



NIMES  
UNIVERSITE

# NEUROPRISM MEETING

**JUIN 20-21, 2025 | NIMES**

NEUROSci & Psycho, Pharma

*Demystifying artificial intelligence, preventing diseases*

**PLUS D'INFO**



**BRAINS' LAB**

NIMES UNIVERSITY

BRAINS LABORATORY

neuprism@brains4d.fr

<https://neuprism.unimes.fr>

Fort Vauban, Nîmes

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## DAY 1 | NIMES



9 H 00 **WELCOME**

9 H 15 **NIMES UNIVERSITE**  
**Multidisciplinary strenght**  
**against risks**, President, Pr. Benoit Roig

9 H 20

9 H 30

10 H 00

10 H 30

## DAY 1 | NIMES



11 H 00 **Opening**  
**under the high-patronage of**  
Anissa Megzari,  
Director of Clinical Research  
CHU-NIMES, FRANCE

11 H 05

11 H 35

12 H 05



**Meeting**  
**B to B**  
BOOTH - DEMO  
INDUSTRIALS  
SCIENTISTS  
DOCTORS  
PARAMEDICAL



NIMES UNIVERS

PARTENERS  
**NEUOPRISM®**

with the organization of  
NIMES UNIVERSITY  
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LE 20 ET 21 JUIN 2025

FORT VAUBAN - NIMES



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Investing in the present  
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# PROGRAM **NEUROPRISM®**

## **DAY 1 | NIMES**

**15 H 00**

**15 H 15**

**15 H 45**

**16 H 15**

## **PLENARY CONFERENCE**

**17 H 00**

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*And, at 18 H 30 ? ...*





# PROGRAM NEUROPRISM®

## DAY 2 | NIMES



9 H 00

**In the présence du**

**PRESIDENT**, Pr. Benoit Roig Nîmes université FRANCE

9 H 15

**The strength of an economy for the influence of a metropolis**

**PRESIDENT** Franck Proust, NIMES METROPOLE FRANCE

9 H 40

9 H 45

10 H 15

10 H 45

11 H 15



# PROGRAM **NEUROPRISM®**

**DAY 2 | NIMES**

## **PLENARY CONFERENCES**

**13 H 30**

**14 H 00**

## **ROUND TABLE & CONCLUSIONS**

**4 WAYS OF LOOKING  
ARTIFICIAL INTELLIGENCE**

hosted by Pr. Valérie Compan

**14 H 30**





DAY 2 | NIMES

16h30

# Ceremony Diplomas & Parchements

NIMES UNIVERSITY

The ceremony will award  
Diplomas (enrolled in the Introductory Course U.D.)  
&  
University Certifications (enrolled in the International  
Symposium) NEUROPRISM 2025



## Scientific manager and designer NEUOPRISM®

**Valérie Compan is Professor of Neuroscience at the University of Nîmes**, and was born in Sète, France. She obtained her PhD in neuroscience from the University of Aix-Marseille in France, and was awarded the Pharmacy Medal (French Association for Therapeutic Research). She carried out her post-doctoral research at the Center for Neurobiology and Behavior at Columbia University in New York (USA) under the guidance of her mentor René Hen. She generated genetically modified animal models (knockout of the *mHtr4* gene encoding serotonin 5-HT<sub>4</sub> receptors), then was assistant professor (University of Burgundy). Director of a research team at the CNRS and INSERM for over 20 years, she helped set up the University of Nîmes in 2003 at the request of Professor Jacques Demaille. She has been responsible for a number of training courses (MASTER Biotchnologie, part of the MASTER BIOSANTE at the University of Montpellier, neuroscience in the psychology bachelor's degree, and physiology and neuroscience in the life sciences bachelor's degree).

Full professor of university, she has also been director of the Faculty of Science and Design at the University of Nîmes (2020-2024 ≥ 300 people). She devotes her research to addictions and has contributed neuroscience knowledge introducing that anorexia is an addiction. She is the author of numerous patents to treat depression (5-HT<sub>4</sub> target; Canadian Institutes of Health Research), obesity and stress-induced anorexia (5-HT<sub>4</sub> target CNRS, INSERM, NIMES UNIVERSITY). Beginning to identify breath markers linked to brain activity heralding the risk of stress-induced dietary abnormalities, she and biotech engineer Sandie Choquart invented a world-unique pocket lab (eBAM®: econnected BioAirMarker®) to detect breath markers in real time. CAPNET (interministerial group) awarded them a national research priority label during the COVID pandemic. Valérie and Sandie are, with Catherine Fandin and Nîmes University, the leaders of B4D, a university company producing and marketing eBAM® (B4D SANTE-FLASH® - Bussiness IBM partners). Valérie is the 2025 winner (innovation chair) of the Institut Universitaire de France.

In the face of rising mental health crises, artificial intelligence (AI) is emerging as an essential solution. NEUOPRISM brings together experts from around the world to reflect on the issues and develop innovative preventive methods. We use AI tools to detect early signs of mental distress. Industrial responses can meet these challenges while ensuring equitable access to care and respecting the freedom of professionals. We invite you to take part in this collective reflection to make mental health a priority accessible to all.

*Valérie Compan*



# René Hen, Professeur, Université de Columbia, New-York, USA

René was born in Strasbourg and obtained his doctorate at the Université Louis Pasteur under the supervision of Pierre Chambon. After a postdoctoral stay with Nobel laureate Richard Axel at Columbia University, he became an assistant professor in Strasbourg. He then returned to Columbia University, where he is currently Professor of Pharmacology, Psychiatry and Neuroscience. His laboratory uses animal models to study neural substrates underlying mood and anxiety disorders. He has been elucidating mechanisms of action of antidepressants and focusing on hippocampal neurogenesis for 25 years. Prof. René Hen heads the Division of Neuroscience at the New York State Psychiatric Institute. Research in this division focuses on identifying dysfunctional brain circuits in mental disorders and targets for current and new drugs. Areas of expertise include serotonergic systems, the stress response, the hippocampus, adult neural stem cells and their contribution to anxiety disorders. Work uses animal models and a large battery of genetically modified mice, as well as stress procedures and behavioral analyses. Most researchers in the division use a common set of technologies that include behavioral paradigms combined with state-of-the-art imaging techniques, optogenetic and chemogenetic strategies. This research is made possible by a range of imaging facilities (two-photon microscopes, mini-microscopes) for observing calcium in living mice. The data is analyzed using machine learning algorithms (coll. Computational Neuroscience Department). The ultimate aim of this program is to understand how abnormal patterns of neuronal activity produce pathological behavior, and to use this knowledge to develop treatments for psychiatric disorders. Prof. René Hen is also director of a T32 training fellowship and has mentored numerous students, post-docs and residents who have gone on to successful research careers in both academia and industry. His aim is to continue to train a generation of researchers who are as comfortable with basic science as they are with clinical issues, so that we can better understand the mechanisms underlying neurological and psychiatric disorders in the future.

## Harnessing brain plasticity to improve mood and anxiety

Depression and anxiety disorders are debilitating illnesses that affect more than 350 million people worldwide. The most common treatments for these disorders are SSRIs (selective serotonin reuptake inhibitors), which block the serotonin transporter and thereby increase serotonin levels in many brain regions. However, about 50% of patients who take SSRIs do not fully respond and among those who respond a significant fraction experiences various side effects such as sexual dysfunction. In addition, SSRIs have a delayed onset of therapeutic efficacy of several weeks. There is therefore a considerable need for better and faster acting antidepressants. One way to develop novel antidepressants is to understand how SSRIs work and why they take so long to be effective and then to target directly the underlying mechanisms. We have shown that SSRIs stimulate neurogenesis in the ventral dentate gyrus of the hippocampus and that the resulting young neurons are critical for stress resilience and for some of the behavioral effects of antidepressants. Specifically, we have shown that adult-born granule cells facilitate pattern separation which may in turn mitigate the overgeneralization often observed in mood and anxiety disorders. We have also shown that the ventral hippocampus contains a specialized population of cells that encode "negative valence" and that project to the hypothalamus and amygdala. We are proposing that chronic SSRIs decrease the activity of these "negative valence cells", resulting in a decrease in anxiety and depression related behaviors. We hope that by inhibiting these cells either directly or indirectly via a stimulation of neurogenesis, we will be able to develop faster acting antidepressants and possibly compounds that are active in treatment resistant depression.

*René Hen*

## Hervé BOKOBZA, psychiatrist - psychanalist

Dr. Hervé Bokobza is a physician who directed the Centre psychothérapique Saint-Martin de Vignogoules (France) for over 20 years. He is Honorary Chairman of the French Association of Private Psychiatrists and former President of the French Psychiatric Federation. His strong involvement led him to become Chairman of the Etats Généraux de la Psychiatrie in 2003.

He is also a founding member of the Collectif des 39, against the Night of Security. He is the author of the book "manifeste d'un psychiatre outragé", published by Champ Social in 2022.

Psychiatry is faced with a central stumbling block: should we care for a sick person, or should we care for a sick subject?

## Psychiatrie et Ethique : réflexions sur la souffrance psychique à l'ère de l'IA.

Psychiatry is faced with a central stumbling block: should we care for a sick person, or should we care for a sick subject? Current trends tend to favour the former, at the risk of losing the ethical dimension that underpins care for the mentally ill.

Should the necessary destigmatization of mental suffering be achieved through the oft-heard assertion that mental illness is an illness like any other

We would argue that this axiom is extremely dangerous, as it risks eroding the specificity of mental suffering, where complexity and singularity reign supreme,

Is artificial intelligence going to upset the invariants of this humanist psychiatry?

*Hervé Bokobza*

## Dr. Damien CLAVERIE, Mr. The Chief Medical Officer

Colonel Damien Claverie is a military doctor and neuroscience researcher at the Institut de « Recherche Biomédicale des Armées ». He began by practicing general medicine. He then turned to research, earning a PhD in neuroscience at the Pierre et Marie Curie University in Paris. HDR research physician in the neurophysiology of stress unit.

## La vulnérabilité aux pathologies liées au stress

My research focuses on vulnerability to stress-related pathologies. Our work aims to understand the mechanisms that explain the evolution towards mental pathologies following exposure to stress, using biological and electrophysiological approaches.

Vulnerability to stress-related pathologies corresponds to an infra-clinical state predisposing the individual to evolve towards a mental pathology following exposure to an aggression. Given the possible chronicity of stress-related pathologies, prevention through the management of the state of vulnerability represents a real challenge. The "infra-clinical" aspect of this state poses the problem of its detection. The identification of biomarkers is therefore one of the essential steps in the management of vulnerability. During this presentation, several preclinical and clinical approaches, also assisted by artificial intelligence, will be presented. These approaches aim to better understand the mechanisms of vulnerability and identify robust biomarkers. These results open the door to the future of primary prevention of stress-related pathologies.

*Damien Claverie*



## **Dr. Guillermo CECCHI, Leader Principal - IBM research - T.J. Watson Laboratory**

Guillermo CECCHI is a senior researcher at IBM Research, T.J. Watson Laboratory. D. in physics from Rockefeller University. He then carried out postdoctoral research in brain imaging for psychiatry at Cornell University School of Medicine (New York), USA. He is Director of IBM's Computational Psychiatry and Neuroimaging Program, Associate Director for Analysis of the Accelerating Medicines Partnership - Schizophrenia (AMP@SCZ), and Director of Phenotype Reimagined to Define Clinical Treatment and Outcome Research (PREDiCTOR), two study centers of the US National Institute of Health (NIH).

### **Predicting mental health outcomes with AI & digital technology**

I will discuss the application of novel methods to predict diverse outcomes from minimally structured, naturalistic data, including onset of psychosis in clinical high-risk youth, early Alzheimer's disease in cognitively healthy adults, response to placebo intervention in chronic pain, and drug use behavior in addiction. We will further demonstrate how artificial intelligence and digital technologies facilitate continuous, at-home monitoring of conditions like ALS and chronic pain, and how they can integrate high-volume behavioral and physiological data into composite metrics that complement traditional clinical assessments. Finally, we will discuss the implementation of these approaches in ongoing large-scale transdiagnostic studies.

*Guillermo Cecchi*

## **Denis David, professor of pharmacology, Paris-Saclay university**

Denis David is a professor at Paris-Saclay University and co-directs the MOODS team (INSERM U1018), which specializes in mood disorders. He studies the mechanisms of antidepressants and has developed animal models of anxiety and depression with Prof. René Hen. He is researching anxiolytic and antidepressant treatments, such as 5-HT<sub>4</sub> receptor agonists. Winner of the NARSAD Young Investigator Award, he is also deputy director of research at the Doctoral School of Life Sciences and Health, where he links neuroscience and psychiatry.

## **Indira David, neuropsychopharmacology engineer Paris-Saclay university**

Dr. Indira Mendez-David is a member of the MOODS team (INSERM U1018) at Paris-Saclay University, specializing in the development of treatments for mood disorders. After earning a master's degree at John Jay College, she worked with Nobel Prize winner Eric Kandel at Columbia University. She received her PhD in 2013, which was awarded the National Academy of Pharmacy's thesis prize. Her research shows the rapid effects of 5-HT<sub>4</sub> receptor agonists, such as prucalopride. The recipient of several awards, including the Deniker Foundation Prize and the NARSAD Young Investigator Award, she uses advanced techniques such as optogenetics and is committed to mentoring young researchers and promoting diversity in neuroscience.

## **Repurposing Prucalopride, a Serotonergic Type 4 (5HT<sub>4</sub>) Receptor Agonist, to treat Anxiety and Depression.**

Interest in serotonin type 4 receptors (5-HT<sub>4</sub>R) has recently grown, fueled by preclinical and clinical evidence highlighting their key role in depression, cognition, and stress resilience. Stimulation of 5-HT<sub>4</sub>R in animal models has shown rapid antidepressant and pro-cognitive effects, with a faster onset than conventional antidepressants such as SSRIs. Furthermore, activation of 5-HT<sub>4</sub>R provides prophylactic protection against stress, either alone or combined with ketamine, suggesting promising therapeutic potential for stress-related pathologies.

In humans, neuroimaging studies have demonstrated reduced brain 5-HT<sub>4</sub>R binding in depressed patients, correlating with memory deficits. Additionally, a large pharmacoepidemiological study revealed that treatment with prucalopride, a 5-HT<sub>4</sub>R agonist approved for constipation, was associated with a lower risk of a first episode of depression compared to other anti-constipation agents. In experimental mouse models, acute prucalopride administration produced rapid anxiolytic and antidepressant-like effects, comparable to diazepam and superior to fluoxetine, across behavioral tests. Moreover, in a corticosterone-induced anxiety/depression model, a subchronic three-day treatment with prucalopride led to fast anxiolytic/antidepressant-like effects, either alone or by accelerating the effects of fluoxetine.

Altogether, these findings position 5-HT<sub>4</sub>R agonists, such as prucalopride, as promising candidates for the rapid treatment of depression and anxiety.

*Indira et Denis David*



## Dr. Allan Geliebter, professor of psychiatry

Dr. Allan Geliebter, PhD, is a professor of psychiatry at the Icahn School of Medicine at Mount Sinai (New-York, USA). He has an MA in biology and a PhD in psychology from Columbia University. He is best known for studies on the role of the stomach in controlling food intake. He has shown that the capacity of the stomach is greater in those with obesity than those of normal weight and greater still in those with binge eating disorder, and greatest of all in those with bulimia nervosa even though of normal weight. He also found that in binge eating disorder fasting ghrelin was lower in the morning but higher in the afternoon than in controls. His group also showed using functional MRI that there was increased brain reward activation to cues of high-calorie foods in obesity vs normal weight and even greater in obesity with binge eating disorder. Additionally, following bariatric surgery for obesity, his group found decreased brain reward activation to high-calorie food cues. Lately, he has been studying potential mechanisms for increased alcohol intake and alcohol use disorder following bariatric surgery.

## Potential Mechanisms for Increased Alcohol Intake and Alcohol Use Disorder Post Bariatric Surgery.

Two popular bariatric surgeries, sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (RYGB) are the most effective weight loss procedures for severe obesity. However, there is recent evidence of increased alcohol intake and new onset alcohol use disorder (AUD) by 2 years following both operations. Although the two operations differ anatomically, they lead to similar increased drinking. The mechanisms behind the increased alcohol intake post-surgery are not clear. One theory is that with the drastic reduction in food intake post-surgery, an « addiction » transfer from food to alcohol intake occurs. Another theory implicates a faster alcohol absorption rate post-SG and post-RYGB for the increased alcohol intake. Understanding the mechanisms could provide new therapeutic targets for preventing increased alcohol intake and AUD in general. It could also help identify measures that could be used in a clinical setting to predict the risk of developing AUD. Finally, it could help guide the development of new surgical procedures that do not lead to increased alcohol intake.

*Allan Geliebter*

## Mathieu JEANJEAN, coordinator of the RAdEO program

Mathieu Jeanjean has been responsible for coordinating the RAdEO program (Network for Adolescents in Extraordinary Circumstances) for the MDA30 association since 2023, after 17 years working in child protection (MECS). Mathieu Jeanjean's initial training is as a special needs teacher, with a Master's degree in social mediation (2015, PAUL VALÉRY University of Montpellier). He then focused his interest on issues of "peer support," "empowerment," and "freely consented commitment."

### Child protection

The RAdEO system has been in place since 2015 and has several missions.

- \* One of the main missions of the RAdEO system is to contribute to a better understanding among professionals in the GARD working in the broad field of adolescents of the phenomenon of radicalization that can lead to violence. RAdEO therefore promotes preventive actions in this area through training, conferences, and the establishment of practice analysis groups.

- \* Another mission is to directly or indirectly take charge of adolescents who have raised concerns about ideological involvement, drawing on a team of professionals, i.e., psychologists and educators working in private practice, and a multidisciplinary network of local partners who can take over. These proposals, which are in line with the MDA's core values (free membership, unconditional acceptance, non-judgment, free services, support from local resources, etc.), aim to promote the creation of a "safety net" around individuals (understood in the complexity of their adolescent reality) and their families, avoiding any stigmatization or "labeling".

*Mathieu Jeanjean*



## Harry KISSILEFF, professor, Mount-Sinai Hospital

Harry Kissileff earned his bachelor's degree in biology from the University of Pennsylvania in 1962. He then earned a doctorate (Ph.D.) from the same institution in 1966. After his doctorate, he completed postdoctoral work at Rockefeller University. He was also an assistant professor there from 1966 to 1971.

From 1971 to 1976, he was an assistant professor at the University of Pennsylvania.

He then worked as a research associate at St. Luke's Hospital in New York. He was also an assistant professor at Columbia University from 1976 to 1988. In 2007, he became an associate professor at Columbia University. He returned to St. Luke's Hospital as a research associate from 2007 to 2015. In 2019, he was an associate research scientist in the Department of Medicine at Columbia University College of Physicians and Surgeons. Since 2019, he has been an assistant professor at the Icahn School of Medicine in the Division of Diabetes, Obesity, and Metabolism.

In addition to his academic activities, Harry was the first president of the Society for the Study of Ingestive Behavior from 1987 to 1988. He also served as chair of the Columbia University Seminar on Appetitive Behavior from 1991 to 2023.

## Objective measurement of eating behavior in health and dis-turbance in animals and humans

Studies on temporal patterns of feeding in animals have established a basis for understanding the mechanisms that regulate food intake. This has led to interventions in humans such as the use of "feeding machines" and universal consumption monitors to identify behavioral determinants of obesity. In addition, cumulative intake curves have been used to characterize food control in both healthy individuals and those with eating disorders. Research on the effect of portion size, the pre-load paradigm comparing solids and liquids, and the role of hormones such as CCK in bulimia has also shed light on the complexity of eating behaviors and predictors of weight loss, particularly after bariatric surgery, while incorporating innovative tools such as the sipometer to assess motivation and the impact of stress on portion control.

*Harry Kissileff*

## **Cristelle LEBON, Psychoanalytic family therapist, Associate Professor Psychopathology and Clinical Psychology**

Dr. Cristelle LEBON has a PhD in psychopathology and clinical psychology, is a Doctor of Clinical Psychology and Psychopathology, is an associate lecturer at the CRPPC, at the Institute of Psychology at the University of Lyon 2, and is a researcher specializing in clinical psychopathology with a psychoanalytic orientation. After ten years of practice in child psychiatry and public psychiatry, her research focuses on the family, the group, and the institution, with a particular focus on contemporary issues such as gender identity and the ecological crisis. Author of some twenty scientific articles and co-author of a book on therapeutic mediation with horses, she is developing a multidisciplinary approach at the interface between psychoanalysis, therapeutic mediation, and artistic creation. President of the Association for the Development of Psychoanalytic Family Therapy (ADTFA), member of the board of directors of the French Society for Psychoanalytic Family Therapy (SFTFP) and full member of the French Society for Psychoanalytic Group Psychotherapy (SFPPG), she also leads training courses for professionals in health, social and medico-social institutions. Her recent work focuses on eco-anxiety, symbolization processes in family therapy, and archaic processes in contemporary clinical practice. Lumière Lyon 2 University; also teaches at Ucl.

### ***The debate is on – Day 2 – A preview of the Round Table!***

## **Artificial intelligence in clinical psychology: a nuanced position**

As a clinical psychologist and psychoanalytically oriented researcher, I recognize the undeniable value of artificial intelligence in the field of psychological research. These tools greatly increase the researcher's capabilities, accelerate data production and analysis, and offer new methodological perspectives—provided that the researcher preserves their own creativity and critical eye. However, in the field of mental health care and clinical work, my position is much more reserved. Fundamental ethical principles must be respected, particularly with regard to the confidentiality of clinical data, an area where my confidence in current software remains limited.

More fundamentally, no artificial intelligence, however sophisticated, can replace the complexity of the human psyche. Psychic functioning is not based on algorithmic rationality, but on associative, unconscious processes that mobilize different registers of memory and affect. The unconscious and transference, cornerstones of clinical psychoanalytic psychopathology, can only be understood in an authentic intersubjective encounter, from subject to subject. It is only in this relational space that an understanding of the patient's mental functioning, the meaning of their symptoms, and the complexities of their diagnostic profile can be developed. Furthermore, the clinician is not a technician of human psychopathologies but, above all, a source of support for patients in a state of psychological distress. In this respect, their flaws and the uniqueness of their personality and style are an integral part of psychological care, in bringing the patients' painful or even traumatic experiences back into play, in the hope of a transformative outcome.

Nevertheless, I remain open to the development of interdisciplinary research on these issues, provided that it places rigorous and consistent ethical reflection at the forefront.

*Cristelle Lebon*



## Christophe MENICHETTI, Solution Architect IA

After 16 years in pre-sales at the IBM Client Center, covering clients and partners across Europe, the Middle East, and Africa in various roles (Analytics, Big Data, and AI), Christophe Menichetti joined the HPC & AI Center of Excellence - Europe in March 2022 as an AI Solutions Architect, Pre-Sales, at the HPE Center of Excellence (Grenoble, France).

Christophe Menichetti also teaches at university, where he lectures on IT architecture, BI, Big Data, and AI.

## Artificial intelligence : IA

During this introductory session on artificial intelligence, I will present the basic principles and mathematics “behind AI” in an educational manner to provide a better understanding of what is and is not possible with AI, and to fully comprehend the power and limitations of AI. We will conclude by presenting possible use cases in healthcare and answering all your questions.

*Christophe Menichetti*

## Stéphane MUSSARD, professeur en économétrie Nîmes université, CHROME

Stéphane Mussard defended his PhD in econometrics in 2004, at the University of Montpellier, France. He then held positions at the University of Montpellier I and Perpignan (research and teaching assistant), CEPS/INSTEAD Luxembourg (post-doc), University of Sherbrooke (post-doc), then associate professor at the University of Montpellier. He is a full professor of econometrics at the University of Nîmes, and he was the co-director of the CHROME laboratory between 2019 and 2024. His research interests are machine learning, deep learning, game theory, and operations research. He is an associate editor of STATS and Economics Bulletin.

## Bias, Fairness, and AI Explainability

AI models, especially in image recognition, often face challenges with bias and explainability. From a game-theoretic angle, explainability tools reveal whether AI decisions are reliable, even when data are noisy or contain outliers. These tools rarely address group fairness, ensuring that predictions do not unfairly harm specific demographic groups. In noisy image data, models may pick up biased patterns tied to sensitive attributes. Game theory can frame fairness as a strategic balance, but real systems often favor majority groups to optimize accuracy. This raises key concerns about whether explainability can be extended to ensure fair treatment across groups.

*Stéphane Mussard*

## **Nasser RAIS, clinical psychologist, psychotherapist**

Nasser Raïs is a clinical psychologist and psychotherapist specializing in intercultural psychology. Nasser is a psychologist with the RAdEO program at the GARD youth center. This program is dedicated to supporting parents whose children have had direct or indirect involvement with religious radicalization. Nasser Raïs works with middle school students on the topic of secularism, exploring how secularism fits alongside their religion. Nasser Raïs is involved in and leads discussion groups for women and men, mothers and fathers of “young people from neighborhoods” considered “priority areas” in the city of Nîmes. We welcome these young people to Nîmes University, sometimes in small groups with the FEU VERT association, where the university nurtures young minds. Nasser Raïs also works as a psychologist with the Alphe association in Nîmes. The aim of this association is to prevent and raise awareness of bullying in schools. He is also co-founder of the Convergence association in Nîmes, through which he runs discussion groups for women from neighborhoods in collaboration with associations in the eastern and western neighborhoods of the city of Nîmes. Nasser also runs two psychological support services with the LA PLEIADE and AMAOS associations. .

## **Child protection and interculturality: a shared commitment**

Child protection is a fundamental issue that transcends cultural and religious boundaries. In an increasingly intercultural society, it is essential to promote common values while respecting diversity. Secularism, as a fundamental principle of our Republic, plays a crucial role in this context. It guarantees freedom of conscience and allows each individual to live their faith without it interfering with the rights of others, particularly those of children. By ensuring a neutral framework, secularism promotes an environment where all children, regardless of their origin, can flourish without fear of discrimination.

Bullying in schools is a tragic reality that affects many children, often exacerbated by cultural or religious differences. It is imperative that concrete action be taken to eradicate this scourge. This requires educational programs that raise awareness among students about diversity and acceptance of others. Schools must become places of dialogue and respect, where every child feels safe and valued.

At the same time, facilitating discussion groups with women and men from “neighborhoods” is an essential step in strengthening social ties and promoting inclusion. These spaces for exchange give a voice to those who often feel marginalized, allowing them to share experiences and work together to build solutions tailored to each person’s reality. By involving parents and local stakeholders, we can create a protective environment for children, where the values of respect and solidarity are at the heart of interactions.

In short, child protection in an intercultural context requires a comprehensive approach that combines secularism, the fight against harassment, and community engagement. Together, we can build a future where every child, regardless of their background, can grow up in a healthy, respectful, and fulfilling environment..

*Nasser Raïs*



## **Gilbert REVEILLON, C.E.O.**

Gilbert is President of CES GovTech EDGE Europe, judge for the CES Innovation Awards CyberSecurity 2022, 2023, 2024, and 2025, and business angel in the fields of quantum technologies and tokenization.

He is a French advisor for foreign trade and president of the digital economy at the CNCCEF, a Knight of the French National Order of Merit, holds an MBA from HEC Montréal, and is a former associate professor/lecturer at the Institut Mines Telecom. Gilbert also holds a FinTech certificate from Harvard Business School Online.

Since 2022, he has been the organizer of the "CES 2026 Web 3 Tokenization FinTech Cybersecurity AI & Quantum Technologies" Village.

### **Innovation en Biotechnologie & I.A.**

Innovation in Biotechnology & AI highlights the importance of advances in these two interconnected fields. Biotechnology uses biological systems to develop innovative solutions, encompassing genetics, pharmacy, agriculture, and bioremediation. It enables the creation of revolutionary drugs and medical devices, improves practices, and treats environmental pollutants, for example.

On the other hand, artificial intelligence simulates human intelligence through advanced algorithms, providing powerful tools for analyzing complex data. Techniques such as machine learning and natural language processing facilitate the extraction of valuable information, accelerating the discovery of new drugs and medical devices and optimizing practices.

The interconnection between biotechnology and AI paves the way for unprecedented innovations, such as personalized treatments and sustainable methods. Adopting a "global view" means considering trends and challenges on an international scale, promoting collaboration between countries and institutions.

It is also crucial to assess the societal impact of these advances on public health and the environment. In short, this synergy represents a promise of innovation that can transform our future, requiring an integrated approach to maximize its benefits while addressing ethical challenges.

*Gilbert Réveillon*

## Dr. Mingming Zhou, The hospital for special surgery

Dr. Mingming Zhou was born in China and obtained her PhD in Biology from New York University. She earned her undergraduate degrees from New York University, the University of Science and Technology of China (Chinese Academy of Sciences, Beijing), and Henan University (Kaifeng, China). Dr. Zhou served as a researcher and teaching assistant at New York University. She has had an exceptional career, conducting research in prestigious international laboratories, starting with Prof. René Hen at the New York State Psychiatric Institute, followed by work in the laboratory of Dr. Jay Gingrich, and collaborating with Nobel Prize winner Paul Greengard at Rockefeller University for over 15 years. Dr. Zhou then joined the group of associate scientists at the New York Stem Cell Foundation's Parkinson's Disease Research Group. She currently contributes to research activities at The Hospital for Special Surgery in New York.

## From academia to industry: my research in the laboratory of Paul Greengard, Nobel Prize 2000, a past for a future IA

Paul Greengard (1925-2019) was a Nobel Prize-winning neuroscientist, renowned for his research into the signaling of neuromodulators, notably dopamine. His work focused on intracellular signaling pathways and the role of proteins such as DARPP-32 in modulating responses to neuromodulators. In the 1990s, he deepened our understanding of signal transduction cascades and identified new therapeutic targets for Alzheimer's disease and other neurodegenerative disorders. Two major studies from his research focus on serotonin signaling and gene expression in the central nervous system. The first article highlights p11 (S100A10) as essential for serotonin receptor function (5-HT1B) and underlines the role of SMARCA3 as a cofactor in the regulation of gene expression, opening up avenues for the action of antidepressants. The second article introduces the TRAP method, which enables us to specifically profile mRNAs actively translated in the CNS, enriching our understanding of the molecular diversity of brain cells. In Greengard's laboratory, I have studied a major health disorder, attention deficit hyperactivity disorder (ADHD), using mice that overexpress CK1delta (CK1delta OE). These mice show ADHD-like features, such as hyperactivity and attention disorders, revealing abnormalities in frontostriatal circuitry and alterations in glutamatergic and GABAergic transmission. Gene expression analysis showed that CK1delta OE affects transcriptional balance in the striatum, with significant changes in 92 genes associated with ADHD in humans. Currently, I work at the New York Stem Cell Foundation (NYSCF), a non-profit research institute founded in 2005, focused on accelerating treatments for major diseases through stem cell research. NYSCF operates its own research facilities and supports interdisciplinary translational research, including a Good Manufacturing Practice (GMP) facility for manufacturing cells for clinical trials. This Array is the only fully automated robotic technology for creating diverse stem cell lines on a large scale, producing hundreds of standardized, high-quality lines every month. It enables gene editing to investigate the genetic basis of diseases and converts stem cells into the specific cell types affected by these diseases, such as brain, heart and pancreatic cells. Two recent studies have particularly caught my attention: i) the first, by Seah et al (2022), uses patient-derived iPSCs to explore gene-environment interactions in post-traumatic stress disorder (PTSD), highlighting how human neurons respond to stress hormones. ii) The second, by Lauren Schiff et al. (2022), presents an automated platform combining robotic cell culture and deep learning to analyze fibroblasts from Parkinson's patients, highlighting the potential for identifying complex disease signatures for drug discovery. Artificial intelligence (AI) is revolutionizing the study of the nervous system by improving brain imaging, decoding neural signals for brain-computer interfaces and predicting neurological disease diagnoses. It seems to enable early detection of disorders such as Alzheimer's and Parkinson's, while personalizing treatments. AI also plays a role in simulating neural networks and brain regions, accelerating drug discovery and enriching our understanding of cognitive and emotional processes. In turn, advances in neuroscience influence the development of brain-inspired AI architectures, creating a beneficial reciprocal relationship for both fields.

*Mingming Zhou*



## Xiaoxi Zhuang, professeur en neurosciences

The Professor Xiaoxi Zhuang has been graduated from Peking University (Beijing, China) with degrees in biophysics and psychology, where he ranked first in both disciplines. He then obtained a PhD in psychology from Columbia University (New York, USA) and conducted his postdoctoral research at the Center for Neurobiology and Behavior in the laboratory of Prof. René Hen. He uses genetic, biochemical, physiological, pharmacological, and behavioral approaches to understand the role of neuromodulation in neurological and psychiatric disorders. The design of specific genetic manipulations, genetic disease models (mice and flies), behavioral paradigms, and the dissection of the underlying physiological, neural, cellular, and biochemical processes (intermediate variables) involved in apparent behavioral phenotypes has been the central theme of his laboratory for 24 years.

### **Erasing or preventing "bad motor memories" as therapy in Parkinson's disease and parkinsonism"**

Dopamine modulates corticostriatal synaptic plasticity; and these gradual changes in synaptic strengths produce long-lasting changes in behavioral responses. Under normal conditions, these mechanisms enable the selection of the most appropriate responses while inhibiting others. However, under dysregulated dopamine signaling, aberrant corticostriatal synaptic strengths ("bad motor memories") could lead to the selection of maladaptive responses and/or the inhibition of appropriate responses in an experience-dependent and task-specific manner.

I will present evidence of aberrant corticostriatal synaptic strengths in Parkinson's disease and parkinsonism animal models. Published data on human patients will be discussed as well.

Preventing or reversing such aberrant synaptic strengths ("bad memories") could be a therapeutic strategy for Parkinson's disease, parkinsonism, and other neurological and psychiatric disorders. I will present multiple evidence from Parkinson's disease and parkinsonism animal models. I will focus on: 1) Molecular targets in dopamine receptor signaling through the cAMP pathway. 2) Since new protein synthesis is required for memory (good or bad) consolidation, I will also discuss RNA binding proteins and epitranscriptomic mechanisms, as they represent a new frontier with the distinct advantage of rapidly and simultaneously altering the synthesis of many proteins locally in memory consolidation.

*Xiaoxi Zhuang*

## Sofiane Zribi, professeur en psychiatrie

Dr. Sofiane Zribi is a psychiatrist and psychotherapist. Since 2021, he has been working as a hospital practitioner at the EPSM de la Marne. In addition to general psychiatry, he is particularly interested in cross-cultural psychiatry and the impact of social change on mental health. Prior to that, he ran a psychiatric clinic in Tunisia for over 20 years and contributed to university and postgraduate training.

He has held important positions, such as president of the Tunisian Association of Private Psychiatrists and the Francophone Federation of Psychiatric Associations (ALFAPSY). He also co-founded the Tunisian Society for Medical Informatics. Today, with his team, he is exploring how to integrate artificial intelligence (AI) into psychiatric practice.

Dr. Zribi also holds degrees in clinical criminology and psychopharmacology. Recently, he collaborated with the University of Paris Cité on a study on the use of AI in the early detection of psychotic disorders.

### **The Tunisian Revolution and the COVID-19 pandemic: how does stress shape collective behavior?**

My approach analyzes the psychological and social effects of two major shocks in Tunisia: the 2011 revolution and the COVID-19 pandemic. The revolution led to a sudden collapse of symbolic landmarks, causing anxiety, adjustment disorders, and social disorganization. The pandemic, occurring in a context of democratic disillusionment, has accentuated isolation, mistrust, and collective distress. Acute post-revolutionary stress has turned into chronic pandemic stress, altering the neurobiological circuits of social bonding (HHS axis, prefrontal cortex, oxytocin). I would highlight a desynchronization of social interactions and anxiety-inducing emotional contagion. In Tunisia, the health crisis has amplified latent democratic fatigue, leading to an authoritarian retreat perceived as reassuring. The study draws on concepts from psychiatry, social neuroscience, and psychoanalysis. It demonstrates that collective mental health is an important marker of democratic resilience. Finally, widespread emotional exhaustion has led to a collapse of political desire, particularly among young people.

*Sofiane Zribi*