Paris Brain Institute
ICM

Synapse

The newsletter designed to connect with you

No. 33 - June 2023

Special Report

Amyotrophic lateral sclerosis: from Charcot to today

In December 2020, at the age of 46, the entrepreneur Olivier Goy was diagnosed with amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's disease, which is characterized by gradual loss of motor neurons in the brain and spinal cord. Lou Gehrig's disease affects the muscles, speech, and then breathing, severely impacting quality of life.

And yet, despite this crushing diagnosis that dramatically changed his way of living, Olivier Goy decided that his disease would not undermine his determination. He promised himself he would continue to make the most of life. He became involved in producing a documentary on disability, called *Invincible été*, and undertook to support research into neurodegenerative diseases at Paris Brain Institute, thereby demonstrating both his strength and his steadfast dedication to the cause. Although this disease has a poor prognosis, our understanding of it is improving by the day.

As you will discover in this issue, gene therapy now provides a way to treat certain patients with a specific familial form of the disease. Early and personalized treatment could curb its progression and limit irreversible damage. Moreover, the Institute's research teams have shown that peripheral immune cells influence brain inflammation, opening up a promising new avenue for therapy. As you can see, Paris Brain Institute's researchers are continuing to explore this topic with efficiency and determination, set on finding remedies for this disease whose effects are so terribly debilitating.

We need your support now more than ever, to help sustain our research and enable our researchers to continue doing such good work. Paris Brain Institute is, and must remain, a place where knowledge and solutions continuously emerge to conquer neurological and psychiatric diseases.

Maurice Lévy
Founding member of Paris Brain Institute

Learning about the brain

On Saturday, March 18, 2023, excitement was in the air! In honor of Brain Week, an international campaign aiming to raise the general public's awareness of the importance of brain research, the Institute opened its doors for a series of workshops, visits and conferences that attracted over 400 people. As the previous two editions had been virtual, due to the COVID-19 pandemic, the atmosphere this year was particularly warm and family-friendly. Congratulations to our researchers, doctors and students for a job well done!

Two Paris Brain Institute researchers in the spotlight

The European Research Council (ERC) funds exploratory research projects in all areas of science and technology. This year, two Paris Brain Institute researchers were recognized for their excellence: Delphine Oudiette, INSERM researcher, for her project on neurophysiological correlates and cognitive processes during the wake-sleep transition; and Stéphanie Baulac, INSERM research director, for her study on the role of cellular senescence in focal cortical dysplasia (FCD), a malformation of cerebral development leading to drug-resistant epilepsy in children. Congratulations!

Open Brain School is organizing its new "Brain to Market" Summer School program

The international "Brain to Market" Summer School program on neuroscience and entrepreneurship will be held from September 11 to 15, 2023, with a focus on Alzheimer's disease. Over the course of a week, 50 international participants (scientists, business managers, engineers, designers, developers) will attend a series of conferences led by entrepreneurs, scientists and clinicians. They will then work in groups to define a project they will be required to defend before a panel of experts and investors. Together, they will make use of business models and functional prototypes to bring life to various innovative concepts. Information and registration at: https://openbrainschool.com/

SYNAPSE, Paris Brain Institute's newsletter addressed to its donors. No. 33 – 2023. Editorial board: Jean-Louis Da Costa, Marion Doucet, Astrid Crabouillet, Isabelle Rebeix, Marie Simon, Claire Pennelle, Lauriane Gallier, Carole Clément and Aurélie Grosse. Design: Adfinitas. Printer: Imprimerie Jean Bernard. Print run: 115,000 copies.

FONDATION A·C·BERDA

Anne et Claude Berda Foundation: innovating through philanthropy

The Anne et Claude Berda Foundation is a new generation of philanthropic organization with an inspiring entrepreneurial vision that creates value for society. Its goal is to help treat brain diseases by supporting innovative projects in the area of medical research. The Foundation is particularly attentive to research projects that have high potential for social impact and development.

That is why the Anne and Claude Berda Foundation has decided to support Paris Brain Institute's NeurAL (Neuroscience Acceleration Launchpad) program, which aims to assist project owners in developing therapeutic neuroscience products. This one-of-a-kind program in France calls on leading technical and industrial experts to help them minimize risks inherent in their R&D projects and move through the essential steps in the creation of a start-up. By supporting the NeurAL program, the Foundation is affirming its commitment to innovation and helping accelerate the marketing of innovative therapeutic solutions for brain diseases. **More information at: www.acberda.org**

A look back at the France Brain Bee competition

France Brain Bee is a neuroscience competition for high school students. In addition to inspiring careers in neuroscience, the overriding mission of the Brain Bee initiative is to teach students about the brain and its functions and dispel misconceptions about neurological and mental illnesses. On March 25, 2023, 44 high school students took part in this latest edition of the competition at Paris Brain Institute. New features included the launch of a six-month "neuroscience discovery" training program, to prepare candidates for this event, and a scientific conference. This year, **Rania Jerad from Ecole Jeannine Manuel** won the 1st prize and will therefore have the opportunity to participate in the international edition, which will be held in Washington, DC in the United States from August 1 to 5. Good work!

Key figures

IN 2022,
19 **STUDENTS TRAINED AT PARIS BRAIN INSTITUTE EARNED THEIR PHD (THESIS PROGRAM) IN SCIENCE.**

Follow us

seen on the web

Find out more in the "News" section of our website.

- A simple blood test can now diagnose de vivo disease
- Appreciation of humorous scenes is associated with specific electrical activity in the brain
- Multiple sclerosis: a new tool to reduce clinical failure

videos

- Conference from 04/11/2023 on Parkinson's disease
- Science, Art and Culture conference from 03/16/2023: "Humanity and the living world" with Prof Gilles Boeuf, biologist and President of the Center for Studies and Expertise in Biomimicry

agenda

Wednesday, June 21

Global ALS Awareness Day

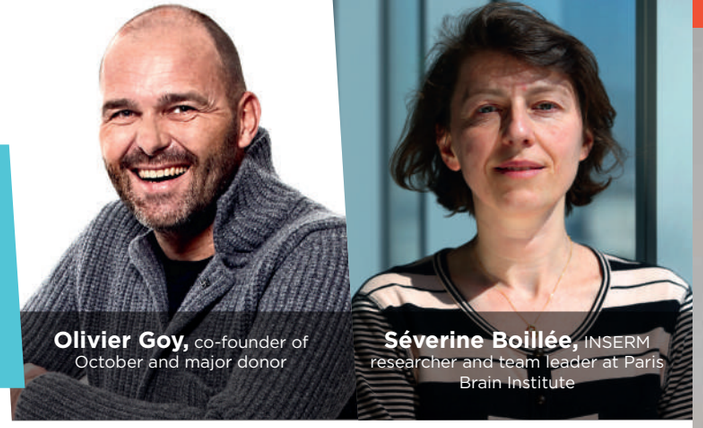
Tuesday, July 4

Conference on sleep: registration required. Please email **cercle@icm-institute.org** or call **+33 (0)1 57 27 40 32**

Thursday, July 6

Circle of Friends cocktail at 6:30 pm at Publicis, 133 avenue des Champs-Elysées, 75008 Paris (stay tuned for invitation and program)

Amyotrophic lateral sclerosis and gene therapy – patients and researchers driven by the same hope!



Olivier Goy, co-founder of October and major donor

Séverine Boillée, INSERM researcher and team leader at Paris Brain Institute

In December 2020, at the age of 46, Olivier Goy, entrepreneur and co-founder of the fintech October, was diagnosed with Lou Gehrig's disease. Determined to step up and fight his disease in the public eye, he began making a documentary film called *Invincible été* in order to tell his story, bring visibility to this disease, and raise money to support the research work carried out by Séverine Boillée's team at Paris Brain Institute.

Can you tell us a bit about *Invincible été*?

O. G. It's a documentary I filmed with 3e Œil Productions; it was directed by Stéphanie Pillonca. The film *Invincible été* – which means "invincible summer" and was inspired by the quote by Albert Camus, "In the midst of winter, I found there was, within me, an invincible summer" – tells my story and the stories of three other disabled people who, despite all their suffering and setbacks, have decided to continue living life to the fullest. All profits from the film, which was released on May 31, and the money raised from selling photos from the shoot will be donated to Paris Brain Institute. This is just one of the initiatives I'm currently working on to raise funds for the Institute. I probably won't benefit from the results of their work, but investing in research and its applications is the only way to give hope to future generations.

> **"Olivier Goy's financial support is extremely valuable for advancing research in the hope that one day, all patients will benefit from treatment. „**
>
> **Séverine Boillée**, team leader at Paris Brain Institute

What therapies currently seem promising?

S. B. For the first time, there's a treatment that's raising many hopes for the 10% of patients who have a genetic form of the disease caused by mutations in the SOD1 gene. This might seem like a very small number, but this is an important breakthrough because it has led to the identification of the mechanism of action responsible for these mutations (accumulation of a toxic protein) and the development of a strategy to block this process. Today, there are high hopes of treating all people with the disease who have genetic mutations responsible for the accumulation of toxic proteins.

Our team has found new mutations in the SOD1 gene enabling a larger number of patients to benefit from this treatment. Some of our research is focusing on the identification of new similar mutations in other patients.

Olivier Goy's financial support is extremely valuable for advancing research in the hope that one day, all patients will benefit from treatment. The space in which our team works was recently named "Espace Invincible été" and for this, we're very honored.

Learn more about the film *Invincible été*
invincible-ete.com

Lou Gehrig's disease: from Charcot to today

In 1869, Jean-Martin Charcot, a neurologist at La Salpêtrière Hospital, described "progressive paralysis and muscular atrophy of the hands, which can extend to the arms, legs, and the muscles of the tongue, pharynx and larynx as the result of spinal cord damage."

What is the current state of research, and what hopes do we have for a cure?

Lou Gehrig's disease (ALS): a complex and highly heterogeneous condition

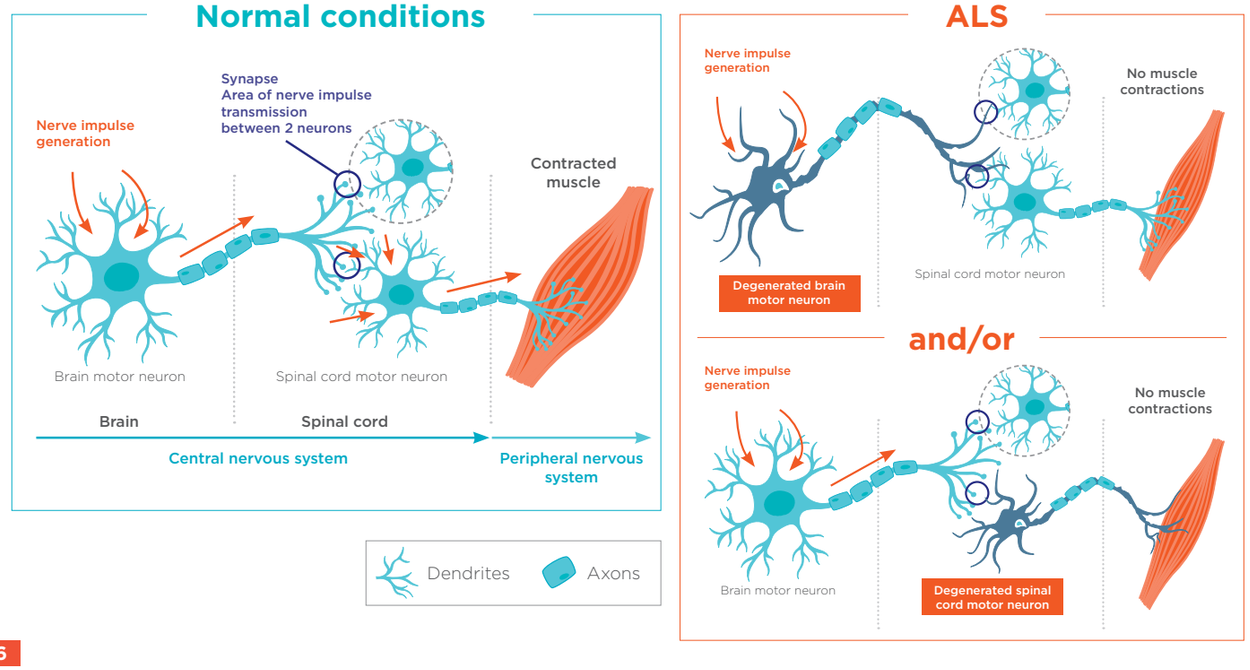
What does the name of this disease tell us?

Sclerosis: the degeneration of motor neurons gives way to fibrous scar tissue.

Lateral: the motor neurons that degenerate are found in the lateral portion of the spinal cord.

Amyotrophic: the muscles no longer receive signals from the motor neurons and therefore no longer contract; they decrease in volume and start to atrophy.

Amyotrophic lateral sclerosis is a progressive neurodegenerative disease characterized by the death of the motor neurons in the brain and spinal cord that control voluntary muscle contractions. The degeneration of these two types of motor neurons interrupts the transmission of information between the brain and muscles; the latter are then no longer solicited and start to atrophy.



LOU GEHRIG'S DISEASE (ALS): KEY FIGURES

500 000
approximate number of ALS cases worldwide

2-5 years
the lifespan of 80% of patients following their diagnosis with ALS

60 years
average age at disease onset

1.5 men for **1** woman

10%
of cases are hereditary

15%
of patients have ALS associated with frontotemporal dementia (FTD)

A high level of variability

Varying causes

In 10% of cases, there is a family history, which means that the disease is hereditary. To date, almost 35 genes have been identified as causative genes in 70% of familial cases. Research is still being undertaken to determine what genes may be responsible for the remaining 30% of familial cases. For each of the causative genes, several mutations have been identified as leading to the onset of the disease. This genetic heterogeneity makes it complicated to investigate the causes of the disease. Moreover, in 90% of "sporadic," i.e. non-hereditary cases, the causes are still unknown.

Varying symptoms

Depending on the location (brain or spinal cord) of the motor neurons affected at the onset of the disease, the initial symptoms are different. In "central" forms, the motor neurons in the brain degenerate, leading to slow movements and muscle stiffness. On the other hand, patients in whom the motor neurons in the spinal cord degenerate tend to present with cramps, abnormal muscle movements at rest, and muscular atrophy.

In most cases, the disease starts in one region of the body and then spreads to the other muscles, which means that patients with a central form may later develop symptoms of the spinal cord form and vice versa.

In 15% of cases, patients experience cognitive and behavioral symptoms associated with degeneration of the motor neurons in the frontal lobe (frontotemporal dementia (FTD)).

Varying progression of the disease

At the most advanced stages of the disease, patients develop respiratory muscle weakness leading to respiratory failure and death, which occurs three to five years after the diagnosis on average. However, some patients can live for almost 15 years after the first symptoms appear.

Varying biological mechanisms

The sclerosis resulting from motor neuron degeneration activates the immune cells. The motor neurons in the brain interact with microglia, the brain's resident immune cells, whereas the motor neurons in the spinal cord are surrounded by both glial cells and macrophages, the circulating immune cells of the peripheral nervous system. These two types of cells are currently known to play a role in inflammation and therefore in the progression of the disease.

"Lou Gehrig's disease is an extremely heterogeneous syndrome in many respects, which is one of the reasons why no curative treatment is currently available for all patients. It is essential to identify profiles of patients characterized by a cause, symptoms, and disease progression, to develop personalized medicine. An effective treatment is currently available for some patients, so there is growing hope."

Dr François Salachas, neurologist and coordinator of the National Reference Center for ALS

Avenues of hope for treating Lou Gehrig's disease

Gene therapy and Lou Gehrig's disease

A major discovery was made at the end of last year thanks to which 1% of patients, with a specific familial form of the disease, can now benefit from effective treatment. In treated patients with an SOD1 gene mutation, the disease stops progressing within two months. This discovery is opening up new avenues for research to curb the disease for all patients.

"For the time being, this treatment is only effective at blocking the production of toxic proteins and thus curbing disease progression for a specific population of patients. Now, the challenge is to use sequencing to identify other patients who could benefit from this treatment, so they may be included in this clinical trial in order to validate the treatment and develop it on a large scale."

Séverine Boillée, INSERM researcher and "ALS Causes and mechanisms of motor neuron degeneration" team leader at Paris Brain Institute

Identifying all patients eligible for gene therapy

Gene therapies have recently been developed for a small percentage of patients who have an SOD1 gene mutation and are affected by a familial form of the disease. This mutation involves the production of a toxic protein that these treatments can moderate, thus keeping the disease from progressing.

Stéphanie Millecamps, at Paris Brain Institute, is seeking to identify other profiles of patients who could benefit from these gene therapies. For this to happen, it will be necessary to identify patients with a mutation in the SOD1 gene and those with other mutations having the same harmful effect, i.e. the production of a toxic protein.

Early and personalized treatment could **curb the disease** and **prolong the lives of patients** by limiting **irreversible damage.**

Addressing inflammation: another source of hope

The spinal cord motor neurons affected in Lou Gehrig's disease are unique in that they are surrounded both by microglia in the spinal cord and by peripheral macrophages in the nerve, which is the part of the motor neuron exiting the spinal cord to connect the muscle to the periphery.

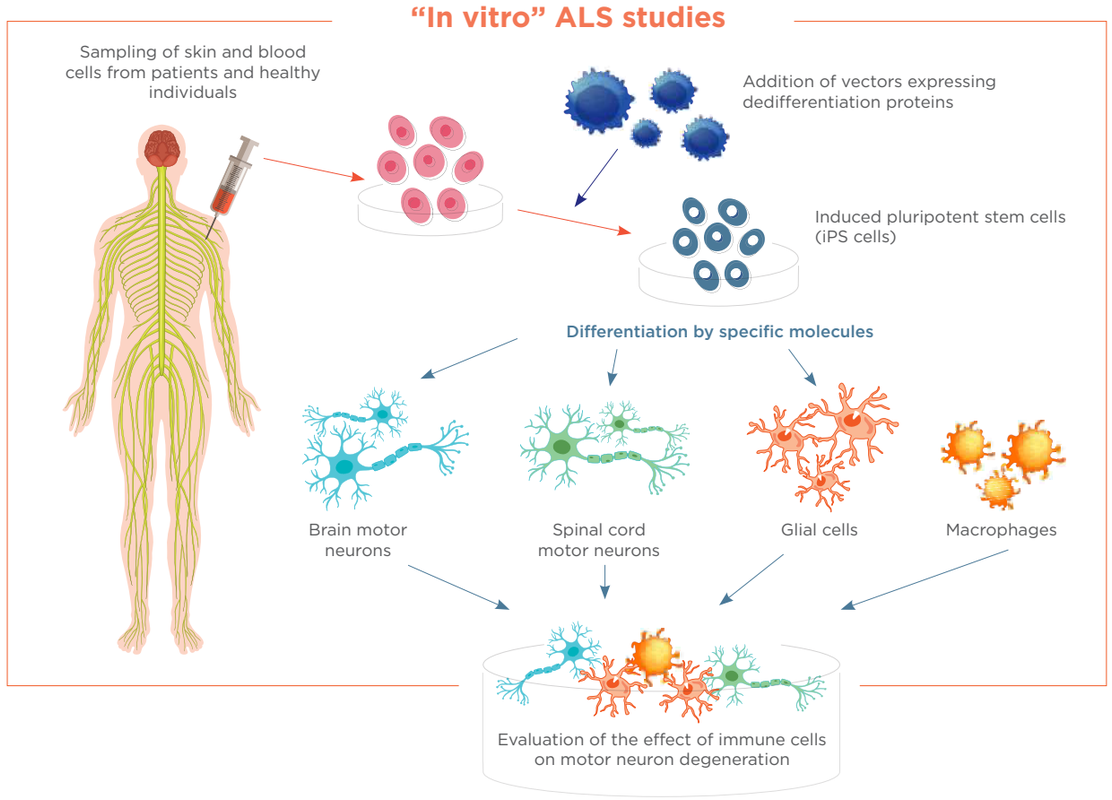
For the first time ever, by carrying out parallel studies in experimental models and in the cells of ALS patients, Séverine Boillée's team recently demonstrated the ability of peripheral macrophages to influence both the responses of microglia in the central nervous system and the degeneration of motor neurons, with a delay in the onset of the disease's symptoms and a significant life-prolonging effect in experimental models.

This is an important breakthrough as it has overcome a major obstacle, i.e. that of delivering drugs to the brain, which is protected by the hard-to-cross blood-brain barrier.

Today, to go even further, the team is working to demonstrate the beneficial effects of circulating macrophages on the disease's progression in humans.

To do so, its researchers are carrying out "in vitro" studies, i.e. studies conducted in a laboratory with human cells:

- with macrophages of patients extracted from blood, comparing them with macrophages of healthy individuals to identify different biological mechanisms that could be targeted by treatments,
- with 3D cell cultures, composed of brain and spinal cord motor neurons as well as microglia and macrophages from iPS cells of patients, to confirm the effects of immune cells on motor neuron degeneration in ALS.



Share your experience

Is cerebral atrophy a disease or a normal process?

Atrophy is a decrease in the volume and mass of an organ. Cerebral atrophy is caused mainly by the degeneration of neurons, leading to the disappearance of their extensions constituting white matter. With aging, the brain can lose up to 10% of its volume; this is a normal physiological process that usually does not cause any severe disorders.

In patients with certain degenerative diseases, however, such as Alzheimer's disease, multiple sclerosis, Lou Gehrig's diseases, etc., cerebral atrophy is more severe and occurs earlier, leading to the onset of symptoms.

What subjects or conditions would you like to read about in future issues of Synapse?

Email us your suggestions. Your subject may be covered in a special report in one of our upcoming issues.

contact@icm-institute.org

A new candidate drug for adrenoleukodystrophy

X-linked adrenoleukodystrophy (X-ALD) is an inherited disorder that affects the white matter of the central nervous system.

It is characterized by the excessive accumulation of very long-chain fatty acids in the body's tissues, including in the brain, spinal cord, and adrenal glands.

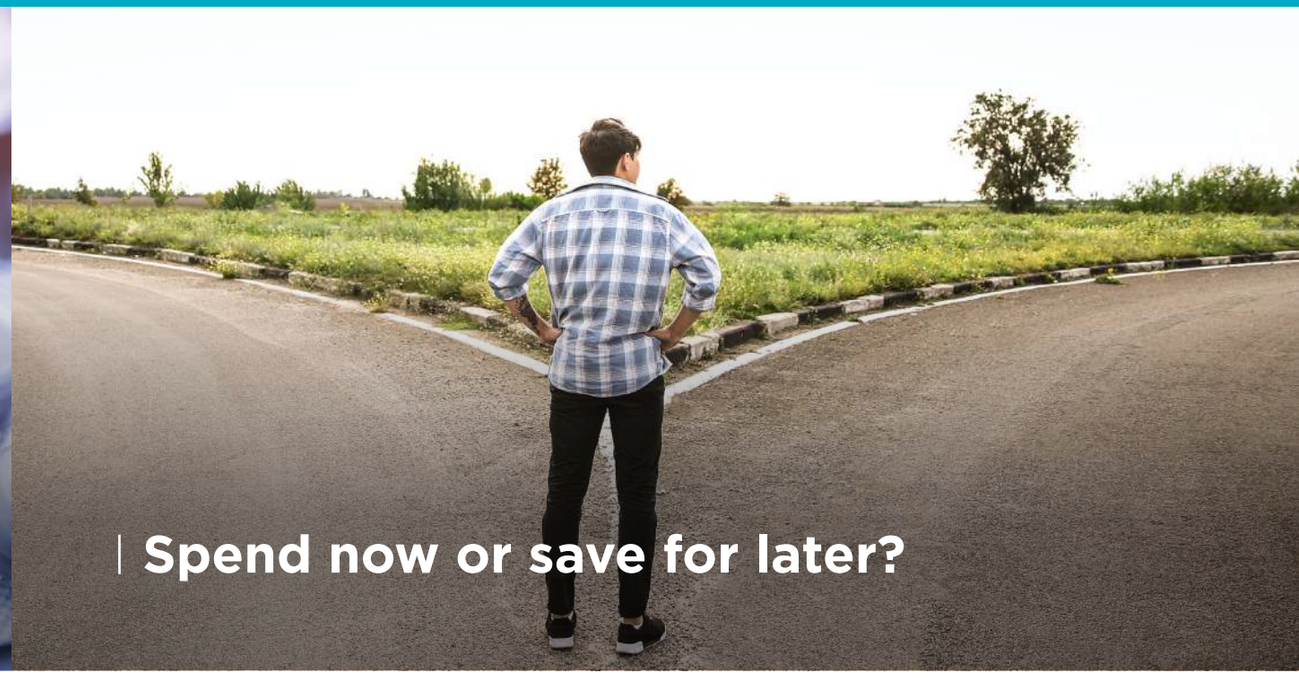
In adulthood, patients also develop spinal cord disease or adrenomyeloneuropathy (AMN) responsible for debilitating chronic symptoms, in particular stiffness with walking and balance difficulties that increase the risk of falls.

The disease is progressive, and since it is caused by a mutation in the X sex chromosome, its most severe forms tend to affect male subjects. It is estimated that one third of boys and over half of men with AMN also develop aggressive brain inflammation, called cerebral adrenoleukodystrophy (cALD), in which the myelin sheath around the neuron extensions is attacked. The flow of nerve impulses is disrupted, leading to rapid cognitive and motor decline whose outcome can be fatal within just a few years.

“ It is estimated that one third of boys and over half of men with AMN also develop aggressive brain inflammation. „

A therapeutic trial coordinated by Prof Fanny Mochel (APHP), a researcher at Paris Brain Institute, showed that a daily dose of leriglitazone helped reduce the progression of some symptoms, such as unsteadiness while standing, and most importantly decreased the risk of developing cALD, i.e. the acute cerebral form associated with premature death. In addition, Prof Mochel's team is now treating 10 or so adult patients with cALD in whom stabilization or even regression of their brain lesions has been observed.

In light of these highly encouraging results, a marketing authorization application for leriglitazone has been submitted to the European Medicines Agency for the treatment of adult male patients with X-linked adrenoleukodystrophy.



Spend now or save for later?

Delay discounting (DD) is a cognitive process that describes an individual's ability to prefer an immediate reward over a larger and later one (for example, €1 now versus €2 in one week).

We all have to make such choices on a regular basis, for example when we decide to buy new shoes today instead of saving up for a nice summer vacation. But are we predisposed to make these choices?

Delay discounting (DD) varies greatly from one individual to the next but remains stable over time for the same person. Earlier studies found that DD was a risk factor for eating disorders (obesity and anorexia), smoking, excessive alcohol use, and drug abuse.

The study conducted by Léonie Koban (CNRS) and Hilke Plasmann (INSEAD), both researchers at Paris Brain Institute, identified a reliable and reproducible predictive brain marker for DD.

In this study, 255 healthy volunteers were invited to choose between smaller sooner rewards and larger later rewards during a functional MRI examination. The researchers also measured the weight and height, percentage fat mass, blood insulin and glucose levels of the study's participants.

The study's results showed that DD could be predicted for an individual based on their functional cerebral activity in various regions of the brain. Moreover, the researchers noted that this marker was related to individual differences in blood insulin and glucose – two metabolic markers – and that it differed between overweight and normal-weight individuals.

“ Delay discounting varies greatly from one individual to the next but remains stable over time for the same person. „

Further studies will be needed to validate this marker as a reliable tool for diagnosing impaired decision-making capacity in various diseases, such as eating disorders, addictions, and neurodegenerative diseases such as Alzheimer's and Parkinson's.

Going further and faster to unlock the mysteries of genetics

Implementing projects that were previously impossible is a daily challenge for Paris Brain Institute's researchers. Saving time without sacrificing accuracy and reliability means speeding up discoveries for the benefit of patients. This is the challenge that the Institute's platforms are taking up, so that each and every researcher has access to the most innovative and effective technologies.

Most neurological diseases have a genetic component. To better understand the mechanisms involved and identify new therapeutic approaches, it is essential to detect abnormalities (mutations) in deoxyribonucleic acid (DNA).

DNA is a biological molecule that makes up chromosomes and carries the genetic information and all the heritable traits of a cell and therefore an individual. Its molecular structure resembles a ladder made up of rungs in which bases called A, T, G and C are assembled.

A sequence of 3.5 billion A, T, G and C bases is specific to each individual and constitutes the genome. The technique used to determine this exact sequence is called sequencing.

In 2023, the acquisition of a next-generation sequencer will triple the sequencing capacity of Paris Brain Institute's iGenSeq platform.

This new instrument will be able to sequence the genomes of 64 healthy individuals and patients, i.e. 26 billion bases within 48 hours with a financial cost reduced by 30%.

Every year, Paris Brain Institute's iGenSeq sequencing-genotyping platform processes over 30,000 DNA samples whose analysis is essential for advancing research.

HOW WILL AI AND MEGADATA REVOLUTIONIZE THE FUTURE OF MEDICAL RESEARCH AND PRACTICE?

On Friday, February 10, 2023, the IHU France alliance (whose members include Paris Brain Institute), the French Council of State and the French data protection authority (CNIL) organized a symposium on artificial intelligence (AI) and megadata. This day-long event brought together doctors, researchers, regulators, manufacturers and policy-makers for three round-table discussions in which they addressed the ethical challenges of using these new tools in medical research and practice and spoke about the prospects they are opening up. These discussions are available for viewing on **the French Council of State's YouTube channel.**

CURE-ND: a European-level program to accelerate scientific discoveries

Paris Brain Institute has teamed up with three European research institutes to implement a common program called CURE-ND. This new alliance in Europe is mobilizing nearly 2,000 researchers interested in understanding the causes of neurodegeneration.

UK Dementia Research Institute in the United Kingdom, Mission Lucidity in Belgium, the German Center for Neurodegenerative Diseases in Germany, and Paris Brain Institute in France have decided to pool their expertise to work as quickly as possible to find ways to prevent, manage and treat neurodegenerative diseases, which constitute a major pressing health concern in today's world.

The aim of this alliance is to promote brain research by catalyzing a strong and united response in Europe to neurodegenerative diseases. Its partners are working to address research challenges at all levels – molecular, cellular, clinical – and improve tools for diagnosing diseases, modulating cerebral activity, alleviating symptoms, and improving the quality of care.

Paris Brain Institute is convinced that strengthening European scientific networks will lead to the production of results that are in line with these ambitions and will facilitate the marketing of innovative products in Europe. This alliance will help raise awareness in institutions of the growing burden that neurodegenerative diseases represent for our societies.

What do they share?

Data and results from research, clinical protocols, cell lines, brain tissue cultures, databases, and good research practices.

When do they meet?

At conferences, seminars and workshops, and as part of working groups, internships and exchange programs.

Frédéric Banzet, age 64, major donor and member of the Committee of Friends since January 2023

Frédéric Banzet: portrait of a new committed member of the Committee of Friends

Frédéric Banzet, who is part of the Peugeot family, was previously a member of PSA's Executive Committee and served as CEO of Citroën. In 2022, he was appointed President of Etablissements Peugeot Frères, the holding company of the Peugeot family group and historically the second-largest shareholder of Stellantis.

How did you learn about the Institute and what motivated you to join the Committee of Friends?

F. B. I first met Jean Todt when he was running Peugeot Talbot Sport. I saw him again several years later when he was FIA President and I was CEO of Citroën. He told me about Paris Brain Institute and its unique entrepreneurial model that combined the strengths of the public sphere with the agility of the private sector. At the same time, my father, who was a surgeon and knew Prof Saillant, had mentioned his initiative that was going to lead to the creation of the Institute. I was therefore interested from the outset and became a donor. The excellence of the project and the group of founders was evident. Subsequent events showed it was worth the investment.

Today I'm stepping up my commitment because urgent action is required. Although treatments are available for many forms of cancer, and although most of our limbs can be repaired, nothing can yet cure brain diseases, which are the Cause of the 21st century!

I've also come to a point in my life where I have both the time and the motivation to make a difference. I want to have an impact, especially by calling on my network. I'm convinced that by joining forces, we can achieve something big. We must act as a group, which is the only way forward. The project and its objectives are all that matter. This cause is Paris Brain Institute's trademark and has driven its success.

What parallels do you draw between the Peugeot entrepreneurial adventure and Paris Brain Institute?

F. B. The whole purpose of our family group is to develop our common good over a long period of time, across generations, and bring meaning to our work, through the investments we make and through the support we provide to responsible companies in the face of societal challenges and to non-profit *organizations*. Clearly, neuroscience research is also a long-term undertaking, but it's inspiring to be able to indirectly contribute to speeding up new discoveries.

What are your hopes for neuroscience research?

F. B. First of all, I hope that Paris Brain Institute will continue to uphold its singular model that combines appetite for risk, a total focus on the patient, and an efficient, agile and intelligent governance and financing model. Next, I share the hopes of researchers and doctors – broadly, that the Institute will make more and more breakthrough discoveries; and more specifically, that personalized neurology and psychiatry will be developed. It is necessary to individualize treatments, which means understanding the root causes of diseases with a view to preventing and curing them. When I visited the Institute, I got the sense that a real commitment to excellence was combined with a great deal of humility. I'm persuaded that Paris Brain Institute will be the home of the next big discoveries in neuroscience.

Inauguration of "Espace Invincible été"

On March 30, 2023, Paris Brain Institute inaugurated the "Espace Invincible été" space in its laboratories, to acknowledge the support and exceptional efforts of Olivier Goy, co-founder of the fintech October and major donor for the Institute.

"Olivier Goy inspires a tremendous amount of hope and has taught us an extraordinary lesson. He embodies what it means to be in service of others" affirmed Professor Gérard Saillant, President of Paris Brain Institute, during the plaque unveiling ceremony in the presence of Mr Goy, surrounded by his wife, family and friends, Professor Alexis Brice, Executive Director, and Séverine Boillée, "ALS Causes and mechanisms of motor neuron degeneration" team leader.

According to Séverine Boillée, *"all this outpouring of generosity that is the result of Olivier Goy's commitment gives us great hope and is incredibly encouraging for our researchers. In my opinion, this plaque we are inaugurating is a strong symbol for our team, of which Olivier is now an integral part."*

Refer to P. 4 of this issue of Synapse to read the interview with Olivier Goy in which he describes its commitment to supporting Paris Brain Institute.

YOUR CONTACT
at the Circle of Friends Office

Ms Shannon Bragg
+33 (0)1 57 27 40 32
cercle@icm-institute.org

F.A.Q.

I run a company and I'd like to use my business assets to provide Paris Brain Institute with resources. What options do I have?

A manager of a company can absolutely use their business assets for philanthropic purposes. As a public utility foundation, Paris Brain Institute can benefit from two forms of support. You can transfer a right to dividends through a temporary donation of usufruct or donate part of the value of your company by giving full ownership of some of your securities. These operations make particular sense if you are planning to sell your company. Before the sale, the Institute will benefit from the dividends. Once the company has been sold, it will directly receive capital gains from the sale of securities. As part of a sale, the timeline of operations is essential. Feel free to get in touch with the Circle of Friends Office.

One of my relatives recently passed away. I'd like to make a donation in his honor.
Can you put his name on the Donors' Wall instead of mine?

Absolutely. Inclusion on the Donors' Wall is a form of recognition for all of Paris Brain Institute's major donors. You are free to provide us with the name you would like to display, whether it is yours, that of your family, or that of a loved one. Donating in memory is a special way to create a lasting tribute to someone while providing researchers with the support they need to fight nervous system diseases.

Cercle des Amis
de l'Institut du Cerveau

Together, let's push back the limits of neuroscience and **invent tomorrow's medicine.**

Paris Brain Institute's Circle of Friends groups together exceptional women and men who wish to help research push back the limits of neuroscience through their financial and human commitment and around shared values, including: generosity, efficiency and innovation for the benefit of Humankind.

Our Circle intends to grow. This is why we invite you to join our Circle, YOUR Circle, where we create a privileged link with doctors-researchers, startups created in the Institute, and its dedicated, committed members. Tomorrow's medicine is being created today, for you and through you. ***Thank you!***

Martine ASSOULINE and **Maurice LÉVY**
Co-Chairs of the Friends of Paris Brain Institute Committee

Invest intelligently in the future against nervous system diseases.

75% of your donation is deductible from solidarity tax on wealth.
66% of your donation is deductible from income tax.

Circle of Friends Office: +33 (0)1 57 27 40 32 - cercle@icm-institute.org

DONATION FORM

Please make your check payable to Institut du Cerveau and send it to us along with this form to the Institut du Cerveau
Hôpital Pitié-Salpêtrière – CS 21414 75646 Paris Cedex 13 – France

Paris Brain Institute

☑ **Yes, I would like to help Paris Brain Institute researchers go forward in their research into brain and spinal cord diseases.**

I'd like to donate: ..... **€**
(amount at my discretion)

☐ **Mrs** ☐ **Mr** ☐ **Mr and Mrs**

Last name: ..... **First name:** .....

Address: .....

Postcode: ..... **City:** .....

Email: ..... @ .....

☐ **I would like to receive free information on bequests and donations.**

Would you like to donate on behalf of your company?

Please specify company name and company registration number (SIREN in France): .....

Paris Brain Institute Foundation complies with the rules of ethics of the "Comité de la Charte du don en Confiance" (Donating with Trust Charter Committee).

GDO62