

# Technical ESF E-Bird Workshop

## Endocrine measurements for ecologists

<sup>th</sup>  
17 November 2006

Glasgow, Scotland, UK



**EUROPEAN  
SCIENCE  
FOUNDATION**



## 1. Overview of Technical Workshop

There are many ways to assess endocrine mechanisms that enable birds to adapt to their environment. The least invasive involve sampling faeces or yolk and these were the subject of the E-Bird technical workshop organized by Susi-Jenni Eierman and Wolfgang Goymann in October 2004, "Analysis of hormones in droppings and in egg yolk in birds". Invasive techniques used to assess endocrine function often involve sampling blood and tissues, and these are the topic for discussion in this workshop. Three techniques which are widely used, and one which may become widely used, have been identified, each with a lead speaker. Each speaker is asked to describe the technique with protocols found to be most useful. Examples will be given of how each technique has been used to address eco-endocrinological questions. The limitations and future possible applications of each technique will be discussed. Participants in the Workshop are asked to contribute their own experiences with any of these techniques and in general, discuss how these techniques might be used to address ecological questions, or be further refined.

Each lead speaker will be given 25 mins to introduce a topic and workshop participants are encouraged to submit 10 min presentations relevant to each workshop theme.

## 2. Workshop Programme (Provisional)

09.00 General Introduction to Workshop

Peter Sharp

09.05 Protein hormone measurement in blood

Peter Sharp ([peter.sharp@bbsrc.ac.uk](mailto:peter.sharp@bbsrc.ac.uk))

09.30 Discussion and Free communications on protein hormone measurements

*10.30 Refreshment Break*

11.00 Quantitative immunocytochemistry

Pierre Deviche ([deviche@asu.edu](mailto:deviche@asu.edu))

11.25 Discussion and Free Communications on immunocytochemistry

*12.30 Lunch break*

13.30 Quantitative in situ hybridization

Simone Meddle ([s.l.meddle@ed.ac.uk](mailto:s.l.meddle@ed.ac.uk))

13.55 Discussion and Free Communications on in situ hybridization

14.55 Functional genomics and endocrine function

Tim Boswell ([timothy.boswell@ncl.ac.uk](mailto:timothy.boswell@ncl.ac.uk))

15.20 Discussion, General Free Communications, Conclusion of workshop

16.00 Final Refreshment break

### 3. Workshop Participants

20 attendees plus 4 course leaders

### 4. How to apply to attend and reimbursement of costs

Please contact Peter Sharp [peter.sharp@bbsrc.ac.uk](mailto:peter.sharp@bbsrc.ac.uk) if you wish to attend. Participants will be able to claim up to 80 euros to cover overnight accommodation, but arrangements for this will have to be made by each participant.

A list of suitable hotels in the vicinity of the University of Glasgow is given on the E-bird Web site under (<http://e-bird.cefe.cnrs.fr/final-workshop.htm>).

### 5. Workshop organiser

Prof Dr Peter Sharp([peter.sharp@bbsrc.ac.uk](mailto:peter.sharp@bbsrc.ac.uk))

Peter Sharp began his research career in the mid 1960s at the University of Leeds with (now Sir) Brian Follett as his PhD supervisor. After post doctoral experience in neuroanatomy in Germany, in 1972, he joined the Poultry Research Centre in Edinburgh, Scotland. This organization has evolved over the years, into the Biotechnology and Biological Sciences Research Council's (BBSRC) Roslin Institute. The Institute has internationally recognized programmes on molecular and quantitative genetics, genomics and early development in farm animals. Between 1988-2004, Peter headed the Division responsible for the Institute's research on cattle, sheep and avian reproduction and development. Notably, as Head of Division he was involved in the strategic and scientific planning of the research that resulted in the birth of the first mammal to be cloned from a somatic cell, "Dolly" the sheep.

His personal research interests are in avian reproductive neuroendocrinology, particularly the endocrine mechanisms controlling avian seasonal breeding, and most recently he has been using techniques in functional genomics including cDNA microarray analyses. He has authored or co-authored 240 refereed papers since 1968.

Peter's contributions to avian neuroendocrinology were recognized in 1995 by one of highest scientific honours that can be awarded in Scotland: election to the Royal Society of Edinburgh, and in 2004, by the award of the Farner Medal by the International Symposium of Avian Endocrinology. Peter is now age- retired, but remains active in the laboratory with many collaborations world wide.