

3D Cell Culture, Drug Screening and Optimization

By JBS Guest Editors Richard Eglen, PhD (Corning Life Sciences) and Jean-Louis Klein, PhD (GlaxoSmithKline)

The Journal of Biomolecular Screening (JBS) invites the submission of abstracts on topics related to **3D cell culture** for publication in a 2017 special issue. Abstract proposals will be used to select and invite papers for review and consideration. JBS is looking for high-quality, short or full length research papers, reviews and perspective articles related to all aspects of 3D culture. Areas of interest include but are not limited to:

- Comparative gene expression, protein function and physiology of immortalized and primary cells in 2D vs. 3D cell culture
- Comparative pharmacology of compound screening in 2D vs 3D cell culture methods
- Evaluation of cell differentiation, growth and motility, and their modulation by novel small molecules and biologics, in 2D vs. 3D cell culture systems
- Optimizing matrices and scaffolds for 3D culture and screening
- Optimization of assay reagents and protocols for 3D compound screening and lead optimization
- Applications of gene editing technologies to 3D cell culture
- Uses of stem cells and iPS cells in 3D cell culture for compound screening
- Applications of 3D cell culture to primary cell-based screening
- Use of 3D cell culture in co-culture approaches to drug screening and compound optimization
- Use of 3D cell culture in cellular imaging and high-content screening
- Use of 3D cell culture in phenotypic screening, and comparison with 2D approaches
- In vivo 3D models of cellular metabolism, particularly cancer cells, neuronal cells, hepatocytes and cardiomyocytes
- New technologies to monitor tumor formation and modulation in vitro using 3D culture methodology
- Organoid culture methods for use in target identification, compound screening and optimization
- Organ-on-a-chip microfluidic technologies to evaluate drug toxicity and metabolic liability
- Novel techniques measuring live cell activities in 3D systems

Submit your abstract before June 1, 2016

1. Submit a title and abstract (up to 500 words) as an MSWord document/attachment to nhallock@slas.org. Please refer to the JBS Instructions for Authors at www.slas.org/publications/scientific-journals/author-instructions.

2. Include “JBS Special Issue / 3DCELL” in the subject line of your e-mail.

3. Include your name, affiliation and contact info in the text of the e-mail and in your MSWord document.

Invited authors will be notified by **June 10, 2016**. Final manuscripts and related materials will need to be completed and submitted by **Oct. 1, 2016**. All submitted articles will be subject to peer-review to ensure scientific rigor, clarity of expression and integration with other contributions in the JBS Special Issue. Submissions from SLAS members and nonmembers are welcome. **Questions?** Please e-mail nhallock@slas.org or call +1.630.256.7527, ext. 106.