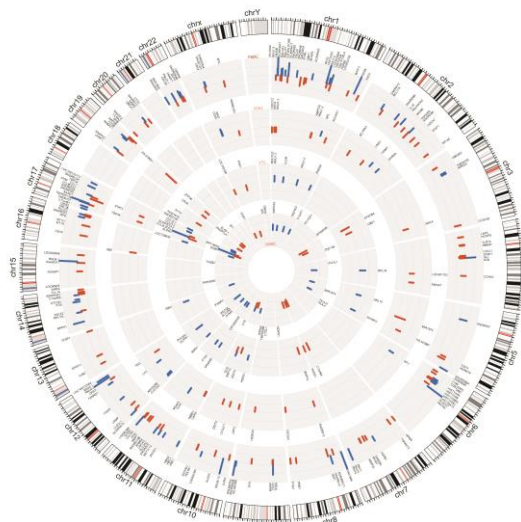
Apart from being a talented McCord Research molecular modelling scholar, Julia Liang is an avid "foodie". This month Julia has prepared Carrot Cake - a classical favorite!



[Approximate calculations: Total EVVO = 150 mL (140 g); Serves 8. Per serve = 400 calories (or 20% of 2,000 calorie diet), 17.5 g EVVO (or 30% of typical daily recommendation), ~4.4 mg olive polyphenols (assuming 250 mg/kg in average EVOO)].

For further details please see our [OliveNet Library Facebook page](#) and visit [Julia's Cooking Revista](#).

\* All of Julia's recipes are tried and tested.

**McCord Research in action**

A visual (Circos plot) display from our Melbourne laboratory indicating how hydroxytyrosol alters gene expression in normal, malignant and transformed cell lines.

[Visualization only; the full size, readable image will be made available in an upcoming publication].