

- ❖ **Name & Designation** : Dr. Kavita Singh, Ph.D Student
- ❖ **Address** : Institute of Nuclear Medicine & Allied Sciences Defence  
Research and Development Organisation, Brig  
SK Mazumdar Marg, Delhi-110054
- ❖ **Name of the International Conference/ Seminar/Symposium/ Workshop** : Joint Annual Meeting ISMRM-ESMRMB-2014.
- ❖ **Title of the abstract accepted** : Demonstration of Differentially degenerated corpus callosum  
in patients with moderate traumatic brain Injury: With a  
premise of cortical callosal relationship.  
Publ-2 +2 under revision
- ❖ **Venue & Date** : Milano, Italy, 10-16th May 2014.
- ❖ **Money sanctioned** : ₹ 70,938/-
- ❖ **Money reimbursed** : ₹ 75,478/- (Due to hike the fare of air travel an  
❖ **additional ₹ 4,540/- were sanctioned)**

### Participation Report

The International Society for Magnetic Resonance in Medicine is a nonprofit professional association dedicated to promoting communication, research, development and application of magnetic resonance techniques in medicine and biology. The Society presents annual meetings and sponsors other major educational and scientific workshops. It is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. It is a community made up of clinicians, physicists, engineers, biochemists, and technologists- professionals united by a common interest in the ongoing dialogue between the scientific and clinical communities. The basic objectives of the community are:

- Bridge the gap between the clinical and scientific communities.
- Foster research and development in basic and clinical MR science and its application to healthcare.
- Provide international forums for MR science in medicine, biology, and other industry hot topics.
- Promote communication and understanding about cutting-edge MR developments.
- Provide educational channels and other opportunities for continuing medical education credits.
- Publish two journals as well as proceedings and syllabi from premier scientific and clinical events.

ISMRM comprises over 8,000 professionals from 58 countries, including academics, researchers and clinicians, private practitioners, regulatory and governmental agencies, and representatives from related industries. ISMRM publishes Magnetic Resonance in Medicine (MRM) and the Journal of Magnetic Resonance Imaging (JMRI), two outstanding publications that are valued industry resources.

## **Academic Highlights of the Conference**

### **New Developments presented in the Conference**

The Joint Annual Meeting ISMRM Meeting was held in Milan, Italy, 19-16 May 2014. The motto of this conference was 'Fashioning MR to Improve Global Healthcare'. ISMRM 2014 is world's leading platform devoted to facilitating a robust exchange of ideas, reflection and collaboration of expertise in the field of imaging and its related disciplines.

There were some presentations by international speakers which have focused on the latest developments in the diagnosis, research and treatments in traumatic brain injuries. It also focused on the improvement of treatment through neurofeed in the scanner at the time of imaging.

This conference presents a comprehensive and wide-ranging programme with varied educational formats including educational lectures, Plenary Lectures, State of the Art Lectures, CME courses, Pro & Con debates, Symposia, Workshops, oral presentations, Posters and electronic Posters, Sponsored Sessions and a up close and personal sessions with the real experts from the field. All this has been really very helpful for me to improve my study. The plenary lectures delivered by leading radiologists basic scientists and other professionals have a strong scientific focus which involved mainly theoretical and research-oriented approach.

#### ***Sessions included:***

- Preclinical Cancer Imaging
- MRI of Sports Related Injuries
- Advanced Diffusion Acquisition
- Cardiac Function, Perfusion & Tissue Characterization
- Technical Advances in Cardiovascular Imaging
- Perfusion and Ultra-High Magnetic Field Diffusion, Perfusion & Functional MRI
- RF Engineering: Coils, Imaging Acquisition & Reconstruction,

### **New development resulting from the conference**

The exposures of meeting have given me an opportunity to learn about recent techniques and development in our field of interest. As I am working on traumatic brain injury using advanced MR Imaging techniques such as in-vivo multinuclear spectroscopy, perfusion imaging, diffusion tensor imaging (DTI), voxel based morphometry (VBM) and T2 Relaxometry. There were some lectures which provide knowledge of application of MR Imaging in several brain disorders. In some plenary lectures, we learned how a changing world is leading us to adapt MR, whether it is the challenge to redefine what a scanner looks and feels like as we broaden MR's scope across applications, across technologies, and across continents, or it is the promise to scan faster than we had ever thought possible as we embrace the powerful new theories of compressed sensing. Also we learned about the power of this modality for assessing the microstructure of in-vivo tissue in health and disease, how MRI is transforming our understanding and treatment of traumatic injuries, and how surgical treatment is being radically changed under the guidance of an MR scanner.

As my field of interest is assessment of metabolic and cognitive impairments in traumatic brain injuries using advanced imaging techniques such as in-vivo multinuclear spectroscopy, perfusion imaging, diffusion tensor imaging (DTI), voxel based morphometry (VBM) and T2 Relaxometry, so there were several presentations which provide knowledge how to correlate clinical data of patients with data of different imaging techniques. They have also shown some recent studies to investigate metabolic, functional and morphological aberrations in injuries using different MR techniques such as MRS (to look for the metabolic changes in TBI patients in comparison to the controls in vivo as well as in vitro) and VBM (to look for white and gray matter changes in diseased vs. controls).

By presenting my work as oral presentation and receiving "ISMRM Merit award-magna cum laude award" at such level, I have got a great opportunity to interact with scientists and researchers of international repute with their views and suggestions about my work. The exposure of meeting has given me an opportunity to learn about recent techniques and development in my field of interest. The conference sessions and lectures will certainly be helpful in building up new concepts and ideas for carrying out my future research work more streamlined and focused with better outputs.

### **Participant's contribution to the conference**

The ISMRM 2014 Meeting was held in Milan, Italy, 10-16 May 2014. ISMRM meeting is held annually and is attended by all scientists, clinicians, researchers from reputed institutes