

ISMRM Workshop on:

MR Imaging of ⁿX-Nuclei (²³Na & Friends): From Controversies to Potential Clinical Applications



Dubrovnik, Croatia • 07–10 April 2018

TARGET AUDIENCE:

The goal is to bring together our community of experienced researchers and newcomers, both basic scientists and physicians, who are interested or engaged in developing and using non-proton X-nuclei MR imaging.

OVERVIEW

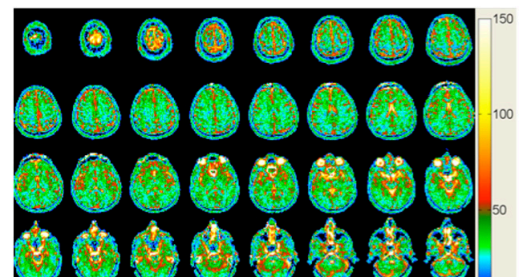
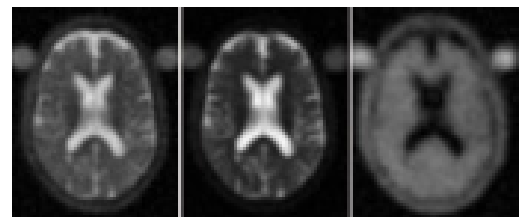
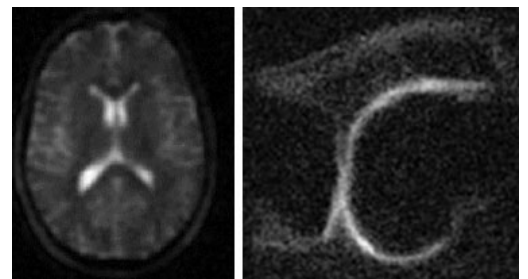
This workshop will cover the latest technical advances and potential clinical applications in X-nuclei imaging (i.e., there is more to MRI than hydrogen, ¹H) using ²³Na (sodium) as an example. We expect that such discussions will be informative for imaging of other X-nuclei as there are often many methodological similarities given low concentrations, complex spin dynamics when spin > 1/2, unique relaxation characteristics necessitating different k-space trajectories, need for custom RF coils (usually at high field), and last but not least issues of absolute quantification. The new biochemical information available from imaging X-nuclei linked to metabolism can address in a novel way several clinical questions affecting both the brain and body. The workshop will feature invited presentations to review the technical state of the art and initiate discussion, as well as poster sessions for attendees to present their latest research. There will also be industry discussion to promote integration of scientific advancements and “best practice” methods for clinical studies across multiple MRI vendors.

Note that spectroscopy and hyperpolarization methods are excluded from this workshop as these topics are covered by other ISMRM study groups.

EDUCATIONAL OBJECTIVES

Upon completion of this activity, participants should be able to:

- Recognize the controversies and challenges of imaging X-nuclei;
- Outline choices in hardware and acquisition methods for imaging X-nuclei;
- Discuss current and potential applications in human disease; and
- Predict future research and clinical needs for human applications of X-nuclei MRI.

**COMMITTEE CHAIR**

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HOUSING & REGISTRATION, PLEASE VISIT:
www.ismrm.org/workshops/2018/XNuclei/
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