INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI 2005–2010

RC-Specific Evaluation of VetSci – Veterinary science: clinical, translational, and animal welfare research

Seppo Saari & Antti Moilanen (Eds.)
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Title:

Summary:
Researcher Community (RC) was a new concept of the participating unit in the evaluation. Participation in the evaluation was voluntary and the RCs had to choose one of the five characteristic categories to participate.

Evaluation of the Researcher Community was based on the answers to the evaluation questions. In addition a list of publications and other activities were provided by the TUHAT system. The CWTS/Leiden University conducted analyses for 80 RCs and the Helsinki University Library for 66 RCs. Panellists, 49 and two special experts in five panels evaluated all the evaluation material as a whole and discussed the feedback for RC-specific reports in the panel meetings in Helsinki. The main part of this report is consisted of the feedback which is published as such in the report.

Chapters in the report:
1. Background for the evaluation
2. Evaluation feedback for the Researcher Community
3. List of publications
4. List of activities
5. Bibliometric analyses

The level of the RCs’ success can be concluded from the written feedback together with the numeric evaluation of four evaluation questions and the category fitness. More conclusions of the success can be drawn based on the University-level report.

RC-specific information:
Main scientific field of research: Biological, Agricultural and Veterinary Sciences
RC-specific keywords: clinical, animal welfare, translational medicine,

Participation category:
2. Research of the participating community is of high quality, but the community in its present composition has yet to achieve strong international recognition or a clear breakthrough

RC’s responsible person:
Peltoniemi, Olli

Keywords:
Research Evaluation, Meta-evaluation, Doctoral Training, Bibliometric Analyses, Researcher Community
Contents

Panel members ........................................................................................................................... 1
1 Introduction to the Evaluation ............................................................................................... 5
  1.1 RC-specific evaluation reports ........................................................................................... 5
  1.2 Aims and objectives in the evaluation .............................................................................. 5
  1.3 Evaluation method ............................................................................................................. 5
  1.4 Implementation of the external evaluation ....................................................................... 6
  1.5 Evaluation material ........................................................................................................... 7
  1.6 Evaluation questions and material .................................................................................. 8
  1.7 Evaluation criteria ............................................................................................................ 10
  1.8 Timetable of the evaluation ............................................................................................. 13
  1.9 Evaluation feedback – consensus of the entire panel ...................................................... 13
2 Evaluation feedback .............................................................................................................. 15
  2.1 Focus and quality of the RC’s research ............................................................................. 15
  2.2 Practises and quality of doctoral training ......................................................................... 15
  2.3 The societal impact of research and doctoral training ..................................................... 16
  2.4 International and national (incl. intersectoral) research collaboration and researcher mobility .... 17
  2.5 Operational conditions ................................................................................................... 17
  2.6 Leadership and management in the researcher community ....................................... 18
  2.7 External competitive funding of the RC .......................................................................... 19
  2.8 The RC’s strategic action plan for 2011–2013 ................................................................. 19
  2.9 Evaluation of the category of the RC in the context of entity of the evaluation material (1-8) ... 20
  2.10 Short description of how the RC members contributed the compilation of the stage 2 material ... 20
  2.11 How the UH’s focus areas are presented in the RC’s research ................................... 20
  2.12 RC-specific main recommendations ............................................................................. 20
  2.13 RC-specific conclusions ............................................................................................... 21
  2.14 Preliminary findings in the Panel-specific feedback ................................................... 21
  2.15 Preliminary findings in the University-level evaluation ............................................. 22
3 Appendices .......................................................................................................................... 25
Foreword

The evaluation of research and doctoral training is being carried out in the years 2010–2012 and will end in 2012. The steering group appointed by the Rector in January 2010 set the conditions for participating in the evaluation and prepared the Terms of Reference to present the evaluation procedure and criteria. The publications and other scientific activities included in the evaluation covered the years 2005–2010.

The participating unit in the evaluation was defined as a Researcher Community (RC). To obtain a critical mass with university-level impact, the number of members was set to range from 20 to 120. The RCs were required to contain researchers in all stages of their research career, from doctoral students to principal investigators (Pis). All in all, 136 Researcher Communities participated in this voluntary evaluation, 5857 persons in total, of whom 1131 were principal investigators. Pis were allowed to participate in two communities in certain cases, and 72 of them used this opportunity and participated in two RCs.

This evaluation enabled researchers to define RCs from the “bottom up” and across disciplines. The aim of the evaluation was not to assess individual performance but a community with shared aims and researcher-training activities. The RCs were able to choose among five different categories that characterised the status and main aims of their research. The steering group considered the process of applying to participate in the evaluation to be important, which led to the establishment of these categories. In addition, providing a service for the RCs to enable them to benchmark their research at the global level was a main goal of the evaluation.

The data for the evaluation consisted of the RCs’ answers to evaluation questions on supplied e-forms and a compilation extracted from the TUHAT – Research Information System (RIS) on 12 April 2011. The compilation covered scientific and other publications as well as certain areas of scientific activities. During the process, the RCs were asked to check the list of publications and other scientific activities and make corrections if needed. These TUHAT compilations are public and available on the evaluation project sites of each RC in the TUHAT-RIS.

In addition to the e-form and TUHAT compilation, University of Leiden (CWTS) carried out bibliometric analyses from the articles included in the Web of Science (WoS). This was done on University and RC levels. In cases where the publication forums of the RC were clearly not represented by the WoS data, the Library of the University of Helsinki conducted a separate analysis of the publications. This was done for 66 RCs representing the humanities and social sciences.

The evaluation office also carried out an enquiry targeted to the supervisors and PhD candidates about the organisation of doctoral studies at the University of Helsinki. This and other documents describing the University and the Finnish higher education system were provided to the panellists.

The panel feedback for each RC is unique and presented as an entity. The first collective evaluation reports available for the whole panel were prepared in July–August 2011. The reports were accessible to all panel members via the electronic evaluation platform in August. Scoring from 1 to 5 was used to complement written feedback in association with evaluation questions 1–4 (scientific focus and quality, doctoral training, societal impact, cooperation) and in addition to the category evaluating the fitness for participation in the evaluation. Panellists used the international level as a point of comparison in the evaluation. Scoring was not expected to go along with a preset deviation.

Each of the draft reports were discussed and dealt with by the panel in meetings in Helsinki (from 11 September to 13 September or from 18 September to 20 September 2011). In these meetings the panels also examined the deviations among the scores and finalised the draft reports together.

The current RC-specific report deals shortly with the background of the evaluation and the terms of participation. The main evaluation feedback is provided in the evaluation report, organised according to the evaluation questions. The original material provided by the RCs for the panellists has been attached to these documents.
On behalf of the evaluation steering group and office, I sincerely wish to thank you warmly for your participation in this evaluation. The effort you made in submitting the data to TUHAT-RIS is gratefully acknowledged by the University. We wish that you find this panel feedback useful in many ways. The bibliometric profiles may open a new view on your publication forums and provide a perspective for discussion on your choice of forums. We especially hope that this evaluation report will help you in setting the future goals of your research.

Johanna Björkroth
Vice-Rector
Chair of the Steering Group of the Evaluation

Steering Group of the evaluation

Steering group, nominated by the Rector of the University, was responsible for the planning of the evaluation and its implementation having altogether 22 meetings between February 2010 and March 2012.

Chair
Vice-Rector, professor Johanna Björkroth

Vice-Chair
Professor Marja Airaksinen

Chief Information Specialist, Dr Maria Forsman
Professor Arto Mustajoki
University Lecturer, Dr Kirsi Pyhältö
Director of Strategic Planning and Development, Dr Ossi Tuomi
Doctoral candidate, MSocSc Jussi Vauhkonen
Panel members

CHAIR
Professor Ary A. Hoffman
Ecological genetics, evolutionary biology, biodiversity conservation, zoology
University of Melbourne, Australia

VICE-CHAIR
Professor Barbara Koch
Forest Sciences, remote sensing
University of Freiburg, Germany

Professor Per-Anders Hansson
Agricultural engineering, modeling, life cycle analysis, bioenergy
Swedish University of Agricultural Sciences

Professor Danny Huylebroeck
Developmental biology
Katholieke Universiteit Leuven, Belgium

Professor Jonathan King
Virus assembly, protein folding
Massachusetts Institute of Technology MIT, USA

Professor Hannu J.T. Korhonen
Functional foods, dairy technology, milk hygiene
MTT Agrifood Research Finland

Professor Kristina Kruus
Microbiological biotechnology, microbiological enzymes, applied microbiology
VTT Technical Research Centre of Finland

Professor Joakim Lundeberg
Biochemistry, biotechnology, sequencing, genomics
KTH Royal Institute of Technology, Sweden

Professor Dominiek Maes
Veterinary medicine
Ghent University, Belgium

Professor Olli Saastamoinen
Forest economics and policy
University of Eastern Finland

Professor Kai Simons
Biochemistry, molecular biology, cell biology
Max-Planck-Institute of Molecular Cell Biology and Genetics, Germany

The panel, independently, evaluated all the submitted material and was responsible for the feedback of the RC-specific reports. The panel members were asked to confirm whether they had any conflict of interests with the RCs. If this was the case, the panel members disqualified themselves in discussion and report writing.

Added expertise to the evaluation was contributed by the members from the other panels and by one evaluator outside the panels.
External Expert
Professor Anders Linde
Oral biochemistry
Faculty of Odontology
Göteborg University
Sweden

Experts from the Other Panels
Professor Caitlin Buck, from the Panel of Natural Sciences
Professor Ritske Huismans, from the Panel of Natural Sciences
Professor Johanna Ivaska, from the Panel of Medicine, biomedicine and health sciences
Professor Lea Kauppi, from the Panel of Natural Sciences
Professor Holger Stark, from the Panel of Natural Sciences
Professor Peter York, from the Panel of Medicine, biomedicine and health sciences

EVALUATION OFFICE
Dr Seppo Saari, Doc., Senior Adviser in Evaluation, was responsible for the entire evaluation, its planning and implementation and acted as an Editor-in-chief of the reports.
Dr Eeva Sievi, Doc., Adviser, was responsible for the registration and evaluation material compilations for the panellists. She worked in the evaluation office from August 2010 to July 2011.
MSocSc Paula Ranne, Planning Officer, was responsible for organising the panel meetings and all the other practical issues like agreements and fees and editing a part the RC-specific reports. She worked in the evaluation office from March 2011 to January 2012.
Mr Antti Moilanen, Project Secretary, was responsible for editing the reports. He worked in the evaluation office from January 2012 to April 2012.

TUHAT OFFICE
Provision of the publication and other scientific activity data
Mrs Aija Kaitera, Project Manager of TUHAT-RIS served the project ex officio providing the evaluation project with the updated information from TUHAT-RIS. The TUHAT office assisted in mapping the publications with CWTS/University of Leiden.
MA Liisa Ekebom, Assisting Officer, served in TUHAT-RIS updating the publications for the evaluation. She also assisted the UH/Library analyses.
BA Liisa Jäppinen, Assisting Officer, served in TUHAT-RIS updating the publications for the evaluation.

HELSINKI UNIVERSITY LIBRARY
Provision of the publication analyses
Dr Maria Forsman, Chief Information Specialist in the Helsinki University Library, managed with her 10 colleagues the bibliometric analyses in humanities, social sciences and in other fields of sciences where CWTS analyses were not applicable.
Acronyms and abbreviations applied in the report

External competitive funding
AF – Academy of Finland
TEKES - Finnish Funding Agency for Technology and Innovation
EU - European Union
ERC - European Research Council
International and national foundations
FP7/6 etc. /Framework Programmes/Funding of European Commission

Evaluation marks
Outstanding (5)
Excellent (4)
Very Good (3)
Good (2)
Sufficient (1)

Abbreviations of Bibliometric Indicators
P - Number of publications
TCS – Total number of citations
MCS - Number of citations per publication, excluding self-citations
PNC - Percentage of uncited publications
MNCS - Field-normalized number of citations per publication
MNJS - Field-normalized average journal impact
THCP10 - Field-normalized proportion highly cited publications (top 10%)
INT_COV - Internal coverage, the average amount of references covered by the WoS
WoS – Thomson Reuters Web of Science Databases

Participation category
Category 1. The research of the participating community represents the international cutting edge in its field.
Category 2. The research of the participating community is of high quality, but the community in its present composition has yet to achieve strong international recognition or a clear break-through.
Category 3. The research of the participating community is distinct from mainstream research, and the special features of the research tradition in the field must be considered in the evaluation.
Category 4. The research of the participating community represents an innovative opening.
Category 5. The research of the participating community has a highly significant societal impact.

Research focus areas of the University of Helsinki
Focus area 1: The basic structure, materials and natural resources of the physical world
Focus area 2: The basic structure of life
Focus area 3: The changing environment – clean water
Focus area 4: The thinking and learning human being
Focus area 5: Welfare and safety
Focus area 6: Clinical research
Focus area 7: Precise reasoning
Focus area 8: Language and culture
Focus area 9: Social justice
Focus area 10: Globalisation and social change
1 Introduction to the Evaluation

1.1 RC-specific evaluation reports

The participants in the evaluation of research and doctoral training were Researcher Communities (hereafter referred to as the RC). The RC refers to the group of researchers who registered together in the evaluation of their research and doctoral training. Preconditions in forming RCs were stated in the Guidelines for the Participating Researcher Communities. The RCs defined themselves whether their compositions should be considered well-established or new.

It is essential to emphasize that the evaluation combines both meta-evaluation\(^1\) and traditional research assessment exercise and its focus is both on the research outcomes and procedures associated with research and doctoral training. The approach to the evaluation is enhancement-led where self-evaluation constituted the main information. The answers to the evaluation questions formed together with the information of publications and other scientific activities an entity that was to be reviewed as a whole.

The present evaluation recognizes and justifies the diversity of research practices and publication traditions. Traditional Research Assessment Exercises do not necessarily value high quality research with low volumes or research distinct from mainstream research. It is challenging to expose the diversity of research to fair comparison. To understand the essence of different research practices and to do justice to their diversity was one of the main challenges of the present evaluation method. Understanding the divergent starting points of the RCs demanded sensitivity from the evaluators.

1.2 Aims and objectives in the evaluation

The aims of the evaluation are as follows:

- to improve the level of research and doctoral training at the University of Helsinki and to raise their international profile in accordance with the University’s strategic policies. The improvement of doctoral training should be compared to the University’s policy.\(^2\)
- to enhance the research conducted at the University by taking into account the diversity, originality, multidisciplinary nature, success and field-specificity,
- to recognize the conditions and prerequisites under which excellent, original and high-impact research is carried out,
- to offer the academic community the opportunity to receive topical and versatile international peer feedback,
- to better recognize the University’s research potential.
- to exploit the University’s TUHAT research information system to enable transparency of publishing activities and in the production of reliable, comparable data.

1.3 Evaluation method

The evaluation can be considered as an enhancement-led evaluation. Instead of ranking, the main aim is to provide useful information for the enhancement of research and doctoral training of the participating RCs. The comparison should take into account each field of science and acknowledge their special character.

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1 The panellists did not read research reports or abstracts but instead, they evaluated answers to the evaluation questions, tables and compilations of publications, other scientific activities, bibliometrics or comparable analyses.

2 Policies on doctoral degrees and other postgraduate degrees at the University of Helsinki.
The comparison produced information about the present status and factors that have lead to success. Also challenges in the operations and outcomes were recognized.

The evaluation approach has been designed to recognize better the significance and specific nature of researcher communities and research areas in the multidisciplinary top-level university. Furthermore, one of the aims of the evaluation is to bring to light those evaluation aspects that differ from the prevalent ones. Thus the views of various fields of research can be described and research arising from various starting points understood better. The doctoral training is integrated into the evaluation as a natural component related to research. Operational processes of doctoral training are being examined in the evaluation.

**Five stages of the evaluation method were:**
1. Registration – Stage 1
2. Self-evaluation – Stage 2
3. TUHAT³ compilations on publications and other scientific activities⁴
4. External evaluation
5. Public reporting

### 1.4 Implementation of the external evaluation

**Five Evaluation Panels**

Five evaluation panels consisted of independent, renowned and highly respected experts. The main domains of the panels are:

1. biological, agricultural and veterinary sciences
2. medicine, biomedicine and health sciences
3. natural sciences
4. humanities
5. social sciences

The University invited 10 renowned scientists to act as chairs or vice-chairs of the five panels based on the suggestions of faculties and independent institutes. Besides leading the work of the panel, an additional role of the chairs was to discuss with other panel chairs in order to adopt a broadly similar approach. The panel chairs and vice-chairs had a pre-meeting on 27 May 2011 in Amsterdam.

The panel compositions were nominated by the Rector of the University 27 April 2011. The participating RCs suggested the panel members. The total number of panel members was 50. The reason for a smaller number of panellists as compared to the previous evaluations was the character of the evaluation as a meta-evaluation. The panellists did not read research reports or abstracts but instead, they evaluated answers to the evaluation questions, tables and compilations of publications, other scientific activities, bibliometrics and comparable analyses.

The panel meetings were held in Helsinki:
- On 11–13 September 2011: (1) biological, agricultural and veterinary sciences, (2) medicine, biomedicine and health sciences and (3) natural sciences.
- On 18–20 September 2011: (4) humanities and (5) social sciences.

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³ TUHAT (acronym) of Research Information System (RIS) of the University of Helsinki
⁴ Supervision of thesis, prizes and awards, editorial work and peer reviews, participation in committees, boards and networks and public appearances.
1.5 Evaluation material

The main material in the evaluation was the RCs’ self-evaluations that were qualitative in character and allowed the RCs to choose what was important to mention or emphasise and what was left unmentioned.

The present evaluation is exceptional at least in the Finnish context because it is based on both the evaluation documentation (self-evaluation questions, publications and other scientific activities) and the bibliometric reports. All documents were delivered to the panellists for examination.

Traditional bibliometrics can be reasonably done mainly in medicine, biosciences and natural sciences when using the Web of Science database, for example. Bibliometrics, provided by CWTS/The Centre for Science and Technology Studies, University of Leiden, cover only the publications that include WoS identification in the TUHAT-RIS.

Traditional bibliometrics are seldom relevant in humanities and social sciences because the international comparable databases do not store every type of high quality research publications, such as books and monographs and scientific journals in other languages than English. The Helsinki University Library has done analysis to the RCs, if their publications were not well represented in the Web of Science databases (RCs should have at least 50 publications and internal coverage of publications more than 40%) – it meant 58 RCs. The bibliometric material for the evaluation panels was available in June 2011. The RC-specific bibliometric reports are attached at the end of each report.

The panels were provided with the evaluation material and all other necessary background information, such as the basic information about the University of Helsinki and the Finnish higher education system.

Evaluation material
1. Registration documents of the RCs for the background information
2. Self evaluation material – answers to the evaluation questions
3. Publications and other scientific activities based on the TUHAT RIS:
   3.1. statistics of publications
   3.2. list of publications
   3.3. statistics of other scientific activities
   3.4. list of other scientific activities
4. Bibliometrics and comparable analyses:
   4.1. Analyses of publications based on the verification of TUHAT-RIS publications with the Web of Science publications (CWTS/University of Leiden)
   4.2. Publication statistics analysed by the Helsinki University Library - mainly for humanities and social sciences
5. University level survey on doctoral training (August 2011)
6. University level analysis on publications 2005–2010 (August 2011) provided by CWTS/University of Leiden

Background material

University of Helsinki
- Basic information about the University of the Helsinki
- The structure of doctoral training at the University of Helsinki
- Previous evaluations of research at the University of Helsinki – links to the reports: 1998 and 2005

The Finnish Universities/Research Institutes
- Finnish University system
- Evaluation of the Finnish National Innovation System
- The State and Quality of Scientific Research in Finland, Publication of the Academy of Finland 9/09.

The evaluation panels were provided also with other relevant material on request before the meetings in Helsinki.
1.6 Evaluation questions and material

The participating RCs answered the following evaluation questions which are presented according to the evaluation form. In addition, TUHAT RIS was used to provide the additional material as explained. For giving the feedback to the RCs, the panellists received the evaluation feedback form constructed in line with the evaluation questions:

1. Focus and quality of the RC’s research
   - Description of
     - the RC’s research focus.
     - the quality of the RC’s research (incl. key research questions and results)
     - the scientific significance of the RC’s research in the research field(s)
   - Identification of the ways to strengthen the focus and improve the quality of the RC’s research

   The additional material: TUHAT compilation of the RC’s publications, analysis of the RC’s publications data (provided by University of Leiden and the Helsinki University Library)

   A written feedback from the aspects of: scientific quality, scientific significance, societal impact, innovativeness
   - Strengths
   - Areas of development
   - Other remarks
   - Recommendations

   Numeric evaluation: OUTSTANDING (5), EXCELLENT (4), VERY GOOD (3), GOOD (2), SUFFICIENT (1)

2. Practices and quality of doctoral training
   - Organising of the doctoral training in the RC. Description of the RC’s principles for:
     - recruitment and selection of doctoral candidates
     - supervision of doctoral candidates
     - collaboration with faculties, departments/institutes, and potential graduate schools/doctoral programmes
     - good practices and quality assurance in doctoral training
   - Identification of the ways to strengthen the research and quality of doctoral training, and the actions planned for their development.

   The additional material: TUHAT compilation of the RC’s other scientific activities/supervision of doctoral dissertations

   A written feedback from the aspects of: processes and good practices related to leadership and management
   - Strengths
   - Areas of development
   - Other remarks
   - Recommendations

   Numeric evaluation: OUTSTANDING (5), EXCELLENT (4), VERY GOOD (3), GOOD (2), SUFFICIENT (1)

3. The societal impact of research and doctoral training
   - Description on how the RC interacts with and contributes to the society (collaboration with public, private and/or 3rd sector).
   - Identification of the ways to strengthen the societal impact of the RC’s research and doctoral training.

   The additional material: TUHAT compilation of the RC’s other scientific activities.

   A written feedback from the aspects of: societal impact, national and international collaboration, innovativeness
   - Strengths
   - Areas of development
   - Other remarks
   - Recommendations

   Numeric evaluation: OUTSTANDING (5), EXCELLENT (4), VERY GOOD (3), GOOD (2), SUFFICIENT (1)
4. International and national (incl. intersectoral) research collaboration and researcher mobility

- Description of
  - the RC’s research collaborations and joint doctoral training activities
  - how the RC has promoted researcher mobility
  - Identification of the RC’s strengths and challenges related to research collaboration and researcher mobility, and the actions planned for their development.

A written feedback from the aspects of: scientific quality, national and international collaboration

- Strengths
- Areas of development
- Other remarks
- Recommendations

Numeric evaluation: OUTSTANDING (5), EXCELLENT (4), VERY GOOD (3), GOOD (2), SUFFICIENT (1)

5. Operational conditions

- Description of the operational conditions in the RC’s research environment (e.g. research infrastructure, balance between research and teaching duties).
- Identification of the RC’s strengths and challenges related to operational conditions, and the actions planned for their development.

A written feedback from the aspects of: processes and good practices related to leadership and management

- Strengths
- Areas of development
- Other remarks
- Recommendations

6. Leadership and management in the researcher community

- Description of
  - the execution and processes of leadership in the RC
  - how the management-related responsibilities and roles are distributed in the RC
  - how the leadership- and management-related processes support
    - high quality research
    - collaboration between principal investigators and other researchers in the RC
    - the RC’s research focus
    - strengthening of the RC’s know-how
  - Identification of the RC’s strengths and challenges related to leadership and management, and the actions planned for developing the processes

7. External competitive funding of the RC

- The RCs were asked to provide information of such external competitive funding, where:
  - the funding decisions have been made during 1.1.2005-31.12.2010, and
  - the administrator of the funding is/has been the University of Helsinki
- On the e-form the RCs were asked to provide:
  1) The relevant funding source(s) from a given list (Academy of Finland/Research Council, TEKES/The Finnish Funding Agency for Technology and Innovation, EU, ERC, foundations, other national funding organisations, other international funding organisations), and
  2) The total sum of funding which the organisation in question had decided to allocate to the RCs members during 1.1.2005–31.12.2010.

Competitive funding reported in the text is also to be considered when evaluating this point.

A written feedback from the aspects of: scientific quality, scientific significance, societal impact, innovativeness, future significance

- Strengths
- Areas of development
- Other remarks
- Recommendations

8. The RC’s strategic action plan for 2011–2013

- RC’s description of their future perspectives in relation to research and doctoral training.

A written feedback from the aspects of: scientific quality, scientific significance, societal impact, processes and good practices related to leadership and management, national and international collaboration, innovativeness, future significance

- Strengths
- Areas of development
9. Evaluation of the category of the RC in the context of entity of the evaluation material (1-8)

The RC's fitness to the chosen participation category
A written feedback evaluating the RC's fitness to the chosen participation category
  - Strengths
  - Areas of development
  - Other remarks
  - Recommendations

Numeric evaluation: OUTSTANDING (5), EXCELLENT (4), VERY GOOD (3), GOOD (2), SUFFICIENT (1)

10. Short description of how the RC members contributed the compilation of the stage 2 material
Comments on the compilation of evaluation material

11. How the UH’s focus areas are presented in the RC's research?
Comments if applicable

12. RC-specific main recommendations based on the previous questions 1–11

13. RC-specific conclusions

1.7 Evaluation criteria

The panellists were expected to give evaluative and analytical feedback to each evaluation question according to their aspects in order to describe and justify the quality of the submitted material. In addition, the evaluation feedback was asked to be pointed out the level of the performance according to the following classifications:

- outstanding (5)
- excellent (4)
- very good (3)
- good (2)
- sufficient (1)

Evaluation according to the criteria was to be made with thorough consideration of the entire evaluation material of the RC in question. Finally, in questions 1-4 and 9, the panellists were expected to classify their written feedback into one of the provided levels (the levels included respective descriptions, ‘criteria’). Some panels used decimals in marks. The descriptive level was interpreted according to the integers and not rounding up the decimals by the editors.

Description of criteria levels

Question 1 – FOCUS AND QUALITY OF THE RC’S RESEARCH

Classification: Criteria (level of procedures and results)

Outstanding quality of procedures and results (5)

Outstandingly strong research, also from international perspective. Attracts great international interest with a wide impact, including publications in leading journals and/or monographs published by leading international publishing houses. The research has world leading qualities. The research focus, key research questions scientific significance, societal impact and innovativeness are of outstanding quality.

In cases where the research is of a national character and, in the judgement of the evaluators, should remain so, the concepts of “international attention” or “international impact” etc. in the grading criteria above may be replaced by “international comparability”.

10
Operations and procedures are of outstanding quality, transparent and shared in the community. The improvement of research and other efforts are documented and operations and practices are in alignment with the documentation. The ambition to develop the community together is of outstanding quality.

**Excellent quality of procedures and results (4)**

Research of excellent quality. Typically published with great impact, also internationally. Without doubt, the research has a leading position in its field in Finland.

Operations and procedures are of excellent quality, transparent and shared in the community. The improvement of research and other efforts are documented and operations and practices are to large extent in alignment with the documentation. The ambition to develop the community together is of excellent quality.

**Very good quality of procedures and results (3)**

The research is of such very good quality that it attracts wide national and international attention.

Operations and procedures are of very good quality, transparent and shared in the community. The improvement of research and other efforts are documented and operations and practices are to large extent in alignment with the documentation. The ambition to develop the community together is of very good quality.

**Good quality of procedures and results (2)**

Good research attracting mainly national attention but possessing international potential, extraordinarily high relevance may motivate good research.

Operations and procedures are of good quality, shared occasionally in the community. The improvement of research and other efforts are occasionally documented and operations and practices are to large extent in alignment with the documentation. The ambition to develop the community together is of good quality.

**Sufficient quality of procedures and results (1)**

In some cases the research is insufficient and reports do not gain wide circulation or do not have national or international attention. Research activities should be revised.

Operations and procedures are of sufficient quality, shared occasionally in the community. The improvement of research and other efforts are occasionally documented and operations and practices are to some extent in alignment with the documentation. The ambition to develop the community together is of sufficient quality.

**Question 2 – DOCTORAL TRAINING**

**Question 3 – SOCIETAL IMPACT**

**Question 4 – COLLABORATION**

**Classification: Criteria (level of procedures and results)**

**Outstanding quality of procedures and results (5)**

Procedures are of outstanding quality, transparent and shared in the community. The practices and quality of doctoral training/societal impact/international and national collaboration/leadership and management are documented and operations and practices are in alignment with the documentation. The ambition to develop the community together is of outstanding quality. The procedures and results are regularly evaluated and the feedback has an effect on the planning.

**Excellent quality of procedures and results (4)**

Procedures are of excellent quality, transparent and shared in the community. The practices and quality of doctoral training/societal impact/international and national collaboration/leadership and management are documented and operations and practices are to large extent in alignment with the documentation. The ambition to develop the community together is of excellent quality. The procedures and outcomes are evaluated and the feedback has an effect on the planning.

**Very good quality of procedures and results (3)**

Procedures are of very good quality, transparent and shared in the community. The practices and quality of doctoral training/societal impact/international and national collaboration/leadership and
management are documented and operations and practices are to large extent in alignment with the documentation. The ambition to develop the community together is of very good quality.

**Good quality of procedures and results (2)**

Procedures are of good quality, shared occasionally in the community. The practices and quality of doctoral training/societal impact/international and national collaboration/leadership and management are documented and operations and practices are to large extent in alignment with the documentation. The ambition to develop the community together is of good quality.

**Sufficient quality of procedures and results (1)**

Procedures are of sufficient quality, transparent and shared in the community. The practices and quality of doctoral training/societal impact/international and national collaboration/leadership and management are occasionally documented and operations and practices are to some extent in alignment with the documentation. The ambition to develop the community together is of sufficient quality.

**Question 9 – CATEGORY**

Participation category – fitness for the category chosen

The choice and justification for the chosen category below should be reflected in the RC's responses to the evaluation questions 1–8.

1. The research of the participating community represents the international cutting edge in its field.
2. The research of the participating community is of high quality, but the community in its present composition has yet to achieve strong international recognition or a clear break-through.
3. The research of the participating community is distinct from mainstream research, and the special features of the research tradition in the field must be considered in the evaluation. The research is of high quality and has great significance and impact in its field. However, the generally used research evaluation methods do not necessarily shed sufficient light on the merits of the research.
4. The research of the participating community represents an innovative opening. A new opening can be an innovative combination of research fields, or it can be proven to have a special social, national or international demand or other significance. Even if the researcher community in its present composition has yet to obtain proof of international success, its members can produce convincing evidence of the high level of their previous research.
5. The research of the participating community has a highly significant societal impact. The participating researcher community is able to justify the high social significance of its research. The research may relate to national legislation, media visibility or participation in social debate, or other activities promoting social development and human welfare. In addition to having societal impact, the research must be of a high standard.

**An example of outstanding fitness for category choice (5)**

The RC's representation and argumentation for the chosen category were convincing. The RC recognized its real capacity and apparent outcomes in a wider context to the research communities. The specific character of the RC was well-recognized and well stated in the responses. The RC fitted optimally for the category.

- Outstanding (5)
- Excellent (4)
- Very good (3)
- Good (2)
- Sufficient (1)

The above-mentioned definition of outstanding was only an example in order to assist the panellists in the positioning of the classification. There was no exact definition for the category fitness.

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5 The panels discussed the category fitness and made the final conclusions of the interpretation of it.
1.8 Timetable of the evaluation

The main timetable of the evaluation:

1. Registration November 2010
3. External peer review May–September 2011
4. Published reports March–April 2012
   - University level public report
   - RC specific reports

The entire evaluation was implemented during the university’s strategy period 2010–2012. The preliminary results were available for the planning of the following strategy period in late autumn 2011. The evaluation reports will be published in March/April 2012. More detailed time schedule is published in the University report.

1.9 Evaluation feedback – consensus of the entire panel

The panellists evaluated all the RC-specific material before the meetings in Helsinki and mailed the draft reports to the evaluation office. The latest interim versions were on-line available to all the panellists on the Wiki-sites. In September 2011, in Helsinki the panels discussed the material, revised the first draft reports and decided the final numeric evaluation. After the meetings in Helsinki, the panels continued working and finalised the reports before the end of November 2011. The final RC-specific reports are the consensus of the entire panel.

The evaluation reports were written by the panels independently. During the editing process, the evaluation office requested some clarifications from the panels when necessary. The tone and style in the reports were not harmonized in the editing process. All the reports follow the original texts written by the panels as far as it was possible.

The original evaluation material of the RCs, provided for the panellists is attached at the end of the report. It is essential to notice that the exported lists of publications and other scientific activities depend how the data was stored in the TUHAT-RIS by the RCs.
2 Evaluation feedback

2.1 Focus and quality of the RC’s research

- Description of
  - the RC’s research focus
  - the quality of the RC’s research (incl. key research questions and results)
  - the scientific significance of the RC’s research in the research field(s)
- Identification of the ways to strengthen the focus and improve the quality of the RC’s research

ASPECTS: Scientific quality, scientific significance, societal impact, innovativeness

The work of the Researcher Community (RC) is in line with the University of Helsinki (UH) research policy and is of excellent scientific quality. The RC focuses on aspects that are important for the veterinary profession (diagnosis, treatment and prevention of diseases) and for the society (welfare of animals, food safety issues, animals used as models in human medicine).

On the one hand, the RC suffers from the fact that the group is large, quite heterogeneous (many disciplines, different animal species) and with different tasks of the members apart from research making it more difficult to manage and to find common lines of research. As suggested by RC, more interdisciplinary aspects would probably improve the quality of research. On the other hand, the RC uses this diversity as an opportunity to strengthen and enrich the research, especially by means of good management and collaboration.

The work of the RC focuses mainly on the link between basic research and applied veterinary medicine, which is a good position for an RC dealing with clinical veterinary medicine. In general, the RC’s work reflects well the current needs of the society and pursues solutions through relevant science.

Questions / comments
- Are all research results published in international peer-reviewed journals (as suggested in the text)? I can imagine that some work is very interesting for Finland, but not for the international community.
- Is there any research in reproduction in small animals? It is not mentioned in the text.
- Is the RC also doing research on poultry as production animals? (broilers, laying hens?)
- How has the ANIWEL program affected the quality of research?
- Work in social sciences is mentioned. Has the RC a deep methodological base for this, or are researchers with a medical background (vets) involved in these projects?
- The wide diversity of disciplines seems to dilute the profile of the RC as a possible centre of excellence. In some areas (animal welfare, reproduction, mastitis research) the quality of research is, however, excellent and very focused.

Numeric evaluation: 4 (Excellent)

2.2 Practises and quality of doctoral training

- Organising of the doctoral training in the RC. Description of the RC’s principles for:
  - recruitment and selection of doctoral candidates
  - supervision of doctoral candidates
  - collaboration with faculties, departments/institutes, and potential graduate schools/doctoral programmes
  - good practises and quality assurance in doctoral training
  - assuring of good career perspectives for the doctoral candidates/fresh doctorates
A lot of attention is paid to the selection of the PhD candidates, and also to the guidance of PhD students. Every PhD student has one main supervisor, and from one to two other co-supervisors (some of them from abroad). In this respect, it is acceptable that a formal steering group is not used. A lot of courses are offered to the students, and there is a lot of international collaboration. It appears that international cooperation needs further strengthening and alignment with the current research areas. The Graduate School in Animal Welfare (ANIWEL) seems to provide a suitable example for good practice as a system for doctoral student guidance.

Questions / Comments

- Numbers of drop-outs: Which % of the PhD students that have started a PhD program, finalize the program successfully, and what are the reasons for not finalizing the PhD?
- The minimum criteria for training (number of courses or credits) and the criteria for being allowed to defend a PhD are not mentioned. Is it necessary for PhD students to follow courses, or is this voluntarily? How many courses should be followed? Are the criteria exactly the same for students within the ANIWEL doctoral program and those that are not in that program?
- It is mentioned that the doctoral training aims to deliver PhD students that will continue a career in research. On the one hand, I agree with this. However, I would also expect that the training is broader and should also be interesting / relevant for persons aiming a career not directly linked with research.
- Any new areas to be explored through international linkages? What is the added value from the Liverpool University and what is expected from cooperation with the University of Giessen?
- Many things seem to be good for ANIWEL students, but a lot of students are not involved in ANIWEL. What is their situation?
- More focus on relevant postdoc positions within RC is recommended. If the examined PhD students can not go on with the research at RC, future recruitment of higher duties will be more difficult.

Numeric evaluation: 4 (Excellent)

2.3 The societal impact of research and doctoral training

- Description on how the RC interacts with and contributes to the society (collaboration with public, private and/or 3rd sector).
- Identification of the ways to strengthen the societal impact of the RC’s research and doctoral training.
- Additional material: TUHAT compilation of the RC’s other scientific activities.

ASPECTS: Societal impact, national and international collaboration, innovativeness

The RC is active in many areas that are very important for the society e.g. welfare of animals, use of animals as a model for human medicine, diseases, infections or conditions (e.g. antimicrobial resistance) important for humans, etc. It also appears that the RC has many strong contacts and close collaboration with professional organisations (companies, breeding clubs, foundations, etc.), institutions and other universities. The societal impact is visible from the amount of clinical work and active collaboration of researchers with professional organizations.

Questions / Comments
Not only research with companion animals can lead to improvement of medical treatments of humans, but also production animals (e.g. pigs) can be used as a model for applications in humans. Is this also the case in the RC?

Does the RC have linkages or collaboration with pharmaceutical companies developing animal drugs. It is not mentioned in the text. This could increase the societal impact of the research. It could also open perspectives for obtaining (more) funding by industry.

The RC is large but the number of popular research and newspaper articles is limited. A strategy to promote writing such articles by members of the RC could increase the visibility of the RC.

**Numeric evaluation:** 4 (Excellent)

### 2.4 International and national (incl. intersectoral) research collaboration and researcher mobility

- **Description of**
  - the RC’s research collaborations and joint doctoral training activities
  - how the RC has promoted researcher mobility
- **Identification of the RC’s strengths and challenges related to research collaboration and researcher mobility, and the actions planned for their development.**

**ASPECTS:** Scientific quality, national and international collaboration

As in many research groups, the (international) collaboration is primarily based on or initiated by informal networking and personal contacts. This is good, but as pointed out by the RC, more structuring may be warranted or necessary on the long term. The RC stimulates students and supervisors to work together with international groups to improve the research quality or to conduct the research in a more efficient way (division of costs, expertise, equipment, etc.). A lot of international collaboration is already in place, especially with other Nordic countries, but also with other research groups. Cooperation with The Nordic Forestry, Veterinary and Agricultural University Network (NOVA) seems very useful in organizing courses but there is not much explanation about the researcher mobility within NOVA or otherwise.

**Questions / Comments**

- The ANIWEL program provides courses and national networking but how is this integrated or coordinated with NOVA? Researcher mobility should be strengthened and included as an essential part of the training schedule of all doctoral students.
- The benefits of collaboration with the Liverpool University and the proposed cooperation with Giessen University should be discussed in more detail. Why was Giessen University chosen? The lack of EU funding should be noted in this context.
- External founding of the RC is relatively low and especially international founding (e.g. EU funding) is very limited. This indicates that project based research collaboration is not RC’s strongest area.

**Numeric evaluation:** 4 (Excellent)

### 2.5 Operational conditions

- **Description of the operational conditions in the RC’s research environment (e.g. research infrastructure, balance between research and teaching duties).**
- **Identification of the RC’s strengths and challenges related to operational conditions, and the actions planned for their development.**

**ASPECTS:** Processes and good practices related to leadership and management
The RC group has good operational conditions (new laboratories, research cow barns) and good contacts with production farms in Southern Finland. There are also a lot of patients (small animals, horses) in the veterinary clinic, and many client farms with 1700 visits per year. In the clinics, the appropriate medical equipment is available, and in the different laboratories, up-to-date research equipment is in place. The infrastructure and research and teaching facilities are modern and rather sufficiently contributing to the strengths of the RC.

The RC recognizes that it is difficult to combine clinical work with research, and that the time left over for doing research after having finished the clinical work is a critical issue. The skills of the technical personnel are acclaimed. There is shortage of qualified staff, as well.

**Questions / comments**
- It is not clear in which degree the data of the patients in the clinics are (optimally) used for research purposes.
- How many necropsies are done each year, and how are these data used to publish e.g. case reports?
- How is the payment of farmers for collaboration with research studies? Is there a structured collaboration including financial agreements?
- Can the revenue from clinical work be used to support research activities and doctoral student mobility?
- Sharing time between research and clinical work seems to a major challenge.

### 2.6 Leadership and management in the researcher community

- **Description of**
  - the execution and processes of leadership in the RC
  - how the management-related responsibilities and roles are distributed in the RC
  - how the leadership- and management-related processes support
    - high quality research
    - collaboration between principal investigators and other researchers in the RC
    - the RC’s research focus
    - strengthening of the RC’s know-how
- **Identification of the RC’s strengths and challenges related to leadership and management, and the actions planned for developing the processes**

**ASPECTS: Processes and good practices related to leadership and management**

The ANIWEL graduate school with the RC is considered as an example of good leadership and management of doctoral training.

It is not clear whether research topics are determined by the department heads / research professors, or whether they are mainly determined by the available funding provided by the government, industry, Finnish academia, etc.

ANIWEL provides a very good structure for recruiting good candidates (e.g. summer school), providing them with appropriate courses, etc.

Leadership and management of the RC are organized in the way typically adopted by the UH. Need to increase collaboration between PI’s and research groups is pointed out and it could improve the quality of research. Also the amount of external founding could be helpful in this respect. ANIWEL’s summer school seems a good practice to follow in the recruitment of new doctoral students.

**Questions / Comments**
- 26 PhD students (out of the 67) are registered as members of graduate school ANIWEL. Does it mean that students not belonging to ANIWEL have a less optimal training? Is it not possible to have a similar structure for the other PhD students?
What is the drop-out percentage of the PhD students (difference between those that start and those that finish their PhD)?

The doctoral training is divided approximately on a 50:50-basis between researchers in companion and production animals. In which way is this a reflection of the population and interest of the undergraduate students? Likely, a majority of the undergraduate students is more interested in companion animals?

Is there any follow-up of PhD students once they have finished their PhD?

2.7 External competitive funding of the RC

- The RCs were asked to provide information of such external competitive funding, where:
  - the funding decisions have been made during 1.1.2005–31.12.2010, and
  - the administrator of the funding is/has been the University of Helsinki

- On the e-form the RCs were asked to provide:
  1) The relevant funding source(s) from a given list (Academy of Finland/Research Council, TEKES/The Finnish Funding Agency for Technology and Innovation, EU, ERC, foundations, other national funding organisations, other international funding organizations), and
  2) The total sum of funding which the organisation in question had decided to allocate to the RCs members during 1.1.2005–31.12.2010.

Competitive funding reported in the text is also to be considered when evaluating this point.

ASPECTS: Scientific quality, scientific significance, societal impact, innovativeness and future significance

External funding is obtained from different organizations, the major ones being the Academy of Finland, the Ministry of Education and Culture and the Ministry of Agriculture. Also, the Finnish Funding Agency for Technology and Innovation (Tekes) and Finnish foundations have sponsored to some minor extent.

Questions / Comments

- Which percentage of the funding is aimed to pay the researcher, and which percentage is aimed to do the research?
- Obtaining sufficient funding is considered as a critical issue (as in most research institutions). It would be interesting to know which percentage of the submitted research projects are finally approved. Are most of the research projects based on open calls, or are the topics based by the funding bodies on beforehand?
- Which percentage of the total research funding originates from external funding?
- The amount of EU funding or the funding from other international sources is not mentioned. Has the RC applied for EU funds from FP5 or other international sources? How is NOVA support counted for?
- Why is there no funding support from the pharmacological/agricultural companies or other related industries and organizations though they are mentioned as collaborators?
- Given the size of the RC, the amount of external founding is low. What is the main reason? How can the situation be improved?

2.8 The RC’s strategic action plan for 2011–2013

- RC’s description of their future perspectives in relation to research and doctoral training.
  ASPECTS: Scientific quality, scientific significance, societal impact, processes and good practices related to leadership and management, national and international collaboration, innovativeness, future significance

The strategic plan of the RC is sound and straightforward. The critical issues have been described. The major issues in the strategic plan are:
Research topics in agreement with the UH Research Policy and the Faculty of Veterinary Medicine.

Further developing of research infrastructure in co-operation with other units and campuses.

Collaboration between the three departments within the faculty, with other faculties, other universities from within and outside Finland and other institutions in Finland.

A structured internationalization program for PhD students.

Questions / Comments

- Further development of proteomics and metabolomics is appropriate and could strengthen the scientific basis for research.
- Increased collaboration between the departments and increasing cooperation with industries and organisations are welcome from the societal point of view.
- A major challenge is how to acquire more competitive funding, especially from the EU. The possible funding options should be explored as a strategic issue for future doctoral training. This is related to the suggested program for internationalization.

2.9 Evaluation of the category of the RC in the context of entity of the evaluation material (1-8)

The RC’s fitness to the chosen participation category.

Category 2. The research of the participating community is of high quality, but the community in its present composition has yet to achieve strong international recognition or a clear break-through.

The RC has selected category 2 ‘The research of the participating community is of high quality, but the community in its present composition has yet to achieve strong international recognition or a clear break-through’, which seems appropriate given its research orientation and achievements, so far. The RC admits that strong international recognition remains to be pursued, though some research disciplines have produced internationally acknowledged results published in high impact journals. Reference is made to the previous international evaluation where the RC scored very well. No self-evaluation has been provided about the achievements of different research fields or groups within the RC.

Numeric evaluation: 4 (Excellent)

2.10 Short description of how the RC members contributed the compilation of the stage 2 material

This was done in a proper way, and since using a web based tool, also in an efficient way.

2.11 How the UH’s focus areas are presented in the RC’s research

Focus area 6: Clinical research

The research fits within the UH’s focus areas.

2.12 RC-specific main recommendations

The RC is functioning very well and is conducting excellent research. They should to a large extent continue on the same lines.
Possible areas for improvement include:
- Develop a more delineated research lines within the wide research area of the group,
- guarantee sufficient time for PhD students for their research apart from their clinical work,
- standardize the doctoral program with the RC (ANIWEL program versus others),
- develop more structure in the international collaboration,
- follow-up persons that finalized their PhD and to evaluate their feedback,
- develop a strategy to increase external funding.

2.13 RC-specific conclusions

The RC is functioning very well. The RC is quite diverse, which can be considered as a threat (more difficult to manage, more difficult to focus on specific research lines, etc.), but also as an opportunity (same approach in different animal species, synergy in case of good collaboration between different disciplines, etc.). The RC should stay active in the areas that are important for the society, further strengthen international collaboration and increase external funding.

2.14 Preliminary findings in the Panel-specific feedback

Research focus
The RC is large (19 PI’s) and heterogeneous (many disciplines, animal health and animal welfare, different animal species), but focuses on aspects that are important for the veterinary profession and the society (welfare of animals, food safety issues, animals used as models in human medicine). The RC uses this diversity as an opportunity to strengthen and enrich the research, especially by means of good management and collaboration. However, a large and heterogeneous group is also more difficult to manage and it makes it more difficult to set out common lines of research.

Practices and quality of doctoral training
The doctoral training is excellent, especially for students within the ANIWEL doctoral program. Attention should be paid to maintain a similar high standard of training for PhD students that are not in the ANIWEL program.

Societal impact
The RC is active in many areas that are important for the society e.g. welfare of animals, use of animals as a model for human medicine, diseases, infections or conditions (e.g. antimicrobial resistance) important for humans, etc.

The RC has also many contacts and close collaboration with professional organisations (companies, breeding clubs, foundations, etc.), institutions and other universities. The societal impact is visible from the amount of clinical work and the active collaboration of researchers with professional organizations.

International and national collaboration
The (international) collaboration is primarily based on or initiated by informal networking and personal contacts. This is good, but more structuring may be warranted or necessary in the long term. A lot of international collaboration is already in place, especially with other Nordic countries, but also with other research groups.

Leadership and management
Leadership and management of the RC are organized in the way as typically adopted by UH. Increased collaboration between PI’s and research groups could further improve the quality of research. The graduate school ANIWEL can be considered as an example of good leadership and management of doctoral training. It provides a very good structure for recruiting good candidates and for providing them with appropriate courses.
External funding
External funding is obtained from different organizations, the major ones being the Academy of Finland, the Ministry of Education and Culture and the Ministry of Agriculture. In general, the total amount of external funding is low and can be considered as a critical issue. Any EU funding is not mentioned.

Strategic action plan
The strategic plan of the RC is sound and straightforward. The major critical issues are:

- To develop and maintain the lines of research that are sufficiently well-delineated within the broad research area of the RC,
- to further develop research infrastructure in co-operation with other units and campuses,
- to collaborate between the three departments within the faculty, with other faculties, other universities from within and outside Finland, other institutions in Finland,
- to develop a structured internationalization program for PhD students,
- to acquire more funding, especially from the EU.

2.15 Preliminary findings in the University-level evaluation

Research focus
The RC is large and heterogeneous. Therefore, attention should be paid to collaboration and communication within the RC, and to set out well delineated lines of research.

Practices and quality of doctoral training
The same quality of training should be provided to all PhD students in the group. The training of PhD students that are not in the ANIWEL program should be similar as the training of students within the ANIWEL program.

Societal impact
The RC should stay active in the areas that are important for the society e.g. welfare of animals, use of animals as a model for human medicine, diseases, infections or conditions (e.g. antimicrobial resistance) important for humans, etc. Also, the RC should keep close contact with professional organisations, institutions and other universities.

International and national collaboration
The international collaboration should be more structured.

Leadership and management
The collaboration between PI’s and research groups should be maintained and intensified to further improve the quality of research.

External funding
More external funding should be obtained, and the RC should strive to obtain EU funding.

Strategic action plan
The RC should strive to:

- Develop and maintain research topics that are sufficiently well-delineated within the broad research area of the RC,
- pay sufficient attention to the permanent management of the RC, and to allow young PhD candidates having sufficient time for their research apart from their clinical work,
- further develop research infrastructure in co-operation with other units and campuses,
- collaborate between the three departments within the faculty, with other faculties, other universities or institutions from within and outside Finland,
• develop a structured internationalization program for PhD students,
• acquire more competitive funding, especially from the EU.
3 Appendices

A. Original evaluation material
   a. Registration material – Stage 1
   b. Answers to evaluation questions – Stage 2
   c. List of publications
   d. List of other scientific activities

B. Bibliometric analyses
   a. Analysis provided by CWTS/University of Leiden
   b. Analysis provided by Helsinki University Library (66 RCs)
NAME OF THE RESEARCHER COMMUNITY:
Veterinary science: clinical, translational, and animal welfare research (VetSci)

LEADER OF THE RESEARCHER COMMUNITY:
Professor Olli Peltoniemi, Faculty of Veterinary Medicine

RC-SPECIFIC MATERIAL FOR THE PEER REVIEW:

- Material submitted by the RC at stages 1 and 2 of the evaluation
  - STAGE 1 material: RC’s registration form (incl. list of RC participants in an excel table)
  - STAGE 2 material: RC’s answers to evaluation questions
- TUHAT compilations of the RC members’ other scientific activities 1.1.2005-31.12.2010
  (analysis carried out by CWTS, Leiden University)

NB! Since Web of Science(WoS)-based bibliometrics does not provide representative results for most RCs representing humanities, social sciences and computer sciences, the publications of these RCs will be analyzed by the UH Library
(results available by the end of June, 2011)
Name: Peltoniemi, Olli
E-mail: 
Phone: +358405381621
Affiliation: University of Helsinki, Faculty of Veterinary Medicine
Street address: Paroninkuja 20, 04920 Saarentaus

Name of the participating RC (max. 30 characters): Veterinary science: clinical, translational, and animal welfare research
Acronym for the participating RC (max. 10 characters): VetSci
Description of the operational basis in 2005-2010 (eg. research collaboration, joint doctoral training activities) on which the RC was formed (MAX. 2200 characters with spaces): The consortium of clinical veterinary medicine and animal welfare consists mainly of researchers that were evaluated as a consortium for clinical veterinary medicine in the last research evaluation conducted in the HU in 2005. This consortium was very well united through clinical research despite being/while being active in a variety of domestic animal species. This group has a long lasting tradition of collaboration across department boundaries and therefore the result of the last evaluation was very positive. Over the past five years, the consortium has grown considerably in quantity as well as quality of research functions. Several major research grants have been received and shared by the researchers working with companion and production animal-related clinical veterinary medicine. Nowadays, the group is further united by the graduate school ANIWEL regarding doctoral training. The doctoral training is divided approximately on a 50:50% basis between researchers in companion and production animals. The Research Centre for Animal Welfare covers the most common domestic animal species and is a well established part of the consortium. The activities of the Centre do not only cross the department borders within the Faculty, but also includes researchers from the neighboring Faculty of Agriculture and Forestry. The Helsinki/Vilki Central Clinical Laboratory serves the clinical departments of the Faculty and, in addition to analyzing patient samples, offers ample opportunities for extensive research. Furthermore, the Helsinki Unit features an ethology laboratory specializing in technology related to the description and analysis of animal behavior.

Main scientific field of the RC’s research: biological, agricultural and veterinary sciences
RC’s scientific subfield 1: Veterinary Sciences
RC’s scientific subfield 2: --Select--
RC’s scientific subfield 3: --Select--
RC's scientific subfield 4: --Select--

Other, if not in the list:

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**4 RC'S PARTICIPATION CATEGORY**

**Participation category:** 2. Research of the participating community is of high quality, but the community in its present composition has yet to achieve strong international recognition or a clear break-through.

**Justification for the selected participation category (MAX. 2200 characters with spaces):** The consortium considers itself as an internationally well known consortium with some parts of the consortium reaching to the international top. The research methods applied are very much up-to-date within clinical veterinary medicine and animal welfare. The publication forums used by the members of the consortium typically score on the upper quartile of those available within the clinical veterinary medicine. Occasionally, when research accomplished in the consortium has clear implications in human medicine, the profile of the forum chosen may considerably exceed that of clinical veterinary medicine. The clinical veterinary sciences scored 6 out of 7 in the international research evaluation by the HU in 2005 already indicated that the consortium is very well regarded within the international research community.

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**5 DESCRIPTION OF THE RC'S RESEARCH AND DOCTORAL TRAINING**

**Public description of the RC's research and doctoral training (MAX. 2200 characters with spaces):** The tools of the research and doctoral training are the two doctoral programmes. 1) The programme which funded by the university. It has had 1-2 full day student positions in clinical sciences. 2) The doctoral programme of Animal Welfare (ANIWEL) started in 2006. Since the beginning of 2010, the main focus has been in clinical veterinary medicine. ANIWEL is funded by the Ministry of Education and Culture and the Finnish Academy. It is a nationwide network having doctoral candidates also in applied etology and social sciences. ANIWEL has 7 students who are paid by the program and approximately 40 students who get their funding from other sources. One third of the students are not able to do full day research as they need to work for living. Out of the 70 supervisors of the doctoral program one fourth are international. The doctoral program provides the students with courses which are tailored to them. The adjacent research community enables peer group support and personal passing of transferable skills. The both programs are well linked to the research and teaching of the clinical departments (production animal medicine and equine and small animal medicine) of the faculty. The clinical summer school started in 2010. It is aimed for undergraduate students who are willing to do their licentiate thesis in clinical sciences. In the summer school the students join the research groups as junior research assistant. Both the supervisors and the doctoral candidates are instructing them. This gives the PhD students an opportunity to practice and improve their pedagogic skills. The University Teaching Hospital makes available animal patients needed for research. Excellent clinical skills are fundamental to a good clinical researcher. It is a challenge to find a way to combine clinical research training and professional specialization. Most of the Principal Investigators of the clinical departments are diplomates of the European College of Veterinary Medicine indicating that they have internationally perceived clinical competence in their clinical research field.
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC STAGE 1 MATERIAL (registration form)

Significance of the RC’s research and doctoral training for the University of Helsinki (MAX. 2200 characters with spaces):
The faculty of veterinary medicine is the only one in Finland. Therefore, the RC is the only academic unit where doctoral training in clinical veterinary research is carried out. Any treatment of a veterinary patient should be based on evidence which have been established in scientific peer reviewed articles which have been published in international scientific journals. When humans are living in close connection with animals, there is an increased risk that contagious diseases may be transferred from animals to humans (and vice versa). During the last few years at least two pandemics (swine flu and avian flu) having their origin in animals have threatened the mankind. Therefore it is most important that the health and diseases of the domestic animals are well known and understood. Spontaneous animal diseases have recently turned to be important translational animal models in medical research.

Production animals, such as cattle, swine, and poultry, are the source of our every day nutrition. It is self evident that good quality food is produced only from healthy animals. In recent days the society has become more and more aware of the welfare of animals. Consumers are openly questioning the methods we are using when producing food stuff of animal origin. In such environment it is essential to use scientific approach when we are looking for better means to keep production animals.

Companion animals and horses are importantly promoting public health by supporting the wellbeing of their owners. However, we are lacking calculations to prove their health economical value.

Adequate veterinary services are the starting point of healthy domestic animal population. Scientific evidence based medicine is the only way to the best veterinary practices. Antimicrobial resistance of bacteria is low in Finland and the country is free of many severe animal diseases just because good veterinary practices. To keep and improve this favourable situation we need active clinical veterinary research and research training.

Keywords: clinical, animal welfare, translational medicine

Justified estimate of the quality of the RC’s research and doctoral training at national and international level during 2005-2010 (MAX. 2200 characters with spaces): The research conducted in the consortium is considered to be on the top in its field. This is indicated by the IF of journals used if reference is chosen among journals in clinical veterinary medicine. The research funding in the consortium has increased considerably throughout the evaluation period. However, in the most competitive sources for funding, the size of the field may be a downside limiting the possibilities for groups functioning within the consortium to be successful. The publication forums used by the members of the consortium typically score on the upper quartile of those available within clinical veterinary medicine. The quality of doctoral training in the consortium is developing constantly. The graduate school ANIWEL, and its predecesor the Resarch School for Animal Welfare, has made the doctoral training programs more systematic by recruiting high-quality teachers for courses within clinical veterinary medicine and animal welfare. The quality of the doctoral training, as measured by the number of doctoral students enrolled in graduate school training programs can be used as a reference, comparing the present level to that in the beginning of the evaluation period. Another indicator may be the number of doctoral training courses organized within the consortium.
Comments on how the RC’s scientific productivity and doctoral training should be evaluated (MAX. 2200 characters with spaces):

As impact factors and citation indexes do favour research fields in main stream research, where number of scientists, journals and articles are thousandfold to those in clinical veterinary medicine, the marginal field should be favoured with multiplying factors which would compensate the small size of the discipline. We should also observe that the most valued scientific journals in biosciences (Nature, Science) have a policy stating that they publish only results of basic sciences. Thus, it is politically impossible to get clinical research results published in them even though qualitatively the manuscript would not be second to any other clinical paper.

The volume of readers of the veterinary journals is small compared to bigger research fields and, thus, the impact factors of remain low, between 1.5 and 2. A small research field is not a synonym to poor quality. Therefore, the impact factors of publications should be compared to those of other veterinary medical research institutes.

Most researchers and doctoral candidates in clinical veterinary medicine are also practitioners who work on veterinary patients. This strong clinical touch is fundamental to a clinical researcher. Evident clinical work – including small group teaching - often occupies half of the working hours and, thus, less time is available for actual research. When the number of A1 articles is used as a marker of scientific productivity, clinical teachers should be favoured with a factor, such as 1.5, which would be used to multiply the actual number of articles.

We should not directly compare the amount of external funding. Instead we should divide the amount of external money with the number of articles and/or PhDs produced. Thus we would get the price of one thesis/article. The unit producing more high level articles with lower external funding would be more cost effective.

When doctoral training is evaluated by counting the number of PhDs and/or articles produced by a Principal Investigator, the comparison should be done to other groups and faculties and institutes in the clinical veterinary medicine.
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Co-workers in discipline 2005-2010

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<tr>
<td>Linden Jere</td>
<td>Postdoctoral Researcher</td>
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</tbody>
</table>
Name of the RC's responsible person: Peltoniemi, Olli
E-mail of the RC's responsible person:

Name and acronym of the participating RC: Veterinary science: clinical, translational, and animal welfare research, VetSci

The RC's research represents the following key focus area of UH: 6. Kliininen tutkimus - Clinical research

Comments for selecting/not selecting the key focus area: The new research focus areas at the University of Helsinki have been published recently (January 17, 2011). The research focus of the RC clearly falls in the focus area number 6 - clinical research. Clinical research includes clinical translational medicine, personalized medicine and clinical veterinary medicine. The core of the research by the present RC can be formulated to be clinical veterinary medicine including translational medicine.

1. Description of the RC's research focus, the quality of the RC's research (incl. key research questions and results) and the scientific significance of the RC's research for the research field(s).

The research conducted by the RC focuses on clinical veterinary medicine and handles animal behavior, treatment, diagnosis and prevention of the diseases and economy and management of the diseases. The translational scope of RC attempts to link basic research findings to applied veterinary science.

In addition to that the subject of clinical and anatomical pathology focuses on the response of the host to different stimuli on genetic, molecular, cellular, tissue or macroscopic level. The final aim of the RC is to provide research results promoting animal health and welfare and at the same time these results could be utilized in decision making on animal, herd and population level.

When the research focus of the RC is examined more closely, detailed information can be added. In the field of pathology and parasitology, especially zoonotic parasites (trichinella and toxoplasma), and mastitis pathogens interaction with tissue are under intensive investigation. Pathologists participate in multidisciplinary research with the expertise on macroscopic and tissue levels with necropsies, histopathology and cytology.

The animal welfare research focuses both on topical issues, such as solving animal welfare issues related to the regulation of turkey transport and on more basic issues of animal welfare in modern society, such as development of tail biting in pigs and pain behavior and treatment of pain. Animal welfare research focuses especially on the following themes: understanding welfare and development of young animals, identifying and accommodating needs of production animals in modern production systems, new aspects of animal welfare in a developing agriculture and the role of animals in a changing society.

The diagnosis, treatment, prevention and economy of different diseases is an essential part of the RC's research focus. First, in production animals bovine mastitis has been one of the major cattle diseases studied. In addition to that mechanisms of infectious diseases in ruminants and research in preventive medicine of ruminant diseases have been under investigation. Pig disease studies include lameness, tail biting, eradication of diseases and respiratory diseases. Especially in production animal research the economic aspect of the disease and its management has been taken into account.
In the equine field, the researchers have added information especially in gastrointestinal and metabolic conditions (gastric ulcers, inflammatory bowel syndrome, sand enteropathy, metabolic syndrome) as well as in orthopedic diseases such as laminitis and treatment of arthritis. Clinical research in small animal internal medicine and surgery focuses on the etiology, pathogenesis and breed association of canine chronic enteropathies, hepatitis, pulmonary diseases, cardiovascular disorders, epilepsy, and otitis externa. Experimental treatment studies have dealt with the effect of diet composition or tylosin on canine intestinal microbiota, the pharmacokinetics and side effects of systemic or inhaled glucocorticoids, and the effect of bioglass as a coating material in total hip replacement. Clinical treatment studies in patients have been performed to assess the effects of tylosin on chronic enteropathies, of peroral or inhaled glucocorticoids on pulmonary eosinophilia, of botulinum toxin A on osteoarthritis, and of anterior cruciate ligament surgery on the long term outcome. Another research focus has been advanced imaging techniques such as endoscopic retrograde cholangiopancreatography and endoscopic near infrared spectroscopy for optic biopsy.

The research focus of the discipline of pharmacology and toxicology is on animal pain and pain alleviation. It includes studies of the pharmacodynamic, pharmacokinetic and adverse effects of certain veterinary sedatives and non-steroidal anti-inflammatory drugs. Canine cognitive studies are the newest opening. They relate closely to the pain sensation of animals.

The research in the field of reproduction focuses on factors affecting normal reproduction such as ovarian function and farrowing in pigs, pregnancy recognition and factors affecting reproduction in mares, composition of seminal plasma in stallions, effect of feeding on cattle reproduction and induction of ovulation in cattle. Also, some problems in reproduction are under investigation: breed related enigmas in animal reproduction, pathology of parturition of sows, and defense mechanisms of mare uteri.

The quality of research

RC publish all results in international peer-reviewed journals with high impact factors in the field of veterinary medicine, both in veterinary or in biomedical journals The quality of research has been excellent by international standards. The research includes study methods and questions from veterinary and pharmacological sciences to biological and social sciences. The work PI’s has been acknowledged internationally. In addition to established research areas new projects have just recently been established especially in equine and small animal clinical research and have therefore not been presented to an international peer reviewed quality assessment previously. However, their research focus is cutting edge in veterinary sciences and the research approach innovative and of promisingly high international impact. All researchers publish their results in international peer-reviewed journals with high impact factors in the field of veterinary medicine, basic science, or human medicine journals. Interdisciplinary national and international co-operation is an integrated part of all activities. The obvious strength of our research is a truly multi-disciplinary approach by a professional, internationally oriented and enthusiastic group of scientists.

The scientific significance

Several groups in the RC have been considered to be very active within the scientific community. The researchers add knowledge in their own field. More knowledge on the epidemiology, etiology, pathogenesis, precise diagnostics, and evidence based treatment of different diseases help in developing more efficient control strategies for their management or even prevention. Reducing of the incidence of diseases and possibility of being able to treat sick animals more effectively have positive consequences on animal welfare, the economy of owners and society as well as on public health.
Ways to strengthen the focus and improve the quality of the RC’s research. Translational scope and multidisciplinary set up of RC enables to combine molecular level basic science with clinical research. On some fields such as mastitis, this has already been shown to be a successful approach. The focus and quality of the RC’s research has been influenced by an increased cooperation between the researchers in the RC and the results can be seen in increased joint research papers. However, co-operation can be further strengthened by adding more interdisciplinary aspects to projects. The challenge lies in sufficiency of resources and restricted animal facilities for experimental research. The RC needs to use clinical material more sufficiently to produce research. This can be achieved by proper cooperation with university animal hospital clients, such as owners of production and companion animals, and breeding associations. However, experimental facilities are also needed. Quality improvement may also focus on promoting excellent junior researchers and supporting experienced and internationally successful senior researchers concerning resources and research time.

Main scientific field of the RC’s research:

How is doctoral training organised in the RC? Description of the RC’s principles for recruitment and selection of doctoral candidates, supervision of doctoral candidates, collaboration with faculties, departments/institutes, and potential graduate schools/doctoral programmes, good practises and quality assurance in doctoral training, and assuring good career perspectives for the doctoral candidates/fresh doctorates.

The method of student recruitment varies between a personal contact (by the PI or by the potential student) to a public call for applications (the Academy of Finland funded Graduate Program in Animal Welfare (ANIWEL) and certain other large-scale projects). A personal interview of the applicants is used when appropriate. In all student selections the main pressure is on the scientific quality of the PhD study plan (innovativeness, impressiveness, feasibility) and the competence of the student (personal skills, previous scientific experience, internationality).

In clinical veterinary research it is elementary that the researcher has also good clinical skills. Accordingly, a professional residency program in an EBVS recognised European college, or a plan of it, is considered as an advantage to a PhD applicant.

Every supervisor undersigns a paper to commit him/herself to the guidance responsibility. The main supervisor often requests from 1 to 2 co-supervisors whose input is elementary to finish the PhD study process in 4 years. A formal position as a co-supervisor motivates the instructors best. It is known that strong commitment increases the time the supervisors personally collaborate with the students. This is the best way also to transfer the transferable skills from a senior to a junior. Steering groups are not used in the RC as in clinical sciences PhD students usually have more than one supervisor. Based on experience this system works in the RC.

Each student has a personal schedule for his/her study program. Progress of the students is followed in regular research meetings where the supervisors and the student attend. Both the Faculty and the ANIWEL doctoral program, where most clinical students are members, collect annually detailed information on the progress of the students. In this report the student can also give the supervisors feed back of the guidance system. The time schedule of the PhD process is up-dated once a year.
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC STAGE 2 MATERIAL

The VetSci RC consists of researchers from three departments. Accordingly, there is a research interest based cooperation between the departments at the Faculty. Location of the RC’s main facilities enable close collaboration with the other faculties (Faculty of Agriculture and Forestry, Faculty of Pharmacy) and the Finish Food Safety Authority Evira which all are located on the Viikki campus. Especially research concentrating on production animal health and welfare have close contacts to MTT Agrifood Research which is the government owned research institute of agriculture and food.

Doctoral candidates who belong to ANIWEL research program have a (usually) free attend to courses organized by other graduate programs, such as the National Graduate School of Clinical Investigation, the Clinical Drug Research Graduate School, and FinPharmaNet – a network for drug research training.

Clinical trials are mainly carried out on privately owned animals at the University Teaching Hospital, and/or on private veterinary clinics, or at privately owned farms.

The researchers have their own contacts with groups at other universities, either national or international. As the faculty of veterinary medicine is the only national institute, any connection to another veterinary faculty is an international contact. International cooperation is elementary to the high quality substance of research but it is also important to the doctoral education. As PhD students usually have from 2 to 3 supervisors, extra efforts are made to have one of them from another (international) veterinary faculty.

The Nordic Forestry, Veterinary and Agricultural (NOVA) University Network is a Nordic virtual university network. NOVA University is one of the most important partners which is annually funding several scientific courses aimed for the PhD students of clinical veterinary medicine in various Nordic countries. In addition to the scientific substance, the courses are important to join both supervisors and PhD students from several countries.

Nordisk Kontaktorgan för Jordbruksforskning (NKJ) is a Nordic organisation which is funding production animal welfare related studies. The funding terms presume that researchers from all Nordic countries are involved. This condition motivates cooperation.

The Veterinary Faculty has an agreement of co-operation with the University of Liverpool. Erasmus student exchange program enables our students to attend the PhD courses in Liverpool and vice versa. Also the Erasmus funded opportunity to teacher exchange has been utilised. The first contact to the University of Giessen has been done in 2010 to start cooperation between the ANIWEL doctoral program and the Veterinary Faculty at the University of Giessen.

A good governance of the clinical research is guaranteed by the quality system of the University of Helsinki which was recently audited and accepted with distinction. More than a half of the RC’s students are members of the ANIWEL doctoral program which is funded by the Academy of Finland 2010-2013. Thus, the good practices presented concern majority of the doctoral students in the RC. The ANIWEL doctoral programme has written terms of references (House Rules). They are openly available on the home pages (http://aniwel.edublogs.org/). The House Rules include the rights and the responsibilities of the students. The supervisors have also written instructions to collect feedback from the students at the end of each course. The board members of the doctoral programme have written instructions of the student selection. How to reflect to feedback and instructions to request for a correction will be finalised in a written form this year, and added to the House Rules. More than a half of the PIs and two thirds of the professors of the RC are active ANIWEL teachers. To the appropriate
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC STAGE 2 MATERIAL

extent, the good practices are followed also by supervisors and student who are not members of ANIWEL.

The purpose of the doctoral training is to educate internationally oriented high quality clinical researchers who continue their career as professional researchers. Good clinical skills are imperative to a qualified clinical researcher. Therefore, it is important to allow the doctoral candidates an opportunity for professional specialization. The target of the RC is to provide the students a structured first-class doctoral program to finish their PhD in the optimal 4 years, and concurrently take into consideration the special characters of clinical work. The accomplishment of the target is guaranteed by a careful student selection, excellent supervisors and active international contacts to the best scientific and clinical groups in the field. The high standard of the research is followed by the impact factors of the publications. The quality of supervision is evaluated by regular student feedbacks, including self reflection of the supervisors.

In the RC most doctoral candidates are veterinarians. Accordingly, all fresh doctorates have excellent employment opportunities. Academic career perspectives may not be as favourable as there is a chronic lack of post doc positions in the Faculty and at the University. Other public research institutes, such as the Finnish Food Safety Authority Evira, and certain private research laboratories offer post doc positions. Utilising the wide international network of the RC’s supervisors, it should be easy to find international post doc positions to the fresh doctorates whose education is highly valued. The governmental authorities (central and municipal) and animal related industry (food, feed-stuff, pharmaceutical) willingly recruit doctorates to specialist positions were actual research is not included.

- RC’s strengths and challenges related to the practises and quality of doctoral training, and the actions planned for their development.
  Strengths 1) The RC of VetSci has a well structured doctoral training which was finalized when the ANIWEL doctoral program was initiated in the beginning of 2010. 2) The Veterinary Teaching Hospital has an adequate patient flow and modern and well equipped facilities which are crucial for successful high quality research. 3) In addition to the veterinary research, these patients make an invaluable resource of translational animal models. The first translational research project in cooperation with the Faculty of Medicine has been started. Challenges 1) Funding of clinical research is tough. The RC is constantly looking for new founding sources. 2) The supervisors and their students are internationally efficiently networked but the contacts and mutual student exchanges are unsystematic. The challenge is to establish a structured internationalisation program. The first step was taken when the University of Giessen was contacted to start to work on a common doctoral program. 3) Veterinarians usually need to choose between scientific and professional post graduate education. The suction

### 3 SOCIETAL IMPACT OF RESEARCH AND DOCTORAL TRAINING (MAX. 4400 CHARACTERS WITH SPACES)

- Description of how the RC interacts with and contributes to the society (collaboration with public, private and/or 3rd sector).

Production animal welfare is presently in the very center of public discussions. Therefore the research results concerning production animals and their welfare have a high interest in the society. The research results are carefully reviewed and they are the basis of revision of legislation and directions given by the authorities. The research is done in collaboration with Ministry of Agriculture and Forestry, Finnish Food Safety Authority Evira and MTT Agrifood Research Finland.

Companion animal research has two kinds of societal impact. Firstly, there is a direct effect on the health of the individual animals and development of treatment methods. Secondly, the clinical research
results are the basis of evidence based medicine. In addition, the results of research made on companion animals can lead to improvement of medical treatments of humans. Thus privately owned animals would serve as translational animal models for medicine. The collaboration is wide and well networked. The majority of the clinical studies are done at the Small Animal and Equine Hospitals which belong to the Faculty of Veterinary Medicine. Cases are recruited to RC’s research projects either from the hospital or through advertising in local and national papers or they are provided in collaboration with private small animal clinics. Collaboration with different breeders clubs has been most fruitful since many of the small animal research projects are studying breed specific diseases. The Faculty of Veterinary Medicine and the Finnish Kennel Club have launched a Foundation for Canine Health Studies in order to enhance fund raising. The novel results of the studies of the department are presented in public evening seminars for referring veterinarians as well as in events for dog and horse owners.

Study of the epidemiology and basic science of zoonotic parasites have given new information for risk assessment and control of food born infections.

Other important collaborators of RC are faculties at University of Helsinki as well as other universities in Finland (University of Eastern Finland, Tampere, Vaasa, Oulu, Turku and Åbo Akademi). Other public collaborators are National Institute for Health and Welfare (THL). Pharmaceutical companies like Vetcare, Pfizer and Orion are funding and collaborating with pathology, pharmacological, small animal internal medicine and as well as porcine studies. Other industrial partners are LSO Foods, Atria and feed companies like Agrimarket, which are supporting the research of the porcine group.

ANIWEL Graduate School, funded by the Finnish Academy for the period 1.1.2010 – 31.12.2013, is providing funding for PhD students both in clinical veterinary medicine and animal welfare. The PhD positions have been crucial in enhancing especially clinical research. Finnish Academy is also providing funding for mastitis projects and canine cognition.

- Ways to strengthen the societal impact of the RC’s research and doctoral training.
  The strength of the RC is the extensive interest of the society towards the clinical veterinary medicine and animal welfare. The RC could be more active in the society to increase our visibility of clinical research and its results. By doing this the RC could also increase the possibilities of getting new funding resources.

- Description of the RC’s research collaborations and joint doctoral training activities and how the RC has promoted researcher mobility.
  The high level of international activities within the RC is mainly based on informal networks and good personal contacts. A large proportion of previous or current doctoral candidates have had / have co-supervisors from other countries. Several of the PI’s also supervise doctoral candidates from abroad. In addition, many research groups within the RC have long-term cooperation with international and especially Nordic collaborators, such as the NKJ (Nordiskt kontakorgan för jordbruksforskning) –funded networks on animal welfare-related topics. The RC is also involved in several networks (eg. via NOVA) organizing international PhD-level courses, which allows students and researchers to network and change ideas. As most ANIWEL – organized courses have international teachers the courses are held in English, international students are invited and so far the level of attendance from abroad has been...
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC STAGE 2 MATERIAL

good. Doctoral candidates within the RC are also encouraged to attend courses and congresses in other countries whenever possible.

International networking of the supervisors is first-rate. In addition to direct research contacts, it is based on the close connections of the members of the European specialization organization of veterinarians (European Board for Veterinary Specialization, EBVS). Most of the PIs in the field of clinical veterinary medicine are also diplomates of their own field. This tight network of clinical specialists serves also as a natural basis to cooperation in research.

The ANIWEL graduate school includes students and supervisors from several other universities in Finland (University of Eastern Finland, Åbo Akademi, University of Turku, Tampere Technical University, University of Oulu), allowing for joint doctoral courses and research seminars. The network of more or less all groups working on animal health and welfare-related issues in Finland is especially well-developed, but national cooperation is also strong within other topics. The RC has regular research collaboration with other Faculties at the University of Helsinki, especially the Medical faculty and the Faculty of Agriculture and Forestry, and the Faculty of Pharmacy. In addition other national Universities, such as the University of Eastern Finland and Tampere Technical University are important research collaborators.

Due to a large proportion of the research within the RC being clinical and applied, related companies and organizations play an important and multifunctional role. Collaboration in the form of sponsoring and funding agreements, practical research cooperation and using outside experts as advisors in research groups is very common. For example, farmers organizations, pharmacological and agrifood companies and organizations such as the Finnish Kennel club and ProAgria are essential for the research work within the RC.

The ANIWEL graduate school provides funding for internationalization of doctoral students (research visits and attending courses) and all doctoral candidates are encouraged to stay abroad for at least some period. The ANIWEL-network, as well as individual PIs have elaborate international contacts, which are used to identify possible foreign supervisors, as well as groups or laboratories for visits by doctoral candidates.

- RC’s strengths and challenges related to research collaboration and researcher mobility, and the actions planned for their development.
  Strengths include excellent informal and formal international networks, and especially strong networks within the Nordic countries. The RC has a very positive attitude towards internationalization, but so far it has been partly challenging to motivate doctoral candidates to spend longer periods abroad. The aim is to develop and establish a structured internationalization program with another university. A preliminary contact has been done to the University of Giessen to start this development. In the future more effort should be made to increase funding for international visits, courses and congress attendance. In addition, the RC needs to actively apply for and take part in EU-level projects.

**OPERATIONAL CONDITIONS (MAX. 4400 CHARACTERS WITH SPACES)**

- Description of the operational conditions in the RC’s research environment (e.g. research infrastructure, balance between research and teaching duties).
  The RC’s researchers have new laboratories at Clinicum- and EE-building and the Veterinary Teaching Hospital (VTH) in Viikki Campus and the production animal hospital and the laboratory on the Saari
estate some 60 km from Helsinki. The RC has a teaching and research cow barn with 40 milking cows available in Saari and another teaching cow barn of similar size in Viikki. Both bovine and porcine related applied research is on a large scale carried out with well-established co-operational production farms located in Southern Finland.

VTH serves annually around 18,000 small animal patients and 2,000 - 3,000 horses. The production animal hospital has 156 client farms with 1,700 visits yearly and 280 cows staying in house as patients. Abundant patient flow is important for recruiting adequate number of patients for clinical research projects.

VTH is provided with digital x-ray equipment, CT and MRI for small animals, ultrasonic equipment also for contrast-enhanced ultrasound, video based endoscopes and modern equipment for follow-up of anaesthesia. The diagnostic data is recorded in the patient program, which serves research and hospital management.

The clinical research in Viikki include the Central Laboratory and the clinical research laboratory. The Central Laboratory has automatic analysers for clinical chemistry and haematology. Three qualified technicians and the head of the laboratory are responsible for the analyses and methodology. Bacteriological analyses started in 2010 by a veterinary microbiologist and a technician. The laboratory has external and internal quality control program. In the clinical research laboratory the number of technicians was increased from three to five in the years 2007 – 2008. They all are qualified and experienced in laboratory work. New equipment for chromatography (two HPLCs, and GC), PCR, and electrophoresis including PFGE, 2-D DIGE as well as devices for photometric and radio immunologic assays and for handling and storing of the research samples are available.

The necropsies are done and cytological smears and biopsies are examined by pathologists (a DECVP) in the Section of Pathology and Parasitology. Modern histological laboratory provides histochemistry and immunohistochemistry stainings, also morphometry, and recently purchased flow cytometry system are available for diagnostic and research purposes.

The laboratory on the Saari estate is focused on reproduction and mastitis research and diagnostics. The animal welfare and behaviour researchers have video surveillance devices and means for objective monitoring and data analysis of physiological responses in animals. Three qualified technicians are engaged in the analytical work.

All of the RC’s principal investigators are involved in teaching, many of them having a lot of teaching duties. Many of the researchers in clinical disciplines, including professors and clinical instructors, are responsible for the clinical training and diagnostic services. This means hospital work with students and sometimes between teaching periods. The hospital work varies from 20 to 60 percent of the annual working time for those involved in patient care. The rest is reserved for other teaching duties, administration, and research.

- **RC’s strengths and challenges related to operational conditions, and the actions planned for their development.**

The strengths of the RC are excellent working environment including the VTH and clinical laboratories with modern equipment for diagnostic and research work. The technical personnel involved in research work is qualified and motivated. The owners of the animals and the farmers are committed in clinical research projects.
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC STAGE 2 MATERIAL

Most challenging for the RC is to find more research time for those who are overloaded with teaching duties, especially with clinical training. Many of the clinical researchers have to acquire or maintain their professional specialisation simultaneously with research activities. Similarly, several PhD students are training for specialist degree in clinical disciplines to become a qualified clinical researcher. The systematic planning of the working hours in the units has been done to allocate more time for research. The minimum of 50 percent research time has not yet achieved in all positions. Lack of qualified applicants keeps some of the academic positions vacant and teaching load high in those units. Efforts on international recruiting will be continued.

**6 LEADERSHIP AND MANAGEMENT IN THE RESEARCHER COMMUNITY (MAX. 4400 CHARACTERS WITH SPACES)**

- Description of the execution and processes of leadership in the RC, how the management-related responsibilities and roles are distributed in the RC and how the leadership- and management-related processes support high quality research, collaboration between principal investigators and other researchers in the RC, the RC’s research focus and strengthening of the RC’s know-how.

The department heads are responsible for the general management of the departments, i.e. for executing the use of funds allocated for the departments, recruiting staff, practical organization of teaching and research at the departments, and follow-up faculty’s and departments’ strategic plans. Decisions of the department budget, funds for recruiting staff and purchasing equipments etc. included, are made by the dean of the faculty, together with the faculty board. Professors of different subjects are responsible for organizing teaching of their subject but have no official obligations for research in that role.

Clinical research by the RC deals with animal diseases and animal behavior, with a specific aim to promote animal health and welfare. The subject of Pathology joined to RC investigates the response of the host to different stimuli on molecular, cellular, tissue or macroscopic level.

The RC has 19 principal investigators; 12 of them are professors and the rest are senior researchers or clinical investigators. As a rule, professors lead research groups in their own fields, but some fields have research groups led by other senior researchers. PIs control allocation of external funds in their research projects and are responsible for practical management of the research. PIs generally lead their groups independently. The leadership and management-related processes of the research in the RC have been freely arranged and are as such quite fragmented. Department heads and professors meet regularly, in order to discuss ongoing matters in teaching as well as in research. Management of research activities has been delegated from both department heads to nominated professors, who are responsible for practical issues such as organizing regular research seminars. Research groups and PIs have already a lot of collaboration within the RC, but this could still be increased.

Within the RC, the most prominent structure regarding development of leadership and supervision of doctoral training programs is the graduate school ANIWEL. Finnish graduate school for clinical veterinary medicine and animal welfare. This school is lead by the RC at the Faculty of Veterinary Medicine, University of Helsinki. Within the RC, 26 PhD students are registered as member students of the graduate school and their progress is monitored on a yearly basis by ANIWEL. This school provides a good forum for recruitment of new PhD students through a summer school system. In 2010, the summer school for clinical veterinary research was started on the Víikki campus to give the undergraduate students an opportunity to become familiar with clinical research. 10 undergraduate students were selected to the clinical summer school based on a written application and an interview.
The summer school students work as research assistants and write their licentiate thesis based on their "own" results.

- **RC’s strengths and challenges related to leadership and management, and the actions planned for developing the processes.**

  Practically all professors and PIs are active in ANIWEL as supervisors. Seminars and conferences organized by ANIWEL and regular other research seminars organized by RC partners provide with plenty of opportunities to discuss challenges related to leadership and management of PhD programs. A new effort is a program called "How to survive as a PhD student" lead by a post doc researcher focusing on practical arrangement and schedule of PhD work.

  RC probably has benefitted considerably from the more organized research leadership and management provided by ANIWEL. However, further development into more programmed research oriented postgraduate education would further improve the functions of the RC, and in particular the supervision of PhD students. This development will improve the quality of postgraduate training and eventually the quality of PhD theses produced by the RC. This would also strengthen the overall research profile of the RC. So far, the most serious attempt to develop these processes within the RC has been taken by ANIWEL.

### 7 **EXTERNAL COMPETITIVE FUNDING OF THE RC**

- **Listing of the RCs external competitive funding, where:**
  - the funding decisions have been made during 1.1.2005-31.12.2010, and
  - the administrator of the funding is/has been the University of Helsinki

  - **Academy of Finland (AF)** - total amount of funding (in euros) AF has decided to allocate to the RC members during 1.1.2005-31.12.2010: **1 689 000 €**

  - **Finnish Funding Agency for Technology and Innovation (TEKES)** - total amount of funding (in euros) TEKES has decided to allocate to the RC members during 1.1.2005-31.12.2010: **192 000 €**

  - **European Union (EU)** - total amount of funding (in euros) EU has decided to allocate to the RC members during 1.1.2005-31.12.2010:

  - **European Research Council (ERC)** - total amount of funding (in euros) ERC has decided to allocate to the RC members during 1.1.2005-31.12.2010:

  - **International and national foundations** – names of international and national foundations which have decided to allocate funding to the RC members during 1.1.2005-31.12.2010, and the amount of their funding (in euros).
    - names of the foundations: Walter Ehrström Foundation
      - Mercedes Zacchariassen Foundation
      - Helvi Knuutila Foundation
      - Finnish Veterinary Foundation
      - total amount of funding (in euros) from the above-mentioned foundations: **660 000 €**
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC STAGE 2 MATERIAL

- **Other international funding** - names of other international funding organizations which have decided to allocate funding to the RC members during 1.1.2005-31.12.2010, and the amount of their funding (in euros).
  - names of the funding organizations: NOVA
  - total amount of funding (in euros) from the above-mentioned funding organizations: 127 000 €

- **Other national funding** (incl. EVO funding and Ministry of Education and Culture funded doctoral programme positions) - names of other national funding organizations which have decided to allocate funding to the RC members during 1.1.2005-31.12.2010, and the amount of their funding (in euros).
  - names of the funding organizations: Ministry of Agriculture
  - Ministry of Education
  - total amount of funding (in euros) from the above-mentioned funding organizations: 2 650 000 €

8 RC’S STRATEGIC ACTION PLAN FOR 2011–2013 (MAX. 4400 CHARACTERS WITH SPACES)

- **Description of the RC’s future perspectives in respect to research and doctoral training.**
  The strategic action plan of the RC will follow the University of Helsinki Research Policy. Clinical research, including clinical veterinary medicine and translational medicine, are included in the focus research areas of the University of Helsinki. Many of the RC’s research areas, such as oncolytic viruses in the treatment of cancer, chronic arthritic pain in aged individuals, parasite zoonosis, and pulmonary fibrosis in dogs, will also contribute to medicine, as naturally occurring animal diseases can be used for models of human diseases. Thus many of the RC’s researchers will actively co-operate with the Faculty of medicine of the University of Helsinki and other universities in Finland as well as with veterinary faculties abroad.

  The RC’s research interests will be in agreement with the research focus areas selected by the Faculty of Veterinary Medicine. Most areas defined in the strategy of the faculty are covered by the RC, including inflammation, infection and tissue response, pain, stress, anesthesia and animal welfare research, diagnostic imaging, development of molecular diagnostics, reproduction of ruminants and horses, swine research, and clinical toxicology. We continue developing methods in proteomics and metabolomics to enhance both clinical diagnostics and understanding of pathophysiology in the research fields of the RC.

  The research infrastructure of the RC will be developed in co-operation between campuses and other units. Intra-campus equipment procurement will be used for purchasing the large research equipments in Viikki campus. The smaller instruments and devices will be acquired by the faculty and the research groups. Outsourcing services, such as specialist laboratories and statistical experts will be used when appropriate. Practices will be developed to facilitate the use of collections and databases of research materials for researchers of the RC and other institutes.

  Collaboration will be further contributed between the researchers from the three departments of the faculty, as well as with the other faculties (e.g. Faculty of Agriculture and Forestry, Faculty of Pharmacy, Faculty of Biological and Environmental Sciences, Faculty of Behavioural Sciences, Faculty of Medicine), other universities in Finland and abroad, the Finish Food Safety Authority Evira and MTT Agrifood Research. The RC will continue its successful co-operation with food, feed-stuff and pharmaceutical industry.

  The future perspectives of the RC are most promising due to the fact that especially at the latter half of the evaluation period lots of investments to influential research have been done. The profits of these
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC STAGE 2 MATERIAL

Investments will become evident in the course the action plan period 2011-2013. However, there are some challenges that will be responded in the strategic action plan. The high quality of research is reflected in the success of its researchers in acquiring competitive research funding from both Finnish and international sources. The RC is will most actively look for new founding sources.

A structured internationalization program will be established for the RC; e.g., a common doctoral program will be started with the University of Giessen and the University of Gent or other universities having a faculty of veterinary medicine.

The guidelines of the University of Helsinki will define the rights and obligations of doctoral students, supervisors and doctoral programs of the RC. As more than a half of the RC’s students are members of the ANIWEL doctoral program, the doctoral training of the RC will comply with the ANIWEL plan of action (2012-2015).

The students of ANIWEL have at present an opportunity to do both scientific and professional post graduate education in turn. The implementation of this system will be monitored, and it will be developed further based on the feedback collected from the doctoral students and by follow-up of their studies.

9 Short description of how the RC members have contributed to the compilation of the stage 2 materials (max. 1100 characters with spaces).

Ten members of the RC, 8 of which were academics and 2 management staff members in clinical departments had responsibilities for gathering data and writing the different fields that belonged to the 2nd stage evaluation. The academics were equally distributed through the active and most functional groups in the RC. Those responsible for each of the points, further employed researchers at different stages (1-4) to hear their views on a given field. Once the materials were compiled, all texts written by the RC members were made available to all academic members of the RC for comments. This was done by means of a web based comment tool called BSCW. Once these comments were taken into consideration, a more final draft was submitted once more for final comments. The leader of the RC then gathered the final comments and made a final revision. The final version was provided to the RC members for information.
1 Analysis of publications

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<th>Publication type</th>
<th>2005</th>
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<th>2008</th>
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<td>A1 Refereed journal article</td>
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<td>42</td>
<td>49</td>
<td>58</td>
<td>49</td>
<td>314</td>
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<td>A2 Review in scientific journal</td>
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<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
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<tr>
<td>A3 Contribution to book/other compilations (refereed)</td>
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<td>5</td>
<td>8</td>
<td>5</td>
<td>4</td>
<td>1</td>
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<tr>
<td>A4 Article in conference publication (refereed)</td>
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<td>14</td>
<td>12</td>
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<td>3</td>
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<tr>
<td>C2 Edited book, compilation, conference proceeding or special issue of journal</td>
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<td>D1 Article in professional journal</td>
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<td>4</td>
<td>4</td>
<td>7</td>
<td>19</td>
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<tr>
<td>D2 Article in professional hand or guide book or in a professional data system, or textbook material</td>
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<td>1</td>
<td>1</td>
<td>8</td>
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<tr>
<td>D3 Article in professional conference proceedings</td>
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<td>1</td>
<td>2</td>
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<tr>
<td>D4 Published development or research report</td>
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## VetSci/Peltoniemi

### RC-Specific Tuhat Compilations of Publications Data 2005-2010

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<th>Publication type</th>
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<tr>
<td>D5 Text book or professional handbook or guidebook or dictionary</td>
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<td>E1 Popular article, newspaper article</td>
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<td>16</td>
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# Listing of publications

## 2005

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<th>Reference</th>
<th>Title</th>
<th>Journal</th>
<th>Pages</th>
</tr>
</thead>
</table>


INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

VetSci/Peltoniemi


2006


Nilsson, A, Ahnman, B, Murphy, M, Soveri, T 2006, 'Welfare function in reindeer (Rangifer tarandus tarandus) after sub-maintenance feed intake and subsequent feeding', Rangifer, vol 26, no. 2, pp. 73-83.
VetSci/Peltoniemi


Pascoe, PJ, Raekallio, M, Kauksela, E, McKusick, B, Granholm, M 2006, 'Changes in the minimum alveolar concentration of isoflurane and some cardiopulmonary measurements during three continuous infusion rates of dexmedetomidine in dogs', Veterinary Anaesthesia and Analgesia, vol 33, no. 2, pp. 97-103.


Westermarck, T., Antila, E., Anti, F. 2006, 'STUDIES ON THE NEGATIVE EFFECTS ON LONG TERM SODIUM SELENITE TREATMENT OF DOWN SYNDROME AND JUVENILE NEURONAL CEROID PATIENTS (JNCL)', Trace Elements in Medicine, vol 7, no. 1, pp. 93.


2008


2009


Hielm-Björkman, A, Rita, H, Tulamo, R 2009, 'Psychometric testing of the Helsinki chronic pain index by completion of a questionnaire in Finnish by owners of dogs with chronic signs of pain caused by osteoarthritis', \textit{American Journal of Veterinary Research}, vol 70, no. 6, pp. 727-734.

Hovinen, M, Rasmussen, MD, Pyöälä, M 2009, 'Udder health of cows changing from tie stalls or free stalls with conventional milking to free stalls with either conventional or automatic milking', \textit{Journal of Dairy Science}, vol 92, no. 8, pp. 3696-3703.


INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

VetSci/Peltoniemi


INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

VetSci/Peltoniemi


Hekkala, HM, Bondarenko, A., Mihalkov, A., Pfleter, K., Sattiimann, T. 2010. 'Anaplasma Phagocytophilum Infection in a domestic cat in Finland', Cornell Reports on veterinary Acadinavica, vol 52, no. art. 82.


INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

VetSci/Peltoniemi


Siirsonen, A, Palm, S, Nagy, S, Palander, P 2010, ‘Knobbed acrosome defect is associated with a region containing the genes STK17b and HECW2 on porcine chromosome 15’, BMC Genomics.


A2 Review in scientific journal

2005

INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

VetSci/Peltoniemi

2006

2007


2010

A3 Contribution to book/other compilations (refereed)

2005


2006
Katila, T 2006, 'Uterine contractility', Current therapy in equine reproduction, Saunders, St Louis (Miss.), pp. 44-51.


17
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

VetSci/Peltoniemi


2008


2009


2010


A4 Article in conference publication (referred)

2005


INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

VetSci/Peltoniemi


2006


2007


VetSci/Peltoniemi


2008


Peltoniemi, O 2008, 'Farmed wild boars (sus scrofa) seem to have only few infectious diseases in Finland.', in the Proceedings of the 19th IPV International Pig Veterinary Society-congress.


Rajamäki, MI 2008, 'Matrix metalloproteinases- which role do they play in the pathogenesis of eosinophilic bronchopneumopathy...', Paper presented at ECMV-CA Congress, Ghent , Belgium: 04. - 06. September, 2008...


2009


2010


B1 Unrefered journal article

2005


2006

INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010


2007


2008


2009


2010


B2 Contribution to book/other compilations (non-refereed)

2008


2009
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

VetSci/Peltoniemi

C1 Published scientific monograph

2007

2010

C2 Edited book, compilation, conference proceeding or special issue of journal

2008

D1 Article in professional journal

2005

2006


2007

2008


2010

INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

VetSci/Peltoniemi


INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010


D4 Published development or research report
2005

2010
Ylän-Ajos, M, Hänninen, L, Pastell, M, Vairos. A 2010, Kalkkunoiden hyvinvointi,

D5 Text book or professional handbook or guidebook or dictionary
2005


E1 Popular article, newspaper article
2005


2006


2007


2008


2009


INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF PUBLICATIONS DATA 2005-2010

VetSci/Peltoniemi


E1 Popular contribution to book/other compilations

2005


Valros, A 2005, 'Hyvinvointi kuvaa eläimen tilannetta kokonaisvaltaisesti', in A Valros, H Teräväinen, J Helin (eds), Hyvinvoinva tuotantoeläin, ProAgria maaseutukeskusten liiton julkaisuja, no. 1014, ProAgria maaseutukeskusten liitto, [Vantaa], pp. 4-7, 9-10.

E2 Popular monograph
2005

2006

I1 Audiovisual materials
2009
Nautojen ja sikojen kipetus: pullitappioli ja verenlasku, opetusvideo (Stunning of production animals with bolt gun, teaching video), CD-levy
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

1 Analysis of activities 2005-2010

Activity type | Count
--- | ---
Supervisor or co-supervisor of doctoral thesis | 110
Prizes and awards | 10
Editor of research journal | 82
Peer review of manuscripts | 86
Editor of series | 1
Assessment of candidates for academic posts | 9
Membership or other role in review committee | 12
Membership or other role in research network | 5
Membership or other role in national/international committee, council, board | 108
Membership or other role in public Finnish or international organization | 88
Membership or other role of body in private company/organisation | 26
Other tasks of an expert in private sector | 6
Participation in interview for written media | 146
Participation in radio programme | 10
Participation in TV programme | 12
2 Listing of activities 2005-2010

Supervisor or co-supervisor of doctoral thesis

Magnus Andersson,
Supervision of PhD thesis study, Magnus Andersson, 2005 → …, Finland
Supervision of PhD Thesis, Magnus Andersson, 2008 → …, Finland

Mari Heinonen,
Supervision of PhD study, the has not been completed, Mari Heinonen, 2008 → 2011, Finland
Supervision of PhD study, the has not been completed, Mari Heinonen, 2008 → 2011, Finland
Supervision of PhD study, väitöskirjatyön ohjaus, Mari Heinonen, 2008, Finland
Supervision of PhD study, väitöskirjatyön ohjaus, Mari Heinonen, 2008, Finland
Supervision of PhD study, the has not been completed, Mari Heinonen, 2009 → 2011, Finland
Supervision of PhD study, the has not been completed, Mari Heinonen, 2009 → 2011, Finland
Supervision of PhD study, väitöskirjatyön ohjaus, Mari Heinonen, 2009, Finland
Supervision of PhD study, the has not been completed, Mari Heinonen, 2010 → 2011, Finland
Supervision of PhD study, the has not been completed, Mari Heinonen, 2010 → 2011, Finland
Supervision of PhD study, väitöskirjatyön ohjaus, Mari Heinonen, 2010, Finland

Terttu Katila,
Supervision of doctoral thesis, Terttu Katila, 01.01.2007 → 31.12.2007, United Kingdom
Supervision of doctoral thesis, Terttu Katila, 01.01.2007 → 31.12.2007, United Kingdom

Outi Laitinen-Vapaavuori,
PhD-project: leader, Outi Laitinen-Vapaavuori, 2009 → …
PhD project: supervisor and leader, Outi Laitinen-Vapaavuori, 2010 → …
PhD-project: supervisor and director, Outi Laitinen-Vapaavuori, 2010 → …

Olli Peltoniemi,
PhD supervision of Juha Virolainen, Olli Peltoniemi, 2000 → 20.05.2005, Finland
PhD Supervision of Jonna Oravainen, Olli Peltoniemi, 2002 → 14.03.2008, Finland
PhD supervision of Kristina Sarickari, Olli Peltoniemi, 2004 → …, Finland
PhD supervision of Claudio Oliviero, Olli Peltoniemi, 2005 → 13.08.2010, Finland
PhD supervision of Tanett Tirkkonen, Olli Peltoniemi, 2005 → …, Finland
PhD supervision of Tuomas Herva, Olli Peltoniemi, 2006 → …, Finland
PhD supervision of Katja Mustonen, Olli Peltoniemi, 2007 → …, Finland
PhD supervision of Silke Haen, Olli Peltoniemi, 2007 → …, Finland
PhD supervision of Eve Ala-Kurikka, Olli Peltoniemi, 2007 → …, Finland
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

PhD supervision of Anna Ollila, Olli Peltoniemi, 2009 → ..., Finland
PhD supervision of Kirsi Swan, Olli Peltoniemi, 2009 → ...
PhD supervision of Simo Rintakoski, Olli Peltoniemi, 2009 → ..., Finland

Satu Pyörälä

Dissertation, Satu Pyörälä, 2001 → 2009, Finland
Dissertation, Satu Pyörälä, 2001 → 2008, Finland
Dissertation, Satu Pyörälä, 2001 → 2008, Finland
Dissertation, Satu Pyörälä, 2001 → 2010, Finland
Dissertation, Satu Pyörälä, 2004 → 2010, Finland

Thomas Spillmann

Diagnostic value of laboratory parameters for treatment control in dogs with chronic gastrointestinal disturbances, Thomas Spillmann, 01.01.2000 → 16.03.2007, Germany
Motility and enteral nerve system of the normal esophagus in rats and dogs as well as in dogs with idiopathic megaesophagus, Thomas Spillmann, 01.01.2000 → 31.12.2008, Germany
Corrosion anatomy, cytology, and function tests compared to pathohistological findings in the healthy and the diseased exocrine pancreas of dogs, Thomas Spillmann, 01.01.2001 → 31.05.2005, Germany
Assessment of the intestinal permeability in healthy dogs using iohexol, Thomas Spillmann, 01.04.2004 → 02.06.2006, Germany
Comparison of iohexol and iodine measurement in canine and equine serum and rat urine after oral administration of iohexol - A contribution to the possible use of iohexol as a marker of intestinal permeability, Thomas Spillmann, 01.09.2004 → 22.05.2007, Germany
Tylosin responsive diarrhea in dogs - treatment efficacy and effects on intestinal microbiota, Thomas Spillmann, 21.09.2006 → ..., Finland
Canine intestinal microbiota - Influence of food composition, Thomas Spillmann, 22.11.2007 → ..., Finland
The role of immune-mediated and genetic disorders in subclinical Doberman hepatitis, Thomas Spillmann, 22.02.2007 → ..., Finland
Near infrared spectroscopy of the upper gastrointestinal tract of pigs and dogs and the lower respiratory tract of dogs, Thomas Spillmann, 11.06.2008 → ..., Finland

Timo Soveri

Supervisor of PhD thesis of Kristiina Sarjakari, Timo Soveri, 2004 → ...
Supervisor of PhD thesis of Minna Kujala, Timo Soveri, 2004 → 2010
Supervisor of PhD thesis of Leena Seppälä-Lassila, Timo Soveri, 2010 → ...

Antti Sukura

Supervision of Taina Mikkonen's PhD thesis, Antti Sukura, 1999 → ..., Finland
Supervision of Nina Airas's PhD thesis, Antti Sukura, 2005 → ..., Finland
Supervision of Teppo Heinola's PhD thesis, Antti Sukura, 2005 → ..., Finland
Supervision of Pikka Jokelanen's PhD thesis, Antti Sukura, 2008 → ..., Finland
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

Co-supervision of Tuija Vehmaa’s PhD thesis, Antti Sukura, 2009 → …, Finland
Co-supervision of Ilona Judström’s PhD thesis, Antti Sukura, 2010 → …, Finland
Co-supervision of Taru Mettinen’s PhD thesis, Antti Sukura, 2010 → …, Finland
Supervision of Christine Kopp-Kühlman’s PhD thesis, Antti Sukura, 2010 → …, Finland
Supervision of Vivi Deckwith’s PhD thesis, Antti Sukura, 2010 → …, Finland

Riitta-Mari Tulamo ,
Supervision of a PhD thesis, Riitta-Mari Tulamo, 01.06.2010 → 31.12.2015, Finland
Supervision of a PhD thesis, Riitta-Mari Tulamo, 01.06.2010 → 31.12.2015, Finland

Anna Valros ,
Supervisor of doctoral candidate, Anna Valros, 2004 → 04.12.2009, Finland
Supervisor of doctoral candidate, Anna Valros, 2004 → 18.02.2011
Supervisor of doctoral candidate, Anna Valros, 2004 → …
Supervisor of doctoral candidate, Anna Valros, 2005 → …
Supervisor of doctoral candidate, Anna Valros, 2005 → 13.08.2010
Supervisor of doctoral candidate, Anna Valros, 2005 → …
Supervisor of doctoral candidate, Anna Valros, 2008 → …
Supervisor of doctoral candidate, Anna Valros, 2008 → …
Supervisor of doctoral candidate, Anna Valros, 2009 → …

Satu Marja Sankari ,
Supervision of PhD thesis of Rafael Frias Beneyto, Satu Marja Sankari, 2001 → …, Finland
Supervision of PhD thesis of Toomas Orro, Satu Marja Sankari, 28.03.2008, Finland
Supervision of PhD thesis of Tytti Niemelä, Satu Marja Sankari, 2010 → …, Finland

Laura Hänninen ,
Animal welfare of slaughter animals - regulations and policy - Doctoral studies, Laura Hänninen, 2005 → …, Finland
Disbudding pain in calves - relation to sleep and welfare - doctoral studies, Laura Hänninen, 2008 → …
Eye tracking in canine cognition research - Doctoral studies, Laura Hänninen, 2009, Finland
Welfare and 3D-accelerometers – a method for predicting health problems and behavior of dairy cattle - doctoral studies, Laura Hänninen, 2009, Finland
Pig Pain - Doctoral studies, Laura Hänninen, 2010 → …, Finland

Minna Marjaana Rajamäki ,
Koiran kroninen keuhkotulehdus: farmakologiset näkökulmat hoitoon, Minna Marjaana Rajamäki, 2007 → 2012, Finland
NIRS spetroskopian käytti endoskopian yhteydessä ruuansulatuskanavassa korilla ja siolilla sekä koiran alemmissa hengitysteissä, Minna Marjaana Rajamäki, 2008 → 2012, Finland
Koiran idioaatinen keuhkofibroosi: klinikin kuvaus ja hautaspektististen markkereiden etsintä, Minna Marjaana Rajamäki, 2009 → 2012, Finland
Onkolyyttisen virushoidon teho ja turvallisuus koroin ja kissan pahanlaatuisissa kiinteissä kasvaimissa, Minna Marjaana Rajamäki, 2009 → 2100, Finland
Koiran idioaatinen keuhkofibroosi: markkereiden etsintää proteomikin keinoin, Minna Marjaana Rajamäki, 2010 → …, Finland
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

Juhani Taponen,
Supervision of Mari Rantalas’s PhD thesis, Juhani Taponen, 2004 → ...
Supervision of Eeva Mustonen’s PhD thesis, Juhani Taponen, 2006 → ...
Supervision of Marja Mikkola’s PhD thesis, Juhani Taponen, 2008 → ...
Co-supervision of Simo Rintakoski’s PhD thesis, Juhani Taponen, 2009 → ...

Faik Atroshi,
Identification of potentially hazardous sphingomonas and mycobacteria in environmental and animal samples., Faik Atroshi, 2005 → ...
Impact and interaction of mycotoxins on neurological disorder patients, Faik Atroshi, 2005 → 2010
Implication of lyme style of epileptic patients with valproate or lamotrigine on 8-hydroxydeoxyguanosine and other oxidative stress markers, Faik Atroshi, 2005 → 2010
Levottomien jalkojen oireyhtymän uniapnean etiologiset ja geneettiset tutkimukset kehitysvammaisille-erityisesti downin oireyhtymässä, Faik Atroshi, 2005 → 2010
Potential role of arachidonic acid, cyclooxygenase, prostaglandin E and glutathione as a grag target in valproic acid treated patients, Faik Atroshi, 2005 → 2010
Role of Oxidative Stress(GSH,GSHPx,TBARs,PGs,COX,SOD,FFA,Sialic acid,Free Iron)in Dog blood and tissues:Inflammation and Immune Response, Faik Atroshi, 2010 → ...

Prizes and awards

Magnus Andersson,
The Golden Dick award 2008, European AI-vets conference, Celle, Germany, Magnus Andersson, 2008 → ..., Germany
Olli Peltoniemi,
Pro Animalia, Olli Peltoniemi, 2003 → ..., Finland
Veterinary Act of the Year - Award, Olli Peltoniemi, 2003 → ..., Finland
Satu Pyörälä,
Topi Salmi -tiedepalkinto - research award, Satu Pyörälä, 01.12.2010, Finland
Henna P. Heikkilä,
Eläinlääkärin päätäkseen 2010 posterinäytteilyn kunniamaininta, Henna P. Heikkilä, 02.12.2010, Finland
The Joan A. O’Brien Research Award, Henna P. Heikkilä, 28.09.2010, United States
Pikka Jokelainen,
Funding and grants, Pikka Jokelainen, 2007 → ...
Young Scientist/Best poster award, Pikka Jokelainen, 2009
Susanne Kilpinen,
Heli Tuulikki Venhoranta,
Best poster award (2010) in annual veterinary meeting in Finland, Heli Tuulikki Venhoranta, 01.12.2010

Editor of research journal

Magnus Andersson,
Reproduction in Domestic Animals, Magnus Andersson, 01.01.2005 → 31.12.2005
Acta Veterinaria Scandinavica, Magnus Andersson, 01.01.2006 → 31.12.2006, Denmark
International Journal of Andrology, Magnus Andersson, 01.01.2006 → 31.12.2006
Journal of Veterinary Medicine A, Magnus Andersson, 01.01.2006 → 31.12.2006
Reproduction in Domestic Animals, Magnus Andersson, 01.01.2006 → 31.12.2006

Mari Heinonen,
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi


Terttu Katila

Acta Veterinaria Scandinavica, Terttu Katila, 01.01.2005 → 31.12.2005
Journal of veterinary Medicine, Terttu Katila, 01.01.2005 → 31.12.2005
Revue de Médecine Vétérinaire, Terttu Katila, 01.01.2005 → 31.12.2005
Theriogenology, Terttu Katila, 01.01.2005 → 31.12.2005
Acta Veterinaria Scandinavica, Terttu Katila, 01.01.2006 → 31.12.2006, Sweden
Animal Reproduction, Terttu Katila, 01.01.2006 → 31.12.2006, Brazil
Animal Reproduction Science, Terttu Katila, 01.01.2006 → 31.12.2006, United States
Reproduction in Domestic Animals, Terttu Katila, 01.01.2006 → 31.12.2006, Germany
Reproduction in Domestic Animals, Terttu Katila, 01.01.2006 → 31.12.2006, Germany
Theriogenology, Terttu Katila, 01.01.2006 → 31.12.2006, United States
Acta Veterinaria Scandinavica, Terttu Katila, 01.01.2007 → 31.12.2007, Sweden
Acta Veterinaria Scandinavica, Terttu Katila, 01.01.2007 → 31.12.2007, Sweden
Journal of Veterinary Medicine A, Terttu Katila, 01.01.2007 → 31.12.2007, Germany
Reproduction in Domestic Animals, Terttu Katila, 01.01.2007 → 31.12.2007, Germany
Reproduction in Domestic Animals, Terttu Katila, 01.01.2007 → 31.12.2007, Germany
Theriogenology, Terttu Katila, 01.01.2007 → 31.12.2007, United States
Animal Reproduction Science, Terttu Katila, 01.01.2008 → 31.12.2008, United States
Animal Reproduction Science, Terttu Katila, 01.01.2008 → 31.12.2008, United States
Reproduction in Domestic Animals, Terttu Katila, 01.01.2008 → 31.12.2008, Germany
Reproduction in Domestic Animals, Terttu Katila, 01.01.2008 → 31.12.2008, Germany

Olli Peltoniemi

Domestic Animal Endocrinology, Olli Peltoniemi, 01.02.2005 → 28.02.2005, United Kingdom
Domestic Animal Endocrinology, Olli Peltoniemi, 01.08.2005 → 31.08.2005, United Kingdom
Domestic Animal Reproduction, Olli Peltoniemi, 01.01.2005 → 31.01.2005, United Kingdom
Reproduction, Olli Peltoniemi, 01.01.2005 → 31.01.2005, United Kingdom
Acta Veterinaria Scandinavica, Olli Peltoniemi, 01.01.2006 → 31.01.2006, Denmark
Domestic Animal Endocrinology, Olli Peltoniemi, 01.01.2006 → 31.01.2006, United Kingdom
Domestic Animal Reproduction, Olli Peltoniemi, 01.01.2006 → 31.01.2006, United Kingdom
Reproduction, Olli Peltoniemi, 01.01.2006 → 31.01.2006, United Kingdom


Satu Pyörälä

Finnish Veterinary Journal, Satu Pyörälä, 01.01.1999 → 31.12.2005, Finland
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

Veterinary Research, Satu Pyörälä, 01.01.2000 → 31.12.2006, France
Journal of Dairy Science, Satu Pyörälä, 2008 → ...

Timo Soveri,
Editorial board membership in Finnish Veterinary Journal, Timo Soveri, 1996 → 2006
National editor of Acta Veterinaria Scandinavica, Timo Soveri, 1999 → ...
The Veterinary Journal, Veterinary Research, Acta Veterinaria Scandinavica, Rangifer, Timo Soveri, 01.01.2005 → 31.12.2005

Riitta-Mari Tulamo,
Biomaterials, Riitta-Mari Tulamo, 01.01.2005 → 31.12.2005, United Kingdom
The Veterinary Journal, Riitta-Mari Tulamo, 01.01.2005 → 31.12.2005, United Kingdom
Veterinary Comparative Orthopedics and Traumatology - Consultant Editorial Board, Riitta-Mari Tulamo, 01.01.2005 → 31.12.2012, Germany
Veterinary Comparative Orthopedics and Traumatology Surgery, Riitta-Mari Tulamo, 01.01.2005 → 31.12.2005, Germany

Ouli Vainio,
member of the editorial board for the Scandinavian Journal of Pain, Ouli Vainio, 2009 → ...

Erja Kuusela,
The Veterinary Journal, Erja Kuusela, 01.01.2005 → 31.12.2005, United Kingdom
Veterinary Anaesthesia and Analgesia, Erja Kuusela, 01.01.2005 → 31.12.2005, United Kingdom

Minna Marjaana Rajamäki,
The Veterinary Journal, Minna Marjaana Rajamäki, 01.09.2005 → 30.09.2005
The veterinary journal, Minna Marjaana Rajamäki, 01.01.2007 → 31.12.2007, United Kingdom

Juhani Taponen,
Acta veterinaria scandinavica, Juhani Taponen, 01.01.2005 → 31.12.2005
Reproduction, Juhani Taponen, 01.01.2005 → 31.12.2005
Reproduction in Domestic Animals, Juhani Taponen, 01.01.2005 → 31.12.2005
Reproduction in Domestic Animals, Juhani Taponen, 01.01.2005 → 31.12.2006
Acta Veterinaria Scandinavica, Editorial board, member, Juhani Taponen, 2009 → ...

Suvi Sinikka Taponen,
Research in Veterinary Science, Suvi Sinikka Taponen, 01.01.2007 → 31.12.2007
Veterinary Microbiology, Suvi Sinikka Taponen, 01.01.2008 → 31.12.2007
Revue de Medicine Veterinaire, Suvi Sinikka Taponen, 01.01.2008 → 31.12.2008
Veterinary Microbiology, Suvi Sinikka Taponen, 01.01.2008 → 31.12.2008

Faik Atroshi,
American Journal of Infection Control, Faik Atroshi, 01.01.2005 → 31.12.2005
Pediatric Nutrition in Chronic Diseases and Developmental Disorders, Faik Atroshi, 01.01.2005 → 31.12.2005
Trend in Biomedicine in Finland: Biomedicine and cancer, Faik Atroshi, 01.01.2005 → 31.12.2005
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

Trend in Biomedicine in Finland: Oxidative stress, understanding the concept of neurodegenerative conditions., Faik Atroshi, 01.01.2005 → 31.12.2005
Editor in chief of the International journal of Trends in Medicine, Faik Atroshi, 2010

Pauli Keränen ,
Suomen Eläinlääkärilehti, Pauli Keränen, 01.10.2006 → 30.11.2006, Finland
Suomen Eläinlääkärilehti, Pauli Keränen, 01.03.2007 → 30.04.2007, Finland

Taina Marjaana Mikkonen ,
Medical Science Monitor, Taina Marjaana Mikkonen, 01.01.2005 → 31.12.2005, United States

Marianna Norring ,
Julkaisun nimi* Journal of Dairy Science, Marianna Norring, 01.01.2007 → 31.12.2007

Peer review of manuscripts
Magnus Andersson ,
vuosina 2001-2010 noin 30 kpl eri lehdissä, Magnus Andersson, 2005 → 2010

Mari Heinonen ,
Reviewer for seven chapters in a book "Sustainable animal production, the challenges and potential developments for professional farming", Mari Heinonen, 2008
Referee for The Veterinary Journal, 3 manuscripts 2009-2011, Mari Heinonen, 2009 → 2011

Terttu Katila ,
Equine Veterinary Journal, Terttu Katila, 1998 → ...
Theriogenology, Terttu Katila, 2002 → ...
Animal Reproduction Science, Terttu Katila, 2003 → ...
Acta Veterinaria Scandinavica, Terttu Katila, 2005 → ...
Reproduction in Domestic Animals, Terttu Katila, 2005 → ...

Outi Latinen-Vapaavuori ,
Acta Veterinaria Scandinavica, Outi Latinen-Vapaavuori, 2009

Satu Pyörälä ,
Acta Veterinaria Scandinavica 5 articles, Satu Pyörälä, 2005 → 2010
Journal of Dairy Research 5 articles, Satu Pyörälä, 2005 → 2010
Journal of Dairy Science 13 articles, Satu Pyörälä, 2005 → 2010
Veterinary Microbiology 8 articles, Satu Pyörälä, 2005 → 2010
Animal, Satu Pyörälä, 2007
Infection and Immunity, Satu Pyörälä, 2007
Irish Veterinary Journal, Satu Pyörälä, 2007
Journal of Applied Microbiology, Satu Pyörälä, 2007
Letters in Applied Microbiology, Satu Pyörälä, 2008
Rangifer, Satu Pyörälä, 2008
Research in Veterinary Science, Satu Pyörälä, 2008
Veterinary Research 3 articles, Satu Pyörälä, 2008 → 2009
Trends in Biotechnology, Satu Pyörälä, 2009
VetSci/Peltoniemi

INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

The Veterinary Journal, Satu Pyörälä, 2010

Thomas Spillmann, JAVMA, Thomas Spillmann, 01.11.2005 → 31.12.2005, United States
Acta Veterinaria Scandinavica, Thomas Spillmann, 03.05.2006 → 21.06.2006
JAVMA, Thomas Spillmann, 05.05.2006 → 23.06.2006, United States
Journal of Veterinary Internal Medicine, Thomas Spillmann, 14.11.2006 → 12.12.2006
JAVMA, Thomas Spillmann, 01.10.2007 → 31.10.2007, United States
Tierärztliche Praxis, Thomas Spillmann, 01.06.2007 → 30.06.2007, Germany
JSAP, Thomas Spillmann, 01.11.2008 → 30.11.2008, United Kingdom
Veterinary Clinical Pathology, Thomas Spillmann, 01.02.2008 → 30.04.2008

Antti Sukura, Acta Veterinaria Scandinavica, Antti Sukura, 1998 → ..., Denmark
Journal of Medical Microbiology, Antti Sukura, 2005, United Kingdom
Journal of Veterinary Medicine A, Antti Sukura, 2005
Journal of Veterinary Medicine A, Antti Sukura, 2006
Acta Veterinaria Scandinavica, Antti Sukura, 2008
Veterinary Parasitology, Antti Sukura, 2008
Veterinary Research, Antti Sukura, 2008
Acta Veterinaria Scandinavica, Antti Sukura, 2009
Veterinary Pathology, Antti Sukura, 2009, United States
Journal of Comparative Pathology, Antti Sukura, 01.01.2010 → 31.12.2010, United Kingdom

Riitta-Mari Tulamo, Member of the AO-Research Committee., Riitta-Mari Tulamo, 01.01.2002 → 31.12.2007, Switzerland
Veterinary Comparative orthopedics and Traumatology - referee, Riitta-Mari Tulamo, 01.01.2002 → 31.12.2012, Germany
Veterinary Surgery, Riitta-Mari Tulamo, 01.01.2006 → 31.12.2008
Horse Betting Levy Board - referee of research proposal, Riitta-Mari Tulamo, 15.10.2010, United Kingdom

Outi Vainio, Acta Veterinaria Scandinavica, Outi Vainio, 01.03.2005, Sweden
Equine Veterinary Journal, Outi Vainio, 01.08.2005, United Kingdom
Journal of Veterinary Medicine A, Outi Vainio, 01.05.2005, Germany
The Veterinary Journal, Outi Vainio, 01.01.2006, United Kingdom
Philosophy, Ethics, and Humanities in Medicine, Outi Vainio, 22.12.2007, United States
The Veterinary Journal, Outi Vainio, 10.12.2007, United Kingdom
Research in Veterinary Science, Outi Vainio, 11.06.2008, United Kingdom
Scandinavian Journal of Laboratory Animal Science, Outi Vainio, 08.02.2008, Sweden
peer review for Acta Veterinaria Scandinavica, Outi Vainio, 2010
peer review for Journal of Veterinary Internal Medicine, Outi Vainio, 2010 → 2011
peer review for Scandinavian Journal of Pain, Outi Vainio, 2010 → ...
peer review for Veterinary Anaesthesia and Analgesia, Outi Vainio, 2010 → ...
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI
RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

Anna Valros ,
Animal Welfare, Anna Valros, 2005 → ...
Animal Welfare, Anna Valros, 01.01.2005 → 31.12.2005
Acta Veterinaria Scandinavica, Anna Valros, 2008 → ...
Acta Agriculturae Scandinavica, Section A - Animal Science, Anna Valros, 2009 → ...
Animal Journal, Anna Valros, 2009 → ...

Marja Raekallio ,
Acta Veterinaria Scandinavica, Marja Raekallio, 01.01.2006 → 31.12.2006

Satu Marja Sankari ,
Acta Veterinaria Scandinavica, Satu Marja Sankari, 13.11.2009
Veterinary Clinical Pathology, Satu Marja Sankari, 27.03.2009
Acta Veterinaria Scandinavica, Satu Marja Sankari, 15.03.2010
New Zealand Veterinary Journal, Satu Marja Sankari, 26.11.2010
Veterinary Medicine International, Satu Marja Sankari, 20.05.2010

Laura Hänninen ,
Acta Agriculturae Scandinavica, Sect A, Animal Science, Laura Hänninen, 2006 → ...
Finnish Veterinary Journal, Laura Hänninen, 2006 → ...
Livestock, Laura Hänninen, 2006 → ...
Livestock, Laura Hänninen, 2009 → ...
Journal of dairy science, Laura Hänninen, 2010 → ...

Minna Marjaana Rajamäki ,
Käsikirjoituksen vertaisarviointi, Minna Marjaana Rajamäki, 22.06.2005
Käsikirjoituksen vertaisarviointi, Minna Marjaana Rajamäki, 06.08.2006
Käsikirjoituksen vertaisarviointi, Minna Marjaana Rajamäki, 03.03.2009

Juhani Taponen ,
Peer-reviewing: Reproduction in Domestic Animals * 1, Acta Veterinaria Scandinavica * 1, Reproduction * 1, Juhani Taponen, 2005
Peer-reviewing: Acta Veterinaria Scandinavica * 1, Juhani Taponen, 2006
Peer-reviewing: Reproduction in Domestic Animals * 2, Juhani Taponen, 2007
Peer-reviewing: Acta Veterinaria Scandinavica * 2, Juhani Taponen, 2008
Peer-reviewing: Reproduction in Domestic Animals * 1, Acta Veterinaria Scandinavica * 1, Juhani Taponen, 2009
Peer-reviewing: Reproduction in Domestic Animals * 1, Acta Veterinaria Scandinavica * 2, Juhani Taponen, 2010

Anna Katrina Hielm-Björkman ,
Peer-review of manuscripts for Veterinary Journal, Anna Katrina Hielm-Björkman, 2010 → ...

Editor of series
Olli Peltoniemi ,
Acta Veterinaria Scandinavica, Olli Peltoniemi, 01.01.2006 → 31.12.2010, Denmark

Assessment of candidates for academic posts
Ouli Laitinen-Vapaavuori ,
Assessment: Promotion for senior lectureship, Ouli Laitinen-Vapaavuori, 2006, Sweden
Assessment: Application for associate professorship, Ouli Laitinen-Vapaavuori, 2009, Sweden
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

Assessment: Promotion for senior lectureship, Outi Laitinen-Vapaavuori, 2010, Sweden

Satu Pyörälä,
Evaluation of competence of docent, Satu Pyörälä, 2005, Sweden
Evaluation of competence of visiting senior lecturer, Satu Pyörälä, 2008, Sweden
Evaluation of competence for promotion as professor, Satu Pyörälä, 2009, Norway
Evaluation of competence of professor of ruminant medicine, Satu Pyörälä, 2009, Denmark
Evaluation of competence of Senior Lecturer with tenure, Satu Pyörälä, 2010, Israel
Evaluation of competence to academic grade A+, Satu Pyörälä, 2010, Israel

Membership or other role in review committee

Terttu Katila,
Forskningskomite av Svensk hästforskningsstiftelse, Terttu Katila, 2009 → …, Sweden

Satu Pyörälä,
Research grant application, Satu Pyörälä, 2005
Research grant application, Satu Pyörälä, 2005, Sweden
Research grant application, Satu Pyörälä, 2007 → 2010, Israel
Application for training fellowship, Satu Pyörälä, 2008, United Kingdom
Research grant application, Satu Pyörälä, 2008, United Kingdom
Scientific evaluation of research of University Dept, Satu Pyörälä, 2008, Sweden
Scientific assessment of research of University, panel member, Satu Pyörälä, 2009, Sweden
Research grant application, Satu Pyörälä, 2010, Switzerland

Anna Valros,
Formas, Sweden, Animal welfare evaluation panel, Anna Valros, 2009 → …, Sweden

Laura Hänninen,
Reviewer for Strong Research Environment!, Laura Hänninen, 2010 → …, Sweden
working group for evaluating animal welfare in Finnish legislation for constructing buildings for animals, Laura Hänninen, 2010 → …, Finland

Membership or other role in research network

Anna Valros,
Coordinator of the NKJ-funded Nordic research network on tail biting in pigs, Anna Valros, 2008 → 2012

Pikka Jokelainen,
Member of The Finnish Veterinary Association, Pikka Jokelainen, 2003 → …
Member of the Finnish Association of Veterinary Practitioners, Pikka Jokelainen, 2005 → …
Member of the Scandinavian-Baltic Society for Parasitology, Pikka Jokelainen, 2009 → …
Member of the Wildlife Disease Association, Pikka Jokelainen, 2010 → …

Membership or other role in national/international committee, council, board

Mari Heinonen,
Deputy member in Veterinary Specialization committee, Mari Heinonen, 2005 → …

Terttu Katila,
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

NKVet (Nordisk kontaktorgan för veterinärmedicin), Terttu Katila, 2002 → ...
International Symposium on Stallion Reproduction, Terttu Katila, 2004 → ...
European College of Animal Reproduction, Examination Committee, Terttu Katila, 01.01.2005 → 31.12.2005
International Stallion Symposium Committee, Terttu Katila, 01.01.2005 → 31.12.2005
Nordisk komité for veterinärvitskapelig samarbeid, Terttu Katila, 01.01.2005 → 31.12.2005
European College of Animal Reproduction, Examination Committee, Terttu Katila, 01.01.2006 → 31.12.2006
International Stallion Symposium Committee, Terttu Katila, 01.01.2006 → 31.12.2006
Nordisk komité for veterinärvitskapelig samarbeid, Terttu Katila, 01.01.2006 → 31.12.2006
Eläinlääketieteet tukimuksen tutkimuksen tukisäätiö, Terttu Katila, 01.01.2007 → 31.12.2007
European Association of Establishment for Veterinary Education, Terttu Katila, 01.01.2007 → 31.12.2007
European College of Animal Reproduction: Examination Committee, Terttu Katila, 01.01.2007 → 31.12.2007
European Society for Domestic Animal Reproduction, Terttu Katila, 01.01.2007 → 31.12.2007
International Congress on Animal Reproduction, Terttu Katila, 01.01.2007 → 31.12.2007
International Equine Reproduction Symposia Committee, Terttu Katila, 01.01.2007 → 31.12.2007, United Kingdom
International Symposium on Stallion Reproduction Committee, Terttu Katila, 01.01.2007 → 31.12.2007
NKVet, Terttu Katila, 01.01.2007 → 31.12.2007
Eläinlääketieteet tukimuksen tutkimuksen tukisäätiö, Terttu Katila, 2008 → …, Finland
Eläinlääketieteet tukimuksen tutkimuksen tukisäätiö, Terttu Katila, 01.01.2008 → 31.12.2008
European Association of Establishment for Veterinary Education, Terttu Katila, 01.01.2008 → 31.12.2008
European Society for Domestic Animal Reproduction, Terttu Katila, 2008 → …
International Equine Reproduction Symposia Committee, Terttu Katila, 01.01.2008 → 31.12.2008, United Kingdom
NKVet, Terttu Katila, 01.01.2008 → 31.12.2008

Outi Laitinen-Vapaavuori,
Pysyvä mikrobiiläkeleikkuryhmä, Outi Laitinen-Vapaavuori, 2007 → 2010

Olli Peltoniemi,
Chairman, appointed (Ministry of Agriculture) group for updating recommendations for use of antimicrobials in veterinary practice, Olli Peltoniemi, 2000 → 2010
Nordic Society for Veterinary Epidemiology, Olli Peltoniemi, 2001 → 2010
Examination Committee Member, European College of Animal Reproduction, Olli Peltoniemi, 2003 → 2006
European College of Animal Reproduction, Chair, Olli Peltoniemi, 2005 → …
Nordic Society for Veterinary Epidemiology, Olli Peltoniemi, 01.01.2005 → 31.12.2005, Denmark
European College of Porcine Health Management, Board (hallitus), Olli Peltoniemi, 01.01.2008 → 31.12.2008, Netherlands
European College of Porcine Health Management, Secretary, Olli Peltoniemi, 2007 → 2010, France
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

Member of Formas’ standing Evaluation Panels, Olli Peltoniemi, 2007 → 2010, Sweden
Secretary, European College of Animal Reproduction, Olli Peltoniemi, 2010 → …, United Kingdom

Satu Pyörälä

National Mastitis Council, Satu Pyörälä, 1999 → …, United States
EU:n eläinlääkekomitean (CVMP) työryhmä Scientific Advisory Group on Antimicrobials (SAGAM), Satu Pyörälä, 2004 → …
6th European Colloquium on Acute Phase Proteins, Copenhagen, Denmark, 2005. Member of the scientific committee, Satu Pyörälä, 01.01.2006 → 31.12.2006, Denmark
Tutkimuksen ja tieteellisten jatkotutkintojen toimikunta, Satu Pyörälä, 2007 → …, Finland

Thomas Spillmann

German Gastroenterological Study Group at the German Society of Small Animal Medicine, Thomas Spillmann, 01.01.1999 → 31.12.2000
European Society of Comparative Gastroenterology, Thomas Spillmann, 01.01.2005 → 14.09.2007
European Society of Comparative Gastroenterology, Thomas Spillmann, 14.09.2007 → …

Antti Sukura

Membership in Scandinavian Society for Parasitology, Antti Sukura, 1986 → …
Membership in Nordic Society for Veterinary Pathology, Antti Sukura, 1998 → …
Membership of C. L. Davis Foundation of Advancement of Education in Veterinary &amp; Comparative Pathology, Antti Sukura, 1998 → …
Member of board of Specialization for Infectious Veterinary Diseases, Antti Sukura, 1999 → …, Finland
Membership in Finnish Union of University Professors, Antti Sukura, 2002 → …, Finland
Assessment of Grant Applications to the Estonian Science Foundation, Antti Sukura, 2004 → 2005, Estonia
Board member of European Society of Veterinary Pathology, Antti Sukura, 2004 → …
Member of Faculty Council, Antti Sukura, 2004 → …
Membership in International Commission on Trichinellosis, Antti Sukura, 2004 → …
Education Committee of ESVP &amp; ECVP, Antti Sukura, 01.01.2006 → 31.12.2007
Board member of Nova, Antti Sukura, 2007 → …
Faculty of Veterinary Medicine, Faculty Council, Antti Sukura, 2007 → …

Riitta-Mari Tulamo

EUROPEAN ASSOCIATION for ESTABLISHMENT of VETERINARY EDUCATION EAEVE, Riitta-Mari Tulamo, 01.01.2005 → 31.12.2005, Belgium
EUROPEAN BOARD OF VETERINARY SPECIALIZATION EBVS, Riitta-Mari Tulamo, 01.01.2005 → 31.12.2005, Netherlands

Outi Vainio

European Association of Veterinary Anaesthetists (AVA), Outi Vainio, 01.01.2003 → …
European College of Veterinary Pharmacology and Toxicology (ECVPT), Outi Vainio, 01.01.2003 → …
International Veterinary Academy of Pain Management (IVAPM), Outi Vainio, 01.01.2003 → 31.12.2006
Suomen koe-eläintieteilijät ry FinLAS, Outi Vainio, 01.01.2005 → 31.12.2005, Finland
Suomen Kirurgityöntekijät ry, Outi Vainio, 01.01.2006 → …, Finland
ECVPT, Outi Vainio, 01.01.2007 → …
IASP, Outi Vainio, 01.01.2007 → 31.12.2007, United Kingdom
IVAPM, Outi Vainio, 01.01.2007 → 31.12.2007, United States
NOVA-KUF, Outi Vainio, 01.01.2007 → 31.12.2009
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

IAISP, Outi Vainio, 01.01.2008 → 31.12.2008, United Kingdom
IAVPM, Outi Vainio, 01.01.2008 → 31.12.2008, United States
member at the board of the Neuroscience Center, Outi Vainio, 01.01.2010 → 22.04.2010
member of an advisory board, Outi Vainio, 2010
varapuheenjohtaja, Outi Vainio, 2010 → 2012
vice chair of the board of research and research education, Outi Vainio, 2010 → 2013

Anna Valros
Chairman of the National Farm Animal Welfare Strategy working group (Appointed by the Ministry of Agriculture and Forestry), Anna Valros, 2004 → 2006
Secretary, International Society for Applied Ethology, Anna Valros, 2004 → 2009
Expert member of the committee developing the Animal Welfare subsidy policy (appointed by the Ministry of Agriculture and Forestry), Anna Valros, 2005 → ...
Suomen soveltavan etologian seura, Anna Valros, 01.01.2005 → 31.12.2005
Junior vice president, International Society for Applied Ethology, Anna Valros, 2009 → 2011
Member of the steering group for the Finnish Centre for Animal Welfare, Anna Valros, 2009 → ...
Member of the Finnish Farm Animal Welfare Council (appointed by the Ministry of Agriculture and Forestry), Anna Valros, 2010 → ..., Finland

Laura Hänninen
ISAE (soveltavan käyttäytymistieteen seura) jäsen, Laura Hänninen, 01.01.1996 → ...
working group for design the national strategy for the farm animal welfare in Finland, Laura Hänninen, 2004 → 2006, Finland
Finish society for applied ethology, Laura Hänninen, 01.01.2006 → 31.12.2006, Finland
Suomen soveltavan etologian seura, Laura Hänninen, 01.01.2007 → 31.12.2007, Finland
Suomen soveltavan etologian seura, Laura Hänninen, 01.01.2008 → 31.12.2008, Finland
Education officer, Laura Hänninen, 2010

Faik Atroshi
Canadian Society for Pharmaceutical Sciences, Faik Atroshi, 01.01.2005 → 31.12.2005, Canada
Finnish Physiology Society, Faik Atroshi, 01.01.2005 → 31.12.2005, Finland
Finnish Society for Biological Medicine, Faik Atroshi, 01.01.2005 → 31.12.2005, Finland
RUSTAM Society for Trace Elements in Medicine, Faik Atroshi, 01.01.2005 → 31.12.2005
Scandinavian Physiological Society, Faik Atroshi, 01.01.2005 → 31.12.2005, Finland
Chairman of the International Global Society for nutrition,environment and health, Faik Atroshi, 2010 → ...
Director,Education and Research Satellite Center in Trace Elements for UNESCO, Faik Atroshi, 2010 → ...

Henna P. Heikkilä
NOVA Student Board, Henna P. Heikkilä, 01.02.2010 → 01.02.2012

Anu Katriina Lappalainen
Jaositustieteilijän toimikunta, Anu Katriina Lappalainen, 01.01.2008 → ...

Marianna Norring
Suomen soveltavan etologian seura ry, Marianna Norring, 01.01.2007 → 31.12.2007, Finland
Eläinten hyvinvoinnin tutkijakoulun koordinaattori, Marianna Norring, 01.01.2008 → 31.12.2008, Finland
Suomen soveltavan etologian seura ry, Marianna Norring, 01.01.2008 → 31.12.2008, Finland
Membership or other role in public Finnish or international organization

**Mari Heinonen,**
- Member of the Finnish Veterinary Association, Mari Heinonen, 1986 → …, Finland
- Member in ISAH, International Society for Animal Hygiene, Mari Heinonen, 1995 → …
- Member of Finnish Association for Food Animal Practitioners, Mari Heinonen, 1997 → …, Finland
- Member of European Society of Domestic Animal Reproduction, Mari Heinonen, 2002 → …
- Member of the Swine fever expert group, Mari Heinonen, 2002 → …
- Member of ISAE, International Society for Applied Ethology, Mari Heinonen, 2004 → …
- Member, Committee planning national goals for welfare in pork production, Mari Heinonen, 2004 → 2005, Finland
- ETT sika-asiantuntiyryhmä, Mari Heinonen, 01.01.2005 → 31.12.2005, Finland
- Eirkostumistöimikunta, HY, ELTDK, Mari Heinonen, 01.01.2005 → 31.12.2005
- Member in Nordic Society for Veterinary Epidemiology, Mari Heinonen, 2005 → …

**Terttu Katila,**
- Maa- ja metsätalousministerin asettama Kansallinen hevostutkimusohjelman työryhmä, Terttu Katila, 12.05.2005 → 30.09.2005
- MTT: Hevostutkimuksen neuvottelukunnan jäsen, Terttu Katila, 01.01.2006 → 31.12.2006, Finland
- MTT: Hevostutkimuksen neuvottelukunnan jäsen, Terttu Katila, 01.01.2006 → 31.12.2006, Finland
- MMM:n pysyvä asiantuntija eläinlääkäreiden ammatinhallintamisen valvontaa varten, Terttu Katila, 01.01.2007 → 31.12.2010, Finland

**Outi Latinnen-Vapaavuori,**
- Eläintähti- ja toimintaneuvoston jäsen, Outi Latinnen-Vapaavuori, 01.01.2005 → 31.12.2005, Finland
- Eläintähti- ja toimintaneuvoston jäsen, Outi Latinnen-Vapaavuori, 01.01.2005 → 31.12.2005, Finland
- Eläintähti- ja toimintaneuvoston jäsen, Outi Latinnen-Vapaavuori, 01.01.2005 → 31.12.2005, Finland
- Eläintähti- ja toimintaneuvoston jäsen, Outi Latinnen-Vapaavuori, 01.01.2005 → 31.12.2005, Finland

**Olli Peltoniemi,**
- Mikrobialityöryhmä, MMM, Olli Peltoniemi, 01.01.2005 → 31.12.2005, Finland
- Mikrobialityöryhmä, MMM, Olli Peltoniemi, 01.01.2005 → 31.12.2005, Finland
- Vahinkoarviolautakunta, MMM, Olli Peltoniemi, 01.01.2006 → 31.12.2006, Finland

**Satu Pyörälä,**
- ETT:n ja EELAn maidontuotannon terveydenhuollon asianajaryhmä, Satu Pyörälä, 01.01.2002 → 31.12.2005, Finland
- MMM:n ryhmää johtava"Nautojen hengitystiesairaudet" ohjausryhmä, Satu Pyörälä, 01.01.2002 → 31.12.2005, Finland
- Steering group of Evira for monitoring antibiotic resistance, Satu Pyörälä, 2002 → …
- MMM:n pysyvä asiantuntija eläintäkäärinörien harjoittamisen valvontaa varten, Satu Pyörälä, 01.01.2003 → …, Finland
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

**RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010**

*VetSci/Peltoniemi*

MMM:n rahoittaman projektin "Improved genetic evaluation on mastitis in dairy cattle" ohjausryhmä, Satu Pyörälä, 01.01.2004 → 31.12.2007


MMM:n pysyvä mikrobiiläläketyöryhmä, Satu Pyörälä, 01.01.2007 → 2011, Finland

Steering group for research project, Satu Pyörälä, 01.01.2007 → 2010, Finland

**Thomas Spillmann,**


**Timo Soeveri,**

Suomen Akatemia, Kasvintutannon tarkastuslaitos, Timo Soever, 01.01.2005 → 31.12.2005, Finland

**Antti Sukura,**

Member of Foot- and Mouth Disease advisory group, Antti Sukura, 2000 → ..., Finland

Vice-trustee of Finnish Union of University Professors, Antti Sukura, 12.05.2005 → ..., Finland

**Riitta-Mari Tulamo,**

Yliopiston Apteeki, Riitta-Mari Tulamo, 01.01.2003 → 31.12.2011, Finland

Suomen eläintäkäsitteiden säätiö, Riitta-Mari Tulamo, 01.01.2005 → 31.12.2005, Finland

Vakuutuslautakunta, Riitta-Mari Tulamo, 01.01.2005 → 31.12.2005, Finland

**Outi Vainio,**

Eläinlääkärintutkimuslaitoksen arviointitarkastuslaitokset, Outi Vainio, 2003 → 2008, Finland

Lääketalous, Eläinlääketutkimuslaitokset, Outi Vainio, 01.01.2004 → 31.12.2008, Finland

Eläinkuljetuksen antidopingtoimikunta, Outi Vainio, 01.01.2006 → ..., Finland

Maa- ja metsätalousministeriö, lääkeluovutuslautakunta, Outi Vainio, 01.01.2006 → 31.12.2006, Finland

Helsingin yliopiston kokeellinen kehityslaitos, Outi Vainio, 01.01.2007 → 31.12.2007, Finland

Neurotieteen tutkimuskeskuksen johtokunta, Outi Vainio, 2007 → 2009, Finland

Vikin tekeoja ja eläintäkäsitteiden, eläintarvikehygienian ja farmasan neuvotteleminen, Outi Vainio, 01.01.2007 → 31.12.2009, Finland

Vikin kampausmenetelmiin liittyvä toiminnan edistäminen ja sosiaaliresurssien kehittäminen, Outi Vainio, 01.01.2008 → 31.12.2010, Finland

**Anna Valros,**

Lihaispajatutkimuskunta ja lihaislihan hyvinvoinnin tutkimuskeskus, Anna Valros, 01.01.2005 → 31.12.2005, Finland

Vihreän lihan hyvinvoinnin tutkimuskeskus, Anna Valros, 01.01.2006 → ..., Finland

Sikojen hyvinvoinnin keskittymä ja lihan hyvinvoinnin ja eläimistöjen elpyminen, Anna Valros, 01.01.2007 → 31.12.2007, Finland

Eläinten ja metsäeläinten eläintäkäsitteiden, eläintarvikehygienian ja farmasan tutkimus ja neuvottelu, Anna Valros, 01.01.2008 → 31.12.2009, Finland

**Marja Raekallo,**

Lääketutkimuksen erityishankkeiden toimisto, Marja Raekallo, 01.01.2005 → 31.12.2005, Finland

Lääketutkimuksen erityishankkeiden toimisto, Marja Raekallo, 01.01.2005 → 31.12.2006, Finland

Lääketutkimuksen erityishankkeiden toimisto, Marja Raekallo, 01.01.2005 → 31.12.2006, Finland

Lääketutkimuksen erityishankkeiden toimisto, Marja Raekallo, 01.01.2007 → 31.12.2007, Finland

Lääketutkimuksen erityishankkeiden toimisto, Marja Raekallo, 01.01.2008 → 31.12.2008, Finland
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

Laura Hänninen,
Naitojen ETU: hyvinvointityöryhmän jäsen, Laura Hänninen, 01.01.2005 → 31.12.2005, Finland
EFSA: extended advisory committee for the dairy cow welfare, Laura Hänninen, 03.07.2007 → 05.12.2007, Italy
Eläintäketettelytoimikunta, Laura Hänninen, 01.01.2007 → 31.12.2007, Finland
MEM ohjausryhmä; kettujen virikkeiden käyttö - tutkimus, Laura Hänninen, 01.01.2007 → 31.12.2007, Finland
member of the Board of experimental farms at the UH, Laura Hänninen, 2007 → 2010

Mari Hovinen,
Lyypsykonekomitea, Mari Hovinen, 01.01.2005 → 31.12.2005, Finland
Meijeriyhdistyksen Hyvät toimintatavat automaattilyypsyssä -työryhmä, Mari Hovinen, 01.01.2005 → 31.12.2005, Finland
Lyypsykonekomitea, Mari Hovinen, 01.01.2007 → 31.12.2007, Finland
Meijeriyhdistyksen Hyvät toimintatavat automaattilyypsyssä -työryhmä, Mari Hovinen, 01.01.2007 → 31.12.2007, Finland
Lyypsykonekomitea, Mari Hovinen, 01.01.2008 → 31.12.2008, Finland

Erja Kuusela,
Eläintäketeltäytäntö, Erja Kuusela, 01.01.2007 → 31.12.2007, Finland

Minna Marjaana Rajamäki,
Lääkelaitos, Minna Marjaana Rajamäki, 01.01.2005 → 31.12.2005, Finland
Lääkelaitos, Minna Marjaana Rajamäki, 01.01.2006 → 31.12.2006, Finland

Juhani Taponen,
Maa- ja metsätalousministeriö, Ohjausryhmä tutkimusprojekteissa Geenidiagnostiikan ja ekspessianalyytiiksen käyttö alkiovalinnassa lypsykarjalla sekä Uusia työkaluja eurooppalaisen lypsykarjan tutkimukseen, Juhani Taponen, 01.01.2005 → 31.12.2005
Maa- ja metsätalousministeriö, Ohjausryhmä tutkimusprojekteissa Lehmän tuotantoikään vaikuttavien geenien kartoitus ja uudet valintamenetelmät, Juhani Taponen, 01.01.2005 → 31.12.2005
Opetus-, Kehitys-, ja Tuotannonhallitus, Juhani Taponen, 01.01.2005 → 31.12.2005
Helsingin yliopiston opetus- ja tutkimusministeriö, Juhani Taponen, 01.01.2005 → 31.12.2008, Finland
Karjalaitoksen tutkimus- ja kehitysneuvottelutoimikunta, Juhani Taponen, 01.01.2005 → 31.12.2008, Finland

Marianna Norring,
Eläinkoelautakunta, edustan eläinsuojelu näkemystä, Marianna Norring, 01.01.2007 → 31.12.2007, Finland

Heli Kaisu Simojoki,
MM:n asettama suu- ja sorkkataudin asiantuntijatyöryhmä, Heli Kaisu Simojoki, 01.01.2008 → 31.12.2008, Finland
**Membership or other role of body in private company/organisation**

**Magnus Andersson**, ESDAR European society of domestic animal reproduction, Magnus Andersson, 01.01.2006 → 31.12.2006, Sweden

**Mari Heinonen**, Editorial group of Finnish Veterinary Journal, member, Mari Heinonen, 2004 → 2009, Finland

**Terttu Katila**, Professorilaitos, Terttu Katila, 01.01.2001 → 31.12.2006, United States

**Antti Sukura**, Member of Finnish Veterinary Association, Antti Sukura, 1985 → …, Finland

**Riitta-Mari Tulamo**, European College of Veterinary Surgeons: Diplomate, past President, past Chair of the Board of ECVS, Riitta-Mari Tulamo, 01.01.2002 → 31.12.2012, Switzerland

**Outi Vainio**, Suomen Eläinlääketieteen yhdistys (FinLAS), Outi Vainio, 01.01.2003 → …, Finland

**Anna Valros**, Juliana von Wendtin säätiön hallitus, Anna Valros, 01.01.2005 → 31.12.2005, Finland

**Matti Juhana Honkavaara**, Hallituksen jäsen, Matti Juhana Honkavaara, 01.10.2009 → …, United States

**Merja Riitta Leinonen**, Lääketieteilisisäkunta, Merja Riitta Leinonen, 01.01.2007 → 31.12.2007, United States

**Marianna Norring**, Fincopa ry, Marianna Norring, 01.01.2007 → 31.12.2007, Finland


**Merja Riitta Leinonen**, Suomen Eläinlääketieteen yhdistys, Merja Riitta Leinonen, 01.01.2007 → 31.12.2007, United States


**Antti Sukura**, Professorilaitos, Antti Sukura, 01.01.2007 → …, Finland

**Terttu Katila**, Professorilaitos, Terttu Katila, 01.01.2007 → 31.12.2010, Finland

**Outi Vainio**, Suomen Eläinlääketieteen tutkimuksen tukisäätiö, Outi Vainio, 01.09.2008 → 31.01.2011, Finland

**Kuva: VetSci/Peltoniemi**

**INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI**

**RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010**
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

Other tasks of an expert in private sector

Mari Heinonen,
Member of the Swine Expert Group of Association for Animal Disease Control, Mari Heinonen, 1997 → 2011, Finland

Laura Hänninen,
Cattle behaviour expert in a working group designing welfare guidelines for the good milk and beef production practices in Finland, Laura Hänninen, 2005 → 2006, Finland

Cal welfare group, Laura Hänninen, 01.01.2007 → 31.12.2007, Finland

Matti Juhana Honkavaara,
Consulting, Matti Juhana-Honkavaara, 01.02.2009 → ..., United States

Heli Kaisu Simojoki,
Eläinten terveydenhuollon lakanautien terveydenhuollon asiantuntijatyöryhmän varajäsen, Heli Kaisu Simojoki, 2002 → ..., Finland

Other tasks of an expert in private sector

Mari Heinonen,
Calf welfare working group, Laura Hänninen, 2005 → 2008, Finland

Participation in interview for written media

Mari Heinonen,
Eläintäänkäypäätä, Mari Heinonen, 27.11.2002 → 31.12.2011, Finland

Heitelmällisyyspäivät, Pohjois-Savon ammattikorkeakoulu ja Haukkas, Mari Heinonen, 14.03.2002 → 31.12.2011, Finland

Kotieläintuottajan ammattilehde, Mari Heinonen, 05.02.2002 → 31.12.2011, Finland

Koulutus Mäntsälän kunnan perusterveydenhuollon teemapäivä, Mari Heinonen, 21.03.2002 → 31.12.2011, Finland


Sikojen hyvinvointipäivä, Mari Heinonen, 04.11.2002 → 31.12.2011, Finland

Suomen Rehu, tuottajaseminaari, Mari Heinonen, 11.01.2002 → 31.12.2011, Finland

Uudenmaan maatalouslaitosten perustutkimus, Mari Heinonen, 07.01.2002 → 31.12.2011, Finland

Vahvistajakoulutus-Suomen lintulääkäriseuran vuosikokous, Mari Heinonen, 10.04.2002 → 31.12.2011, Finland

Ympäristöterveydenhuollon alueelliset neuvottelupäivät, Mari Heinonen, 07.03.2002 → 31.12.2011, Finland

Hyvinvointi ja eläinkulttuuri, Mari Heinonen, 17.03.2005 → 31.12.2011, Finland


Outi Latinin-Vapaavuori,
Suomen Kennelliitto ry, Jalostushevosien jatkokurssi, Outi Latinin-Vapaavuori, 30.01.2000 → 31.12.2011, Finland

Participation in interview for written media

Outi Latinin-Vapaavuori,
Suomen Kennelliitto ry, Jalostushevosien jatkokurssi, Outi Latinin-Vapaavuori, 30.01.2000 → 31.12.2011, Finland

Outi Latinin-Vapaavuori,

Eläintäänkäypäätä, Mari Heinonen, 27.11.2002 → 31.12.2011, Finland
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

Olli Peltoniemi,
Orion Pharma, Eläinlääkkeet järjestämä tiedotustilaisuus, Olli Peltoniemi, 18.08.2000 → 31.12.2011, Finland

Satu Pyörälä,
Haastattelu Yliopisto -lehessä no 10, Satu Pyörälä, 01.01.2002 → 31.12.2011, Finland

Antibiotikaiden ja -kirjojen järjestämä seminaari Valioilla, järjestää Nuciatherm, Satu Pyörälä, 23.05.2003 → 31.12.2011, Finland


Outi Vainio,

HY:n koulutustrainingu, Outi Vainio, 01.01.2004 → 31.12.2011, Finland

Lehti: Eläinten ystävä, Outi Vainio, 01.01.2004 → 31.12.2011, Finland

Lemmikki -lehti, Outi Vainio, 01.01.2006 → 31.12.2011, Finland

Eläintäkkärivapaa-aika -lehde, Outi Vainio, 01.01.2008 → 31.12.2011, Finland


Anna Valros,
Tilaisuus: HY, Mikkeli, Luomukurssi, Anna Valros, 08.11.2000 → 31.12.2011, Brazil

Ikäihmisten yliopisto, Anna Valros, 11.11.2002 → 31.12.2011, Netherlands

Luomukalaisen yliopistokokouksen pitää, Anna Valros, 14.06.2002 → 31.12.2011, Netherlands

Pääkaupunkiseudun luonnonkunnat, Anna Valros, 01.09.2002 → 31.12.2011, Netherlands

Ruotsinkielisten biologian ja maantieteen opettajien koulutusharjoitteisto, Anna Valros, 16.11.2002 → 31.12.2011, Netherlands


Suomen Eläinsuojeluyhdistysten eläinsuojelualanopiskelijallentulo, Anna Valros, 23.05.2002 → 31.12.2011, Netherlands

Töölö gymnasium, Anna Valros, 26.11.2002 → 31.12.2011, Netherlands

Eläinmaailma 7,2003, Anna Valros, 01.01.2003 → 31.12.2011, Finland


Helsingin Sanomat, Anna Valros, 22.02.2003 → 31.12.2011, Finland

Koulutuspäivä, Anna Valros, 14.11.2003 → 31.12.2011, Finland

Lihatalous 4/2003, Anna Valros, 01.01.2003 → 31.12.2011, Finland

LoA, Anna Valros, 19.11.2003 → 31.12.2011, Finland

LoA 4/2003, Anna Valros, 01.01.2003 → 31.12.2011, Finland

Maaseudun tulevaisuus, Anna Valros, 31.03.2003 → 31.12.2011, Finland

Maaseudun tulevaisuus, Anna Valros, 19.11.2003 → 31.12.2011, Finland

Skolningsdag för Österbottens svenska svinproducenter, Anna Valros, 10.01.2003 → 31.12.2011, Finland

YLE Alueuutiset, Anna Valros, 18.11.2003 → 31.12.2011, Finland

YLE Q, Anna Valros, 01.01.2003 → 31.12.2011, Finland

YLE Tutkimus Juttu, Anna Valros, 22.05.2003 → 31.12.2011, Finland

YLE:n alkainen, Anna Valros, 18.11.2003 → 31.12.2011, Finland

Helsingin sanomat, Anna Valros, 28.05.2005, Finland
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

Interviews for newspapers and magazines (several), Anna Valros, 2005 → 2010
Lihatalous 1/2005, Anna Valros, 01.01.2005 → 31.12.2011, Finland
Maaseudun tulevaisuus, Anna Valros, 30.05.2005 → 31.12.2011, Finland

Laura Hänninen

A barn in the city, Laura Hänninen, 02.2003 → …, Finland
Länsi-Uusimaa, Laura Hänninen, 01.11.2003 → 31.12.2011, Estonia
Universitas Helsingiensis, Laura Hänninen, 01.02.2003 → 31.12.2011, Estonia
Yliopisto-lehti, Laura Hänninen, 13.06.2003 → 31.12.2011, Estonia

Young calf needs proper sleep, Laura Hänninen, 11.2003 → …, Finland
Eikäniäkkäinen, neuvojen ja tuottajien jatkokoulutus, ELKE-hanke, Laura Hänninen, 01.12.2004 → 31.12.2011, Finland
Helsingin Sanomat, kuukausiliite, Laura Hänninen, 01.12.2004 → …, Finland
YLE, Laura Hänninen, 01.01.2004 → 31.12.2011, Finland
Lehtihastattelu: Maatilan Pirkka, 06-2005, Laura Hänninen, 01.06.2005 → 31.12.2011, Finland
Hufvudstadsbladet haastattelu, Laura Hänninen, 01.01.2006 → 31.12.2011, Finland
Tiede-lehti, Laura Hänninen, 01.01.2006 → 31.12.2011, Finland
YLE Kuopion alueutiset, Laura Hänninen, 01.01.2006 → 31.12.2011, Finland
YLE Pallo hallussa - ohjelma, Laura Hänninen, 01.01.2006 → 31.12.2011, Finland

Cattle welfare, Laura Hänninen, 31.12.2007, Finland

YLK-myös, Laura Hänninen, 16.03.2007 → 31.12.2011, Finland

A functional loose house - now and in the future, Laura Hänninen, 07.11.2007

Me Naiset/ Luontonurkka/ 5-2008, Laura Hänninen, 01.01.2008 → …, Finland

Researcher pro calf welfare, Laura Hänninen, 15.12.2008, Finland

a good quality rest increases calves growth, Laura Hänninen, 29.01.2007, Finland
resting increases calves’ growth, Laura Hänninen, 03.2007 → …, Finland

the cuties: the most adorable animal dissertation, Laura Hänninen, 16.03.2007, Finland

A novel research searching pleasant factors for animals, Laura Hänninen, 12.12.2008, Finland

Finnish animal welfare centre promotes the spreading of animal welfare knowledge, Laura Hänninen, 15.12.2008

How lives happy cow?, Laura Hänninen, 02.2008 → …, Finland


Me Naiset/ Luontonurkka/ 5-2008, Laura Hänninen, 01.01.2008 → 31.12.2011, Finland

Researcher pro calf welfare, Laura Hänninen, 15.12.2008, Finland

21
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

Sleep of cattle, Laura Hänninen, 05.2008, Finland
Eläinsuojelun määräyksiin vaaditaan remonttia, Laura Hänninen, 10.12.2009 → ...

Animal right’s society published new material from the fur farms, Laura Hänninen, 05.11.2010, Finland

Half of the calves are disbudded in sedation, Laura Hänninen, 06.10.2010 → ...

Happy “calthood” as basis for cow welfare, Laura Hänninen, 06.2010 → ...

Sairaat turkiseläimet eivät saa tarhoilla erikoishäkkiä,, Laura Hänninen, 01.03.2010 → ...

Mari Hovinen,


Lypsysoittoseminaari asialta kiinnostuneille (Jokisillan), Mari Hovinen, 09.10.2002 → 31.12.2011, Finland

Valion neuvonjoivälistä Pitäjänmäellä, Mari Hovinen, 06.10.2004 → 31.12.2011, Finland


Automaattilypsy ja lainsäädäntöä luontopäivityt Seinäjoella, Mari Hovinen, 17.03.2005 → 31.12.2011, Finland


ELKE-hankkeen tuontotarkastuksenluontopäivityt, Mari Hovinen, 15.03.2005 → 31.12.2011, Finland

Mastittitukikirjoihin seminaari Joroisissa, Mari Hovinen, 27.05.2005 → 31.12.2011, Finland

Tutkimusseminaariseminaari Joroisissa, Mari Hovinen, 05.06.2007 → 31.12.2011, Finland


Maidonkäsittelylaitteiden täydennyskurssi Jyväskylässä, Mari Hovinen, 04.11.2008 → 31.12.2011, Finland


Maitohygiénialoitton johdannon kokous, Mari Hovinen, 01.12.2008 → 31.12.2011, Finland

NOVA Mastitis research -kurssi, Mari Hovinen, 11.08.2008 → 31.12.2011, Finland

Juhani Taponen,

International congres on cattle reproduction, ELTDK, KLEL, Juhani Taponen, 28.08.2003 → 31.12.2011, Finland


Semihogtjen jatkokuolutasuspäivityt, FABA, Kuopio, Juhani Taponen, 07.05.2003 → 31.12.2011, Finland

Semihogtjen jatkokuolutasuspäivityt, FABA, Kuopio, Juhani Taponen, 22.10.2003 → 31.12.2011, Finland

Faik Atroshi,

Alternative and Biological medicine, Miami, Faik Atroshi, 01.09.2005 → 31.12.2011, Latvia


Round Table discussion, Drug Therapy use, Kentucky, Faik Atroshi, 01.04.2005 → 31.12.2011, Latvia

Satu Maarit Raussi,

Onnellinen lapsuus - hyvinvoinnin perusta, Satu Maarit Raussi, 19.08.2010 → ...

Stäng inte in hunden i het bil, Satu Maarit Raussi, 19.08.2010 → ...

Yhdet jos toisenkin asialla, Satu Maarit Raussi, 19.08.2010 → ...

Jonna Finella Tuulia Oravainen,

Lihatalous, Jonna Finella Tuulia Oravainen, 01.01.2002 → 31.12.2011, Italy

Susanne Kilpinen,

Haastattelu Vatsan Hyvinvointi- teamalehteen, Susanne Kilpinen, 19.01.2010
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

Kati Niinistö, Lemmikkein maalima, Kati Niinistö, 01.01.2004 → 31.12.2011, Sweden
Ikaisten vaikutuksellinen emolehmälämpö, Heli Kaisu Simojoki, 03.02.2003 → 31.12.2011, Finland
Keski-Suomen Proagrian Laatuvalmis sianlihantuottajille, Heli Kaisu Simojoki, 06.02.2003 → 31.12.2011, Finland
Naudanlihan tuottajien laatuvalmis Proagrian Etelä-Karjalan maasutukikeskus, Heli Kaisu Simojoki, 07.01.2003 → 31.12.2011, Finland
Vasikkapäivä Keski-Suomen lihan tuottajille Valion kanssa, Heli Kaisu Simojoki, 14.03.2003 → 31.12.2011, Finland
Vasikkapäivä, Kymeriaksoon tilaeräntapiko koulutus tuottajille, Heli Kaisu Simojoki, 30.01.2003 → 31.12.2011, Finland
Välityseläinliikennöidens ja Järvi Suomen Portin henkilöstökoulutusta, Heli Kaisu Simojoki, 10.01.2003 → 31.12.2011, Finland

Participation in radio programme

Anna Valros, Interview, YLEn Ykkönen, Anna Valros, 26.01.2005, Finland
Interview, YLE aikainen, Anna Valros, 15.12.2005, Finland
Interview, YLE radio Vega, Anna Valros, 10.10.2006, Finland
Interview, YLE news, Anna Valros, 27.08.2009, Finland

Laura Hänninen, Nautojen luontainen käyttäytyminen, Laura Hänninen, 01.11.2004 → …, Finland
Tuotantoeläinten hyvinvointi, Laura Hänninen, 03.2004 → …, Finland
Vasikoiden lepo ja uni, Laura Hänninen, 24.01.2009 → …

Anu Susanna Näreaho, radiohaastattelu, Anu Susanna Näreaho, 05.11.2008, Sweden

Henna P. Heikkilä, YLE Radiouutiset, Henna P. Heikkilä, 18.07.2010, Finland


Participation in TV programme

Anna Valros, Interview, YLE A-Studio, Anna Valros, 28.11.2007
Interview YLE Suomi Express, Anna Valros, 11.2008, Finland
Interview, YLE AamuTV News, Anna Valros, 17.10.2010, Finland
Interview, YLE FST News, Anna Valros, 02.11.2010, Finland
Interview, YLE Studio Prisma, Anna Valros, 02.02.2010

Laura Hänninen, Nautojen luontainen käyttäytyminen, Laura Hänninen, 01.11.2004 → …, Finland
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING AT THE UNIVERSITY OF HELSINKI

RC-SPECIFIC TUHAT COMPILATIONS OF OTHER SCIENTIFIC ACTIVITIES 2005-2010

VetSci/Peltoniemi

Nautojen lepokäyttäytyminen, Laura Hänninen, 03.2006 → ...
Vaskoiden lepoaika ja kasvu, Laura Hänninen, 11.2006 → ..., Finland
Vaskoiden lepo ja uni, Laura Hänninen, 21.01.2009 → ...
A-tuubi Eläinten hyvinvointi-Iltta, Laura Hänninen, 13.04.2010 → ..., Finland
Sleep lab for cows, Laura Hänninen, 20.03.2010

Susanne Kilpinen,
Haastattelu MTV3 Huomenta Suomen suorassa lähetyksessä, Susanne Kilpinen, 16.08.2006
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING
AT THE UNIVERSITY OF HELSINKI
by CWTS, Leiden University, the Netherlands

Research Group: Peltoniemi O

Basic statistics

- Number of publications (P) 279
- Number of citations (TCS) 734
- Number of citations per publication (MCS) 2.67
- Percentage of uncited publications 38%
- Field-normalized number of citations per publication (MNCS) .95
- Field-normalized average journal impact (MNJS) 1.21
- Field-normalized proportion highly cited publications (top 10%) .84
- Internal coverage .76

Trend analyses

Performance (MNCS) by collaboration type

Collaboration

Internal coverage
INTERNATIONAL EVALUATION OF RESEARCH AND DOCTORAL TRAINING
AT THE UNIVERSITY OF HELSINKI
by CWTS, Leiden University, the Netherlands

Research profile

![Research profile chart]

Threshold: \( P \geq 5 \)