

## Press Release

October 10, 2024

### NETRI announces the formation of its Scientific Advisory Board.



NETRI, an industrial start-up that develops organs-on-chip for health industries, today announced the formation of its Scientific Advisory Board (SAB) and inaugural appointment of Dr. Myriam Guiral and Dr. Nicolas Aznar. The SAB members will provide insight and guidance to NETRI on the scientific orientation. Today, NETRI's SAB is meeting for the first time with NETRI teams to benefit from their unique insight in Oncology and Organoids state of the art and markets.

Lyon, France – The newly formed SAB is made up of world-leading experts whose skills cover **strategic, operational and scientific support** with a particular focus on **Oncology and Pain management** with the appointment of **Myriam Guiral** and on **Organoids** with the appointment of **Nicolas Aznar**.

The vocation of NETRI's SAB members is to **evaluate and to advise the research** items explored by NETRI and to **advise on the products and services roadmap** driven by each member's knowledge of the market. Each member will contribute to the development of NETRI and **act as an ambassador** of NETRI, both scientifically as a **Key Opinion Leader** but also by **identifying business opportunities and introductions**.

**Thibault Honegger**, CEO of NETRI added, "This Scientific Advisory Board represents a real scientific support for NETRI and will enable us to direct our R&D investments in line with the market demands, especially regarding our pain-on-chip models and our MultiFluidics™ line for multiple innervated and vascularized organs on chip. I am delighted and thank Myriam and Nicolas for joining the SAB".

#### Pain-on-chip, an innovative model to change lives.

The **failure rate of chemotherapies** in clinical phase is over **80%**, of which **90% induce neuropathic pain** to patients. Such attrition rate, with associated development costs and patient that suffers contribute to limit the number of new chemotherapies or anti-cancer treatment available to patients.

Released in June 2023, the **NeuroFluidics™ MEA platform** combines **compartmentalization** and **electrophysiological recordings** (recording of the electrical activity of neurons) when stimulating axons or dendrites only. Such compartmentalization

enables different organs to be **innervated** and **interconnected** using **human induced pluripotent stem cells**. The natural innervation of all organs makes it possible to **use the electrical signals of neurons as a natural biosensor of a biological effect**, enabling a **digital signature** to be extracted for each therapeutic compound tested on NeuroFluidics™ MEA platform. These signatures, obtained from clinical studies of drug candidates or customer molecules, are used to train **NETRI's AI algorithm** and build **digital libraries** for each therapeutic indication. These solutions make it possible to **predict the clinical toxicological and efficacy responses** of drug candidates by comparing their signatures with the digital libraries. Using this approach with culture of hiPSC-derived sensory neurons pave the way to anticipating Chemotherapy-Induced Peripheral Neuropathy (CIPN) in chemotherapy agents discovery.

Against this backdrop, **NETRI has nominated Myriam Guiral** to its SAB to **continue the development of its CIPN-on-chip model** and, more broadly, to **extend its models to pain management in oncology**.

**Dr. Myriam Guiral**, born in the south of France, began her academic journey in her home country before expanding her horizons to the Netherlands, where she completed a Master's in Biophysics followed by a Ph.D. Her career trajectory shifted from science to the commercial domain, where she excelled in various leadership roles. Over the years, Myriam has held positions ranging from sales executive to CEO, contributing to the growth of prominent MedTech and Biotech companies across the Netherlands, Belgium, and France.

Recently, she has taken on key roles as Chief Commercial Officer (CCO) in multiple startups, playing a pivotal role in securing successful funding rounds. Drawing from her extensive experience, Myriam is now dedicated to supporting startups in the health and innovation sectors, offering her expertise to foster their growth and development.

« I am really delighted to join NETRI as SAB member. This new adventure is more than just a professional project. It is a true-life mission, inspired by the experience I've been through and driven by a deep desire to make a positive impact on the world of health and innovation. NETRI brings great innovation to the market with its unique *in vitro* models that meet the specific needs of the pharmaceutical industry. With deep expertise in neuroscience, NETRI offers solutions that reduce attrition rates, lower costs, and decrease reliance on animal models», explain **Myriam Guiral, NETRI' SAB**.

### Organoids and organs-on-chip, relevant *in vitro* models.

Around **90% of clinical trials fail**, and **75% of the cost** of developing a new drug is due to these failures. These issues have an impact on human and animal health and related industries, from medical devices to innovative compound screening.

At the confluence of **cell and tissue engineering, microfluidics, biomaterials** and **micro-nanotechnologies, organoids and organs-on-chip** are, among the whole range of new alternative methods, **key disruptive technologies for preclinical and clinical research**. They make it possible to model functional human tissues, study normal or pathological

physiology and improve the predictability of efficacy and toxicity results, while limiting animal experimentation. These new alternative methods halve drug development time and the associated risks (cost, high failure rate in the clinical phase, repositioning).

NETRI announced in June 2024 the launch of its **Multifluidics™ platform**, which paves the way for **reproducible and high-throughput culture of innervated and vascularized organoids from patient-derived hiPSCs**. The Duplex and Duplex Link devices will also pave the way for pump-free multi-organ systems.

In this context, **NETRI has nominated Nicolas Aznar** to its SAB to **continue the development of its organoid-on-chip platform** and, more broadly, to **extend its models to regenerative medicine**.

**Dr. Nicolas Aznar** is a prominent cancer biology researcher at CNRS and a group leader at the Tissue Biology and Therapeutic Engineering Laboratory (LBTI) in Lyon, France. He earned his PhD in Molecular and Cellular Biology and Cancer from the University of Lyon. Dr. Aznar completed his first postdoctoral fellowship at the University of California, San Diego, where he made a significant breakthrough in understanding the molecular mechanisms governing the interplay between Wnt/Frizzled (FRZD), receptor tyrosine kinases (RTKs), and heterotrimeric G-proteins, three critical signaling pathways in eukaryotic cells.

In 2017, Dr. Aznar joined the Cancer Research Center of Lyon for his second postdoctoral training, focusing on cancer cell plasticity where he secured a permanent research position in 2018. Today, he leads a research team at LBTI investigating the role of the microenvironment in stem cell and cancer stem cell fate determination, with a particular emphasis on therapy resistance and personalized medicine in cancer.

In addition to his research, Dr. Aznar serves as the executive director of the 3D B.I.O. (Biology, Innovation, and Organoids) facility at the SFR Bioscience Service Unit, located in the renowned Biodistrict of Lyon-Gerland. His contributions to cancer biology and therapeutic innovation have positioned him as a key figure in the field, driving advancements in understanding tumor biology and treatment resistance.

“NETRI is at the forefront of innovation in biomedical research through its cutting-edge work with organoids, organ-on-chips, and New Approach Methodologies (NAM). By developing advanced organ-on-a-chip platforms, NETRI is enabling precise simulations of human organ systems, fostering breakthroughs in drug discovery and disease modeling. The integration of organoids—miniaturized, lab-grown versions of human organs—into their platforms is providing more accurate and human-relevant models for studying complex diseases, including neurodegenerative and cancerous conditions. NETRI’s commitment to NAM, a suite of non-animal testing methods, is driving ethical and more efficient approaches to drug testing and therapeutic research, significantly reducing the reliance on traditional animal models. Together, these technologies are positioning NETRI as a leader in personalized medicine and next-generation biomedical research.”, explain **Nicolas Aznar, NETRI’ SAB**.

## About NETRI (LYON 840248744)

NETRI, an industrial start-up, offers healthcare industries the ability to generate mini human organs on chip which, coupled with AI treatments, can predict the clinical effect of a drug candidate. NETRI offers its customers support throughout the development of their drug or product candidate, providing predictive answers on toxicity, efficacy and modes of action in the discovery, preclinical and clinical phases. Organs-on-chip devices enable the creation of healthy or pathological physiological models. Using its high-throughput microfluidic technologies, NETRI's models recreate human physiology in vitro by co-culturing cells, either primary or derived from human stem cells, compartmentalized and coupled with functional activity measurements. NETRI today markets its NeuroFluidics™ organs-on-chip models in oncology (CIPN-on-chip and pediatric glioblastoma), neuroinflammation (Inflammatory Bowel Disease), neurological disorders (Alzheimer on chip), skin disorders (sensitive skin on chip) and nutritional health (innervated gut) applications. [www.netri.com](http://www.netri.com)