

## IN THE NEWS

Earlier this month British tennis star Elena Baltacha announced that she has been diagnosed with liver cancer. This comes after the diagnosis at just 19yrs that she suffers from the condition primary sclerosing cholangitis. PSC is a rare condition, affecting about 1 in 16,000 people and Elena was young to be diagnosed and is doubly unfortunately now to be facing one of its most serious complications. We wish her well as she undergoes treatment.

### PRIMARY SCLEROSING CHOLANGITIS: THE FACTS

- **PSC is uncommon - it affects 1 in 16,000. Most people are diagnosed in their 40s**
- **In PSC the bile ducts inside and outside the liver become inflamed (*cholangitis*) causing scarring and thickening (*sclerosis*). The cause is often unknown (it is '*primary*' rather than arising from another condition).**
- **The most common symptoms are feeling generally tired and unwell, weight loss, itchiness and abdominal discomfort. Often sufferers will develop jaundice (yellowing of the eyes and skin).**
- **Doctors will concentrate on alleviating symptoms. Liver transplant may be an option.**

There are two main types of liver cancer, hepatocellular carcinoma (HCC) and the more rare cholangiocarcinoma (CC). Compared to other forms of solid cancers (eg breast), liver cancer is responsive to few chemotherapeutic agents which reflects our lack of knowledge of the key molecular mechanisms underlying cancerous growth. In the healthy state, liver cells undergo a steady cycle of



British tennis star Elena Baltacha, now facing an off-court fight after a diagnosis of liver cancer.

regeneration and replacement but when cancer develops, cells begin to proliferate much more rapidly. Dr Salvatore Papa and his team are trying to understand the action of growth-promoting factors and cytokines which cause this proliferation of normal and malignant cells in the hope that they can identify new targets for treatment.

As with all cancers, the earlier the diagnosis, the better the chances of effective treatment. Dr Wing-kin Syn and his team are looking at a different aspect of cell signaling, specifically a system known as the Hedgehog pathway and a particular protein called osteopontin. Research has shown that the Hedgehog pathway is involved in modulating inflammation and fibrosis, as well as tumour development. Suppression of the Hedgehog pathway has been shown to induce regression of tumours. Dr Syn and team are looking at whether levels of osteopontin could be used as a biomarker of severity and stage of disease.

### **Eureka moments**

Research requires patience and faith that advances, however small, will all add up to real progress. For our scientists, a real marker that they are making progress is having their work reviewed by scientific colleagues and judged worthy of publication. Dr Shilpa Chokshi and team have had three papers accepted for publication this month. The team is focusing on viral hepatitis B and C and in particular, the mechanisms of spontaneous clearance of viral infection and how the body's immune system can be boosted in those patients who do not clear the infection.

### **Please consider a donation**

Along with patience, research needs funding. Mary Woodard Lasker, a well-known American champion of medical research, once said: "*If you think research is expensive, try disease!*" The cost of treating liver disease is currently estimated at £55billion a year in England and £7billion in Scotland. In these times of austerity we should economise – please consider a donation.

**Watch our scientists describe their work and how we are tackling liver disease:**

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*New arrival:  
Dr Valeria  
Iansante, post  
doc scientist  
in Dr Papa's  
Cell Signaling  
group, with  
baby Nicole  
who arrived  
in February*

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



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