For a **carbon-offset programme** see https://thepointsguy.com/guide/a-guide-to-airline-carbon-offset-programs/

For more on **reducing the footprint of academic travel** see www.flyingless.org

changes. We face growing problems that affect healthcare in new and pervasive ways. Climate change is a crucial new concern with which we, as clinicians, must engage.

Air travel might be our biggest contribution to carbon emissions. We have estimated that the total carbon emissions for a typical year of conference travel of the four of us is 22·5 tonnes (ie, ranging from a 22% to 96% excess over the average annual carbon emissions per person). But conferences are important because of formal learning, off-line meetings that drive science forward, and peer conversations that improve practice around the world. Moreover, the value of face-to-face contact is undoubted. Such events also generate organisational income. We need to establish their cost-effectiveness and value, and factor them into calculations of carbon cost and environmental impact.

We estimated the carbon emissions due to travel of the approximately 3200 participants at a recent international epilepsy conference to be 2000 tonnes of carbon dioxide. Many conferences are substantially bigger than a typical epilepsy conference but, even if they were similar, travel to the about 1500 medical meetings that are organised each year would alone result in 3 million tonnes of carbon dioxide being emitted annually, which is equivalent to the total annual emissions of Madagascar (population 25 million). Madagascar has been identified by the World Bank as a country being particularly vulnerable to climate change. Is this equitable? How can fairness in this context be calculated? We need more data and advances in technology to bring people together virtually, but with the same warmth and social nuances of personal meetings (calculating the relative environmental costs of such technology also). In the interim, carbon offset programmes exist but, to make a real difference, we should consider flying less.

Climate change is happening and, from the perspective of attempting to provide holistic healthcare, it will affect both our patients and our profession at many levels. If there are steps we can take that might make a difference—and might help to prevent consequences for people with epilepsy—we should take them. As many have pointed out before: "There can be no Plan B, because there is no planet B". We cannot stay idle whilst the temperature rises.

*Sanjay M Sisodiya, Ingrid E Scheffer, Daniel H Lowenstein, Samantha L Free*

# Lifeline

For more on **LEADS** see https://leads-study.medicine.iu.edu/

**Liana Apostolova** is a neurologist with a special interest in cognitive disorders and Alzheimer's disease research. She is the Barbara and Peer Baekgaard Professor of Alzheimer's Disease Research at Indiana University School of Medicine (Indianapolis, IN, USA). Her research focuses on the early stages of Alzheimer's disease, including the development of imaging and genetic biomarkers, and on early onset of the disorder.

**What has been the greatest achievement of your career?**
The successful launch of the multi-site Longitudinal Early-Onset AD Study (LEADS) focused on a rare form of Alzheimer's disease that affects middle-aged individuals. The impact of Alzheimer's disease on these young patients and their families is particularly devastating as they are often gainfully employed, raising families, and not ready to retire.

**What inspires you?**
My two biggest inspirations are all questions that remain unanswered after many decades of research into Alzheimer's disease and the need for a cure.

**If you wrote an autobiography, what would be the title?**
*Living the American Dream*. I am a foreign medical graduate and am so thankful that I was given the opportunity to direct such a large scale multi-site scientific project as LEADS. I never imagined I would be able to breathe life into such an impactful project.

**How would you improve the public's understanding of research?**
I would love to be able to teach each and every person that working together is the only way to succeed in eradicating human disease and suffering. Everyone can make a difference—by volunteering for research studies; raising awareness by speaking of their own experiences as a patient, caregiver, or even observer; and donating their time or providing philanthropic support for research into health conditions that have touched their lives or for a cause that inspires them.

**What one discovery or invention would most improve your life?**
Having the latest and greatest scientific and technological achievements readily available in clinical practice would be a game changer for physicians. Such access would make a difference in our ability to accurately diagnose and treat our patients. In the Alzheimer's disease field we have imaging technology that allows the detection of amyloid plaques in the living human brain, but the lack of insurance coverage makes it impossible for us to implement it.

**If you were Bill Gates, how would you spend your fortune?**
I think Bill Gates needs no lessons in how to enable science or strive for eliminating poverty, hunger, and deadly diseases. His very recent philanthropic efforts directed to Alzheimer's disease research prove he truly appreciates the need to prioritise diseases that have a global impact.