# Tentative Outline

## Special Thematic Issue for Current Stem Cell Research & Therapy

### Applications of Raman spectroscopy technology for stem cells analysis

***Guest Editors: Guannan Chen and Duo Lin***

**Aims & Scope:**

Stem cell plays a significant role in tissue engineering field such as regenerative medical therapy, due to its inherent nature of being a reliable cell source for providing grafts to replace diseased tissues and organs. It is imperative clinical value to qualify cell and monitor the differentiation state of cell by fast and sensitive detection technology. Raman spectroscopy technology is an optical analytical method, and is capable of providing 'fingerprint' biochemical information of cells at even single molecule. Subtle changes associated with differentiated stem cell therefore can be immediately presented and read out by Raman spectroscopy, which offers an alternative strategy for stem cell analysis. This special issue from Current Stem Cell Research and Therapy examines applications of Raman spectroscopy technology for stem cells analysis. It invites high-quality papers describing the detection of molecular properties of stem cells during differentiation process.

**Keywords:** Stem cell; Raman spectroscopy; Spectral analysis; Cell imaging

**Subtopics:**

The subtopics to be covered within this issue are listed below:

- Assessment of differentiation status of neuro-progenitor stem cells by Raman spectroscopy
- Time- and spatially-resolved monitoring of mineralisation of bone nodules in-vitro by Raman spectroscopy
- Monitoring cardiac differentiation of human embryonic stem cells by Raman spectroscopy

**Schedule:**

- Manuscript submission deadline: April 30th, 2018
- Peer Review Due: June 1st, 2018
- Revision Due: August 1st, 2018
- Announcement of acceptance by the Guest Editors: September 1st, 2018
- Final manuscripts due: January 1st, 2019

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