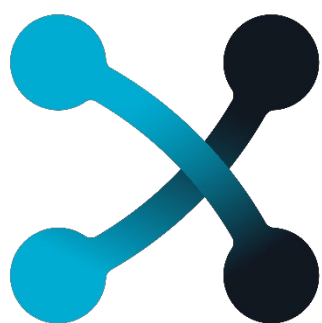
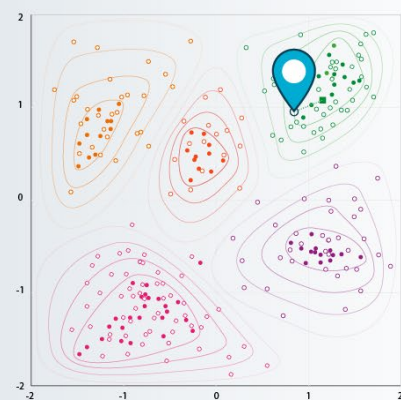


Press Kit

March 2025



NETRI

NETRI, change of scale

Based on **10 years of work in academic research**, NETRI was founded in June 2018 in Lyon. Considered a Health DeepTech, NETRI develops so-called **organs-on-chip technologies** that, coupled with **Artificial Intelligence**, predict the human effect of a drug candidate.

NETRI's mission is to enable **all patients to receive rapid, personalized and accessible treatments**. It provides devices for reproducing innervated human organs based on human stem cells, using the activity of innervating neurons as an indicator of treatment performance.

Located in the heart of Lyon's Gerland Biodistrict, in the Bioserra 3 building, with 1100m² of production units and 500m² of offices, the **new NETRI plant marks a change of scale in the company's development**. It **manufactures and operates its devices in its production unit**, using techniques derived from the microelectronics industry, cell culture automation and Artificial Intelligence.

« *The inauguration of our production plant marks a fundamental step in our ambition to revolutionize biomedical research. Thanks to our know-how, our positioning and growing demand, NETRI aims to achieve over 150% growth within the next 2 years, and become a key player on an international scale.* » says Thibault Honegger, Co-founder and CEO of NETRI.

In 2025, NETRI will have 35 employees, including 12 PhDs in medicine, pharmacology, neuroscience and AI within a multidisciplinary team (engineering, biology and digital). In January 2025, it was **awarded the Innovation Prize at the CES (Consumer Electronics Show) in Las Vegas, for its pioneering NeuroFluidics™ Care platform**.



Thibault Honegger is CEO and co-founder of NETRI. A graduate of Ecole Centrale de Nantes, he obtained his PhD in Biotechnologies at LTM (CNRS/Université Grenoble Alpes/CEA) in 2011. Thibault Honegger was a post-doctoral researcher at MIT, Boston, USA, for two years, where

he developed and studied axonal guidance in microfluidic devices and created the first technological building blocks for NETRI. He then joined the CNRS as a research fellow in Grenoble to head the microfluidic neuroengineering team. He has published over 40 articles in peer-reviewed journals and is the inventor of 12 patents, has been awarded several research grants including an ERC Starting Grant in 2016. He co-founded Peerus in 2015, Linkio in 2015, Smart Force Technologies in 2016 and Lys Therapeutics in 2021.



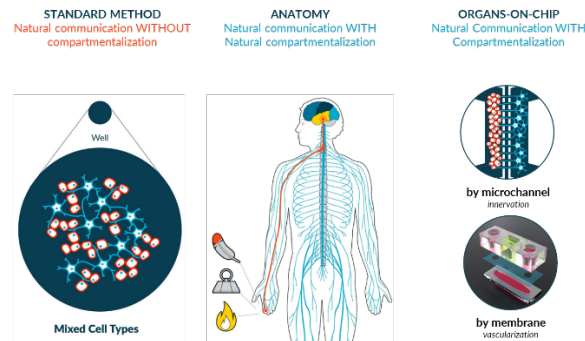
Florian Larramendy is CTO and co-founder of NETRI. He holds an engineering degree in embedded microelectronics and a PhD in electrical engineering from LAAS (CNRS/Université de Toulouse) in 2013. Florian Larramendy was a post-doctoral researcher at the

Institute of Industrial Science, University of Tokyo (Japan) and at the Department of Microsystems Engineering (IMTEK), University of Freiburg (Germany), where he developed smart microprobes, tools for 2D/3D tissue engineering and flexible 3D microfluidics. In 2017, he joined the CNRS at LTM in Grenoble to develop microfluidics for neuroengineering.

"During my studies at MIT, I had the opportunity to participate in the creation of the first organ-on-a-chip devices. Bringing NETRI into the industrial phase today is not only a personal satisfaction, but also the success of an entire team." Thibault Honegger

"After several years of R&D and fund-raising, NETRI continues to gain momentum. The industrialization of our devices, coupled with our technical expertise, allows us to be at the forefront of this new technology." Florian Larramendy

What are organs-on-chip?



Defined as **biological avatars**, organs-on-chip **predict the effectiveness of a new treatment or drug repositioning**. They speed up pre-clinical trials while limiting animal experimentation.

Organs-on-a-chip were conceived in 2011 by Professor Don Inberg, who was the first to propose a lung-on-a-chip model. Since then, numerous research groups have developed new models, simulating the physiology of other organs in the human body (e.g. brain, liver, heart...).

NETRI is developing technologies that use neurons as sensors to create rapid solutions compatible with other systems. These technologies make it possible to **build digital reference libraries to study a number of use cases, such as the pain associated with chemotherapy**. The company uses **human stem cells to reproduce the functions of human organs**. These cells are harvested from donor skin biopsies and reprogrammed into pluripotent stem cells. These have the capacity to be differentiated into all types of human cells, within NETRI's own devices.

Faced with a competitive market, NETRI is positioned as a unique player linking the innervation (functional digitization) of any organ.

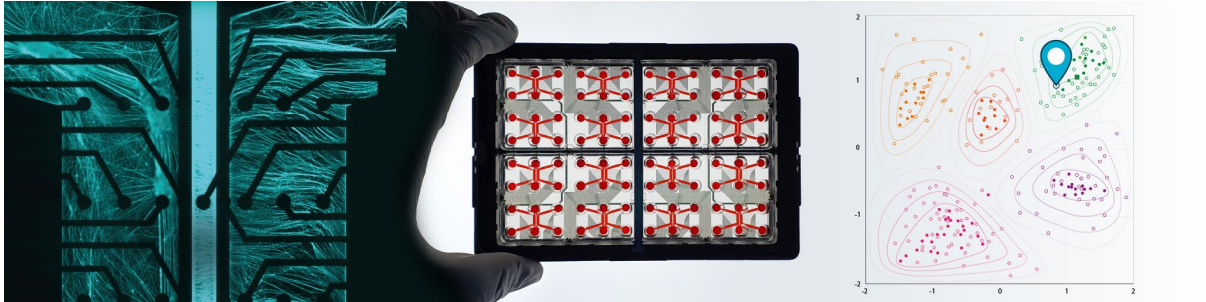
Ultimately, organ-on-a-chip offers healthcare manufacturers **multiple advantages**:

Significantly de-risking clinical phases

- Accelerate preclinical phases
- Limit animal testing
- Reposition drug candidates
- Better targeting of patient cohorts during clinical phases
- Diagnose complex diseases

NETRI's ambition:

Digitizing human biology



Neurons are identified as information-carrying users in the body. They can handle complex data in the brain and spinal cord (the central nervous system), or transmit information from all over the body via the peripheral nervous system. In short, **neurons are natural machines for integrating biological information and transforming it into digital information**. Located in the spinal column, sensory neurons are linked to all organs via their nerve endings. They constantly send information on the state of the organs (healthy, in pain, presence of abnormal state...), which are then transmitted in the form of electrical signals to the brain for analysis.

NETRI takes advantage of this natural source of information to partly digitize human biology. Since 2018, the company has been offering **medical devices to reproduce this innervation pattern with human neural stem cells**, in order to record the upward flow of neural information (known as a digital signature).

It is also developing **algorithms for "decoding" and comparing digital signatures**. By applying only pharmaceutical compounds, chemical elements or human fluids to nerve endings, it then becomes possible to "predict" their efficacy, toxicology or diagnose diseases by comparing each signature with signatures of reference compounds present in **digital libraries by therapeutic indication**.

NETRI's ambition is to massively populate its digital libraries in its priority application areas. To achieve this, we need to consolidate them, while continuing to industrialize our devices and cell cultures, and accelerating our international sales development.

In addition to its unique technology, **NETRI also stands out for its value creation. It not only sells devices, but also standardized data** on the digital signatures of compounds.

To meet major industrial and regulatory challenges



NETRI is currently the **only French company capable of producing and marketing organs-on-chip**. For manufacturers, this is not only an **alternative to animal experimentation**, but also a **time-saver in controlled clinical trials for drug development**.

NETRI focuses on **3 markets** where demand is exponential and is actively seeking solutions:

- **Dermo-cosmetics:** manufacturers find it difficult to use animals to develop new ingredients, and are actively seeking alternative solutions such as those proposed by NETRI to objectively assess sensations of well-being, pain, irritation and scratching in indications such as eczema, atopic dermatitis or pruritus. Using our innervated skin platform, it becomes possible to record the interaction between pathological skin and the nervous system.
- **The effects of pain:** whether it's pain induced by chemotherapy, injection of vaccines or vomiting induced by ingested drugs, healthcare manufacturers are unable to objectively measure these side effects, which lead to 80% clinical phase failures. NETRI has entered this market with its pain model-on-a-chip, which can connect spinal cord neurons (CNS type) to human sensory neurons (PNS type) with astrocytes. It is then possible to record the response of the entire network when a molecule is placed only on the nerve endings of sensory neurons (nerve type).
- **Neurotoxicology:** all drugs or chemical elements ingested directly or indirectly by humans must be tested for their potential neurotoxicological effects before being approved by regulatory bodies. The majority of preclinical trials used to be conducted on non-human primates, but since 2020, soaring prices and accessibility problems have prompted the healthcare industry to look for solutions to massively evaluate neurotoxicological effects. Our brain organoid and CNS innervation platform enables us to anticipate the effects of a dietary pesticide on the proper development of children's brains, or on neurotoxicity in adults.

On the other hand, when new treatments wish to be brought to market, whatever their field of application, it is necessary to test their toxicity and efficacy by applying for regulatory approval before they can enter the clinical phase or the market. Not all market segments are subject to the same regulatory constraints, but NETRI meets several of them:

- **The pharmaceutical industries are strictly regulated by regulatory authorities** such as the FDA (USA), EMA (Europe) or ANSM (France). These agencies have built **standardized processes** on the primary and secondary effects of new treatments. There is a Momentum on the **need to accelerate accreditation processes, limit the associated economic risks while helping to reduce animal experimentation.**
- **The dermo-cosmetics and food health industries** are ahead of the game when it comes to methods for evaluating ingredients in creams or food pesticides. The former banned the use of animals in pre-marketing tests 10 years ago. The latter will be banned by 2030.

To reduce failure rates (9/10 drugs fail in the clinical phase) and limit the number of experimental uses, **organs-on-chip technologies are being strongly pushed by regulatory authorities.** The methods used by these technologies are in the process of being accredited as "Medical Devices" (including the device, the method of use and the analysis methods).

NETRI, key figures



- **2012:** scientific research begins
 - **2018:** NETRI founded
 - **2019:** 1st patent filed
 - **2025:** inauguration of France's first organ-on-a-chip production plant
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- **10 million euros:** the amount of funds raised since NETRI's creation
 - **35 employees** in 2025
 - **150 million** in annual sales by 2030

Prizes awarded

- Prix Maddyne - Banque Populaire: SovTech 2024
- Start-up Santé Grand Prix Check Up Santé 2023 - BFM Business
- French Tech Rise 2022 - French Tech Lyon Saint Etienne
- Coup de cœur jury Entrepreneur de l'année start-up category 2022 - EY
- Winner Business Awards 2020 - CIC Innovation
- Coup coeur Trophées de l'innovation 2019 - Bref Eco

They support us

To live up to its ambitions and attract and retain top talent, NETRI is proud to have the support of a number of economic and local players:

- **The Auvergne-Rhône-Alpes Region** through the "Pack relocalisation - Train employees" program, part of the region's industrial development and training plan.
- **BPI (Banque Publique d'Investissement)** through the "Deep Tech" program, where NETRI was the winner of the government-funded "Innovations in biotherapies and bioproduction" call for projects, as part of France 2030.
- **Lyon Biopôle:** NETRI has been hosted by the lyonbiopole innovation center since 2018 with easy access to cell culture and microfabrication infrastructures
- **Les Hospices Civils de Lyon:** since 2019, NETRI has been a Laureate of the call for clinical innovation projects with HCL to develop a differential in vitro diagnostic tool for neurological disorders, which has led to a thesis co-supervision and numerous scientific papers

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