杨一鸿（Yihong Yang），美国国家卫生研究院(NIH)高级研究员，国家药物成瘾研究所(NIDA)磁共振影像与频谱部主任。1995 年获得美国伊里诺大学博士学位，师从 MRI 发明者、诺贝尔奖得主劳特伯（Lauterbur)教授。1995 年至 1998 年任 NIH 博士后, 1998 年至 2002 年任美国康奈尔大学助理教授。2002 年至今，分别任 NIH 研究员、终身高级研究员。主要从事 MRI 技术研究与在药物成瘾方面的应用。已在国际主流期刊发表学术论文 120 多篇，包括国际顶级期刊 PNAS 8 篇, Neuron, JAMA Psychiatry, American Journal of Psychiatry, Journal of Neuroscience 等多篇, 并且合著 MRI 专著 7 部。多年参与美国 NIH、英国 MRC、中国 NSFC 基金的评审。

Positions:
Senior Investigator of NIH
Chief of Magnetic Resonance Imaging and Spectroscopy Section, NIDA, NIH

Research directions:
The overall goal is to develop advanced functional and structural magnetic resonance imaging/spectroscopy techniques and to evaluate their potentials in drug addiction applications.

Specifically, we have been developing functional magnetic resonance imaging (fMRI) techniques to measure evoked and resting activity of the brain. In resting state fMRI, new acquisition and analysis strategies are developed to assess alterations of brain circuitries in brain disorders, particularly in drug addiction.

We are investigating diffusion tensor imaging (DTI) and beyond DTI techniques to assess tissue integrity related to brain dysfunctions. Novel image registration methods based on implicit reference are developed for more accurate group analysis of diffusion images. We are also developing voxel-wise methods to evaluate structural changes in the brain and evaluating these methods in substance abuse populations.

We have been developing magnetic resonance spectroscopy (MRS) techniques to measure metabolite and neurotransmitter concentrations in the brain. Particular focus is the detection and quantification of glutamate, glutamine, and GABA levels in the brain.

We are assessing underlying neuronal mechanisms of resting-state fMRI signals using animal models. Electrophysiological and fMRI signals from the rat brain are integrated to reveal the neuronal origins of the resting fMRI signal.

Publications:
http://www.ncbi.nlm.nih.gov/pubmed/?term=yihong+yang

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