

Curriculum vitae

PERSONAL INFORMATION

Family name, First name: Blomstrand, Berit Marie
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EDUCATION

- 2017 - PhD-position at [The University of Copenhagen](https://www.copen.ku.dk/), Faculty of Health and Medical Science, Denmark on "[BarkCure](#): Condensed tannins from Norwegian pine and spruce bark – antiparasitic effects and potential commercial exploitation (NFR number 268264)". Supervisors: Professor Stig Milan Thamsborg, Research Professor Håvard Steinshamn, Dr Spiridoula Athanasiadou, and Dr Heidi Enemark.
- 1993 – 1999 Cand. med. vet, [University of Veterinary Medicine, Hannover, Germany](https://www.vet.uni-hannover.de/)

CURRENT POSITION

- 2017- Ph.D. candidate at NORSØK, Norwegian Centre for Organic Agriculture, Norway.

PREVIOUS POSITIONS

- 2016 - 2017 Pathologist/researcher at the Norwegian Veterinary Institute, Tromsø (18 months)
2016 Norwegian Veterinary Institute, Oslo, training period (2 weeks)
2013 - 2021 Herd surveillance veterinarian at a broiler farm in Surnadal, Norway
2005 - 2018 Owner and general manager at Trollheimen Small animal clinic, small animal clinic
2003 - 2016 Veterinary surgeon in Rindal veterinary district, livestock
2003 Veterinary surgeon in Vest-Telemark veterinary district, livestock/companion animals
2002 – 2003 General manager at Fornebu Small animal clinic AS, companion animals
2001 – 2002 Veterinary surgeon in Surnadal veterinary district, livestock/companion animals
1999 - 2001 Department veterinarian and deputy CEO, The Norwegian Food Control Authority, Voss
2015-2017 Race veterinarian at sled dog races (Finnmarksløpet, Bergebyløpet)
1996-1998 Practice experience/assistance at various small animal clinics in Norway, Alaska (USA), and New Zealand
1997 Medizinischer Dienst der Krankenversicherung Niedersachsen, Germany, secretary (4 weeks).
1992-1993 Farm worker at various farms in Norway (milk production, beef, pork, and sheep)

EXTERNAL LABORATORY TRAINING AND STAYS ABROAD

- 2020 Scotland's Rural College, Edinburgh, Scotland. Assessing the anthelmintic properties of acetone extracted pine bark extract on *Heligmosomoides bakeri* in a mouse model (3 weeks)
- 2018-2019 Norwegian Veterinary Institute, Oslo, Norway. Performing oocyst development inhibition assays to assess the anti-cryptosporidial properties of bark extracts from Norwegian spruce and pine on *C. parvum* in cell cultures (7 months)
- 2018 Norwegian Veterinary Institute, Oslo, Norway. Introduction to laboratory methods for identification, quantification and assessment of viability and pathogenicity of *Cryptosporidium* (2 months)
- 2017 Scotland's Rural College, Edinburgh, Scotland. Performing in vitro trials to assess the anthelmintic properties of bark extracts from Norwegian spruce and pine on ovine nematodes (2 weeks)
- 2017 University of Copenhagen, Denmark. Introduction to in vitro methods for assessing the anthelmintic abilities of bark extracts on *Ascaris suum* (3 weeks)
- 1996-1998 Practical experience/assistant positions at various small animal clinics in Alaska (USA) and New Zealand

RELEVANT COURSES

- 2019 Livestock nutrition and disease control, SRUC, Edinburgh, Scotland, 5 ECTS
- 2019 R for Veterinarians, SRUC, Edinburgh, Scotland, 5 ECTS
- 2018 Intensive medical writing, University of Copenhagen, Denmark, 3.1 ECTS
- 2018 Basic statistics VET410, NMBU, Oslo, Norway, 3 ECTS
- 2017 Course in laboratory animal science for research workers (FELASA-C), NMBU, Norway, 6 ECTS
- 2017 Responsible conduct of research, University of Copenhagen, Denmark, 2 ECTS
- 1999-2016 Various courses relevant to clinical practice with livestock and companion animals (anaesthesia, hygiene, dermatology, dental extraction, fertility control in cattle, diagnostic of endoparasites, diseases in cats, orthopaedics, neurology, soft tissue surgery in companion animals, etc.)

ANIMAL EXPERIMENTAL WORK

- 2020 Experimental infection of house mice (*Mus musculus*) with the intestinal nematode *H. bakeri* for assessing the *in vivo* anthelmintic properties of bark extract from Scots pine (*Pinus sylvestris*) in a mouse model.
- 2019 Experimental infection with a field strain of ovine *Eimeria* spp. for assessing the *in vivo* anticoccidial properties of a bark extract from Norway spruce (*Picea abies*) in young lambs.

LABORATORY EXPERTISE

Cell culturing techniques and *Cryptosporidium parvum* development inhibitory assays

Various nematode inhibitory assays (egg hatch assay, larval motility assay with XCELLigence real time cell analyser in addition to visual evaluation and counting as motility assessment method)

Conducting autopsies on terrestrial mammals

Microbiological examination of swabs, organ materials, and carcasses, anthrax diagnostics

Endoparasites: faecal sampling and analyses using various techniques (Baermann, McMaster, sedimentation, direct microscopy, *Cryptosporidium parvum* diagnostic using immunofluorescence antibody test (IFAT))

Ectoparasites: various diagnostic methods

Blood sampling with subsequent microscopic, chemical, and haematological in-house analyses

Real time qPCR analysis of *C. parvum*

SCIENTIFIC PUBLICATIONS

Blomstrand, Enemark, Steinshamn, Aasen, Johanssen, Athanasiadou, Thamsborg, Sørheim.

Administration of spruce bark (*Picea abies*) extracts in young lambs exhibits anticoccidial effects but reduces milk intake and body weight gain. *Acta Veterinaria Scandinavica* 2022 (Article).

Hoste, Meza-OCampos, Marchand, Sotiraki, Sarasti, **Blomstrand**, Williams, Thamsborg, Athanasiadou, Enemark, Acosta, Mancilla-Montelongo, Castro, Costa-Junior, Louvandini, Sousa, Salminen, Karonen, Engstrom, Charlier, Niderkorn, Morgan. Use of agro-industrial by-products containing tannins for the integrated control of gastrointestinal nematodes in ruminants. *Parasite* 2022 (Article).

Blomstrand, Enemark, Øines, Steinshamn, Aasen, Mahnert, Sørheim, Athanasiadou, Thamsborg, Woolsey. Extracts of pine bark (*Pinus sylvestris*) inhibit *Cryptosporidium parvum* growth in cell culture. *Parasitology Research* 2021 (Article).

Woolsey, **Blomstrand**, Øines, Enemark. Assessment of differences between DNA content of cell-cultured and freely suspended oocysts of *Cryptosporidium parvum* and their suitability as DNA standards in qPCR. *Parasites and Vectors* 2019 (Article).

Blomstrand, Ptochos, Enemark, Thamsborg, Aasen, Steinshamn, Athanasiadou. In vitro anthelmintic effect of bark extracts from *Picea abies* and *Pinus sylvestris* against sheep nematodes. 2nd COMBAR working groups meeting, León, Spain, 2018 (Poster).

Mørk, **Blomstrand**, Nymo, Romano, Gjerset, Tryland. A case of sheep-associated Malignant catarrhal fever in semi-domesticated reindeer (*Rangifer tarandus tarandus*). Nordic conference on reindeer husbandry research Jukkasjärvi (Kiruna), Sweden, 2017 (Poster).

PROJECTS

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| 2022 | Healthrum: Natural bioactive compounds with antiparasitic and anti-methanogenic activity in sheep and reindeer. |
| 2022-2023 | How to facilitate for keeping pigs and poultry outdoor? |
| 2022-2023 | Outdoor pigs: better animal welfare |
| 2021-2024 | Roamfree: Robust Animals in sustainable Mixed FREE-range systems |
| 2021-2022 | Lamb-loss reduction: what are the causes of loss of lambs kept on summer outfield pasture in Norway? |

- 2018-2022 Organic plus: Pathways to phase-out contentious inputs from organic agriculture in Europe (H2020 grant agreement No. 774340)
- 2017-2020 BarkCure: Condensed tannins from Norwegian pine and spruce bark – antiparasitic effects and potential commercial exploitation (NFR number 268264, Ph.D.-project)
- 2016-2019 Diseases in semidomesticated reindeer (*Rangifer tarandus*) kept in-fence during winter (Norwegian Veterinary Institute, Torill Mørk)
- 2016-2017 Causes of abortion in sheep: During spring 2016, aborted foetuses and placentas were collected and examined to state the cause of abortion. Aim: Develop a diagnostic package for veterinarians and farmers (Norwegian Veterinary Institute, Berit M. Blomstrand)
- 2016 Dissemination project: Health and diseases in semidomesticated reindeer (*Rangifer tarandus*) – lecturing reindeer herders about reindeer health included results from previous research projects (UiT – The Arctic University of Norway, Prof. Morten Tryland)

REFERENCES

- Torill Mørk, DVM, Pathologist and researcher, Norwegian Veterinary Institute, Tromsø, Norway.
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- Lonneke Zeijlemaker, DVM, veterinary surgeon Trollheimen Dyreklinikk, Surnadal, Norway. Mob: +47 481 88 627, E-mail: Lonneke.vintage@gmail.com