

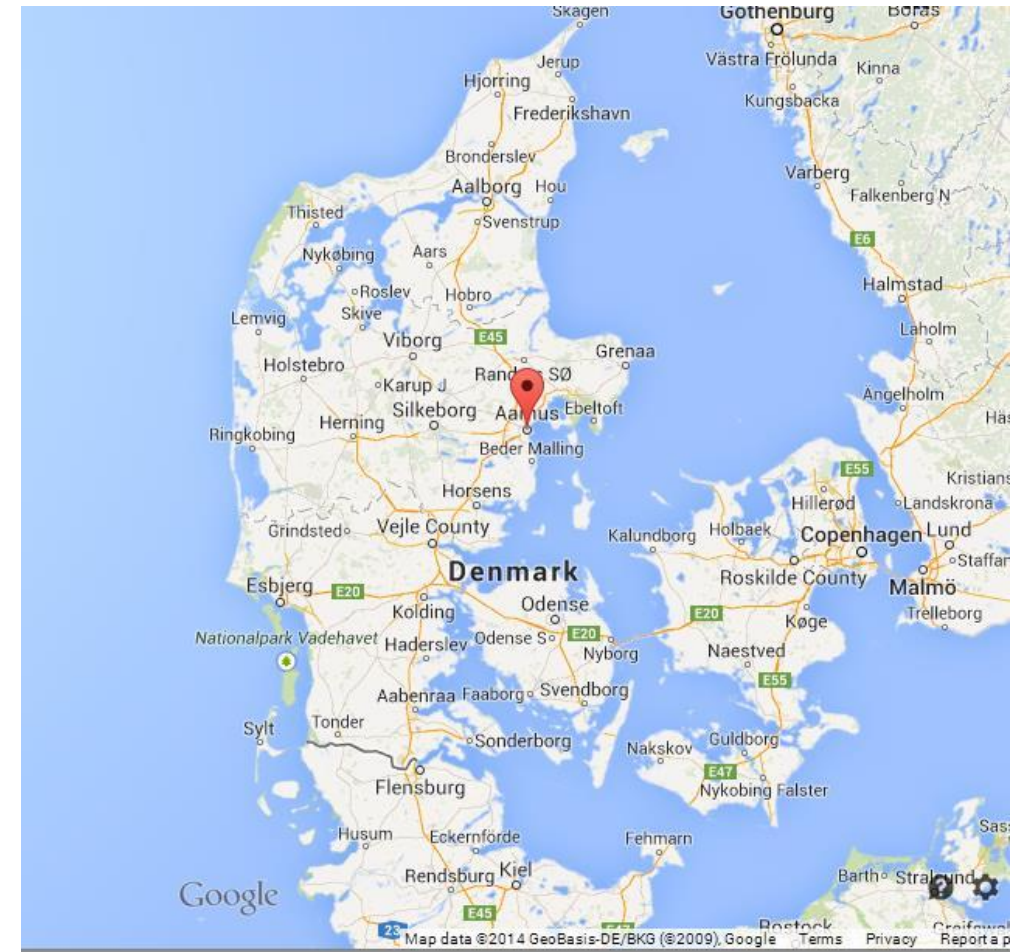
## Collaborator: Aarhus (Denmark)



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# Comparative Medicine Lab

## Department research topics:

1. Animal models
2. Telemetry devices
3. Bioimaging
4. Hyperbaric and oxygen physiology



## Aarhus University Hospital:

Europe's 2nd biggest hospital.

18.000 employees

1400 fulltime researchers

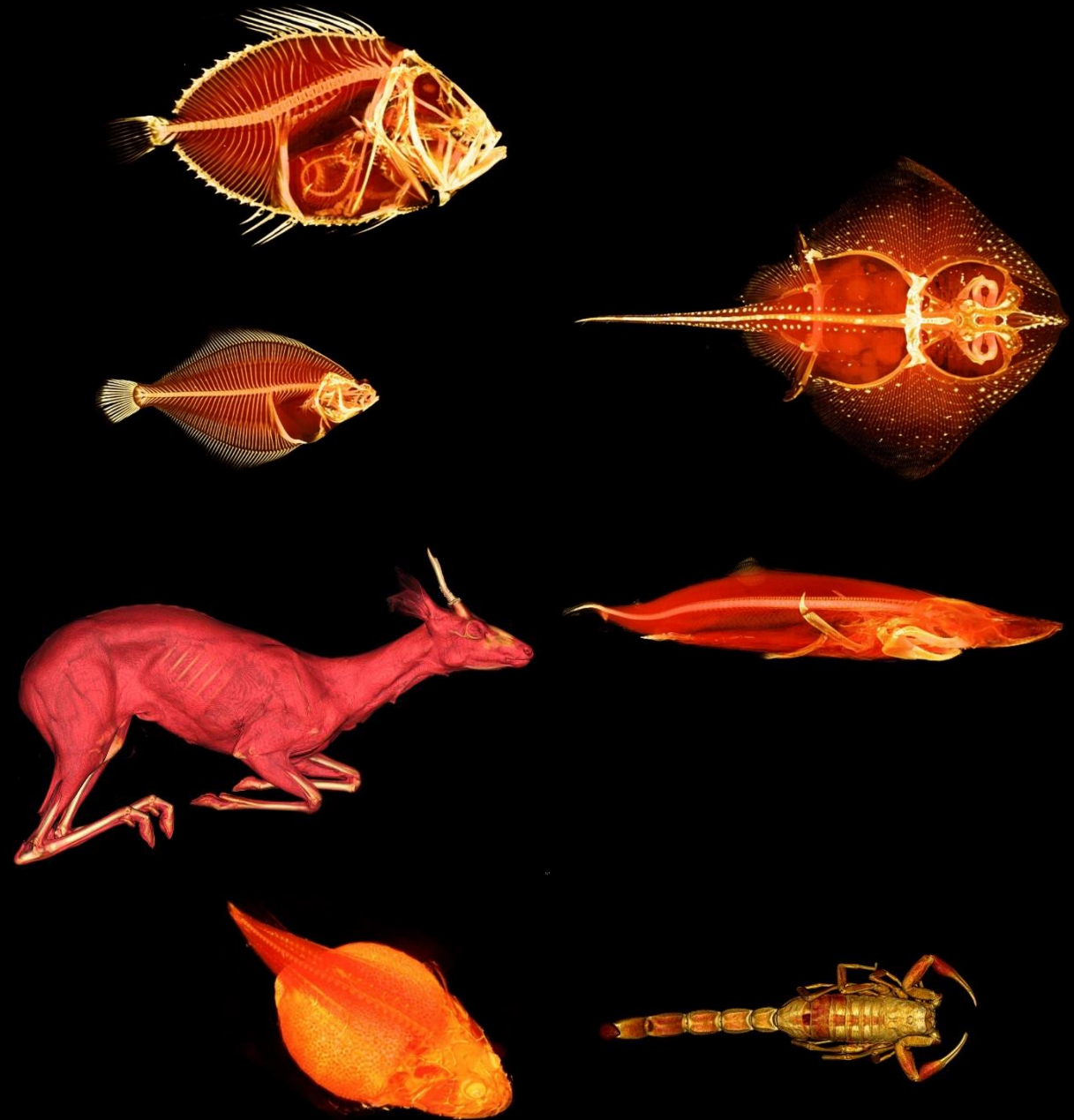




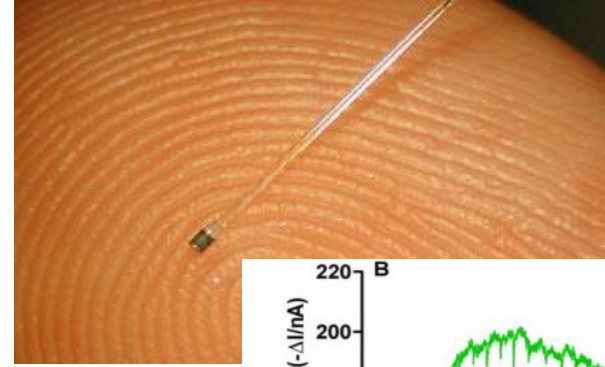
# 1. Animal models

Dedicated animal  
stables and facilities.  
Rats, mice, pigs, etc...

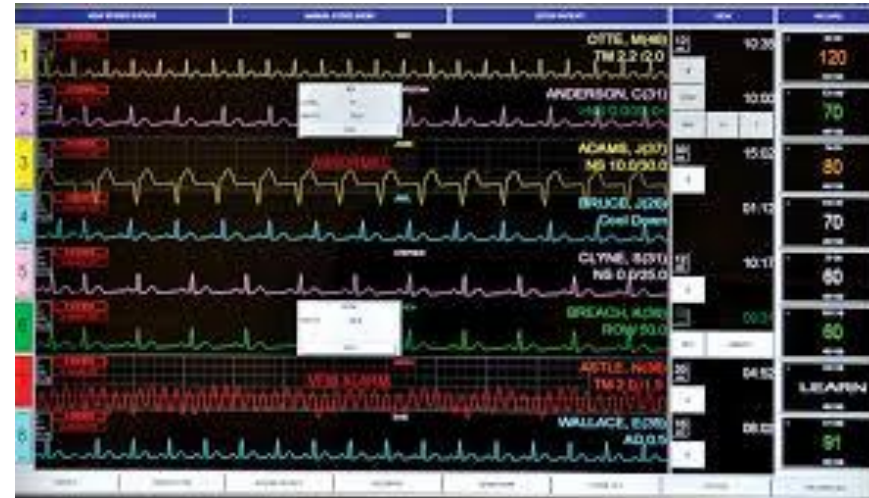
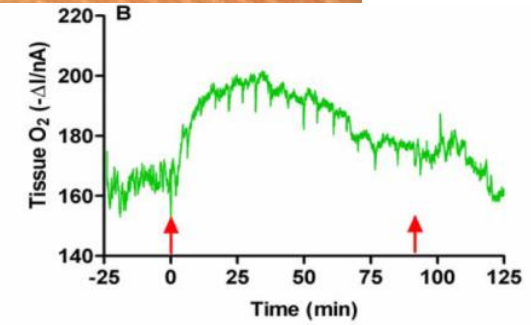
>4400 species  
investigated in the  
lab between 2014-  
2019



## 2. Telemetry

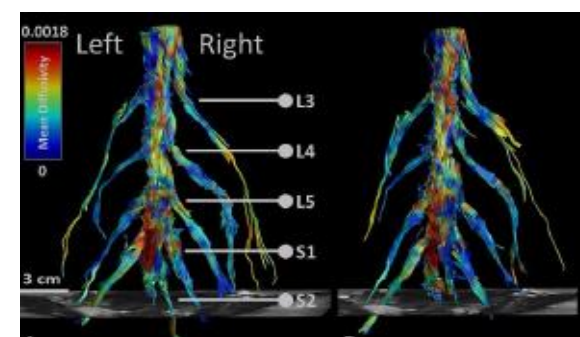
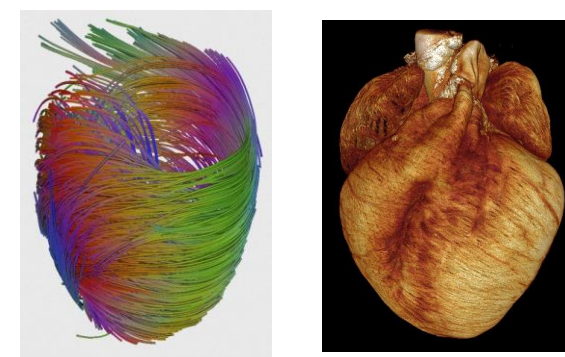
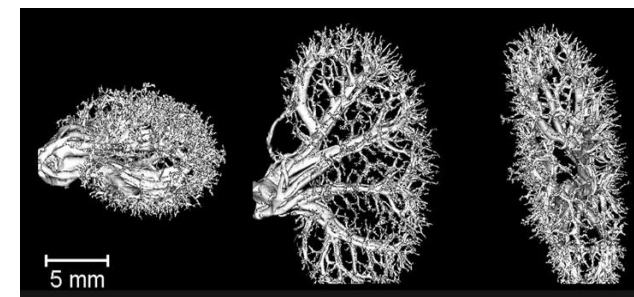
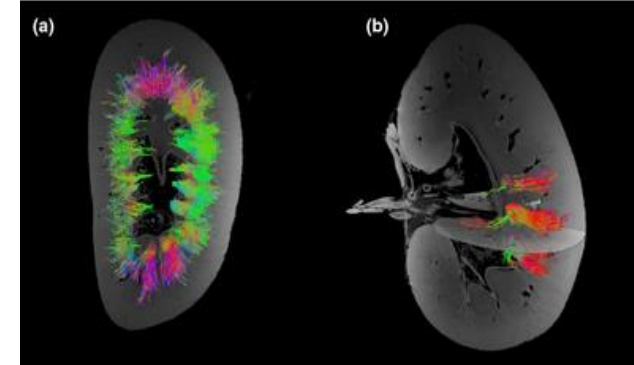
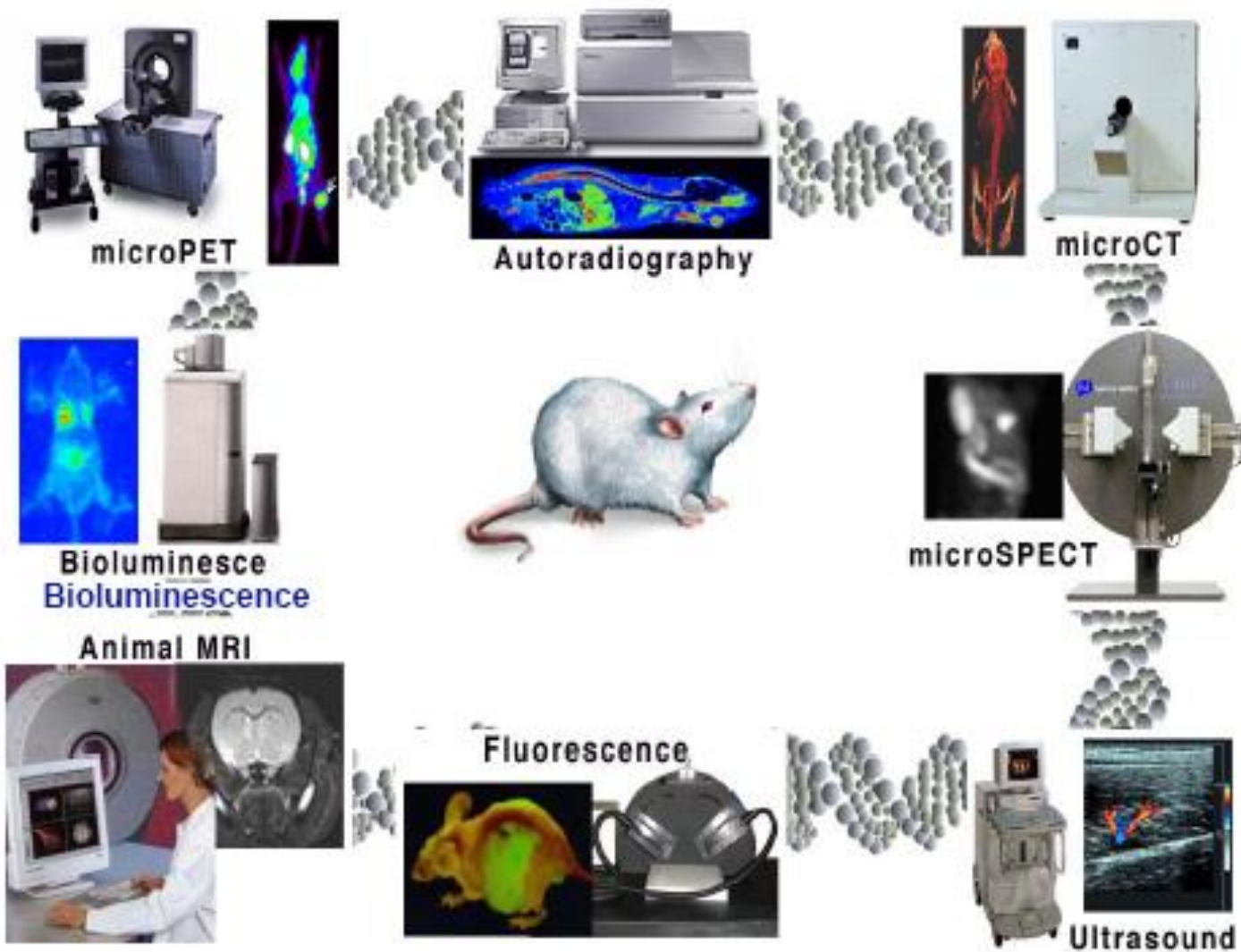


Wireless  
pO<sub>2</sub> sensor





# 3. Imaging

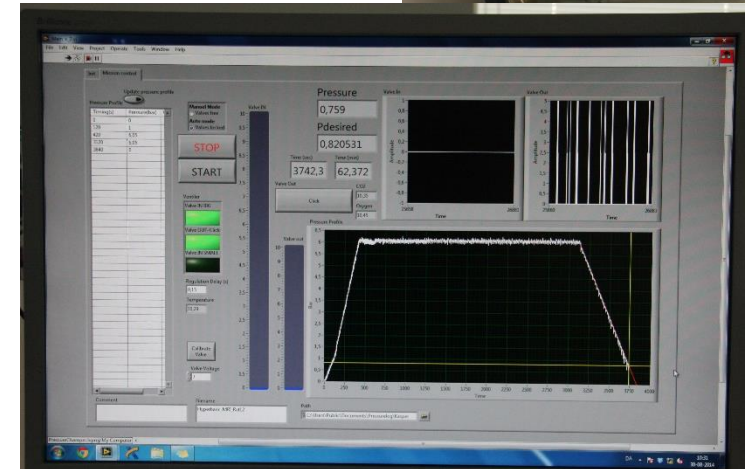
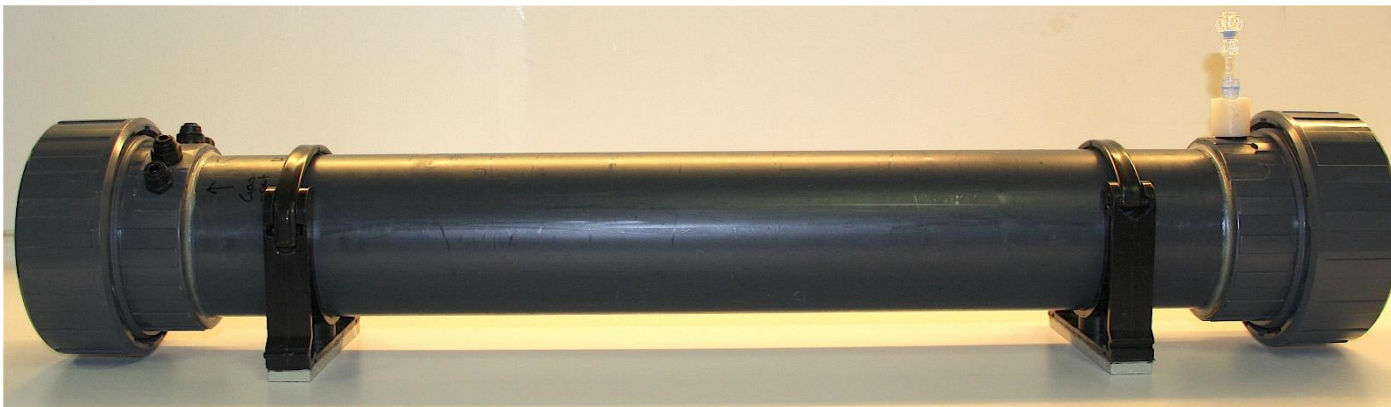
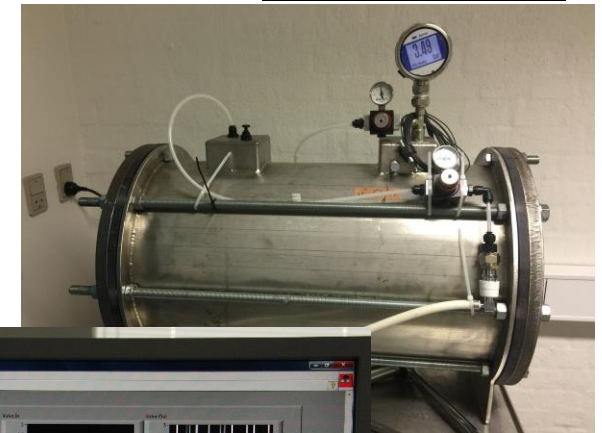
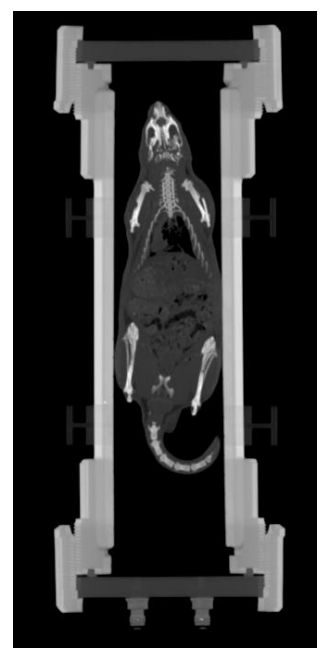


## 4. Hyperbaric and oxygen physiology

Hyperbaric chambers for animals (n=4) (up to 30 bar),  
including 1 for MRI/CT

Hyperbaric chambers for humans (n=3)

Hypoxia/normobaric chambers for animals  
Cimate chambers for animals





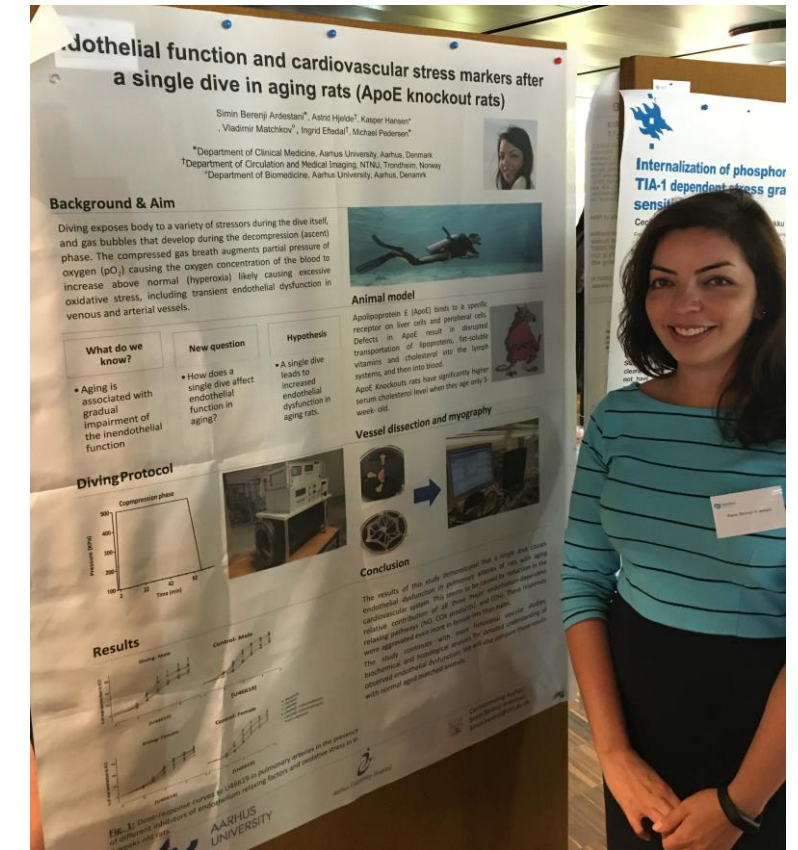
# Simin Ardestani (PhD student, end Nov 2019)

## Publications:

1. Simin Berenji Ardestani, Costantino Balestra, Elena V. Bouzinova, Øyvind Loennechen and Michael Pedersen, Evaluation of divers' neuropsychometric effectiveness and High-Pressure Nervous Syndrome via test battery package and questionnaires in operational setting, Frontiers in physiology, section of Environmental, Aviation and Space Physiology, 2019, volume 10
1. Simin Berenji Ardestani, Vladimir V Matchkov, Ingrid Eftedal and Michael Pedersen, A single simulated heliox dive modifies endothelial function in the vascular wall of ApoE knockout male rats more than females, Frontiers in physiology, section of vascular physiology, 2019, volume 10
1. Simin Berenji Ardestani, Ingrid Eftedal, Michael Pedersen, Per Bendix Jeppesen, Rikke Nørregaard, Vladimir V. Matchkov, Phenotyping ApoE knockout rats on a Western diet: endothelial dysfunction in small arteries as early signs of atherosclerosis, under review journal of physiology.
1. Simin Berenji Ardestani, Vladimir V. Matchkov, Kasper Hansen, Nicklas Riss Jensen, Michael Pedersen, Ingrid Eftedal, 7 weeks diving effects on endothelial function and mitochondrial respiration in ApoE Konockout rats, preparing manuscript.

## Conference presentation:

1. Oral presentation; Extreme Environmental Physiology: Life at the Limits, September 2019, Portsmouth, UK
2. Oral presentation, Annual Scandinavian Vascular Research Symposium, July 2019, Copenhagen, Denmark
3. Poster presentation, ESM-EVB conference, April 2019, Maastricht, Netherlands.
4. Oral presentation, Årsmøte og medlemsmøte i Norsk Baromedisinsk Forening, Feb 2019, Bergen, Norway
5. Poster presentation, Annal clinical medicine meeting, November 2018, Aarhus
6. Poster presentation, DACRA meeting, July 2018, Sandbjerg, Denmark
7. Participate, EUBS meeting, September 2019, Ravenna, Italy
8. Poster presentation, Nordoc conference, August 2017, Stockholm, Denmark
9. Poster presentation, PhD day, 2017 & 2018, Aarhus, Denmark



# Collaborations

- We are very open to joint collaborations (patients, animals, technical studies, etc).
- Joint applications/grant proposals
- Industry and academics:

