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Descroix-Vernier EthicScience Prize 2025 : 110,000 euros for non-animal research, 3 promising and innovative research projects rewarded

The Descroix-Vernier EthicScience Prize (DVES): promote cutting-edge medical research in France

On 28 March 2025, the <u>Comité Scientifique Pro Anima</u> and the <u>Fondation Descroix-Vernier</u> rewarded three of the most innovative and promising scientific projects not using animals for medical research. The ceremony was held under the patronage of Senator Arnaud Bazin at the prestigious Palais du Luxembourg, in Paris.

This highlight of cutting-edge biomedical research projects aims to provide a better response to the human and global health challenges of the 21st century, while also taking better account of ethical, competitiveness and sovereignty issues.

Bringing together more than a hundred guests representing the wealth and complementarity of the different health sectors (toxicology, biomedical research, veterinary medicine, cosmetics), the ceremony unveiled the winning projects of this 2025 edition.

Chaired by Dr Jean-Pierre Cravedi, toxicologist and former expert with ANSES and EFSA, the <u>Selection</u> <u>Committee for the interdisciplinary and cross-sectoral Prix Descroix-Vernier EthicScience</u> (DVES) 2025 had deliberated on 2 December last year; the winners having been kept secret since then.

Three projects awarded / The 2025 Laureates: between excellence and innovation

The Descroix-Vernier EthicScience Prize rewards programmes in three categories:

- Innovation (new concepts and technology transfer): 50,000 eur ;
- **Development and applicability** (practical research): 50,000 eur;
- Jury Prize: Forward-looking project (support from the selection committee): 10,000 eur.

All have in common the deployment of new cutting-edge tools and technologies for medical research and thus better respond to the need for knowledge and/or new treatments to treat human pathologies; this, without the need for any experimentation on animals.

The Innovation Prize was awarded to:

"Neuron as a sensor"

led by Dr Benoit Maisonneuve and Dr Thibault Honegger of Lyon-based start-up NETRI.



NETRI's "*Neuron as a Sensor*" project aims to address critical issues relating to the efficacy of drugs, the toxicity of chemicals and the scientific and ethical limits of animal testing. Via the use of a microfluidic platform using neurons as sensors to generate digital biological signatures, this innovative tool combined with artificial intelligence enables a wide range of compounds and chemicals to be assessed.

This approach offers a more predictive, ethical and humane method, transforming drug screening, chemical risk assessment and diagnostics. Effective for conditions such as Alzheimer's and neuropathic pain, this revolutionary technology is helping to reduce reliance on animal testing while improving the accuracy and efficiency of biomedical research.

Objectives:

- 1. To test a wide range of substances in order to refine predictive accuracy and broaden applicability.
- 2. Develop and validate artificial intelligence tools to analyse and separate the signals recorded in the digital library.
- 3. Improve understanding of the correlation between digital signatures and clinical data in order to demonstrate the predictivity of this platform.

To find out more: <u>https://www.proanima.fr/en/neuron-as-a-sensor/</u>

The Development and Applicability Prize was awarded to:

"PDAC on a chip", Understanding drug efficacy constraints through modelling of pancreatic adenocarcinoma (PDAC)

led by Prof Halima Alem-Marchand, from the Université de Lorraine-CNRS and co-sponsored by Dr Lina Bezdetnaya, from the Lorraine Cancer Institute.



The "*PDAC on a chip*" project aims to develop a dynamic model combining 3D printing and microfluidics to reproduce the tumour environment of pancreatic cancer (PDAC). This innovative approach, based on a patented system, makes it possible to study the interaction of drugs with tumour cells and their environment under realistic conditions, taking into account biological flows and protein-nanoparticle interactions that influence their efficacy.

Led by Professor Halima Alem-Marchand and Dr Lina Bezdetnaya, this project combines expertise in microfluidics and nanomedicine to create an advanced 'cancer-on-a-chip' platform, offering predictive and ethical tools to improve cancer treatments.

Objectives:

- 1. To create realistic tumour models in order to elucidate the limits of efficacy of anti-cancer treatments.
- 2. Determine the median effective concentration of standard drugs and compare the results at different flow rates to highlight the influence of flow and cellular interactions on therapeutic efficacy.
- 3. Provide new information on resistance mechanisms and optimise treatment protocols.

Find out more: <u>https://www.proanima.fr/en/pdac-on-a-chip/</u>

The Jury Prize was awarded to:

"*ObFAT-3D*", Human tissues *ex vivo* 3D to mimic obese adipose tissue led by Dr Vincent Dani and Dr Luigi Formicola of Nice-based start-up ExAdEx-Innov.



This project is developing in vitro 3D models using human adipose tissue from surgery to recreate tissue similar to that of obese patients. This patented technology faithfully reproduces the pathophysiological responses of adipose tissue, offering an ethical and effective alternative to animal experimentation.

The "*ObFAT-3D*" models provide a better understanding of obesity and metabolic diseases, while improving clinical trial success rates thanks to directly exploitable human data. This project represents a major step forward in reducing the use of animals in biomedical research.

Aims:

- 1. To characterise the minimal molecular and functional signatures of visceral fat in obese patients using transcriptomic and functional analysis approaches.
- 2. To generate the first *in vitro* model of clinically relevant adipose tissue capable of mimicking visceral fat in obese individuals.

To find out more: https://www.proanima.fr/en/obfat-3d/

The Descroix-Vernier EthicScience Prize: a pioneering and necessary prize

The EthicScience Prize, created in 2013 by the Pro Anima Scientific Committee and its founder Christiane Laupie-Koechlin, is awarded every two years for research programmes based on the use and/or development of non-animal methods. The aim of the prize is to help make up for insufficient public funding and a lack of political will in favour of innovative methods that have the potential to replace animal experimentation in the long term.

Since 2005 and the creation of his foundation, business leader and philanthropist Jean-Baptiste Descroix-Vernier, the former head of Dalenys, has supported a number of charitable causes, including the Pro Anima Scientific Committee.

In 2023, the two organisations will strengthen their collaboration to give greater resonance to the pioneering work carried out by the Pro Anima Committee.

Since 2013, the EthicScience Prize has rewarded synthetic skin models, *in vitro* lung models, and 3D neural network models.

It will be renamed the Descroix-Vernier EthicScience Prize in 2023. Continuing this visionary approach, in 2023 the Descroix-Vernier EthicScience Prize rewarded projects based on cutting-edge organoid and organ-on-a-chip technology.

Thus sponsored by the Descroix-Vernier Foundation, with a total endowment of €110,000, the Pro Anima Scientific Committee's DVES Prize, expected to grow, is among the best-endowed prizes in Europe and now rewards three teams of researchers in the three categories mentioned above.

The next edition of the Descroix-Vernier EthicScience prize will take place in 2027; calls for applications will be launched during 2026.

Download more pictures of the ceremony here.

DVES 2025 Prize partners

 InSphero, among the pioneering biotechs in 3D cell development and 3D organ-on-achip technologies to deliver industrial-grade solutions. Its precision and robust technology offering of InSight[™] 3D human tissue platforms is used by major pharmaceutical companies around the world to increase the efficiency of drug discovery and safety testing.



About the organisers

Pro Anima Scientific Committee



The Pro Anima Scientific Committee (anima = breath, life), founded in 1989 by Christiane Laupie-Koechlin under the honorary chairmanship of Professor Théodore Monod, is a pioneering structure in France. This scientific committee acts as a unique scientific hub, promoting a global health approach through more reliable toxicological testing and biomedical research.

Pro Anima's aim is to link the players involved, and to support, encourage and promote new approaches - outside the animal model - and their adoption in regulatory and practical terms.

The Pro Anima Scientific Committee encourages the development and validation of new, innovative and fast-growing research methods in the face of the limitations of animal experimentation, which is less and less able to meet the challenges of competitiveness and is not compatible with the requirements of increasingly personalised, human-centred medicine.

Descroix-Vernier Foundation



Created over 20 years ago by Jean-Baptiste Descroix-Vernier, the mission of the **Fondation Descroix-Vernier** is to save lives, as many lives as possible. To this end, it gives priority to helping the weakest and most threatened. The Foundation is active in three areas: people, animals and nature. The Foundation is funded solely by the Descroix-Vernier couple, who have chosen to share their entire estate during their lifetime.