

4th FSVO/UFAW Symposium - Humanely Ending the Life 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**



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| 14.30 - 17.00 | 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 (<i>Institute of Agrifood Research and Technology, Spain</i>) |
| 15.00 - 15.15 | A review of indicators and sensor technologies to assess pig welfare at the slaughterhouse Angela Ramon Perez (<i>Autonomous University of Barcelona, Spain</i>) |
| 15.15 - 15.35 | Comparison of 8 different inert gas (mixtures) to CO₂ for stunning pigs at slaughter Jonas Knöll (<i>Friedrich-Loeffler-Institut, Germany</i>) |
| 15.35 - 16.00 | Break |
| 16.00 - 16.20 | Improving automatic electric stunning systems for pigs as a viable & more ethical alternative to CO₂ Lesley Moffat & Kees Scheepens (<i>Eyes on Animals, The Netherlands</i>) |
| 16.20 - 17.00 | Q&A / Discussion time for Session Three topics |
| 17.00 | End of day one |



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SWITZERLAND

Schweizerische Eidgenossenschaft
Confédération suisse
Confederaziun Svizra
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Federal Department of Home Affairs FDHA
Federal Food Safety and
Veterinary Office FSVO

HUMANELY
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6-7 MARCH 2024

UFAW
SCIENCE IN THE SERVICE
OF ANIMAL WELFARE

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Thursday 7 March

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09.00 - 09.05 **Welcome and Introduction**
Otto Maissen (*FSVO, Switzerland*)

09.05 - 11.00 **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 (*European Reference Centre for Animal Welfare for Poultry and other Small Farmed Animals (EURCAW-Poultry-SFA) and 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 **Q&A / Discussion of Session Four presentations**

11.00 - 11.30 **Break**

11.30 - 13.05 **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 - 12.35 **Short Talks:**
Optimisation of electrical stunning in the decapod crustacean Norway lobster (*Nephrops norvegicus*)
Amaya Albalat (*University of Stirling, UK*)



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12.10 - 12.35

Short Talks:

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*)

12.35 - 13.05

Q&A / discussion of Session Five presentations

13.05 - 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

- 1. Lateral Vice Cervical Dislocation - A novel method for secondary physical euthanasia in hamsters**
Alexandria Hicks-Nelson (*Fred Hutchinson Cancer Center, USA*)
- 2. Methods of decapod crustacean slaughter: science and practice led evidence and solutions for a sentient species and for industry**
Ben Sturgeon (*Crustacean Compassion, UK*)
- 3. 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*)
- 4. Effectiveness of repeated exposure to anaesthesia in the Norway lobster (*Nephrops norvegicus*)**
Endre Putyora (*University of Stirling, UK*)
- 5. The fair-fish database: welfare assessment of aquatic species in aquaculture and fisheries**
Jenny Volstorf (*Fair-Fish, Switzerland*)
- 6. Towards a humane way to euthanize commercial bumblebees**
Gema Martin-Ordas (*University of Stirling, UK*)
- 7. 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*)
- 8. Humane killing of an economically important decapod crustacean, the signal crayfish**
Eleftherios Kasiouras (*University of Gothenburg, Sweden*)

