



Expert UK-based CRO offering customised bioassay development, pharmacological profiling and compound screening

### Welcome to the latest edition of our newsletter

Here is a snapshot of what has been happening at Aurelia Bioscience in the last quarter:

### New video: Poster on 3D cell culture technology

Watch this video to learn more about our poster on ‘Magnetic Electrospun Micro-fibre Scaffold Assemblies: Examples of their use for 3-Dimensional Cell-Based Screening Applications’ that we presented at the World Pharma Week in Boston this year: <https://youtu.be/TiqY2QD6vPo>

Follow us on YouTube for more videos: [https://www.youtube.com/channel/UCCM8RB3EwMh3T4lingB\\_oMw](https://www.youtube.com/channel/UCCM8RB3EwMh3T4lingB_oMw)

**iPSC's Differentiated to Cortical Neurones on Electrospun Scaffold**

Cells (A) isolated from human or animal or iPSC's derived are dispensed in high concentration and small volume from a Mantis dispenser (B) on to a sheet of scaffold material (C) in a well plate pitch (9mm = 96 well, 4.5mm = 384 well), then cultured in a petri dish (D) to allow cells to differentiate and mature. 'Plugged' scaffolds containing cells are extracted (E) into 'assay-ready' plates (F).

**A** Brightfield 10 X  
**B** FoxG1 (R) /PAX6 (G) 20 X  
**C** Tubulin (G) 20 X

Partially differentiated neuro-ectoderm cells were purchased as a cryo-preserved stock and loaded on to 1mm scaffold discs in 384 well plates. Once adhered to scaffolds, differentiation media was changed every two days for 40 days, during which time the cells differentiated into cortical neurones. Cells were fixed while on scaffolds then probed with fluorescence tagged antibodies to Fox-G1 (B), Pax-6 (B), Tubulin (C) and Ctip-2 (C) to identify nature cortical neurones. Scaffolds were imaged in widefield using a CX-5 imager in 10x brightfield (A) and 20x fluorescence (B, C). Nuclei were stained with Hoechst (blue). In other samples, proteins were isolated from cells on scaffolds, run in Western Blotting (D) - (WES – Protein Simple instrument) and probed with antibodies to Pax-6 and Ctip-2 – shown in E are Western blots of protein isolated 14 day post culture in differentiation media showing markers of mature cortical neurones (E).

**D** Western Blotting instrument  
**E** Western blots for PAX-6 and Ctip-2

## European Simple WESTern User meeting

Our scientists attended the 'European Simple Western User' meeting in Abingdon this month and shared our experience of using WES: Western Assay System with other delegates. Our Chief Scientific Officer's talk on 'Examples of WES use in a Contract Research Organisation: Detection of phosphorylation using immuno pull-downs and the use of WES for PROtein Targeted Chimeric (PROTAC) assays' was well received and generated a lot of interest in the audience. Follow the link to learn more about WES: <https://www.aureliabio.com/specialised-technologies/wes/>

**aurelia**  
bioscience  
bioassays + screening

# WESTern Blotting

taking you beyond the scopes of traditional Western Blotting

"helping you discover the next breakthrough drug"

Examine the effects of your compounds on protein expression and phosphorylation in cells

Wes by ProteinSimple

- Highly reproducible
- Sensitive
- Higher throughput

Applications include: ● PROTAC ● Protein expression

GET IN TOUCH WITH US

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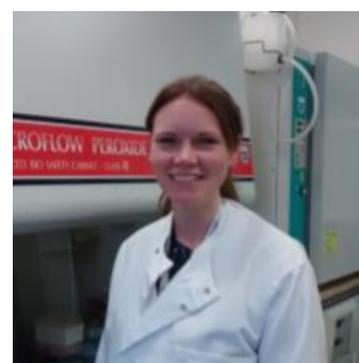
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Immunoassay detection

## Scientist's profile: Dr. Alison Gordon

Alison is one of the Senior Research Scientists at Aurelia Bioscience, responsible for handling client projects as well as working on in-house R&D such as 3-dimensional spheroids and scaffolds. With a strong background in Medical Biochemistry, her doctoral research revolved around investigating the molecular pharmacology of agonist-stimulated beta-arrestin-receptor interactions. Before joining Aurelia, Alison worked for a number of biotechnology and pharmaceutical companies, including GSK. An expert at High Content Imaging, she loves working in different research areas and exploring



new techniques. She enjoys being involved in the client's drug discovery journey and wishes she could find out what happens beyond her part in the project. Her passion for biology is not just restricted to the workplace, as she encourages her kids to do science projects at home and actively supports science in local schools as well.

"We are a small family of like-minded people working together to push forward the boundaries of drug discovery. I like to think that our contribution to the process has an effect, however small, on improving the lives of people who are suffering with various diseases.", says Alison on completing four years at Aurelia Bioscience.

### **Discovery on Target conference: Boston, USA**

Our Chief Scientific Officer, Gary Allenby and Marketing Manager, Payash Bahuguna represented Aurelia Bioscience at 'CHI: Discovery on Target' conference in Boston, USA in September. The conference featured advances in current and emerging 'hot' targets and technologies, including target validation strategies for the discovery and development of novel therapeutic agents, ranging from biologics to small molecules.



### **Upcoming events**

Catch us at the following events next quarter:

- **ELRIG Drug Discovery 2019:** Liverpool, UK • November 5-6
- **SLAS 2020:** San Diego, USA • January 25-29

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