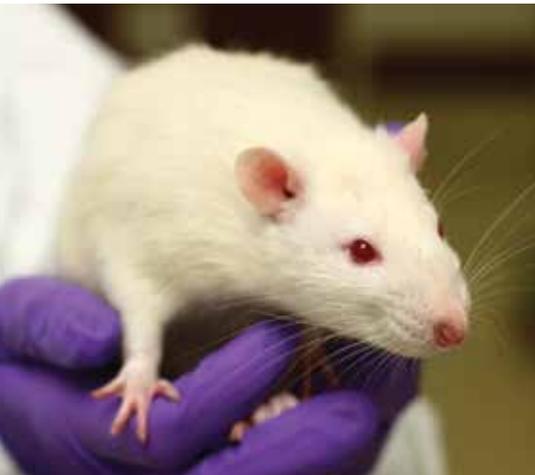




Universities Federation for Animal Welfare Annual Report 2017-2018

Science in the Service of Animal Welfare



www.ufaw.org.uk

UFAW – the International Animal Welfare Science Society

The Universities Federation for Animal Welfare, founded in 1926, is an independent charity promoting animal welfare science worldwide, together with high standards of welfare for farm, companion, laboratory and captive wild animals and for those animals with which we interact in the wild.

This report highlights the work undertaken by the charity during the past year which has been possible due to the continued commitment of its members and donors who have supported the charity through subscriptions, donations and legacies. This support is the very heart and life-blood of the charity and enables us to continue to strive for improvements in animal welfare – for which we thank you.

UFAW's vision is simple – to improve animals lives through research, education, information and advice. It does this by:

- Promoting, funding and supporting animal welfare science and technology that underpins advances in animal welfare
- Promoting and supporting education in animal care and welfare
- Providing information, organising meetings and publishing books, articles, technical reports, information on its website and the journal *Animal Welfare*
- Providing expert advice to government departments and other bodies and helping to draft and amend laws and guidelines

Photo credits: L-R Rat: © Understanding Animal Research, Sheep: Pixabay/Pexel, Cat: TookaPic/Pexel and Elephant: Harvey Sapir/Pexel.



Photo credit: Pexel

Welcome to the 2017/18 Annual Report for UFAW

“Clear thinking, and objective assessment of the facts” – not words spoken by the great fictional detective Sherlock Holmes but the principles that UFAW has adopted and promoted from the very beginning. In so doing, it has led the way in the discovery, and sharing, of the knowledge unlocked by science – thereby making a tremendous difference to our understanding of what constitutes “good welfare” and ultimately the lives of millions of animals.

As I look back over the last twelve months, I am astonished at what the charity has achieved. UFAW-supported research continues to forge advances in our understanding of animals and how we care for them, from chickens and macaques to dairy cattle in Israel. Through the LINKs scheme, the charity has supported an animal welfare science symposium in Sweden, an animal welfare myth busters event at the University of Nottingham and a seminar talk on assessing and mitigating stress in cats and dogs during routine veterinary examinations at the Université de Montréal in Canada, to name but a few.

Our scientific staff have responded to a number of Government consultations, including codes of welfare for meat and breeding chickens, laying hens and pigs and an inquiry into dangerous dogs. Our staff also responded to the draft Animal Welfare (Sentencing and Recognition of Sentience) Bill 2017, arguing that the animal groups protected by the legislation should be explicitly defined and pointed out that some European legislation already included cephalopods in addition to vertebrates. UFAW also argued that there should be provision to include taxa within the definition of sentient animals if future research provided sufficient evidence.

www.ufaw.org.uk

The continuing growth in interest in animal welfare science was again highlighted by the number of applicants for UFAW’s Animal Welfare Student Scholarship scheme and by the excellent attendance and quality of speakers and posters at the 6th biennial *Recent advances in animal welfare science VI* conference – see page 14. This year, work has also commenced on a major international symposium for 2019 focusing on developing and raising awareness of new ideas and the promotion of higher quality and better-focused animal welfare science.

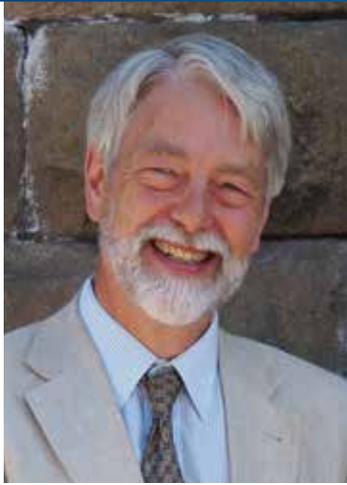
As a charity, UFAW relies on voluntary donations and new members to continue to be a significant force in advancing our knowledge of animal welfare and I would like to thank everyone who has championed UFAW’s work over the last twelve months. The achievements and work outlined in this report are testament to your continued and dedicated support as well as the efforts of all those who have worked to help the charity improve animal well-being and advance the science of animal welfare. Thank you for sharing our vision and mission.



Professor Andrea Nolan OBE
Chairman of Trustees



“UFAW-supported research continues to forge advances in our understanding of animals and how we care for them...”



“...as in the past, UFAW has aimed to address specific issues and to develop capacity in animal welfare science around the world, leading to lasting improvements in animal welfare.”

UFAW’s approach to animal welfare is rather special, and to help explain why this is so, seventy years ago UFAW’s founder wrote an article, drawing attention to UFAW’s specific objectives. At that time these included: abolition of the gin-trap, improvements in farm animal marketing and slaughter, the use of animals in research and the need for anaesthesia during surgical operations on animals (this last being rather startlingly self-evident to modern ears). These were obviously worthwhile goals, but to my mind the true novelty of UFAW’s approach was captured in his points that UFAW works on an objective and rational basis to achieve good animal welfare, and that the greatest benefits could be achieved by research and by university education, so leading and moulding progressive thinking. This rational approach to animal welfare problems based on science and education at a high level was then novel, and it is why UFAW’s work has been, and continues to be, so important in advancing knowledge that affects so many animals well into the future. If you would like to read more about the significant impacts that UFAW’s work has had for animal welfare please see www.ufaw.org.uk/important.

During the last financial year, UFAW has continued to follow this approach. The charity has funded research aimed at assessing the lifetime impact of stressors on primates; research on novel methods to assess animal emotion; has supported work on causes of disease (some of which may be influenced by human activities) in garden wildlife; and funded a study on whether young dairy cattle experience chronic pain following the removal of horns. UFAW also ran an extremely successful international conference, of which one attendee wrote “thank you so much for such an excellent and inspiring conference. My head is full of ideas now!” and a joint meeting with the Humane Slaughter Association on controlled atmosphere methods of stunning. The charity is currently working on a regional meeting to be held in Hong Kong.

These are just some of the projects that UFAW has worked on over the last year and, as in the past, UFAW has aimed to address specific issues and to develop capacity in animal welfare science around the world – leading to lasting improvements in animal welfare. Please help us to continue this important work.

A handwritten signature in black ink, reading "Robert C Hubrecht". The signature is fluid and cursive.

Robert C Hubrecht OBE
Chief Executive & Scientific Director



PROMOTING AND SUPPORTING ANIMAL WELFARE SCIENCE

UFAW promotes and supports high quality science that will lead to substantial advances in animal welfare, and to promote education in animal welfare – particularly at the university and college level. The charity provides both focussed and reactive funding of essential research and other projects through grants and scholarships, and UFAW is one of the very few organisations to fund research in this way world-wide.

Grants can range from small ones to support a student project, or travel to a conference, to substantial support for multi-year research programmes. Over the past year the charity has supported several new projects and a number of other UFAW-supported major projects are ongoing.

PROVIDING FUNDING FOR RESEARCH TO BENEFIT ANIMAL WELFARE

Over the financial year, UFAW has awarded 47 grants to support a number of projects. One of the major challenges in animal welfare is working out when animal welfare is compromised so that we can take action to improve it. Two of UFAW's most recent large project grants are trying to tackle this question using different approaches.

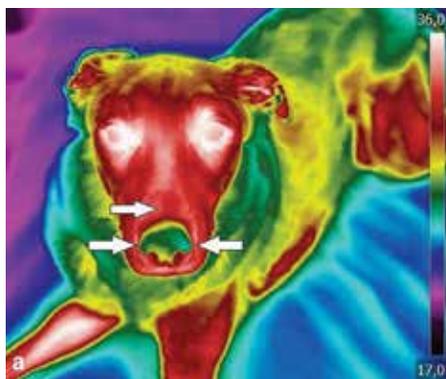


Photo credit: Mike Mendl

At Bristol University Mike Mendl and colleagues including Helena Telkanranta, Elizabeth Paul and Becky Whay are working on a way of measuring the welfare of various animals using infrared thermography to measure temperature changes which may correlate with changes in the animal's emotional state. Specifically, they are testing whether changes in temperature on one side of the head may differ from the other side during certain states. Such lateralised temperature effects may reflect enhanced function in the right hemisphere of the brain in negative states and the opposite in positive states.

These techniques might be able to improve our knowledge of whether certain procedures are good or bad for animals' welfare and allow rapid assessment of the emotional state of animals at a given time. To support this work the group was awarded substantial funding in 2017 with the research due to be completed in 2019.

As well as developing methods to instantaneously assess the welfare state of animals it is also important to know more about their long-term state of welfare.

Elena Armstrong was awarded the 2016 UFAW Research Training Scholarship to allow her to undertake a PhD supervised by Dr Tom Smulders at Newcastle University which aims to discover ways to examine changes in the brains of chickens that may represent the long-term (in some cases perhaps even lifetime) experience of the animals. A key goal in animal welfare science is to find objective measures of animal welfare, not just at one instant but over an extended period, perhaps eventually allowing us to start to ask fundamental questions about the welfare of animals over their lifetimes and to examine how their overall welfare might be improved.

If successful, Elena's project might allow researchers to examine the brains from chickens raised in different conditions and work out whether some systems mean the chickens have better welfare over their lifetimes than others.

Recently Elena and colleagues have tested whether a common welfare problem in chickens, keel-bone fracture, leads to changes in their brains. In adult mammals hippocampal neurogenesis (the generation of new neurons in the area of the brain associated with memory and emotional behaviours) is often reduced by poor welfare states such as chronic stress or pain. The changes are often restricted to the regions of the hippocampus associated with emotional responses. Elena's work suggests that chickens with keel-bone fractures also exhibit reduced hippocampal neurogenesis. This suggests that this technique might be able to detect poor long-term welfare such as chronic pain in chickens, a very promising finding.

In 2017 UFAW also awarded a grant from UFAW's 3Rs Liaison Group Fund to Professor Georgia Mason and PhD student Andrea Polanco at the University of Guelph in Canada to investigate the welfare of laboratory macaques. Their project aims to identify indicators of poor psychological welfare in lab-housed primates.

PROVIDING TRAVEL GRANTS TO FACILITATE SHARING AND KNOWLEDGE

UFAW grants often support travel or training projects that enable researchers and others to disseminate welfare knowledge at scientific meetings and other events.

This year, for example, UFAW provided funding to enable Professor Sarah Baillie from Bristol Vet School and her colleagues to organise a seminar in Bangladesh to introduce new approaches to veterinary teaching including the use of simple models rather than live animals to teach clinical skills. This project has multiple benefits for animal welfare, including reducing the use of live animals for teaching clinical skills, and aims to improve clinical skills so that workshop participants may further disseminate these teaching methods throughout Bangladesh.

The charity has also provided funding for students and others to attend scientific meetings including support for a number of those presenting their work at the *UFAW Recent advances in animal welfare science VI* meeting in Newcastle. UFAW also supported the attendance

of a number of students, interested in the welfare of amphibians and reptiles, to attend a workshop entitled *Co-operation the Future of Husbandry?* organised by the Advancing Herpetological Husbandry group (AHH) and The British Herpetological Society (BHS), enabling the students to learn about the latest developments in the care of these species.



Photo credit: HSA

Animal welfare in Israel (the UFAW SAWI fund)

The UFAW SAWI fund supports and promotes scientific and educational initiatives for the advancement of animal welfare in Israel. Over the last seven years the fund has been used to support PhD student, Roi Mandel, to carry out research on the welfare of dairy cattle under the supervision of Dr Eyal Klement of the Koret School of Veterinary Medicine, Hebrew University of Jerusalem. Roi's work is now nearing completion and we are looking forward to receiving his report this summer.

The SAWI fund also supported a travel grant to Mrs Liat Morgan, of The Hebrew University of Jerusalem, to allow her to present her research at the *7th International Symposium on the Assessment of Animal Welfare at Farm and Group Level* in the Netherlands. Mrs Morgan won the second best poster award for her presentation and, after the conference, she wrote "As in Israel only few people deal with animal welfare research, the UFAW support allowed us to improve our activities which hopefully will have a great practical impact on animals and farmers".

UFAW hopes to use the UFAW SAWI fund to further establish animal welfare science as a discipline in Israel, to address both local and global welfare issues. If you would like to support animal welfare in Israel, please contact the UFAW office or you can make a donation on-line www.ufaw.org.uk/our-work/sawi-fund

The welfare of animals used in research in China

Since 2013, UFAW staff have worked with the Home Office, AAALAC International and the Chinese Association for Laboratory Animal Science on a series of symposia in China to advance the 3Rs and to support the development of National Standards for the care of animals used in research. The latest in the series, the 5th UK-China seminar on research animal welfare and ethics "Good Welfare - Good Science" was held in September in Qingdao, at which the Chief Executive gave a presentation on dog welfare and co-ran a workshop on social housing with Professor Joe Garner, Stanford University.



Dr Robert Hubrecht presenting in China with rabbit gifted by Chinese hosts

RECOGNITION FOR EXCEPTIONAL CONTRIBUTIONS TO ANIMAL WELFARE – UFAW AWARDS

This year, UFAW recognised two outstanding scientists for their work to advance animal welfare. The UFAW Medal was presented to Professor Paul Flecknell in acknowledgement of his exceptional contributions to the welfare of animals and the Young Animal Welfare Scientist of the Year was awarded to Dr Rebecca Meagher for her work which addressed challenging animal welfare science issues, including individual differences that may affect animals' housing requirements and inferences about animals' mental states.

The awards were presented by UFAW CEO Dr Robert Hubrecht at the charity's one day conference *Recent advances in animal welfare science VI* at the Centre for Life, Newcastle.

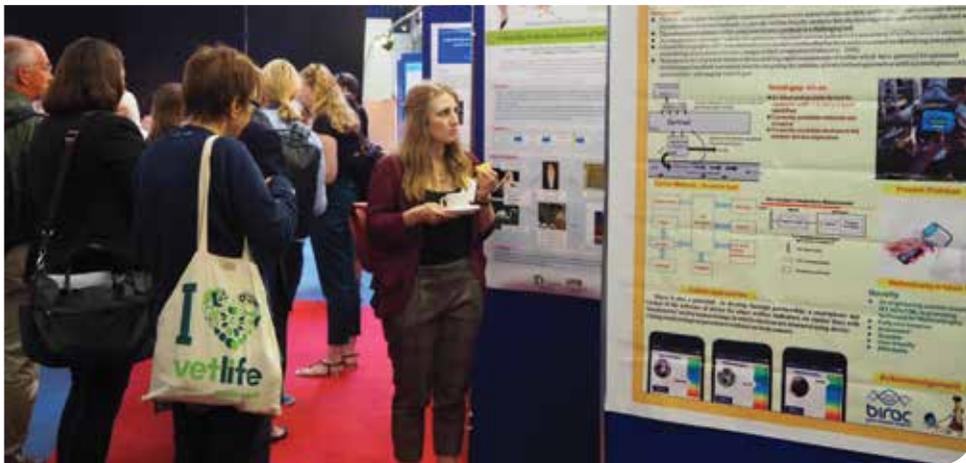


Photo credit: UFAW

The poster session at UFAW's *Recent advances in animal welfare science VI* conference

Professor Paul Flecknell

UFAW was very pleased to recognise Paul's remarkable achievements over a 30 year career which has successfully focused on improving the welfare of animals in the UK and internationally through a diverse range of activities.

Professor Paul Flecknell, Emeritus Professor of Laboratory Animal Science at Newcastle University, is widely recognised as the leading authority in the field of veterinary anaesthesia and pain recognition, and has had a huge impact in this field particularly with respect to refining veterinary care of animals used in research.

Professor Flecknell has led a highly successful research group focussing on the assessment of pain and welfare in animals, and evaluating new techniques to ameliorate pain. He has published over 180 books, chapters, and peer-reviewed papers, with a strong citation record and his books *Laboratory Animal Anaesthesia* and *Pain Management in Animals* are standard texts in the field.

Professor Flecknell is an innovative and inspiring communicator and has been a trail-blazer in developing web-based training resources that can be viewed by many people around the world. Professor Flecknell has also played a hugely influential role on many committees, societies, funding bodies and journals concerned with veterinary and laboratory animal welfare science and practice.

Paul's outstanding contributions have thus been at many levels – scientific, practical, translational, educational, and in academic leadership and they have led to substantial improvements in welfare for animals around the world.

Dr Rebecca Meagher

Dr Meagher is a Lecturer in Dairy Animal Science at the University of Reading.

Her PhD tackled an unusual theme *Why are captive animals often so inactive and does it matter?* To address this, she carefully developed and validated indicators of the states of fear, depression, apathy and boredom in the mink. Rebecca's research has concentrated on big issues that are relevant to almost every species we keep. First, how can we tell, objectively, what animals are feeling? And second, why doesn't meeting animal's physical needs guarantee good welfare?

She already has 22 publications, one of which on boredom-like states in animals has been accessed over 10,000 times. Her work showing that isolation of calves impairs their learning ability has also attracted widespread attention, while her research on enrichment for farmed mink has helped change animal care codes in Canada and so improved the welfare of millions of these animals each year.

Dr Meagher holds a lectureship in animal welfare, despite being only 6 years post-doctoral, and her undergraduate teaching has been innovative, and attracted praise.



Photo credit: UFAW

L-R Dr Robert Hubrecht, Dr Rebecca Meagher (Young Scientist of the Year), Professor Paul Flecknell (UFAW Medal) and Professor Bo Algiers (winner of the 2018 Humane Slaughter Award)

EDUCATION IN ANIMAL CARE AND WELFARE



EDUCATING TOMORROW'S ANIMAL WELFARE ADVOCATES

UFAW promotes education in animal welfare – particularly at the university and college level – in a variety of ways. Over the past twelve months, new university LINKs have been made around the world, thereby helping UFAW to expand its outreach work, build capacity and share knowledge and best practice.

LINK Scheme

This educational outreach programme connects individuals at universities and educational institutions around the world and encourages and supports novel animal welfare activities.

This year, UFAW reached a milestone with its 100th LINK to this network –the Faculty of Veterinary Medicine at the University of Teramo, Italy.

Since the start of the academic year, new LINKs have been established with the University of Portsmouth, UK, the University of Pretoria, South Africa, McGill University, Canada, the University of Bonn, Germany, Aberystwyth University, UK, Liverpool John Moores University, UK and Plumpton College, UK.

Some examples of LINKs activity include:



3rd Animal Welfare Science Symposium, Uppsala, Sweden Swedish University of Agricultural Sciences (Dr Jan Hultgren)

Although animal welfare research is often presented in Sweden at other specialised or species specific meetings, there is no regular multi-disciplinary scientific meeting with animal welfare science as its focus. To advance the broad subject of animal welfare, researchers need to share and discuss their results and ideas, and this symposium was conceived as a friendly scientific forum to do just that. The programme offered plenary talks from invited speakers, shorter presentations from other participants and group

discussions. There were twenty talks in total covering farm, companion, laboratory animals and fish using approaches from disciplines as diverse as epidemiology to agricultural history.

13th annual UFAW Student Animal Welfare Conference – Writtle University College

Students from Moulton, Hartpury and Brooksby Melton Colleges travelled to Writtle University College to attend the 13th annual UFAW Student Animal Welfare Conference. At this inter-university event, which is supported by the UFAW LINK scheme, final year students from the four colleges presented the results of studies undertaken as part of their degrees. Attendees listened to a range of talks from their fellow students and browsed a diverse selection of poster presentations. The studies looked at a range of issues, including how a chicken's dustbathing acts like a dry shampoo on their feathers to how leaving a horse alone on a horse walker affects their behaviour and heart rate.

Université de Montréal, Canada (Dr Daniel Pang)

UFAW LINK funds were used to support the visit of Dr Lee Niel (Associate Professor, Campbell Centre for the Study of Animal Welfare, University of Guelph) to the Université de Montréal in December. Dr Niel gave a seminar entitled *Can you handle it? Assessing and mitigating stress in cats and dogs during routine veterinary examinations*.

UFAW Animal Welfare Seminar Series at the University of Nottingham (Dr Lisa Yon)

Through the LINK scheme, UFAW supports the activities of the Nottingham Animal Behaviour and Welfare Study Group and their work to promote the study and discussion of animal behaviour and welfare at the university.

In May, the group set up a booth on Animal Welfare Myth Busters as part of a university wide Mayfest public outreach day. Activities ranged from a 'dog food weighing game' to try and measure out how much food you think you should feed different dogs to a demonstration of UV lighting for reptiles and birds and comparison photos of different habitats/housing for exotic pets – guessing which ones are good or bad, and why.

Free resources on animal welfare science for veterinary schools from the UFAW-Wiley series

Following its spring appeal, UFAW gifted a number of books from the UFAW Wiley-Blackwell animal welfare series to the libraries of five selected veterinary schools in Central and South America, for use by their staff and students. Books within this series address a range of issues including environmental enrichment, farm animal welfare, equine welfare and the welfare of animals used in research. One of the recipient universities, the School of Veterinary Medicine at Universidad San Francisco de Quito (USFQ) Ecuador said: *“Animal Welfare is a topic that unfortunately has been slowly being introduced in our country ... However, we have been doing a great effort, in transmitting animal welfare principles to our students, so that they can educate people that raise livestock, as it is in this area where the main problem related to poor animal welfare has been detected. Thank you so much for this magnificent donation..., the books will be on display in the electronic USFQ library access, in order to be reached by any student at USFQ... Our library is also open for any individual that is not USFQ member, upon request. Therefore anyone outside of USFQ can also have access to the donated collection.”*



Ms Ivette Dueñas, Head of the School of Veterinary Medicine at Universidad San Francisco de Quito (USFQ) and Mr Xavier Palacios, Head of the USFQ Library with their donated books

UFAW Student Scholars 2017

Each year students awarded a UFAW Animal Welfare Student Scholarship are invited to present the findings of their studies at an annual meeting, to share their knowledge amongst their peers and forge valuable relationships within the academic world. For the 2017 scholars, the meeting was hosted by the University of Reading.

Over the years, the quality of the presentations has been a notable feature and this year – the 19th of these meetings – proved no exception with scholars delivering excellent talks on subjects as diverse as the effectiveness of Meloxicam in providing pain relief in Merino lambs undergoing mulesing (Lydia Inglis, Murdoch University, Australia), hair cortisol as a biomarker for chronic stress in Border collies with idiopathic epilepsy (Alexander Davies, Royal Veterinary College, UK) and links between skin lesions, aggression and lameness in breeding sows (Petra Briene, Institute for Agricultural, Fisheries and Food Research, Belgium).

The first Farm Animal Care Trust scholarship, given in memory of Ruth Harrison, was awarded at this meeting. The award went to Eva Read of the University of Plymouth who was presented with a copy of Ruth Harrison's seminal work *Animal Machines* for her study on *Quantifying the extent of hunger in dry sows*.

Animal Welfare Student Scholars 2018

This year, UFAW has awarded 10 Animal Welfare Student Scholarships. These have been awarded to:

Miss Adele Aynesley, Aberystwyth University, UK: Cognitive testing as a means to investigate depression in horses

Ms Theresia Bischof, University of Natural Resources and Life Sciences, Vienna, Austria: Warm versus cold - how to increase piglets' use of the creep area?

Mr Uri Baqueiro Espinosa, Queen's University Belfast, UK: Developing protocols for assessing the behavioural and welfare impacts of commercial dog breeding

Miss Emily Hendry, University of Glasgow, UK: Footpad dermatitis in broilers: insights from infrared thermography?

Ms Hannah Hussain, University of Cambridge, UK: Health and welfare of ageing tigers in zoological collections

Ms Christina Long, Royal Veterinary College, UK: Scared, depressed or just content?: a pilot study on the welfare of captive Pallas's cats

Ms Aileen MacLellan, University of Guelph, Canada: Are "depression-like" responses in mice really depression?

Ms Freija Maulbetsch, University of Natural Resources and Life Sciences, Vienna, Austria: Chilled or bored? Inactivity in fattening cattle

Miss Natalie Maxwell, University of Glasgow, UK: Assessing chronic stress in dogs (*Canis familiaris*) in South Korea under differing husbandry conditions

Miss Nicole Regan, Royal Veterinary College, UK: Exploring the relationship between anti-epileptic drug use, food-motivation, and obesity in dogs with epilepsy

The *Animal Welfare Journal*

Animal Welfare continues with its remit to publish the results of peer-reviewed scientific research, technical studies and reviews relating to the welfare of kept animals (eg on farms, in laboratories, zoos and as companions) and of those in the wild whose welfare is compromised by human activities. The last twelve months have seen the scope of the journal continue to grow both in terms of the international reach of the studies and the range of species covered. Studies from places as diverse as Chile, Canada, Australia and New Zealand sit alongside those from Finland, Norway, Italy and Sweden and the range of species encompasses a vast array of different animals and scenarios: from self-directed behaviour in mandrills to body temperature in migratory passerines and from circus and zoo animal welfare to modern slaughter techniques and halal meat production. Plans are in hand for a special issue addressing conceptual issues in animal welfare, to be guest edited by Dan Weary, Mike Appleby and Peter Sandøe.

COMING TOGETHER TO SHARE KNOWLEDGE AND BEST PRACTICE

Rodent and Rabbit Welfare Meeting

Every year UFAW and the RSPCA's Research Animals Department jointly organise a meeting on the welfare of rodents and rabbits used in scientific research. The 24th RSPCA/UFAW meeting on Rodent and Rabbit Welfare was held near London on the 14th November 2017. These meetings provide a forum for discussion on new developments relating to the care and use of rodents and rabbits in scientific procedures, with the aim of promoting advances in rodent and rabbit welfare. Speakers at the meeting addressed topics that included how to meet the needs of breeding rabbits, the pros and cons of group-housing male mice and assessing the value of positive emotions in rats.

2018 will be the 25th anniversary meeting and the 2018 meeting aims to provide an update on the latest research and developments in the housing and care of these species for animal technologists, veterinarians, researchers and anyone else with an interest in rodent and rabbit welfare. Topics covered will include refinements in housing for rabbits, ways to encourage nest building in lab-housed rats, the impact of repeated anaesthesia (a common research procedure) in rats, identification of mice, plus an update from the Home Office.

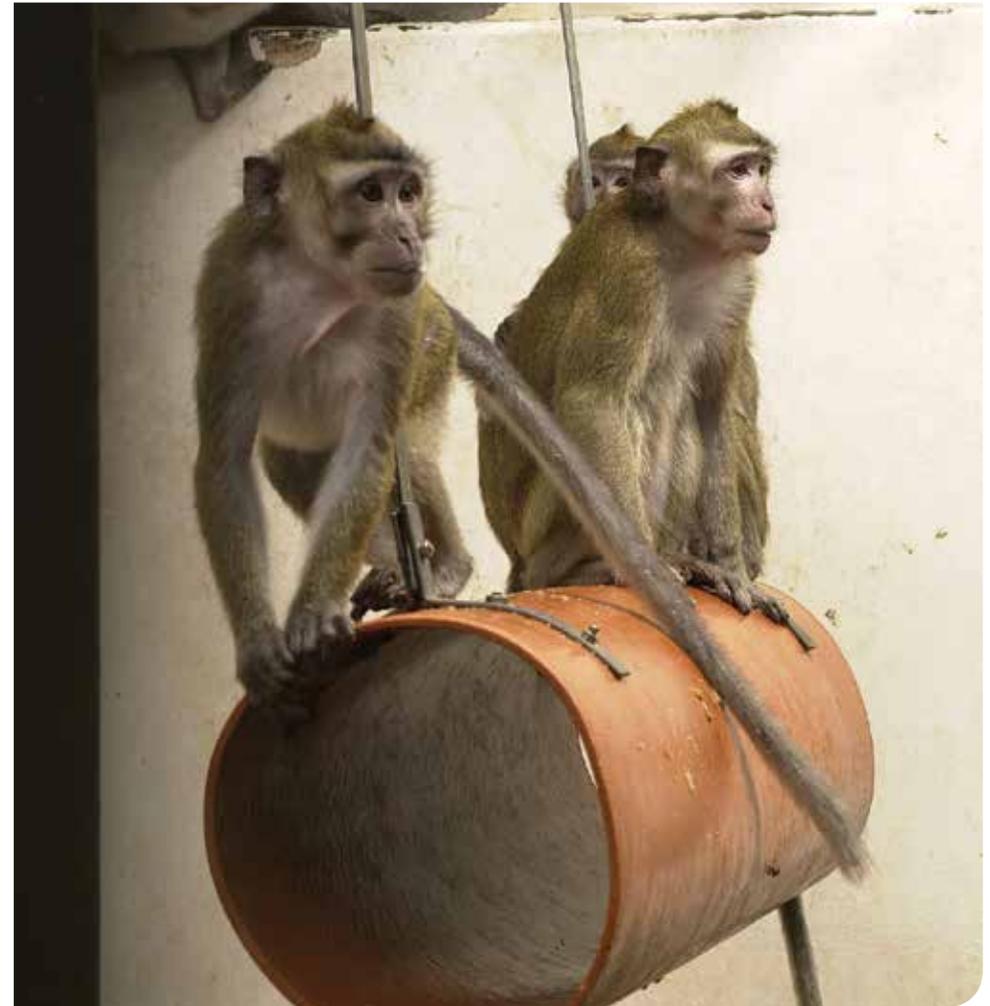


Photo credit: © Understanding Animal Research/Wellcome Images

LASA/UFAW meeting on the Welfare of Animals used in Research

For a number of years, UFAW has, with the Laboratory Animal Science Association (LASA), organised an annual meeting on the welfare of animals used in research for animal care professionals. This year the topic of the meeting was on planning and implementing the 3Rs – strengths, weaknesses, opportunities and threats. The aim of this meeting was to draw on practical experiences of the successes and difficulties that people had experienced when implementing the 3Rs at their establishments. Dr Hubrecht stepped in, when a speaker was unable to attend, and gave a lecture on animal behaviour and the opportunities and threats for refinements. He used primates to illustrate the importance of using natural behaviour to inform housing and husbandry decisions and provide a stimulating environment.

Recent Advances in Animal Welfare Science VI – UFAW animal welfare conference Newcastle upon Tyne, UK

The 6th biennial *Recent advances in animal welfare science* conference was aimed at established animal welfare scientists, and those at the beginning of their research careers, and once again addressed animal welfare concerns across an impressive variety of talks and posters. In addition to talks addressing fundamental issues of measuring and understanding animal welfare, the 200 plus delegates also heard about a range of practical solutions to welfare problems.

These included how best to use infrared thermography to assess animal welfare and avoid some of the problems associated with the technique, how time perception might be a useful technique to measure emotional state in animals, the potentially painful long-term effects of tail docking and tail biting in pigs and an investigation of long term pain caused by the practice of tooth clipping and grinding in piglets, which often causes the tooth to become jagged, fracture or shatter, revealing the pulp cavity and the nerves contained in it.

Other talks looked at the most prevalent health issues in dogs, factors that may lie behind the continued and increased ownership of brachycephalic (flat-faced) breeds of dog



Photo credit: Pexel

despite their health issues and the need for veterinarians to be better trained on how to deal with end of life issues in pets and decision making on when it is time to euthanise – to both ensure the welfare of the animals and to prepare the owner for the event.

Abstracts for all these talks, and for the 70+ posters that were presented at the conference can be found on the UFAW website www.ufaw.org.uk/recentadvances2018

Forthcoming meetings

Work has already commenced on UFAW's 2019 International Symposium, *Advancing animal welfare science: How do we get there? Who is it good for?* which will be held in July 2019 in Bruges, Belgium. Further information can be found on the website www.ufaw.org.uk

A meeting to bridge cultural gaps to advance animal welfare world-wide, supported by UFAW, the City University of Hong Kong and New Zealand Ministry for Primary Industries, *Animal Welfare across Borders*, will take place in Hong Kong in October 2018.



PROVIDING EXPERT ADVICE

UFAW provides information and advice on aspects of biology, management, health, behaviour and ethics relating to the welfare of domestic and wild animals to government departments, non-governmental organisations, universities and others. The charity is also consulted on draft legislation, guidelines and codes of practice relating to animal welfare.

Over the last year UFAW staff have continued to provide confidential animal welfare advice to the general public and to organisations whose work involves animals including zoos, NGOs, research organisations and companies. In some cases staff provide such advice formally, by sitting on internal advisory committees, or by working as members of ethics panels or by visiting and lecturing. Some examples are provided below:

UFAW has provided responses to government consultations including on codes of welfare for meat and breeding chickens, laying hens and pigs. It also responded to the Environment, Food and Rural Affairs Committee (EFRA) inquiry into Dangerous Dogs.

Dr Hubrecht gave a lecture on improving the welfare of dogs at the 5th UK-China seminar on Research Animal Welfare and Ethics. He also co-organised and co-ran a workshop to encourage appropriate social housing for rodents, dogs and other species taking into account current guidance and knowledge of natural social systems.

Dr Hubrecht lectured on animal behaviour and the opportunities and threats for refinements at the LASA/UFAW meeting in September 2017.

Dr Hubrecht lectured at St Catharine's College Cambridge on the Cambridge Animal Welfare Science Ethics and Law Course. This course provides continuing professional development in animal welfare ethics and law for researchers, animal care staff, legislators and regulators working with animals.

Dr Hubrecht has also served on advisory committees for a multi-national corporation and an NGO concerned with conservation of wildlife. He is also a 3Rs convenor for LASA, a scientific advisor to the Douglas Houghton Memorial Fund and serves on an animal welfare and ethical review body (AWERB) for a breeding and research establishment.

Senior Scientific Programme Manager Dr Huw Golledge gave several presentations and lectures throughout the year on a range of subjects. He spoke on the welfare impacts of various euthanasia techniques for laboratory rodents, and in particular on the need to develop alternatives to killing laboratory rats and mice with carbon dioxide at several meetings. These included the controlled atmosphere stunning meeting organised by UFAW and the Humane Slaughter Association as well as those held by the Swiss Federal Food Safety and Veterinary Office (FSVO), the Danish Animal Experiments Inspectorate and the Irish Health Products Regulatory Authority (HPRA) and at 3Rs days held at Edinburgh University, the Pirbright Institute and Ghent University in Belgium. Dr Golledge also lectured on humane killing techniques for laboratory animals on two of Edinburgh University's Animal Welfare MSc courses.

At the *World Congress on Alternatives and Animal Use in the Life Sciences* in Seattle, Dr Golledge spoke about the use of "cage-side" tests of animal welfare, questioning whether many of them are reliable enough to be used to monitor animal welfare. He also gave a poster on the ethical issues which surround the use of companion animals in clinical trials as an alternative to using laboratory animals, a topic which he also broached with a number of concerned veterinarians and animal welfare scientists in a letter to the *Veterinary Record*.



Photo credit: UFAW courtesy of E. Carter

ADMINISTRATION AND FINANCE

Finance and Accounts

The following summarised accounts have been extracted from the full accounts and have been prepared in accordance with the Companies Act 2006, which were approved by the Directors/Council and signed on its behalf on 17th July 2018.

The full accounts have been audited and the auditors' opinion was without qualification. The accounts will be filed with the Companies Registry and the Charity Commission after the Annual General Meeting on 17th October 2018.

Full accounts, and the audit report can be obtained from the Charity Secretary, The Old School, Brewhouse Hill, Wheathampstead, Herts AL4 8AN.

Independent Auditors' Statement to the Council of the Universities Federation for Animal Welfare

We have examined the summarised financial statements that comprise the summary statement of financial activities and summary balance sheet.

Respective Responsibilities of the Council and Auditors

You are responsible as the Council for the preparation of the summarised financial statements. We have agreed to report to you our opinion on the summarised financial statements' consistency with the financial statements, on which we reported to you on 17th July 2018.

Basis of Opinion

We have carried out the procedures we consider necessary to ascertain whether the summarised financial statements are consistent with the full financial statements from which they have been prepared.

Opinion

In our opinion the summarised financial statements are consistent with the full financial statements for the year ended 31st March 2018.



S. Francis-Joseph FCCA 17th July 2018
Senior Statutory Auditor
for and on behalf of Anthony Joseph & Co Limited, Stevenage

UFAW Summary of Financial Activity Year Ended 31st March 2018

	2017/18 £	2016/17 £
Incoming Resources		
Voluntary Income	281,373	528,548
Charitable Activities	212,299	93,401
Investment Income	213,578	189,068
Total Incoming Resources	707,250	811,017
Resources Expended		
Costs of Generating Funds	84,440	76,552
Charitable Activities	475,125	400,367
Other Resources Expended	150,991	159,943
Total Resources Expended	710,556	636,862
Operational (Outgoing)/Incoming Resources for the Year	(3,306)	174,155
Other Recognised Gains & Losses:		
Net Realised Gain/(Losses) on Investments	299,069	148,763
Net Unrealised Gains/Losses on Market Value of Investments	(250,800)	777,206
Net Movement of Funds	44,963	1,100,124
Balance Brought Forward	8,308,231	7,208,107
Balances Carried Forward	8,353,194	8,308,231

UFAW Balance Sheet as at 31st March 2018

	2017/18 £	2016/17 £
Fixed Assets		
Tangible Fixed Assets	372,002	378,314
Investments	7,711,696	7,725,668
	8,083,698	8,103,982
Current Assets		
Debtors	88,268	43,271
Money Market & Deposit Accounts	390,200	424,105
Cash at Bank and in Hand	20,748	22,787
	499,216	490,163
Current Liabilities		
Creditors: Amounts Falling Due within One Year	(204,156)	(237,698)
Net Current Assets	295,060	252,465
Total Assets less Current Liabilities	8,378,758	8,356,488
Creditors: Amounts Falling Due after More than One Year	(25,564)	(48,217)
Net Assets	8,353,194	8,308,231
Funds		
Unrestricted	7,741,222	7,702,652
Restricted	611,972	605,579
	8,353,194	8,308,231

The summarised accounts were approved by the Trustees and signed on their behalf on 17th July 2018.



Professor A Nolan OBE MVP DipECVA DipECVPT DVA MRCVS
Chairman



C McCann BSc ACA
Treasurer

Annual General Meeting 2017

The AGM was held on the 7th November 2017 at the Old School, Brewhouse Hill, Wheathampstead. As in previous years this was held in conjunction with the Annual General Meeting of the Humane Slaughter Association (CIO). The members of UFAW Council also act as Trustees for the HSA. Joint meetings are held to save time and money.

The notice convening the meeting had been sent to all members and was taken as read. The meeting agreed the Minutes of the AGM of 2016 and resolved to receive the Accounts and Auditor's Report for the year ended 31st March 2017. Questions on the Report of the year's work were answered by the officials present and the meeting resolved that the Report and Accounts be received.

It was resolved that Anthony Joseph & Co Limited Registered Auditors, be appointed as auditors to UFAW and its associated Trusts and their remuneration should be fixed by Council.

Mr M Radford, and Dr D Sargan, stood down under the rules regarding rotation, both offered themselves for re-election, and were re-elected. Following the resignation of Mr A Wilson, Dr J Downes a new candidate was proposed, Dr Downes nomination had the full support of Council, and she was duly elected.

Notice of Annual General Meeting 2018

The Annual General Meeting of the Universities Federation for Animal Welfare will be held at 12.30pm on Wednesday 17th October 2018 at The Old School, Brewhouse Hill, Wheathampstead. The formal notice and agenda have been sent to all members and are available from the Secretary at the registered office.

LEGAL AND ADMINISTRATIVE INFORMATION

Vice-Presidents:

Professor P H Holmes OBE BVMS PhD FRCVS FRSE
J H Pratt BVM&S DVSM FRCVS
G D Sales BSc PhD AKC MRSB DipTCDHE
Professor R S Anderson BVMS PhD MRCVS
Professor P M Biggs CBE DSc DVM FRCPath FRSB FRS FRCVS
B Howard BVMS PhD FRCVS
L A Brown MBE BVSc BA PhD FRSB MBA FRCVS

Council:

(who are the Directors of the Limited Company)

Chairman:

Professor A Nolan OBE MVB DipECVA
DipECVPT DVA MRCVS ψφλ

Vice-Chairman:

A G Simmons BVMS MSc MRCVS λ

Honorary Treasurer: C L McCann BSc ACA φλ

Members:

Professor R M Bennett BSc MSc PhD λψ
J Bradshaw BA PhD φ
J Downes BVSc MRCVS (from 7th November 2017)
B North MBA PhD MSc λ
A Olsson MSc
D Pritchard BSc BVetMed MPH MRCVS ψ
M Radford OBE LLB
C Reid ψ
D R Sargan MA PhD Ψφ
φ Member of the Grant Panel
λ Member of the Finance Panel
ψ Member of the Fundraising Panel

Staff:

Chief Executive/Scientific Director:

Robert C Hubrecht OBE BSc PhD FRSB

Senior Scientific Programme Manager:

Huw Golledge BSc PhD

Scientific Officer:

Elizabeth Carter BSc MSc

Development Officer:

Stephen M Wickens BSc PhD

Editorial Assistant:

Steven Weddell BSc BVSc MRCVS HND

Fundraising/Communications Manager:

Tracey Woods MCIPR

Secretary:

Jane Moorman

Office staff:

Samantha Griffin

Wendy L Goodwin

Offices:

The Old School, Brewhouse Hill,
Wheathampstead, Hertfordshire AL4 8AN
Telephone: 01582 831818
Fax: 01582 831414
Website: www.ufaw.org.uk
E-mail: ufaw@ufaw.org.uk

If you no longer wish to receive information about the charity's activities or support, then please contact the UFAW office. (Members should be aware that notification of future Annual General Meetings is provided in the Annual Report).

Registered Auditors:

Anthony Joseph & Co Limited,
Suite F47, Business & Technology Centre,
Bessemer Drive, Stevenage, Herts SG1 2DX

Bankers:

HSBC Bank plc,
31 Chequer Street,
St Albans, Herts, AL1 4YN

Barclays Bank plc,
33 Darkes Lane, Potters Bar,
Herts EN6 1BA

Santander UK plc,
Bridle Road, Bootle L30 4GB

Solicitors:

Withers LLP, 16 Old Bailey, London, EC4M 7EG

Investment Advisers:

Smith & Williamson Investment Managers,
25 Moorgate, London EC2V 5NS



Universities Federation for Animal Welfare

The Old School, Brewhouse Hill, Wheathampstead, Herts. AL4 8AN, United Kingdom

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