Björn Ekwall Memorial Foundation | BEMF

Introduction to the Björn Ekwall Memorial Award Lecture

Professor emeritus Stina Oredsson
Department of Biology, Lund University
Sweden

Björn Ekwall - a pioneer in the field of *in vitro* toxicology

1940-2000

- **”Basal cytotoxicity”:** Most acute toxic effects in the body ultimately converge on basic cellular failure (1983)
- Multicentre Evaluation of *In Vitro* Cytotoxicity (MEIC), 50 reference chemicals, 60 non-animal assays,100 labs worldwide
- Ekwall was one of the key scientific innovators who pushed practical, human-relevant in vitro toxicology forward

Björn Ekwall Memorial Foundation (BEMF)

- In 2001, the Björn Ekwall Memorial Foundation was formed under The Scandinavian Society for Cell Toxicology (SSCT)
- BEMF is an independent trust from 2020
- Based on donations

- Björn Ekwall Memorial Award

Björn Ekwall Memorial Award

To honour the scientific work and memory of Björn Ekwall by rewarding scientists who have substantially contributed to the field of *in vitro* toxicology specifically animal free

- Developing new animal free tests
- Mechanistic or validation studies
- Informing and teaching about animal free tests

The Previous 21 Awardees

- 2002 Maria José Gómez-Lechón, Spain
- 2003 Per Kjellstrand, Sweden
- 2004 Hanna Tähti, Finland
- 2005 Hasso Seibert and Michael Gülden, Germany
- 2006 Cecilia Clemedson, Sweden
- 2007 Rodger Curren, USA
- 2008 Erik Walum, Sweden
- 2009 Anna-Laura Stammati, Italy
- 2010 Richard Glothier, United Kingdom
- 2011 Päivi Myllynen, Finland
- 2012 Horst Spielmann, Germany
- 2013 Per Artursson, Sweden
- 2014 Tuula Heinonen, Finland
- 2015 Michael Balls, United Kingdom
- 2016 Vera Rogiers, Belgium
- 2017 Thomas Hartung, Belgium
- 2018 Anna Forsby, Sweden
- 2019 Jan van der Valk, The Netherlands
- 2021 Sandra Coecke, Italy
- 2022 Helena Kandárová, Slovakia
- 2023 Marcel Leist, Germany

The Awardee 2025
Dr. Hanna Vuorenpää

Motivation

Dr. Hanna Vuorenpää is the recipient of the 2025 Björn Ekwall Memorial Award, in recognition of her groundbreaking work in *in vitro* model development, and in particular the advancement of organ-on-chip research. Her achievements include developing models without the use of foetal bovine serum and promoting animal-free cell culturing through teaching and outreach activities.

Positions and Achievements

- Previously post-doctoral researcher at Faculty of Medicine and Health Technology, Tampere University, Finland
- Organ-on-Chip platforms that can be used in toxicity studies and are applicable in biomedical research
- Advanced 3D co-culture systems combining vascularization with target cells such as human hepatocytes, cardiomyocytes, and adipocytes to replicate tissue level functions
- Organ-on-Chip models to investigate neurovascular networks and blood-brain barrier functions
- President of the Finnish National Consensus Platform for Alternatives to Animal Testing
- Member of the Finish Project Authorisation Committee
- Member of the Finnish National Committee for the Protection of Animals Used for Scientific Purposes under the directive 2010/63/EU (the EU directive to protect animals used in animal experiments)
- Currently, Dr. Vuorenpää works as a senior scientist in the 3R-Center for In Vitro Models and Alternatives to Animal Testing and in the µOrganoLab, University of Tubingen, Germany

The Björn Ekwall Memorial Award Lecture 2025

”Where are we heading with New Approach Methodologies?”

by Hanna Vuorenpää