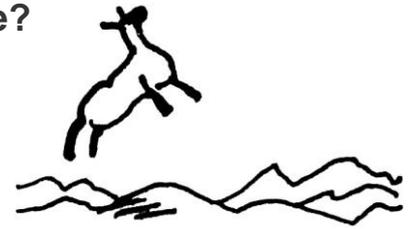


Advancing animal welfare science: How do we get there? – Who is it good for?

UFAW International Symposium 2019
3rd-4th July 2019
Site Oud Sint-Jan, Bruges, Belgium



Biographies of keynote speakers

Dr Joseph Garner

Stanford University, USA

'Good science, good welfare. How understanding animals used in research helps us'

Department of Comparative Medicine
300 Pasteur Drive, Edwards
Stanford
California
USA



The overarching theme of Joe's research is understanding why most drugs (and other basic science findings) fail to translate into human outcomes, the role that animal models and methodology play in in these failures, and developing new approaches to improve the translation and benefits of animal research while minimizing welfare impacts. Joe is an Associate Professor in the Department of Comparative Medicine, a Courtesy Associate Professor in the Department of Psychiatry and Behavioral Sciences, and a member of the Child Health Research Institute at Stanford University. Joe runs Stanford's Technique Refinement and Innovation Lab, which provides 3Rs support services for researchers on campus. Joe is an internationally recognized expert in the behavior and welfare of laboratory mice, including awards from the National Center for the 3Rs (UK), the American Association for Laboratory Animal Science, the Swiss Laboratory Animal Science Association, and the Universities Federation for Animal Welfare. Joe also works extensively in human health, both as a researcher and an advocate. Joe's current human health research is focused on animal and human studies in autism, trichotillomania, and compulsive skin-picking. The question driving all of this work is "Why does one sibling become ill and another does not?", and the goal is to identify biomarkers leading to screening, prevention and personalized treatment options. Joe's advocacy work includes service on scientific advisory boards for the Trichotillomania Learning Center, the Tourette Association of America, and the Beautiful You MRKH Foundation.

Joe's work is available via a number of different websites:
Stanford website: med.stanford.edu/profiles/Joseph_Garner
Papers: scholar.google.com/citations?user=JThS8LMAAAAJ
Mouse ethogram: www.mousebehavior.org
TRI-Lab: <http://med.stanford.edu/compmed/research/services.html>

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Professor Linda Keeling

Swedish University of Agricultural Sciences, Sweden
'Advances in technology to monitor animal welfare on the farm?'

Department of Animal Environment and Health
Swedish University of Agricultural Sciences
Uppsala
Sweden

Linda Keeling is Professor of Animal Welfare at the Swedish University of Agricultural Sciences. She has a background in ethology and manages an active research group dealing with basic and applied questions related to welfare assessment, affective states in animals and the effects of early experience on later behaviour. She is coordinator of the Centre of Excellence for Animal Welfare Science in Sweden and a member of the EU Platform on Animal Welfare.



Dr Hans van de Vis

Wageningen Livestock Research, The Netherlands
'Challenges associated with assessing and improving the welfare of farmed fish'

Animal Health and Welfare
Wageningen Livestock Research
De Elst 1, PO Box 338
6708WD
Wageningen
The Netherlands



Hans van de Vis PhD is senior researcher at Wageningen Livestock Research. He is project leader of interdisciplinary projects focused on fish welfare. His main research interests are in the fields of effects of stress throughout the production of farmed and captured fish.

Dr. Hans van de Vis has expertise on welfare of farmed and captured fish. In his research the focus is on assessment of stunning/killing methods of farmed fish and stress related to handling, transport and rearing. For wild fish he also studies how fishing gear affects welfare of fish.

He was involved in seven projects funded by the European Commission and various Norwegian and Dutch projects. In these projects research institutes collaborated with companies.

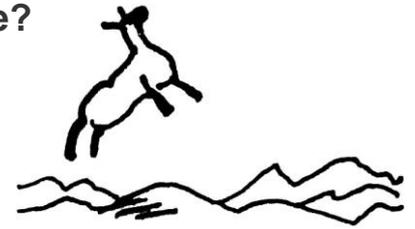
Hans acted as (co)-author of papers on: 1) the relationship between water quality and stress in African catfish, pike perch and European eel; 2) how transport affects stress physiology in European and African catfish; 3) on assessment of pain in fish; 4) on welfare of captured fish; 5) and on

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assessment of stunning of farmed and captured fish.

He also acted as national expert for the AHAW Eel Welfare Working Group Meetings organised by the European Food Safety Authority in 2008 and 2009. He participated in AHAW Working Group Meetings focused on welfare of eel during husbandry and welfare aspects of stunning and killing of gilthead sea bream and sea bass.

He was a member of the management team of the finished Cost project Wellfish (Cost Action 867). The Wellfish project was focused on the provision of a secure foundation for the development of operational welfare indicators in order to monitor and safe guard the welfare of farmed fish in Europe. The book "Welfare of farmed fish in present and future production systems" was a major deliverable. Hans van de Vis acted as editor in chief during the preparation of this book.

Hans was involved as workpackage leader in DG Sante project (Specific Contract SANTE/2016/G2/SI2.736160) that was focused on an inventory of welfare aspect of transport and slaughter methods of farmed fish in Europe.

Current position

Hans van de Vis PhD is senior researcher At Wageningen Livestock Research. He is project leader of interdisciplinary projects focused on fish welfare. His main research interests are in the fields of effects of stress throughout the production of farmed and captured fish.

Key publications

Boerrigter J,R Manuel, R Van den Bos, T Spanings, J Roques, G Flik and H van de Vis, H

(2015) Recovery from transportation by road of farmed European eel (*Anguilla anguilla*).

Aquaculture Research 46: 1248–1260

Manuel R, R Boerrigter, J Roques, J van der Heul, R van den Bos, G Flik and H van de Vis

(2014) Stress in African catfish (*Clarias gariepinus*) following overland transportation. *Fish*

Physiology and Biochemistry 40: 33 – 44

Roques, J, W Abbink, W Geurds, H van de Vis and G Flik (2010) Tailfin clipping, a painful

procedure: studies on Nile tilapia and common carp. *Physiol. Behav.* 101: 533-540

Schram, E, JAC Roques, T van Kuijk, W Abbink, J van der Heul, P de Vries, S Bierman, H van

de Vis and G Flik (2014) The impact of elevated water ammonia and nitrate concentrations on

physiology, growth and feed intake of pikeperch (*Sander lucioperca*). *Aquaculture* 420–421,

95–104.

Veldhuizen LJJ, PBM Berentsen, IJM de Boer, HW van de Vis and EAM Bokkers (2018) Fish

welfare in capture fisheries: A review of injuries and mortality. *Fisheries Research*: 204, 41–48

Van de Vis H, W Abbink, B Lambooy and M Bracke. Stunning and killing of farmed fish: How

to put it into Practice? (2014) In: *Carrick Devine & Michael Dikeman, editors-in-chief.*

Encyclopedia of Meat Sciences 2e, Vol. 3, Oxford: Elsevier; 2014. pp. 421-426

Van de Vis, H, A Kiessling, G Flik and S Mackenzie (Eds) (2012) *Welfare of farmed fish in*

present and future production systems. Springer, Heidelberg, Germany, 312 pp

Van de Vis, H and B Lambooy (2016): Fish stunning and killing. In: *Animal Welfare at*

Slaughter (eds. A. Velarde and M. Raj). 5M Publishing, Sheffield, UK, p. 152-176