

# Provisional Programme



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Federal Department of Home Affairs FDHA  
Federal Food Safety and  
Veterinary Office FSVO

## 4<sup>th</sup> FSVO/UFAW Symposium Humanely ending the lives of animals 6-7 March 2024



### Wednesday 6 March

All timings are GMT+1 / CET

- 08:30 – 09:15**      **Registration and poster set-up**
- 09:15 – 09:25**      **Welcome and Introduction:** *Martin Reist (FSVO, Switzerland)*
- 09:25 – 11:20**      **Session One: Animals in Research**  
Chair: *Patricia Turner (Charles River Laboratories & University of Guelph, Canada)*
- 09:25 – 09:45**      **Invited speaker:** *Patricia Turner (Charles River Laboratories & University of Guelph, Canada)*
- 09:45 – 10:05**      **Humanely ending the life of laboratory rats**  
*Charlotte Calvet (University of Zurich, Switzerland)*
- 10:05 – 10:25**      **Neurophysiological monitoring of the dying brain: the welfare consequences of hypobaric hypoxia and hypercapnic hypoxia in laboratory mice**  
*Jasmine Clarkson (Newcastle University, UK)*
- 10:25 – 10:50**      **Short talks:**
- Refining the drop method for isoflurane induction in mice**  
*Maya Bodnar (University of British Columbia, Canada)*
- Etomidate Effectively Euthanizes Zebrafish (*Danio rerio*)**  
*Kenzie Schwartz (Stanford University, USA)*
- 10:50 – 11:20**      **Q&A / discussion time for Session One topics**
- 11:20 – 11:50**      **Break**
- 11:50 – 13:00**      **Session Two: Humane control of ‘Pests’ / Schädlinge**  
Chair: *Huw Golledge (UFAW, UK)*
- 11:50 – 12:00**      **Introduction to session:** *Huw Golledge (UFAW, UK)*
- 12:00 – 12:20**      **Incorporating animal welfare into pathways for developing selective toxins for control of introduced animals**  
*Ngaio Beausoleil (Massey University, New Zealand)*
- 12:20 – 12:40**      **Using a naturally occurring sterility gene to humanely control house mouse pests**  
*Andri Manser (University of Zurich, Switzerland)*
- 12:40 – 13:00**      **Q&A / discussion time for Session Two topics**
- 13:00 – 14:30**      **Lunch**
- 14:30 – 16:00**      **Session Three: Slaughter of Livestock**  
Chair: *Claudio Zweifel*
- 14:30 – 14:40**      **Introduction to session:** *Claudio Zweifel*
- 14:40 – 15:00**      **The role of the EURCAW in refining the assessment of poultry and rabbit welfare at slaughter**  
*Alexandra Contreras-Jodar (Institute of Agrifood Research and Technology, Spain)*

- 15:00 – 15:20**     **A review of indicators and sensor technologies to assess pig welfare at the slaughterhouse**  
Angela Ramon Perez (*Autonomous University of Barcelona, Spain*)
- 15:20 – 15:40**     **Comparison of 8 different inert gas (mixtures) to CO<sub>2</sub> for stunning pigs at slaughter**  
Jonas Knöll (*Friedrich-Loeffler-Institut, Germany*)
- 15:40 – 16:00**     **Break**
- 16:00 – 16:20**     **Improving automatic electric stunning systems for pigs as a viable & more ethical alternative to CO<sub>2</sub>**  
Lesley Moffat & Kees Scheepens (*Eyes on Animals, The Netherlands*)
- 16:20 – 17:00**     **Q&A / discussion time for Session Three topics**
- End of day one.**

#### **Thursday 7 March**

All timings are GMT+1 / CET

- 09:00 – 09:05**     **Welcome and Introduction:** Otto Maissen (*FSVO, Switzerland*)
- 09:05 – 11:10**     **Session Four – Depopulation and emergency killing**  
Chair: Antonio Velarde (*Institute for Food & Agricultural Research & Technology, Spain*)
- 09:05 – 09:20**     **Invited Speaker:** Antonio Velarde (*Institute for Food & Agricultural Research & Technology, Spain*)
- 09:20 – 09:40**     **More humane stunning and euthanasia in pigs and poultry based on nitrogen, with high expansion foam technology**  
Nicole Krefting (*Heft AB, Sweden*)
- 09:40 – 10:30**     **Short Talks:**
- Animal Disaster Management Decision-Making: Applying an Animal Welfare Science-Ethics Guided framework within One Health**  
Raymond Anthony (*University of Alaska Anchorage, USA*) & Andreia De Paula Vieira (*Veterinarian and Independent Researcher, Curitiba, Brazil*)
- Towards a more humane depopulation of poultry in case of Avian Influenza**  
Leonardo James Vinco (*Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia-Romagna (IZSLER), Italy*)
- Humane methods for killing day-old chicks**  
Birte Nielsen (*Humane Slaughter Association, UK*)
- A Sustainable Approach to Eliminate Male Chick Culling in the Egg Industry (online)**  
Eliran Kadosh (*Head of Research, eggXYt, Israel*)
- 10:30 – 11:00**     **General Q&A / Discussion of Session Four presentations**
- 11:00 – 11:30**     **Break**
- 11:30 – 13:15**     **Session Five – Humane killing of aquatic species for food**  
Chair: Hans van de Vis (*Wageningen University and Research, Netherlands*)
- 11:30 – 11:50**     **Invited speaker:** Hans van de Vis (*Wageningen University and Research, Netherlands*)
- 11:50 – 12:10**     **Challenges of determining sensibility in fish**  
Jenny Bouwsema (*Institute of Aquaculture, University of Stirling and Ace Aquatec, UK*)
- 12:10 – 12:45**     **Current welfare issues in stunning and killing practices of farmed aquatic species in Thailand and Vietnam**  
Simão Zacarias (*University of Stirling, UK*)
- Optimisation of electrical stunning in the decapod crustacean Norway lobster (*Nephrops norvegicus*)**  
Amaya Albalat (*University of Stirling, UK*)

**Assessment of the efficiency of electric stunning on the behaviour, physiology, and meat quality of the American lobster (*Homarus americanus*)**

Guiomar Rotllant (*Spanish National Research Council, Spain*)

- 12:45 – 13:15**      **Q&A / Discussion of Session Five presentations**
- 13:15 – 14:30**      **Lunch**
- 14:30 – 16:00**      **Session Six – Humane killing of aquatic species for food**  
Chair: Hans van de Vis (*Wageningen University and Research, Netherlands*)
- 14:30 – 14:50**      **Impact of electrical shock and analgesia in Norway lobster (*Nephrops norvegicus*)**  
Eleftherios Kasiouras (*University of Gothenburg, Sweden*)
- 14:50 – 15:10**      **Optimisation of in-water electrical stunning in tropical prawns (*Penaeus vannamei*)**  
Endre Putyora (*University of Stirling, UK*)
- 15:10 – 15:30**      **Stunning and killing of European lobster (*Homarus gammarus*) and Edible crab (*Cancer pangurus*)**  
Ragnhild Svalheim (*Nofima, Norway*)
- 15:30 – 16:00**      **Q&A / Discussion of Session Six presentations**
- 16:00**              **Meeting Close**

**Posters:**

**Lateral Vice Cervical Dislocation - A novel method for secondary physical euthanasia in hamsters**

Alexandria Hicks-Nelson (*Fred Hutchinson Cancer Center, USA*)

**Methods of decapod crustacean slaughter; science and practice led evidence and solutions for a sentient species and for industry**

Ben Sturgeon (*Crustacean Compassion, UK*)

**Grinding as a slaughter method for farmed black soldier fly larvae: Empirically-supported recommendations for more instantaneous and humane practice**

Craig Perl (*Insect Welfare Research Society, USA*)

**Effectiveness of repeated exposure to anaesthesia in the Norway lobster (*Nephrops norvegicus*)**

Endre Putyora (*University of Stirling, UK*)

**The fair-fish database: welfare assessment of aquatic species in aquaculture and fisheries**

Fausta Borsani (*Fair-Fish, Switzerland*)

**Towards a humane way to euthanize commercial bumblebees**

Gema Martin-Ordas (*University of Stirling, UK*)

**The value of welfare: What can we expect from consumers if we increase their exposure to more facts about wild-caught fish welfare?**

Themistoklis Altintzoglou (*Nofima, Norway*)

**Humane killing of an economically important decapod crustacean, the signal crayfish**

Eleftherios Kasiouras (*University of Gothenburg, Sweden*)