



## Special Seminar

# Structural genomics and its applicability to structural biology

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Over the past 7 years, the Joint Centre for Structural Genomics ([www.jcsg.org](http://www.jcsg.org)) has developed various methodologies and technologies and assembled a high throughput (HT) production pipeline for all steps from target selection, cloning, expression, crystallization to structure determination. As one of the 4 NIH PSI production centers, we have focused on large Pfam families without structural coverage, as well as on proposing and validating new protein families, that have recently been added to Pfam.

Our biomedical theme project revolves around The Central Machinery of Life, and proteins that are conserved in all kingdoms of life. New and exciting projects in our target portfolio are focused on metagenomes, in particular, the Global Ocean Sampling (GOS) and the human gut microbiome. To date, we have processed over 11,000 targets, solved over 435 structures and deposited over 405 in the PDB.

As a result of processing such a large number and variety of targets through our HT pipeline, we have been able to test and validate various strategies to increase efficiency, improve yield, and lower cost per structure, that include multiple salvage pathways. Many of these advances in HT structural biology can easily be implemented on a smaller scale in individual structural biology labs.

**2 pm, Monday 23<sup>rd</sup> July**

**Tea Room, level 4**

**School of Molecular and Microbial Biosciences**

**University of Sydney**

For more details, visit the SPG website:

<http://www.mmb.usyd.edu.au/spg/>