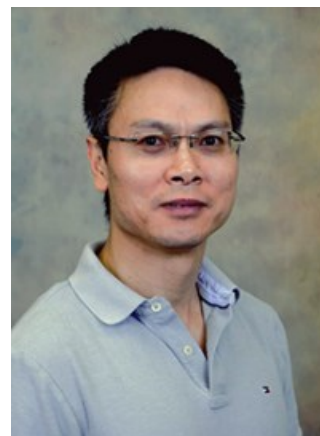


Meet Dr. Da-Ting Lin, a Green Champion Award Winner!

This month, we are highlighting an individual that uses green practices in his daily routine, Dr. Da-Ting Lin. Dr. Lin works in the National Institute on Drug Abuse (NIDA) on the Bayview campus in Baltimore, MD. While serving as the Chief of the Neural Engineering Unit, his main research focus has been developing and applying in vivo optical imaging methods and computational methods to investigate the link between neuronal circuit dysfunction and the development of long term drug addiction and relapse.



Dr. Lin has been previously recognized with a 2016 HHS Green Champion award for his development of the miniScope, which incorporates sustainability practices into in vivo optical imaging techniques. The

miniScope imaging system provides vital research information by allowing simultaneous recording of the



A picture of Dr. Lin's miniScope

activity of hundreds of neurons in the deep brain regions of freely moving animals. However, the miniScope also incorporates many sustainability principles. One example of this is the energy efficiency gained by replacing traditional lights with LED lights. Dr. Lin actively promotes in-lab development of custom equipment, which typically cost less than stock equipment, can be built to emphasize efficiency, and have parts that can be recycled or reused when no longer needed. A few examples of custom equipment Dr. Lin has created for his lab are robotic surgical instruments, an animal behavioral testing apparatus, two-photon imaging equipment, a total internal reflection microscope, and a super-resolution microscope.

Dr. Lin uses other green practices in his lab as well. His lab uses LED light sources for fluorescent excitation instead of traditional mercury light sources for routine microscopy. This alternative minimizes the use of the toxic substance mercury and has the added bonus of increased energy efficiency. The lab also uses non-toxic DNA dyes for visualizing DNA in gel rather than using carcinogenic dyes.

This is a great example of minimizing the use of toxic materials whenever a non-toxic alternative is available. Finally, Dr. Lin's lab makes an effort to minimize the use of paper and to promote the use of digital record keeping. A digital record conserves resources, allows for better backup of data and requires less space. We encourage all labs at NIH to follow Dr. Lin's example and start utilizing green practices in your daily activities!