



## CHIEF MEDICAL OFFICER WARNS OF RISING RATES OF PREVENTABLE LIVER DAMAGE

On 15<sup>th</sup> July we are holding a meeting at the Royal Society in London bringing together medical consultants, health managers and policy makers to discuss *The Crisis of Liver Disease in the UK - Alcohol, Obesity and Viral Hepatitis*. Chief Medical Officer for England, Dame Sally Davies, warned in her Annual Report for 2012 that eating too much and drinking too much alcohol are the two major causes of rising rates of liver disease in the UK, with undiagnosed hepatitis B and C being a third factor. She warned that England is facing a rising tide of fatal liver disease but the damage caused by eating and drinking is preventable.

### FATTY LIVER DISEASE

A healthy liver contains little or no fat. The liver processes fats called triglycerides which we get from our diet and which the body needs for energy and growth and releases them as lipoproteins into the bloodstream to circulate through the body. When the secretion of lipoproteins from the liver is interrupted or the flow of triglycerides to the liver is increased, there is a build-up of fat in the liver cells.

It is hard to be precise about how many people have some form of fatty liver disease but it is estimated that one in five people (20%) in the UK are in the early stages of the condition.

**Maintaining a healthy weight, avoiding alcohol for 2 or 3 consecutive days a week and increasing your physical activity will all make for a healthier liver**



Dr Azzura Greco who is heading up the Institute's programme into the Epigenetics of Fatty Liver Disease

**Nonalcoholic fatty liver disease (NAFLD)** is one of the most common causes of chronic liver disease and encompasses a spectrum of disease states ranging from simple steatosis (fatty liver) to hepatocellular carcinoma. These conditions arise from abnormalities in the deposition, accumulation and metabolism of lipids by the cells in the liver. However, the precise pathways regulating these processes and the progression to disease are still unclear.

Epigenetic mechanisms of nuclear chromatin remodeling, such as DNA methylation, post-translational modifications of histones and incorporation of histone variants into the chromatin, are increasingly recognized as crucial factors in the pathophysiology of NAFLD. It has already been shown that the histone variant *macroH2A.1* is involved in lipid metabolism and Dr Azzura Greco and PhD student Christine Podrini are looking at two isoforms, mH2A1.1 and mH2A1.2, with the aim of understanding how they are associated with the development of fatty liver and HCC and how the two isoforms differentially regulate gene expression and lipid metabolism in the liver.



## Raising funds for Liver Research

Congratulations, thanks and a great deal of respect go to Mollie Jager who did a sponsored sky-dive in memory of her cousin Rob Pepper. Rob died from autoimmune liver disease in 2012 aged just 33yrs.

*Thank you Mollie*

## Wing-kin Syn awarded Sir Francis Avery Jones Research Medal 2013

Wing Syn, Head of the Inflammation and Liver Fibrosis Research Group in the Institute, will receive this prestigious award at the British Society of Gastroenterology meeting in Glasgow in June.

## PhD students on target

Puy-Man Choy and Christine Podrini, two PhD students funded by studentships from the Foundation, have both successfully upgraded from MPhil to PhD status. This is a big milestone for them and for us as these are the first PhD students funded by the Foundation in the Institute. Both Puy-Man and Christine have worked very hard and thanks also go to their supervisors Salvatore Papa, Azzura Greco and Shilpa Chokshi.

**Watch our scientists describe their work and how we are tackling liver disease:**  
<http://youtu.be/WArxDxiH1gk> or follow the link on our home page



If you would like to receive further newsletters by email please send an email to us at: [n.day@researchinliver.org.uk](mailto:n.day@researchinliver.org.uk) simply typing 'email newsletter' in the tagline and we will do the rest



*Mollie in the sky*

**1 in 10 people will have a problem with their liver at some point in their life**



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