

# in a **Heartbeat...**

ISSUE No. 11

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## From the Director's Desk

Welcome to the latest edition of *In a Heartbeat*. In this issue, there's news of the latest study that offers even more evidence that 'good cholesterol' protects the heart. Read about The Heart Research Institute's Dr Christina Bursill as she explains the importance of small proteins called *chemokines* and examines their role in vascular inflammation. As always, there's a delicious new recipe from *Heart Food – the Healthy Heart Cookbook*, this one for a hearty breakfast.

We hope you take the time to learn about the critically important research that you're helping to make happen.

Enjoy your newsletter... and thank you again for your wonderful support.




Professor Philip Barter

MBBS, PhD, FRACP

Director

The Heart Research Institute

## Our Director **wins** prestigious international award

**Professor Philip Barter** has been recognised for his outstanding contribution to cholesterol research, with the announcement of the European Atherosclerosis Society's prestigious **Anitschkow Award for 2011**. The award recognises Professor Barter's longstanding and significant contribution to atherosclerosis research.

Professor Barter was among the first to describe the activity of cholesterol ester transfer protein (CETP), which controls the exchange of cholesterol between HDL ('good cholesterol') and other types of lipoproteins. These findings have been critical to the understanding of cholesterol regulation in the body and paved the way for therapies designed to slow the development of heart disease.

In announcing the award, the Society said Professor Barter was a dedicated and outstanding scientist with an enduring research interest in heart disease. "Since the 1970s he and his co-workers have repeatedly made pivotal and pioneering contributions enabling us to better understand the metabolism and function of plasma lipoproteins, notably HDL."

The award also recognises Professor Barter's active role in educating and mentoring the next generation of atherosclerosis researchers. It will be presented at the Opening Ceremony of the 79th EAS Congress, Gothenburg, Sweden later this year.

## Team **UPDATE**

### New research unit to focus on little known protein

The Heart Research Institute will this year broaden our research areas, establishing a new research team headed by **Dr Christina Bursill**.

**The Immunobiology Unit** will focus on a previously under-researched area of heart disease – small proteins called chemokines (key contributors to the development of atherosclerosis) and examine their role in vascular inflammation. Dr Bursill said lifestyle issues such as smoking, alcohol, diet and lack of exercise cause damage to vascular cells. Our body produces chemokines when it detects cell damage and their number and level of activity grows in response to this inflammation. Earlier research by Dr Bursill clearly revealed a link between the 'good cholesterol' (HDL) and its capacity to suppress the progression of atherosclerosis by **regulating the activity of chemokines**.

The new Immunobiology Unit will consist of 5 researchers headed up by Dr Bursill, who completed her PhD studies in nutrition

before working as a post-doctoral fellow at Oxford University for 5 years.

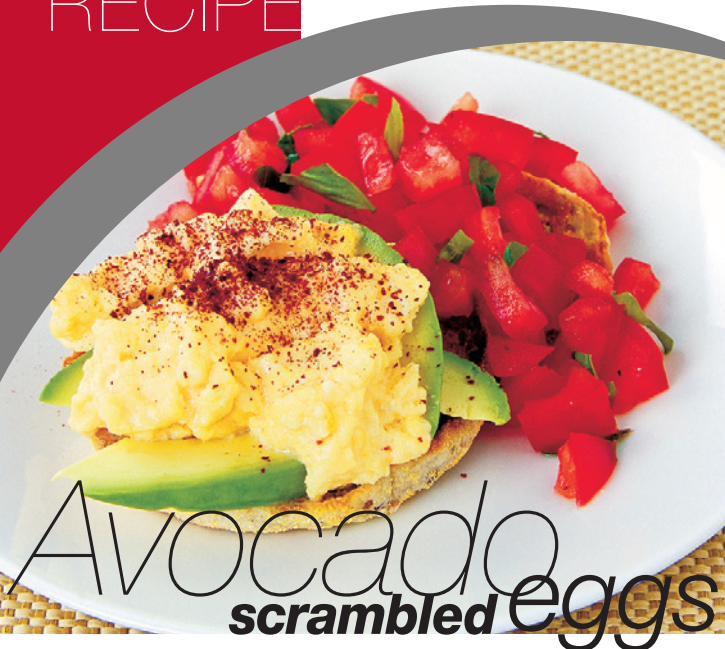
Last year, Dr Bursill was awarded an International Atherosclerosis Society Young Investigator Grant, which allowed her to present her research at the Congress. This annual conference brought together leading HDL researchers and the guest speaker was the President of the European Atherosclerosis Society, Professor John Chapman.

Dr Bursill said: "Chemokines play an important role in inflammation, yet have had little press in the past. Our work will focus on teasing out the important role they play in heart disease. By better understanding their role, **we can hopefully develop chemokine inhibitors**, which could suppress the development of atherosclerosis and associated cardiovascular diseases.

**"This is certainly an up-and-coming, cutting edge area of heart research and we are still in the process of discovering what these proteins do."**

Dr Christina Bursill





# Avocado scrambled eggs

**Ingredients**

- 2 small tomatoes, diced
- 1/2 cup torn basil leaves
- Freshly ground black pepper
- 1/4 cup (60ml/2fl oz) low fat milk
- 1 tablespoon salt-reduced 'margarine' spread
- 2 eggs, lightly beaten
- 2 multigrain English muffins
- 1/4 medium avocado, sliced
- 1/2 – 1 teaspoon paprika

Serves 2 – each serving contains 2 serves of vegetables

**Per serve:**  
 1452 kilojoules (347 calories)  
 15g of protein  
 19g total fat (4g saturated fat)  
 Low GI  
 26g total carbohydrate  
 5g of fibre  
 397mg of sodium

**Directions**

1. Combine the tomatoes, basil and pepper in a small bowl and mix well.
2. Heat the milk and margarine in a small non-stick frying pan.
3. When hot, stir in the egg. Using a spatula, gently lift the egg as it begins to set on the base of the pan. Cook until the egg is just set and still creamy.
4. Meanwhile, split the toasted muffin in half and place on warmed serving plates.
5. Top one half with the tomato and basil and the other half with egg and avocado and serve sprinkled with Paprika.

**HEALTH BEAT**

- People with diabetes may need extra carbohydrates, such as a glass of fruit juice or piece of fruit.
- Try high-omega eggs for additional omega-3 fats that protect the heart, and plant sterol margarine spread to help lower cholesterol.
- Grain muffins are a wholegrain food.

A gift in your will could save millions of lives in the years to come. For more information about this selfless act, we would be happy to send you our FREE booklet – **Time to Reflect**. To receive your copy please email: [legacy@hriuk.org](mailto:legacy@hriuk.org) or for **Legacy information only**, call 0808 234 4009.

If you have an interesting story, perhaps about winning a fight with heart disease, or you have some feedback to the newsletter, please e-mail our editor at [administration@hriuk.org](mailto:administration@hriuk.org)



**More evidence that ‘good cholesterol’ protects the heart**

The benefits of high-density lipoproteins (HDL) – ‘good cholesterol’ – have been further revealed in research recently released by The Heart Research Institute. Published in *Arteriosclerosis, Thrombosis & Vascular Biology*, the research details outcomes of a one-week trial of HDL injections.

“The trial showed that a short-term series of HDL injections was able to reduce the expression of chemokines in the circulation and in atherosclerotic plaques by around 30-40%”, Heart Research Institute senior researcher Dr Christina Bursill said. “Chemokines are key markers for atherosclerosis, which develops because of an accumulation of inflammatory cells in the walls of blood vessels and leads to the formation of plaque that can ultimately block the vessel, causing a heart attack or stroke.”

Dr Bursill said the findings clearly show a link between HDL and its capacity to suppress the progression of atherosclerosis by regulating the activity of chemokines. “Through a series of 5 daily HDL injections, we were able to significantly reduce chemokines in the blood and in atherosclerotic plaques. Clearly HDL plays an important role in protecting the body against atherosclerosis,” said Dr Bursill. “These findings reveal an important role for chemokines in the anti-atherosclerotic and anti-inflammatory effects of HDL.”

This latest research has led to the establishment of a new Research Team here at the Institute to be headed by Dr Bursill. (See accompanying story – *Team Update*)



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