



## LASA WINTER MEETING



25th - 27th November 2015

from zebrafish embryos. This serves to further the development of high throughput recording technologies, and to demonstrate the use of pre-feeding stage larvae for detection of cardiac dysfunction by ECG recording.

### **What happens when a new Class of animal becomes regulated? Challenges and lessons arising from the inclusion of cephalopods in Directive 2010/63/EU**

*Prof Paul. L.R. Andrews, Division of Biomedical Sciences, St George's University, London and Association for Cephalopod Research CephRes, Naples, Italy.*

With the phrase “live cephalopods” the European Commission brought an entire new Class of more than 700 known species within the regulations covering research and education using living animals in the EU. The cephalopods most commonly used for research within the EU are native coleoid species such as *Octopus vulgaris*, the cuttlefish *Sepia officinalis*, the squid *Loligo vulgaris* and occasionally the imported nautiloid *Nautlius pompilius*. Cephalopods have been variously described as a higher, advanced, exceptional or cleverest invertebrate. Although a single species of cephalopod, *Octopus vulgaris*, was included in the UK regulations from 1993, the inclusion of cephalopods in Directive 2010/63/EU from January 2013 is the first time since the introduction of legislation in European countries in the late 19th Century that an entire Class of animal has been brought within regulation. By using the phrase “live cephalopod” the Directive includes cephalopods from the point of hatching and this raises specific challenges for statistical returns and recognition of pain, suffering, distress and lasting harm (PSDLH) because for example the paralarvae of *Octopus vulgaris* are <2mm long and weigh a fraction of a gram.

In this lecture I will cover the following topics:

1. A very brief introduction to cephalopods, their biology (e.g. the coleoids have three hearts) and research uses;
2. Why were cephalopods included in the Directive? Summary of the EFSA 2005 panel findings in the light of new data,
3. How did the cephalopod research community respond to the Directive?
4. Development of Guidelines for Care and Welfare of cephalopods in the laboratory-the FELASA, CephRes and Boyd Group initiative: Practical implications for research post-Directive;
5. Determining the threshold for regulation and severity of procedures;
6. Implications of the Directive for cephalopod research research both within and outside the EU;
7. Wider lessons from the “cephalopod Directive” experience.

The publication of Guidelines for the Care and Welfare of Cephalopods within 3 years of the Directive represents a milestone for cephalopod research. Work is continuing within COST Action FA1301 ([http://www.cost.eu/COST\\_Actions/fa/FA1301](http://www.cost.eu/COST_Actions/fa/FA1301)) to further develop objective criteria for PSDLH, severity assessment and monitoring welfare.