

University of Liverpor

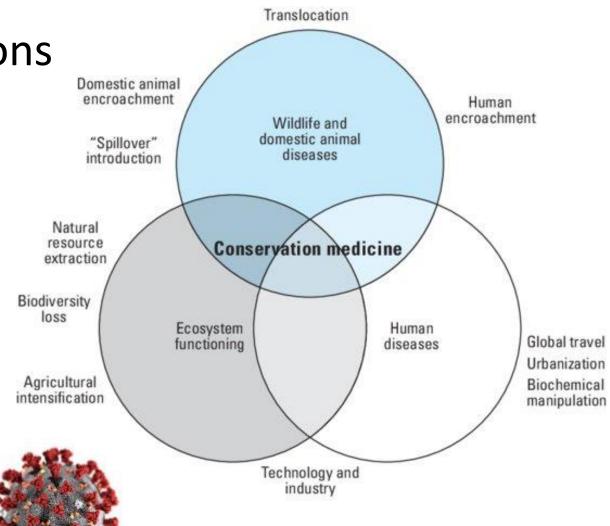
Veterinary Conservation Medicine BSc

# So what is Conservation Medicine?

• Study of complex interactions between animal, human + ecosystem health.

• Eg origins of Covid19





### Who is involved...

Staff











- Dr. Jakob Bro-Jorgensen
- Prof. Paula Stockley
- Prof. Jane Hurst
- Dr. Ilik Saccheri
- Prof. Julian Chantrey
- Post docs / PhDs / vet residents

### Vet Students (~post 3<sup>rd</sup> yrs)

- Relatively small group (5-10)
- Primarily Liv but also Nott, Edin, Glas, RVC, Surrey + Bristol

### BSc Veterinary Conservation Medicine (1 Year, intercalated)

#### Semester 1

### Semester 2

#### **Concepts in Veterinary Conservation Medicine**

(15 credits)

Introduction to PBL

PBL-scenarios

Seminars (mainly outside speakers)

Practical sessions

### **Conservation Biology**

(15 credits)

Lecture course (School of Life Sciences)

### Introduction to Research in Veterinary Conservation Medicine (30 credits)

Seminar series on key skills. Design of research project to be conducted in  $2^{nd}$  semester; development of relevant skills and knowledge.

Applications in Veterinary

Conservation Medicine

(15 credits)

PBL-scenarios

Seminars (mainly outside

speakers)

Practical sessions

Zoo Animal Welfare & Management Study (15 credits)

Investigations at Chester Zoo

OR

Conservation Medicine
Placement

(15 credits) Self-arranged

Research project (30 credits)

Laboratory / field- / desk-based research project

Christmas

Easter

September-January February/June

# 1. Conservation Biology - Topics

- Biodiversity loss
- Climate change impacts
- Species re-introductions
- Accidental introductions
- Prioritizing choices of species & protected areas
- Habitat loss and disturbance
- Conservation practice in the UK and in developing countries
- Overexploitation of wildlife populations
- Metapopulations
- Conservation genetics
- Ecosystem services
- Economics of conservation
- Lessons from past extinctions
- Conservation and agriculture



Lectures
Seminars with student debates
Tutorials
Essay

# 2+3 Research Project

Oct – May, 2 modules, 50% of course work

Join you with a research group or individual



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Practical sessions

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#### Applications in Veterinary Conservation Medicine (15 credits)

PBL-scenarios Seminars (mainly outside speakers) Practical sessions

### Zoo Animal Welfare & Management Study (15 credits)

Investigations at Chester Zoo

OR

#### Conservation Medicine Placement

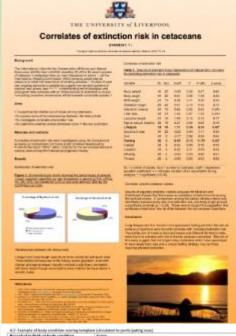
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#### Research project (30 credits)

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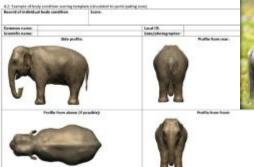
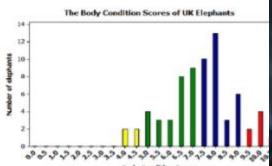


Figure 5: Body condition scores of UK elephants.





September-January February/June

# 2. Research project

- Laboratory, field-based research, data analysis (or combination)
- Gives 6 months of first-hand experience of bioscience research and introduces some of the necessary skills.

Projects may be publishable.



EAZA Best Practice Guidelines Sumatran Laughingthrush Garrulax bicolor

Chocolate

THINGS THAT

Peanut Butter

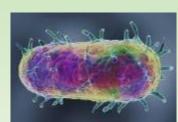






# 3. Research project – diverse egs...

- JC Practical wildlife health and disease research projects on Chester Zoo cases/ UK squirrels/ reintros / badgers/ garden birds/ seabird morbidity
- PS UK wildlife reintroductions (dormice, beavers);
   Zoo animal behaviour\* + welfare (bush dogs, elephants), + experimental behavioural ecology (wild rodents)
- JBJ Co-grazing parasites in antelopes + cattle / Primate extinction risk / Drivers of bush-meat hunting
- JH wild mouse behaviour with olfactory repellents for rodenticides.
- Caroline Millins rewilding + tick infections
- Alan Radford SAVsNet wildlife aspects
- Marcus Blagrove novel vector borne viruses
- Prof David Bardell hedgehogs

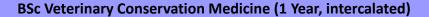






# 4. Concepts in Veterinary **Conservation Medicine**





#### Semester 1

#### **Concepts in Veterinary Conservation Medicine** 15 credits)

Introduction to PBL

Seminars (mainly outside speakers)

#### **Conservation Biology**

(15 credits)

Lecture course (School of Life Sciences)

#### Introduction to Research in Veterinary Conservation Medicine (30 credits)

Seminar series on key skills. Design of research project to be conducted in 2<sup>nd</sup> semester; development of relevant skills and knowledge.

#### Semester 2

#### **Applications in** Veterinary Conservation Medicine

(15 credits)

PBL-scenarios Seminars (mainly outside Practical sessions

#### Zoo Animal Welfare & **Management Study** (15 credits)

Investigations at Chester Zoo

OR

#### Conservation **Medicine Placement** (15 credits)

Self-arranged

#### Research project (30 credits)

Laboratory / field- / desk-based research project



February/June September-January

Delivered by Probem Based Learning scenarios





4+5. Concepts / Applications in Vet Conservation Medicine

- Delivery

• PBLs

Tutorials

Seminars with guest speakers

Practical fieldwork class







# 6a. Zoo Animal Welfare + Management Study

CHESTER ZOO

- Mini research project at Chester Zoo
- Develops understanding of animal behaviour + its relevance to successful captive management, breeding and welfare of zoo animals















### **6b. Placements**

- For a 3-6 week duration during spring
- Nature reserves eg. RSPB (Bardsey Island), wildlife reintroduction projects, BTO, RSPCA wildlife rehab, Otter Trust, etc
- Local conservation organisations eg. Blue Planet, CWT/LWT/NWNT





### See our webpage:

https://www.liverpool.ac.uk/study/undergraduate/courses/ veterinary-conservation-medicine-intercalated-honours-bsc/

Programme director:

Jakob Bro-Jorgensen: bro@liv.ac.uk

Funding enquiries:

Mandy Peffers: peffs@liv.ac.uk

**Application deadline:** 

University home > Study > Undergraduate > Courses > Veterinary Conservation Medicine Intercalated Honours BSc



### **Veterinary Conservation Medicine BSc**

A one-year intercalated BSc honours degree in Veterinary Conservation Medicine, specifically designed for veterinary undergraduate students with an interest in conservation.

You will learn about current concepts and issues involved in conservation biology, and achieve a wider appreciation of the roles that veterinarians can have in this field. The programme aims to broaden the employability of veterinarians by providing knowledge and interdisciplinary skills relevant to a wide range of conservation and research-related careers. Our Veterinary Conservation Medicine programme is available to both University of Liverpool and external intercalating students.

#### Programme overview

The programme delivers a broad introduction to the fundamental principles of conservation biology. Through small group-work, you will engage with a range of current issues at the interface between wildlife conservation and the health and welfare of animals in the wild and in zoos.

Apply



#### Course Information

What is intercalation?

Modules

**Career Prospects** About Us

Who to contact

Dr Jakob Bro-Jorgensen

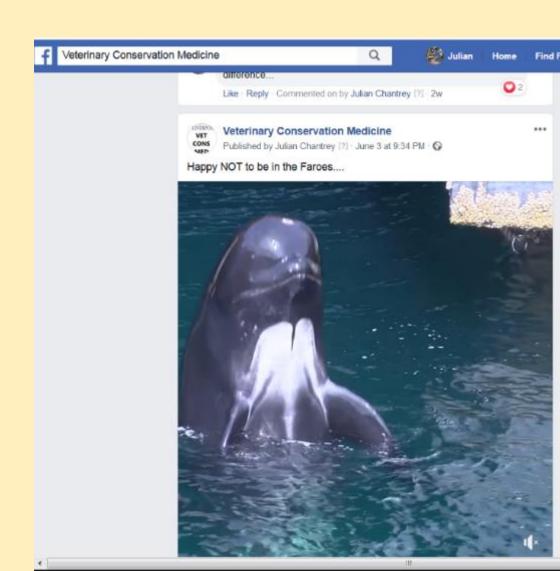
brodiliverpool.ac.uk

# Ask our graduates...



3 in final year; 5 in  $4^{th}$  year. n = 8

# visit our Facebook + X websites



### What some of our past students say ...

Looking back, it was my favourite year of university, not just because it was enormous fun and I made some life long friends, but because it was the year my career started. Doing the conservation medicine intercalated degree allowed me to challenge myself in new ways. I learnt to investigate real life conservation issues with an analytical and critical mind set. I discovered new skills in applied biology and learnt lab based research techniques.

The Veterinary Conservation Medicine degree highlighted the tremendous amount of good work that zoos do for conservation, along with some of the unique challenges of keeping animals in captivity and inspired me to dedicate my career to helping provide captive zoo animals with the best lives possible.

Cons Med was my most interesting year at Uni as I found it gave more room to think than just pure learning as on the vet course ... it definitely broadened my horizons + gave me some different skills.

I really enjoyed the year and the holistic view it took, I feel that was really helpful for the final years and going forward. I would choose the same intercalation subject if I did it all again!

Since graduating in Cons Med, I've been working all over the world with domestics and wildlife. Currently juggling teaching on the MSc in Wild Animal Health & Biology at the RVC, doing my PhD research in Tasmanian devil facial tumour + studying for my Vet Education teaching certificate.







# Past students – where are they now?

- Gabby Drake Chester Zoo vet
- Sarah-Jane Smith International Zoo Vet Group
- Stamos Tahas Copenhagen Zoo vet
- Kevin Jones South Wales mixed exotics practice
- Ian Ashpole Chester Zoo vet
- Sara Shopland Wildfowl + Wetlands Trust vet
- Tammy Shadbolt wildlife vet + researcher ZSL
- Bev Panto RSPCA wildlife vet
- Many vets still in practice but with a different perspective