

## PHARMACY *a long and proud history*

# DIE ANOTHER DAY

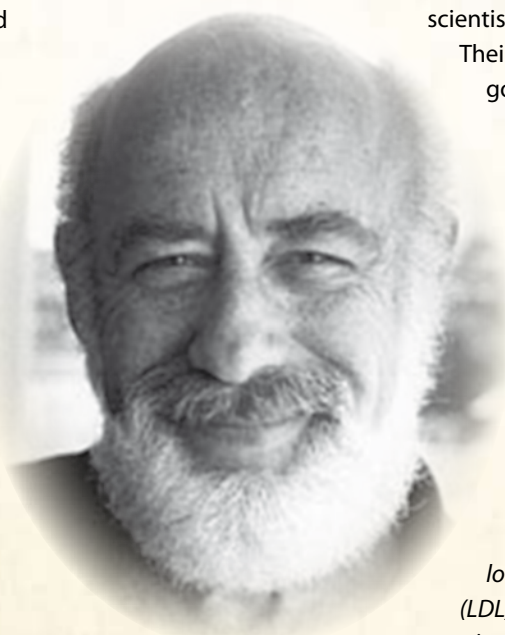
As I have continued to dig into the cholesterol story I have found good news and bad news, with results affecting the diet, medication and lifestyle of millions of people at risk from heart disease. Players in the theatre of **heart attack prevention** include rabbits, guinea pigs, rats, whole communities, scientists, universities, big Pharma, doctors and specialists, the food industry, alternative medicines and more. The stage is global starting in Russia, ending in America, spanning over 100 years to produce the single biggest impact ever – dictating our lifestyles and how medicine and food dollars are spent.

Who caused the heart attack? It is a case worthy of **Agent 007 – James Bond**.

**Suspects include:** high blood pressure, smoking, obesity, diet problems, stress, lack of exercise, and *cholesterol*. Is *cholesterol* the main suspect and hence the BAD GUY? Go to it, 007.

Last month we ended with atherosclerosis, rabbits and Nikolai Anichkov. Scientists generally failed to continue Anichkov's *cholesterol* research, though they had their suspicions. In the 1930s and '40s patients with excess *cholesterol* in their blood began to be advised to avoid eating *cholesterol*-rich foods, especially eggs.

In 1943 **John Gofman** received a doctorate in nuclear and physical chemistry from Berkley USA, and in 1946 a medical degree from the University of California. He



John Gofman

and his team confirmed that the Russian scientist **N Anichkov** was correct.

Their *cholesterol*-fed rabbits also got atherosclerosis (thickened arteries). They then developed an ultra high-speed centrifuge and centrifuged samples of serum from the *cholesterol*-fed rabbits. The contents separated into two fractions. **Gofman** called the one that floated to the top *low-density lipoprotein cholesterol (LDL)* and the one that sank to the bottom *high-density lipoprotein cholesterol (HDL)*. Further research showed it was likely the *low-density lipoprotein cholesterol (LDL)* may be causing *thickened arteries/heart disease*. It appeared it was not the *total blood cholesterol* levels that were the problem, but rather the levels of *LDL*.

**Dr J Gofman** and his team's research into **cholesterol and artery damage** was the first such study ever to be published in the top American *Science* journal (1955). This publication caused concern among some heart specialists who did not believe that the *low-density lipoprotein cholesterol LDL* was the bad guy, but believed the *total cholesterol* was the bad guy.

Who was right? **Gofman** proposed finding out by studying the blood of thousands of Americans free from **heart disease**. As is often the case in such studies the result was not entirely clear, but it appeared that when *total blood cholesterol* was raised, the cholesterol responsible was *LDL cholesterol*.

**Next month the plot thickens: guinea pigs, suicides, vitamin C, Mars bar, K rations, diet.**