

# EUROPE BIOBANK WEEK 2020

17 – 20 November | Virtual Conference

BIOBANKING FOR  
GLOBAL CHALLENGES



## **EBW2020 Topic 16: Animal Cells and Gametes: Next Generation Biodiversity Resources for Research and Conservation.**

Away from the clinical, medical and human arena, but incredibly important to healthy ecosystems on planet Earth and hence, human welfare, this fascinating session focuses on 'next generation' resources for biodiversity research and applied conservation. Selected viable collections from the US and EU are highlighted including invaluable resources from established gold standard to inspirational new collections of cell lines and gametes from animal species across the world (many critically endangered). Session highlights include research and development covering new animal cloning technologies, genetic rescue, population enhancement and species resurrection, with some inspirational recent success stories, both engaging and emotional. The session presents novel and challenging cell cryobiology for non-human species, complementing, learning from and informing equivalent areas in the clinical sectors, and will be of great interest to EBW2020 conference delegates from all areas and biobanking disciplines. Available 'On Demand' from Nov 17<sup>th</sup> onwards – download it – we promise you will be surprised and thoroughly entertained!

**Our Speakers:**

**Marlys L. Houck:** Curator of the Frozen Zoo® at San Diego Zoo Global’s Institute for Conservation Research, San Diego, California, USA.



Marlys is a specialist in cell culture and comparative cytogenetics of critically endangered species including mammals, birds, reptiles and amphibians. Marlys joined San Diego Zoo Global in 1987 establishing expertise in rhinoceros cell culture and cytogenetics. She currently manages the Frozen Zoo® vertebrate cell culture and karyotyping team who have compiled one of the world’s largest exotic species karyotype and cell line collections. As one of the few research teams with this specialty, they share their methods and expertise with scientists around the world to help launch similar collections in global biodiversity hotspots.

Presentation Title: *“Fibroblast Cells: Their Role In Enhancing Species Conservation”*.

**Tullis Matson:** Founder and Managing Director of Stallion AI Services.

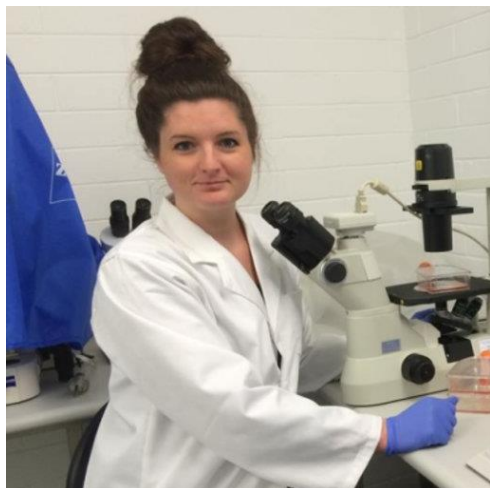


Tullis has practiced artificial insemination in horses for over 30 years, pioneering advanced AI, research and cryopreservation techniques for equine semen and embryos. He is a Rare Breeds Survival Trust Scientific Advisory Committee member, and has received several prestigious awards for conservation. A career highlight in 2020 was when the first endangered Suffolk Punch horse was foaled in the UK resulting from a sex-sorted semen process, technology which can help critically endangered breeds survive into the future. Recently Tullis has also ‘given

birth' to the charity Nature's SAFE, working with Chester Zoo to create a living cryobank specialising in viable material from endangered animal species before they become extinct.

Presentation Title: *"Equine Assisted Reproduction Technologies and Their Application to Other Species Preservation"*.

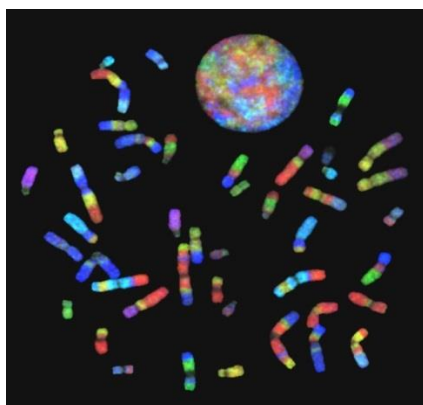
**Julie Strand:** Manager of the Conservation Biobank in Randers, Denmark.



Julie is currently working on a PhD focusing on biobanking as a conservation tool, in particular how viable cell lines combined with comparative cytogenetics can be used within conservation management. Honing her skills in the cell culture training program facilitated by San Diego Frozen Zoo®, she now specializes in cell culture on amphibians and reptiles and is currently developing her skills in comparative cytogenetics.

Presentation Title: *"Biobanking as a conservation tool – The way to an amphibian cell line"*.

**Jorge Pereira** is a postdoc at the Animal and Veterinary Research Centre at the University of Vila Real, Portugal.



Jorge is studying comparative cytogenetics and population genetics, he has Masters and PhD degrees in Molecular, Comparative and Technological Genetics and worked as Research Associate at the Cambridge Resource Centre for Comparative Genomics, Cambridge Uni, and Cytocell Ltd, UK under the supervision of Professor Malcolm Ferguson-Smith, where he developed expertise in chromosome isolation by flow cytometry used in comparative chromosome studies in many different species.

Presentation Title: *“The use of animal cell lines for chromosome evolution and comparative genomic studies: the past, present and future”*.