

## Profile

### Giada Sebastiani: a leading voice on liver fibrosis



Giada Sebastiani has always believed that unless something is actually impossible, then with enough self-belief it can be achieved. Her motto is “Never, never give up”. Born and raised in the mainland part of Venice, Italy, she chose medicine to ask and answer questions with science and satisfy her philanthropic need to help others. “I saw that medicine would fit all these tendencies”, Sebastiani tells *The Lancet Gastroenterology & Hepatology*. Today, she is a hepatologist and the Research Director of the Division of Gastroenterology and Hepatology at McGill University Health Centre in Montreal, Canada, where her principal focus is non-alcoholic fatty liver disease (NAFLD) and non-invasive diagnosis of liver disease.

She studied medicine at the University of Padua, Padua, Italy, and immediately found herself fascinated by the liver and infectious diseases. “The liver is unique because it forgives insults, and it regenerates”, she explains. Longing to see the world, she took fellowships at London’s Royal Free Hospital, London, UK, and Centre Hospitalier Universitaire de Bordeaux, Bordeaux, France, where she worked with mentor Laurent Castera, who would build her knowledge on non-invasive liver testing. She then returned to Padua and spent 2 years working in emergency medicine. But both she and her husband Kostas Pantopoulos, a Greek biochemist, were hungry for opportunities elsewhere. They moved to Canada when Kostas obtained a position at Jewish General Hospital, Montreal, Canada (affiliated to McGill University). While Sebastiani had no connections there it did not stop her. “Doing research is like keeping a fire burning”, she explains. “If you don’t give it oxygen, it will die.”

After learning French while pregnant with one their two children, she sent her CV to hospital leaders and against the odds, was awarded a position at McGill University. Forever grateful for the opportunity, Sebastiani has given back her time in clinical, academic, and teaching activities. During her 10 years at McGill, she has mentored 36 research trainees, and is also part of a mentorship programme for other women in medicine.

For the past decade, Sebastiani has led the hepatology research programme at McGill, building a cross-disciplinary research programme and testing screening and interventional strategies for NAFLD and liver fibrosis, involving collaborations across 14 countries. In 2018, she co-founded the Canadian NASH Network, which researches NAFLD, and with whom she published a landmark study showing NAFLD prevalence is likely to increase by 20% in Canada by 2030.

“Due to increasing obesity and type 2 diabetes, NAFLD is the most common liver disease globally, affecting 25% of the general adult population and resulting in cirrhosis and

early death in serious cases”, she explains. Ultimately, liver transplantation is the only cure for the worst cases, and Sebastiani is very concerned we are accelerating towards a critical mass of serious NAFLD cases. “Liver transplantation will become ever more restricted due to the increasing waiting list”, she explains. Cases of cirrhosis, liver cancer, and liver transplants due to NAFLD are set to double by 2030 in Canada and the USA, and the already acute liver donor shortage will become intense.

Central to her team’s work is the pioneering use of FibroScan technology and serum biomarkers to non-invasively detect and stage NAFLD. Together these mean that 85% of liver biopsies could be avoided. While Sebastiani knows that population screening for NAFLD is not feasible, she explains “we must focus our attention on those at highest risk”. This includes people with type 2 diabetes and obesity, but also people with HIV, inflammatory bowel disease, and polycystic ovary syndrome.

Sebastiani is a leader in liver disease in HIV and established the liver disease in HIV (LIVEHIV) cohort in 2014, which follows almost 1000 people with HIV. NAFLD in people with HIV is of epidemic proportions at 35% globally, double that found in the general Canadian population. “Many people with HIV are aged more than 50 years and experienced earlier toxic antiretroviral medications and decades of persistent low grade systemic inflammation associated with the virus”, she explains. Her team [published research](#) showing 6-month treatment with the antioxidant vitamin E is safe and effective for NAFLD in people with HIV.

Diet and exercise are the main treatments for NAFLD, with a 10% body weight loss able to reduce liver scarring for many people. In recent years, more antifibrotic compounds have been approved or are in development. She explains interest in new drugs for NAFLD has only accelerated recently, probably related to the sheer number of people affected.

The public remains unfamiliar with NAFLD and most cases are undiagnosed. “We only see this silent killer in the worst cases”, she explains. “We need to provide screening tools so that every endocrinologist and general practitioner can recognise someone at increased risk and refer them for blood tests. Only one in five [people] will need to see a specialist like myself.” The wider problem of unhealthy diets and lack of physical activity must be tackled at societal level, beginning in early life so children develop healthy habits that stop NAFLD developing.

Tony Kirby



For more on **vitamin E in people with HIV** see *AIDS* 2020; **34**: 237–44