

# ANNUAL REPORT 2023



Giving  
blood  
*the power*  
to heal

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President of EFS

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**WE ARE CLOSE TO  
10,000 PROFESSIONALS  
WITH MANY DIFFERENT EXPERTISE  
DRIVEN BY THE SAME BELIEF:  
OUR MISSION IS VITAL.**

**Every day we take action and commit to  
give blood the power to heal.**

Every day we guarantee national blood product reserves by organising blood drives across France.

Every day we prepare the human tissues and cells needed for transplants.

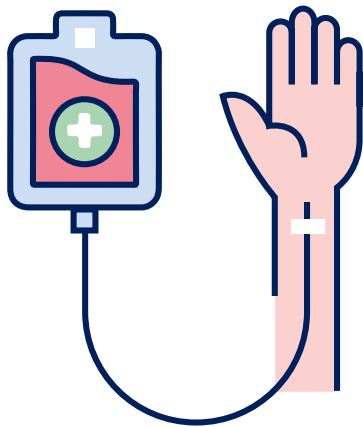
Every day we provide diagnostic tests for patients and their medical teams.

Every day we drive science forward thanks to our commitment to research.

And every day we contribute to the operation and reputation of the French health care system with passion and professional ethics in equal measure.

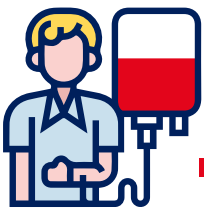
**Giving  
blood  
*the power*  
to heal**

# EFS IN 2023



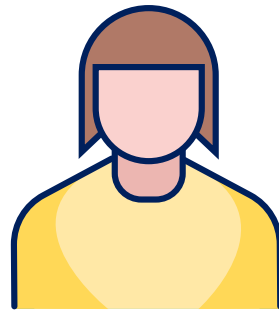
**2,678,054  
DONATIONS**

were given by  
**1,571,605** donors



**-4.5%**

red blood cells issued to  
health care establishments  
compared to 2022



**+67.9%**

new plasma donors

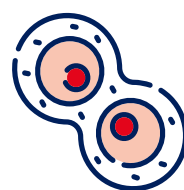
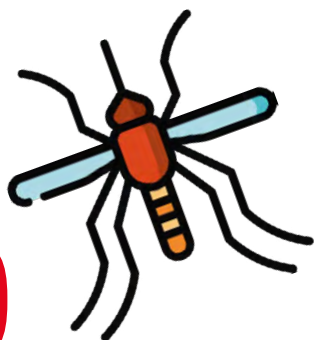
**827,631  
LITRES**



of plasma (+5.6% compared  
to 2022) were issued to the  
LFB (French Fractionation  
and Biotechnologies  
Laboratory)

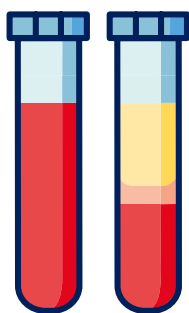
**185,180**

tests carried out to screen for the West Nile virus **compared to 52,000 in 2022**



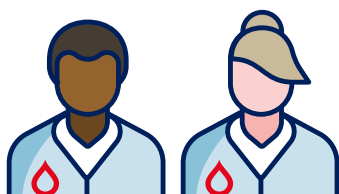
**28**

active  
Advanced  
Therapy  
Medicinal  
Products  
projects



**54.5 MILLION  
LABORATORY  
TESTS**

carried out in 2023 in our medical biology and blood screening laboratories



**758**

new colleagues hired on permanent contracts

Interview

with Frédéric Pacoud

PRESIDENT OF EFS

## “Strengthening our ability to plan and write the future of EFS”

**You were appointed head of EFS on 6 December 2023. What do you feel are the Establishment’s key strengths?**

**Frédéric Pacoud:** First and foremost, I would like to point out that EFS is the biggest national public establishment in the health care sector and fulfils essential missions in our health care system. This vital role gives us major responsibilities across France.

Our primary mission is to guarantee self-sufficiency in labile blood products (LBP) so that all patients can be treated. Thanks to the commitment and expertise of our teams, we have always managed to do this without ever compromising our safety requirements, even during difficult periods. We are also the guarantors of the ethical framework for blood donation, which France has upheld since the post-war period. Ours is a solid, tried and tested method that is even inspiring the future European regulation as we speak.

EFS has fulfilled this twofold mission by constantly transforming itself. To organise its blood drives, recruit and improve donor retention. To build a single establishment. To continue to improve the service offered to patients. To remain at the cutting edge of technological and medical innovation. EFS is in direct contact with society and therefore has to change with it – that’s a requirement. The changes we will make in the years to come are enshrined in this ongoing legacy of transformation.

**In 2023, self-sufficiency was guaranteed without an emergency appeal for donations. But blood drives nevertheless had to be cancelled and pressure on blood reserves re-emerged at the end of the year. What is your view on this alleviated albeit fragile situation?**

**F.P.:** Although self-sufficiency was guaranteed in 2023, as it is every year, it was due to the fact that fewer labile blood products were issued to health care establishments. This is not a situation we can deem satisfactory, as it infers



an ongoing decline in blood drive productivity, a scenario that is not only economically unsustainable but may well also demotivate teams.

As highlighted by the IGAS and IGF<sup>1</sup> audit, we lack visibility when it comes to the changing needs of the health care system. We therefore need to develop a better long-term vision of the needs of health care establishments. This requires us to work on data with DGOS<sup>2</sup>, ARS<sup>3</sup> and hospitals.

Last but not least, our self-sufficiency objective is becoming increasingly qualitative in order to provide each patient with the blood product best suited to their situation. However, this objective is more difficult to achieve with depleting reserves. Which is why, in spring 2023, we had to launch an appeal to group O donors. But this targeted approach, made feasible thanks to our marketing tools, also complicated our blood drives. It's down to us to conduct an in-depth analysis of our blood drives in order to reinvent the wheel for the future in a bid to satisfy the dual requirement of transfusion safety and blood group compatibility taking rare blood types into account.

**This “alleviated” situation in the collection of whole blood has benefited plasma donation in particular...**

**F.P.:** We have stabilised our plasma collection targets, which is good news for the teams, who have seen their efforts rewarded. In 2023, we succeeded in mobilising almost 68% more plasma donors than in 2022. This target was achieved thanks to the resources rolled out to raise awareness of plasma donation among the general public, and to two communication campaigns in particular, one of which was a large-scale autumn campaign.

In addition, a 100% plasma donation collection centre has opened its doors in Hazebrouck, in Northern France. Finally, thanks to the decree that now authorises remote medical assistance for apheresis donations, we can gradually roll out the same approach for plasma donations as for whole blood collection. This modernisation project, which has regional support, will allow us to help strengthen national sovereignty given the rising demand for plasma-derived medicines. However, while EFS intends to play its part in this scale-up, it will not be able to go any further unless the objectives and resources of the French plasma value chain are agreed with the French government. Plasma

is a development objective in which we must be able to invest in order to meet patients' needs by working with the LFB<sup>4</sup> in particular to structure the plasma value chain.

**In 2023, the European institutions agreed on the future Regulation for Substances of Human Origin (SoHO). How does this constitute a step forward for donors and patients? Is it in recognition of our ethical model?**

**F.P.:** This legislation, which reaffirms in particular the principle of voluntary, unpaid donation as well as the health safety requirements for donors and patients, bears witness to the recognition of the ethical model. The Commission's initial draft already included these principles which have been reinforced by the European Parliament. In addition to promoting our ethical model at European level, this regulation provides an ideal opportunity to harmonise standards on a European scale and afford greater protection for donors and patients alike. It is a resounding victory for the health and safety of all Europeans.

**“Plasma is a development objective in which we must be able to invest in order to meet patients' needs.”**

**As a major stakeholder in the medicine of tomorrow, EFS has invested in research and bioproduction. Why is this commitment crucial for our health sovereignty?**

**F.P.:** Historically, research has gone from strength to strength at EFS thanks to our knowledge of blood cells, which is directly linked to our missions within the health care system. Our initial objective was to improve the therapeutic management of transfused patients and promote health safety. It is part and parcel of an entire ecosystem involving universities and research bodies, INSERM (French National Institute of Health and Medical Research)



Frédéric Pacoud,  
on a visit to the  
Lille *Maison du don*  
on 20 December 2023

“We must continue to transform our establishment to improve the service to patients, remain at the cutting edge of innovation, organise our blood drives and recruit donors in a society that has profoundly changed.”

and the CNRS (French National Centre for Scientific Research). This has enabled us to study cell medicine and develop Advanced Therapy Medicinal Products for regenerative medicine and immunotherapy.

95% of these “ATMPs” are currently produced abroad at very high cost. For EFS, the health sovereignty challenge is therefore twofold. As a pillar of this system, it is only natural that EFS is keen to help produce the medicines of tomorrow at a cost that is sustainable for our health model. But it is also a matter of developing the capacity for innovation both in France and in Europe as a whole.

In light of the health crisis and related shortages, this capacity for innovation is therefore a strategic issue.

**At the end of 2023, the French government decided to make a long-term commitment to invest €100 million in EFS. Enshrined in the French Social Security Financing Act (LFSS), the amount will be redefined each year. Why is this good news for EFS? How does it have a crucial impact on its economic model?**

**F.P.:** This long-term funding is good news on three counts. It once again confirms the clear support



of the French government for EFS. It will allow us to break even this year. And it enables EFS to imagine its future. With 10% of resources now coming from this French Health Insurance grant, our economic model is taking on a mixed guise. It clearly reflects the drop in labile blood product transfers which has financed all EFS activities up to this point. This major change is not an end in itself but heralds a new beginning to transform and modernise EFS in depth. This is all the more important given the French government's greater involvement in steering EFS. Further input is expected throughout 2024, particularly with regard to plasma, with the French government setting a collection objective backed by further investment. This is essential in order to open new blood donation centres and recruit new donors.

**Since your appointment, you have focused on the challenges facing the Establishment in the years ahead. What are these challenges and what are your priorities for 2024?**

**F.P.:** The key word in every challenge facing us is transformation. Starting with the transformation of our blood drives, which need to adapt in line with social change and become part of a more urbanised society. We will do this by focusing on structure and size, but also by looking at ways of recruiting and retaining donors.

Our second challenge is to relaunch sustained social dialogue to drive our organisational changes and enhance our appeal. Because the shortage of health sector resources is here to stay for some time to come. We need to re-examine our collective bargaining agreement, review classifications, set out attractive career pathways and invest in our training policy. This will allow us to undertake genuine forward-looking management of jobs and skills.

In addition to these challenges, we need to secure and modernise our digital tools, starting with the creation of a single department to manage our information systems. We also need to review our investment policy with particular focus on a multi-year property master plan. From this summer onwards, we will also be adapting our organisation in the run-up to the Olympic and Paralympic Games in Paris, with transfusion safety and auto-sufficiency to meet the requirements of such a major event. To overcome all of these transformational

challenges, the Establishment must pursue a multi-year trajectory with the OPC<sup>5</sup> embodying the contractual agreement with the government. The latest contract was imperilled by the health crisis and our subsequent financial crisis. We now need to strengthen the ability of EFS to plan and write its future.

**“We have sound fundamental principles and our ethical, civic and human values guide our actions. We can be proud of our expertise and commitment.”**

**To conclude, what would you like to say to the employees and partners of EFS?**

**F.P.:** I would like them all to have confidence in the future. We have sound fundamental principles and our ethical, civic and human values guide our actions. We provide a public service that is essential to the health care system, and we contribute to health democracy at the very heart of the regions. We can be proud of our expertise and commitment. However, I would also like EFS employees and all our partners to be aware of what society expects from us. We must be mindful of the need to join forces and continue to modernise EFS on all fronts in order to meet those expectations.

- 1 - Audit carried out in the spring of 2023 by the inspection office for health, social security, social cohesion, employment and labour policies and organisations (IGAS) and the Inspectorate-General of Finance (IGF) on the EFS economic model and the blood and plasma value chain
- 2 - DGOS: *Direction générale de l'offre de soins* (General Directorate for Health Care Services)
- 3 - ARS: *Agences régionales de santé* (French Regional Health Authorities)
- 4 - LFB: *Laboratoire français du Fractionnement et des Biotechnologies* (French Fractionation and Biotechnology Laboratory)
- 5 - OPC: Objectives and Performance Contract

## Article

# Dr Grégory Emery

DIRECTOR GENERAL FOR HEALTH

**2023** proved to be a challenging year for the French Blood Establishment. Faced with changes affecting its activities, EFS has had to cope with cyclical and structural difficulties impacting its organisation and budget forecasts. These changes in society and medicine are not unique and are leaving their mark on all health and transfusion systems across Europe.

We therefore faced a collective challenge to reinvent a sustainable and resilient economic model for the Establishment without compromising the major principles that underpin the specific features of the French transfusion model.

It is thus a source of great pride to have witnessed the biggest reform this year since the creation of EFS, as set out in the French Social Security Financing Act for 2024. Whilst this reform retains the principle of using the sale of labile blood products to fund most activities, it also includes long-term

Health Insurance funding and sets out the principle for redefining issuing tariffs that are directly linked to costs. Its primary objective is to breathe new life into the Establishment and rekindle a virtuous cycle of investment and security.

**“2023 proved to be a challenging year for the French Blood Establishment.”**

2023 reminded us of the challenge to consider plasma and blood product collections in general in a fast-paced world where it is sometimes difficult to incorporate the act of giving into our busy daily routines. The Establishment therefore has to constantly adapt in line with its donors. Once again in 2023, EFS was able to safeguard its self-sufficiency and sovereignty in terms of transfusion and plasma for fractionation, respectively. Given the growing demand for plasma-derived medicinal products, we all need to take action and pull together to donate and give more.

EFS is adopting an innovative approach to the major challenges facing the medicine of tomorrow by developing its biotherapy activities. 2023 was also marked by preparations for a very busy year ahead with the Paris 2024 Olympic and Paralympic Games on the horizon. EFS is adopting an exemplary approach to the major changes taking place in our ecosystems and is at the forefront when it comes to managing arboviruses and other emerging diseases.

It would not be possible to meet all of these challenges without the exemplary and ongoing commitment of the EFS staff, to whom I am extremely grateful.

The General Directorate for Health and the French government support EFS and are taking action to deal with all of these challenges.



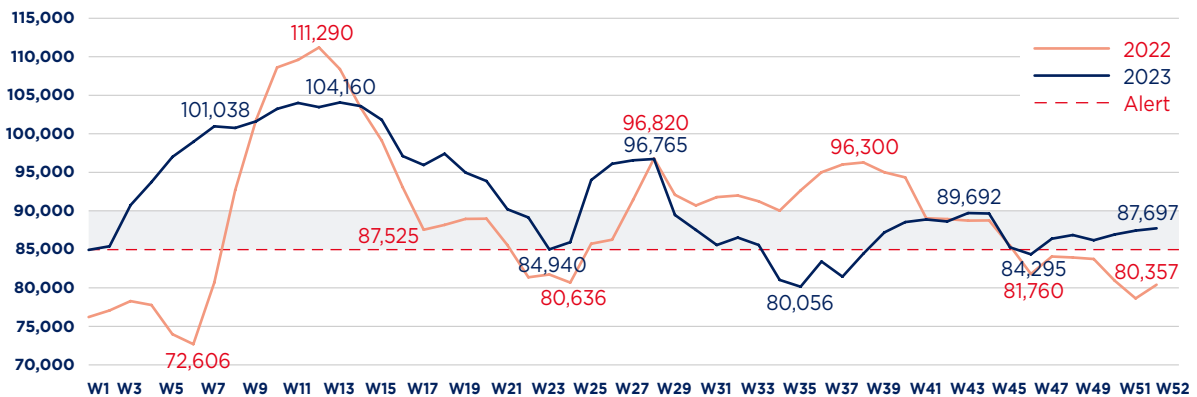
**MOBILISED  
FOR  
THE PUBLIC BLOOD SERVICE**

Mobilised...

# FOR BALANCED BLOOD RESERVES TO TREAT PATIENTS

In 2023, with fewer blood products being issued to health care establishments and thanks to the mobilisation of the teams, donors and volunteers, blood reserves were maintained at a sufficient level to meet requirements without the need for emergency appeals. Self-sufficiency in red blood cell concentrates (RBCs) was accompanied by the achievement of a healthy balance between blood groups.

COMPARISON OF STOCK CURVES FOR RED BLOOD CELL CONCENTRATES: 2023 VS. 2022



Donors responded well to awareness campaigns and we experienced fewer human resources problems in 2023. Remote medical assistance (RMA), which has now been rolled out across France, has enabled us to continue most of our blood drives. Furthermore, issuing to health establishments has dropped", explains Hervé Meinrad, Director of Collection and Production at EFS.

## AN ALLEVIATED SITUATION

This trend started to take hold just a few days into the New Year with growth driven by the positive impact of the Christmas 2022 appeal for donations. "Our reserves stayed at around 100,000 bags until March." And although reserve levels then fell gradually to 85,000 bags due to the Easter holidays and May bank holidays, "our reserves increased again from June onwards due to World Blood Donor Day, which was very successful. This allowed us to go into the summer period with almost 100,000 bags in reserve." And despite the fairly conventional end-of-summer dip, the autumn of 2023 was slightly better than that of 2022. Reserves held steady at 85,000 to 90,000 bags in November. Conversely, we ended the year with a strain on reserves during the festive season, which is always tricky.

## A LOWER ALERT LEVEL DUE TO THE DROP IN ISSUING

Moreover, the threshold at which self-sufficiency could be compromised was lowered from 90,000 to 85,000 RBCs in 2023. "Every week we used to issue on average 45,000 bags of RBCs to health care establishments. We therefore needed 90,000 to have a two-week safety net. We are currently issuing fewer bags, so this threshold has automatically been lowered to approximately 85,000 bags. But this global situation may mask pressure in certain regions or in certain blood groups."

## MORE TARGETED COORDINATION OF RESERVES

A more targeted approach towards blood donors has made it possible to strike a very good balance between blood groups. From the end of April onwards, given the shortage of O- blood products, EFS decided to launch an appeal to target precisely those donors. Although few in number (6% of the population), they are extremely valuable because their red blood cells, which are compatible with all blood groups, can be used for all patients in an emergency situation. "This has led us to adopt a different way of working and to target certain donors more closely to avoid oversupply in some groups and insufficiency in others," concludes Hervé Meinrad.



## **Remote medical assistance (RMA) operational in blood drives across the country**

It is now accepted that a doctor does not need to physically attend a blood drive provided that they can be called upon to give medical advice or help treat a patient who is feeling unwell but is not showing any serious symptoms. Three years ago, EFS began rolling out the RMA solution for whole blood drives across France. This roll-out was completed successfully in 2023. More than one-third of mobile blood drives were held using RMA and approximately one in three donors attended the 11,380 RMA blood drives held that year. Safety levels were commensurate with those of conventional blood drives with just over a 2% occurrence of adverse events. This activity mobilised 270 supervisory nurses and 60 RMA doctors duly trained and authorised to work in this way. Building on this success, EFS will extend the approach to apheresis collection from the spring of 2024 onwards. The decree on staff qualification, required for this extension of RMA to apheresis, was enacted in 2023 and is a major asset in promoting plasma collection (see page 12).



Valenciennes Maison du don

## **NEW DONATION CENTRES TO BETTER WELCOME DONORS**

Increasing blood collection facilities and attracting more donors by being more accessible and more appealing – this is the twofold objective behind the new *Maison du don* donation centres opened every year by EFS in a bid to ensure self-sufficiency. This approach was adopted for the Valenciennes centre which was opened in the city centre in March 2023. Around 15,000 donations will be collected every year at this centre, i.e. 10% more than at the previous premises. This also applies to Charleville-Mézières, which re-opened its doors in October after undergoing renovation, and to the Hazebrouck facility dedicated to plasma donation (see page 13).



**2,678,054 DONATIONS IN 2023**

Mobilised...

# FOR PLASMA COLLECTION, COMBINING ETHICS, PUBLIC HEALTH AND HEALTH SOVEREIGNTY

WITH AN EVER-GROWING NEED FOR PLASMA-DERIVED MEDICINAL PRODUCTS, FRANCE MUST NOW RESPOND TO THIS PUBLIC HEALTH AND NATIONAL SOVEREIGNTY CHALLENGE. THANKS TO THE EFFORTS MADE IN 2023, EFS SUCCEEDED IN MOBILISING ALMOST 50,000 NEW PLASMA DONORS, I.E. AN INCREASE OF 67.9% COMPARED TO 2022.



**P**atients with immune deficiencies, haemophiliacs and patients presenting inflammatory diseases, neuropathies or tetanus are all likely to be treated with plasma-derived medicines in order to survive or enjoy a better quality of life. And the numbers are rising.

## A THREEFOLD CHALLENGE

*“With medical advances and an ageing population, the worldwide demand for plasma-derived medicinal products is increasing by approximately 7% each year,”* warns Cathy Bliem, EFS Managing Director of the Blood Transfusion Chain, Therapeutic Activities and Development in 2023. Two in three patients being treated in France currently receive medicinal products imported from the US. *“This dependency weakens us both economically and from a health perspective,*

*and contravenes the French ethical model. In the US, “plasma donors” are paid and can donate their plasma up to 104 times a year compared to 24 times in France. This may put their health at risk.”*

## EFS STEPPING INTO ACTION

To offset this situation, the LFB<sup>1</sup> is preparing to produce more plasma-derived medicinal products at its Arras plant with some units scheduled to be operational by the end of 2024. EFS has already taken action this year to recruit and retain new donors in order to meet this need. New communication campaigns have been launched alongside awareness-raising initiatives for EFS teams in a bid for staff to gain a clearer understanding of the importance of plasma and help them motivate donors. *“As for our collection facilities, we estimate that we will need to open, relocate or expand around twenty plasma-specific or combined sites over the next five years if the government sets us the target of delivering 1.4 million litres compared to today’s figure of 815,000.”* Adapting in line with needs is also in the pipeline. A 100% plasma pilot site and two new mixed donation centres opened in 2023, with three more to follow in 2024. Finally, in 2024, EFS is preparing to extend RMA to apheresis plasma collections (see opposite).

## A RETURN TO GROWTH FROM 2023 ONWARDS

These adjustments began to bear fruit in 2023, with continued growth in terms of collections. *“We started the year with 5,000 to 5,500 weekly plasma donations compared to 3,000 in 2022, and ended the year with 6,500 to 7,000, regularly exceeding this ceiling along the way,”* explains Hervé Meinrad, EFS Director of Collection and Production. The number of donors *per se* has increased by 31% and the number of first-time donors is up 64%.

1 - LFB: Laboratoire français du Fractionnement et des Biotechnologies (French Fractionation and Biotechnology Laboratory)

## A DECREE PAVES THE WAY FOR RMA IN APHERESIS

Previously limited to whole blood donations, remote medical assistance (RMA) for blood drives can now be applied to apheresis and therefore plasma donations. This had to be authorised by the French Public Health Code and ultimately materialised with the decree on 3 November 2023 relating to the qualification of certain EFS staff members. Submitted to the EFS social partners at the end of November, RMA will be gradually rolled out for apheresis between 2024 and 2025. This is a major asset in ensuring that plasma can be collected safely without a doctor in attendance at the donor collection centre.



## TWO HIGH-IMPACT CAMPAIGNS TO BOOST PLASMA DONATIONS

Raising awareness in France of the importance of plasma and encouraging people to donate – this is the twofold target behind the specific campaigns rolled out by EFS in 2023. The first of these was announced on the website and across social networks in July while the second campaign was broadcast on all major television channels in October. These campaigns achieved their goal, alternating between testimonials from patients and donors alike. A 20% rise in appointments was noted up to mid-August and over the autumn school holiday period, culminating in over 7,000 plasma donations per week and a 10% increase in website traffic.

**+67.9%**  
**NEW PLASMA**  
**DONORS IN 2023**



**827,631 LITRES**  
**OF PLASMA FOR**  
**FRACTIONATION**



## A pilot site at Hazebrouck for 100% plasma collection

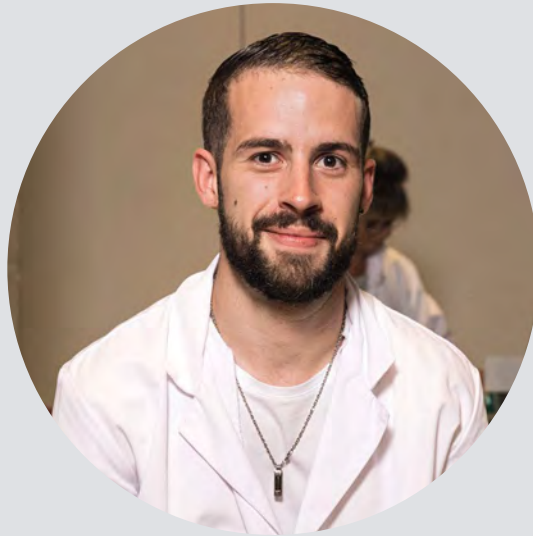
EFS decided to take action on several fronts in order to step up plasma collection. In June 2023, EFS opened a pilot donation centre in Hazebrouck, a high-potential area, right in the heart of Flanders. The aim was to test the efficacy of dedicated sites. The level of generosity amongst this large, young population is the highest in the region, which should guarantee the eight donor armchairs a continuous supply of plasma in a bid to receive over 7,000 plasma donations per annum between now and 2025.

“I developed leukaemia at the age of 10 and have been living with a chronic immune deficiency ever since. Every three weeks I go to hospital for infusions of plasma-derived medicines. This allows me to live a normal life and to continue my studies. Anyone can need plasma, at any time and at any age.”

*Circé*  
PATIENT

## THE PEOPLE BEHIND EFS

# INTERVIEW



*Julian Leroux*

BLOOD COLLECTION NURSE IN IVRY  
(EFS ÎLE-DE-FRANCE)

### **What is your background and what brought you to EFS?**

I studied nursing at Saint-Maurice in Val-de-Marne. A school friend who graduated before me joined EFS and told me all about it. She talked about her daily working routine and said that I would enjoy travelling to blood drives and being in contact with donors. So I took her advice and applied to EFS where I started as a collection nurse in 2019. It was a case of word of mouth.

### **How would you describe your day-to-day work?**

I don't really have a typical working day because I change teams and collection sites on a daily basis. You have to constantly adapt and I like the idea that this is part of my daily routine. When I'm assigned to blood collection, I spend my day with donors. It requires concentration, an attentive ear and pedagogy because many donors ask questions and you have to be able to answer them. Some of them are afraid, especially those who have never given blood before. We have to look after them and create a warm and friendly setting so that they will want to come back! We talk about everything and anything, but certain topics often come up time and time again: generosity, volunteering, etc. It's an enjoyable experience for the most part!

### **What were you particularly proud of in 2023?**

Since January 2023, I've been authorised to conduct pre-donation interviews (EPDI)\*. That's another aspect of the job. I was trained by doctors, starting with theory and then moving on to the practical side. Now I interview donors before they give blood. And if I have the slightest doubt, I ask the doctor in charge of the blood drive or the RMA\* doctor for advice, in accordance with our procedures. This professional growth allows me to broaden my knowledge and understand all the stages in the donation process – from the interview through to collection.

\* When authorised nurses conduct pre-donation interviews and there is no doctor on site, doctors can be contacted at any time by telephone. This is the principle behind the remote medical assistance (RMA) system used across France.



Mobilised...

# FOR A POSITIVE DONOR EXPERIENCE

**EFS LAUNCHED THE INNOVADON PROGRAMME FIVE YEARS AGO IN A BID TO ENSURE THAT EVERY DONOR HAS A POSITIVE EXPERIENCE. FROM WEBSITE TO MOBILE APP, FROM THE RELATIONSHIP WITH THE TEAMS TO THE LAYOUT OF THE DONATION CENTRES, THE DONOR EXPERIENCE IS CONSTANTLY ADAPTED IN LINE WITH NEW EXPECTATIONS. WE TAKE A LOOK BACK AT THE PROGRESS MADE IN 2023 AND THE INITIATIVES PLANNED FOR 2024.**

**B**ecause the donor experience begins long before blood donation, because it reaches a peak during the actual blood donation and because it continues afterwards, we have focused our actions on these three stages in the donor journey," explains Jean-Pierre Lebaudy, EFS Marketing Director.



New Lyon Part-Dieu blood donation centre

## SIMPLIFYING THE DONOR JOURNEY

The blood donor website has been improved. "Since March 2023, donors can access information and make an appointment all on the same site". Plasma donation was also given a higher profile in June. And from next year, creating an account will be much easier and accessible to everyone, including those who have never given blood before. The mobile app will also be updated for easier access to personal accounts: "this will create a more enjoyable, interactive experience. It will also allow us to give donors personal recognition based on their number of donations". Finally, EFS recently began work to digitise the pre-donation questionnaire - a document that all prospective donors must complete when they come to the blood donation centre.

## WELCOMING AND TAKING CARE OF DONORS

Officially approved in 2023, the new design of the donation centres will be rolled out at the three new EFS sites in Lyon, Paris, and Fort-de-France (Martinique) in 2024. "We will be able to welcome donors and

provide home comforts in the guise of warm, open-plan, comfortable spaces. The journey will be smoother and more rewarding." Once on site, the blood drive teams continue to receive caring relationship training in order to ensure that each donor has a positive experience (see page 16). In the same vein, old employee uniforms will gradually be replaced by new ones bearing a thank you message. "Finally, we are encouraging local, eco-responsible initiatives for break snacks."

## STAYING IN TOUCH WITH DONORS BEFORE AND AFTER THEIR DONATION

"It is crucial to take an interest in donors and get to know them better. This is how we can better target them and then contact them. To do this, we needed a new CRM targeting tool." This strategy has been adopted in all EFS regions since September 2023. As for the operators who contact donors, they are gradually joining forces in 100% EFS regional contact centres, and will continue to do so in 2024. Since the end of 2023, they have also been familiarising themselves with the caring relationship and will use a dedicated telephone tool from 2024 onwards. "Donors will also have access to a new toll-free number so they can contact our teams more easily wherever they are," adds Jean-Pierre Lebaudy.





## “Words that count” to say thank you to donors on WBDD

In 2023, EFS launched a new initiative for World Blood Donor Day (WBDD) on 14 June. On that day, over 26,000 donors received a personal message of thanks. Written by patients, EFS staff, volunteers and carers, 750 messages were collected in the run-up to the day and then printed. Donors were able to respond to these messages or share them on social media, if they so wished.



## A caring relationship with donors



**THREE QUESTIONS FOR CAMILLE JOURNET, COMMUNICATION DIRECTOR AT EFS NVAQ<sup>1</sup>, AND DOCTOR JACQUES COURCHELLE, HEAD OF BLOOD COLLECTION AT EFS AURA<sup>2</sup>, BOTH OF WHOM ARE RESPONSIBLE FOR THE DONOR WELCOME PROGRAMME.**

### What is a caring relationship and what purpose does it serve?

**Dr Jacques Courchelle:** The aim is to create a relational imprint, i.e. to create donor memories. We want them to feel calm, useful, welcome and relaxed. To achieve this, our teams have to be informative, appreciative, considerate and friendly.

**Camille Journet:** And they already do it so well, since 89% of donors say they are satisfied<sup>3</sup> with their experience. But our teams needed to be aware of the impact of this relationship and of the need to be consistent. This is why we have been running workshops for the last three years.

### Why is it important?

**C. J.:** We hope that donors, once reassured by this memorable experience, will come back and talk about donation in order to encourage friends and family to give. This is crucial, given that 170,000 donors deregister every year.

**Dr J. C.:** And even more so because the experience side of things is far more important to new, younger donors.

### To what extent has this approach been rolled out?

**Dr J. C.:** Almost one in three of our blood drive staff has already attended a workshop, and 44% of our collection areas have been made aware of the programme.

**C. J.:** In addition, since the autumn of 2023, we have been running workshops dedicated to plasma donation, highlighting the issues involved and using real-life scenarios. Since the end of 2023, we have also been running workshops on remote relationships for our contact centre teams.

1 - Nouvelle-Aquitaine

2 - Auvergne Rhône-Alpes

3 - Source: Donor Observatory 2022

## THE PEOPLE BEHIND EFS

# INTERVIEW



*Thom Narayaninsamy*

MOBILE BLOOD COLLECTION UNIT DRIVER IN POINTE-À-PITRE  
(EFS GUADELOUPE-GUYANE)

### **What is your background and what brought you to EFS?**

I've always had a passion for buses and HGVs, so it was quite natural for me to start my career as a driver. I've worked for several private companies in Guadeloupe, particularly in the tourism sector. In 2019, once I realised that I could combine my passion and serve the public at the same time, I didn't hesitate. So, for the last four years, I have been a mobile blood collection unit driver at EFS Guadeloupe-Guyane.

### **How would you describe your day-to-day work?**

My main job is to drive the blood collection vehicle to the various mobile blood collection sites in Guadeloupe. Once there, my role is to secure my collection unit and prepare the site before the medical team arrives. The other part of my job is to look after donors after they have given blood. I prepare their snack and make sure that they feel well. I also ensure that they rest for twenty minutes and leave the facility feeling stress free. It's something I really enjoy! Finally, when I'm not on a mobile blood drive, I work at the Pointe-à-Pitre donation centre, where I'm also in charge of snacks and help out with logistics. The goal of all of these tasks is to create the best possible conditions for the donors and my team.

### **What makes you proud to work at EFS?**

I am proud to be able to say that, in my own way, I help the public health service to run smoothly. When I go out to collect blood, I have only one purpose in mind - to mobilise as many donors as possible to ensure that blood reserves are maintained. To this end, EFS relies heavily on the volunteers who support us before and during blood drives. I meet them every day and we work very well together. It's all about teamwork!



**1,571,605**  
DONORS  
IN 2023

**OF WHICH 17%**  
NEW DONORS

**AND 89%**  
OF DONORS SATISFIED  
WITH THEIR EXPERIENCE<sup>1</sup>

1 - Source: Donor Observatory 2022



"There are so many good reasons to give blood! It saves lives and is a personal achievement. Inside, you feel like a bit of a hero! I talk about it quite often and if I can convince just one person to give blood, then that's a win."

*Farès*  
BLOOD DONOR



## PrédonPsy, a study to prevent donor faintings more effectively

Because the experience of giving blood for the first time is a crucial factor in donors returning in future and in donor retention *per se*, and because vasovagal reactions can leave bad memories, even if they are not serious, EFS launched a study in 2023 on new prophylactic approaches involving 4,500 new donors. The aim is to demonstrate the effectiveness of a method for reducing the stress and anxiety behind most of these symptoms. In practice, just before they give blood, donors receive a flyer explaining what causes stress and also receive coaching in muscular and breathing exercises. Reassured and focused on these exercises, donors can then give blood. If the results of this study, conducted by EFS Auvergne Rhône-Alpes in partnership with the University of Caen, prove conclusive (findings are expected by 2025), the approach will be rolled out across France.





## THE PEOPLE BEHIND EFS

# INTERVIEW



*Dr Marlène Guillet*

DIRECTOR OF THE BLOOD SCREENING LABORATORY IN ANGERS  
(EFS CENTRE-PAYS DE LA LOIRE)

### **What is your background and what brought you to EFS?**

At the end of my residency in medical biology, I worked in a virology laboratory in Paris for three years. At the time, I wanted to travel and challenge myself, so I left to work on the epidemiological monitoring of influenza and rabies at the Pasteur Institute in Cameroon, for two years. On my return, I worked for a few years at the hospital in Angers, before joining EFS in 2016. I was recruited as a biologist and gradually took on more responsibilities, culminating in becoming the director of the laboratory in 2021.

### **What are your day-to-day tasks?**

Blood screening involves analysing all blood donations to ensure that they do not contain any transmissible diseases. We screen for HIV and hepatitis, for example, and we also determine blood groups to ensure immunohaematological compatibility with future patients. Every day, my team tests between 12,000 and 15,000 tubes of blood. My main role is to ensure that the processes needed to guarantee transfusion safety are followed. I manage a team of around fifty people.

### **What was your biggest challenge in 2023?**

Rolling out hepatitis E screening from March 2023 onwards. We had to perform an additional analysis on all donations to implement this national measure. We were able to do this with the same number of staff thanks to the commitment of our teams and the performance of our machines. We were also faced with an increase in the number of West Nile cases, a virus transmitted by mosquitoes. For every indigenous case identified in a given region, we had to research all the donations taken in that area, up to eight days in advance, to retest them. We know that these emerging viruses are likely to develop, so we need to adapt and be ready. I know I can really count on my team to do just that!

Mobilised...

# FOR THE SAFETY OF PATIENTS AND DONORS

INTERVIEW WITH PASCAL MOREL, RESPONSIBLE PERSON AT EFS.

**In 2023, self-sufficiency was guaranteed without any emergency appeal. Nevertheless, you're sounding the alarm. Why is that?**

**Pascal Morel:** Because staffing problems continued to affect our blood drives in 2023. We have had problems replacing people who have left, maintaining skills across all roles and having the teams we need to carry out our tasks. Out of the 2,300 blood drives cancelled this year, 1,700 were cancelled because we did not have a full team. This situation continues to threaten our self-sufficiency and unless there is a rapid improvement, it could jeopardise our ability to maintain the quality of our activity. Fortunately, thanks to the mobilisation and mutual support of our on-duty teams, all patients were able to receive their labile blood products (LBP). The fact that 2023 was calmer than 2022 is largely due to the 4.5% drop in red blood cell concentrates (RBCCs) being issued to health care establishments. With current resources, EFS is no longer able to collect to the same extent as it did before the health crisis. This situation must be taken into account to avoid a downturn if issuing increases.

**Is that why EFS launched a targeted appeal to group O donors?**

**P. M.:** Partly, yes. The balance between blood groups is crucial in order to be able to meet the needs of all patients. However, as soon as our reserves drop, those impacted are the less common groups, including the O- group, which represents just 6% of the population. This pressurised management of reserves has led us to monitor the suitability of transfusions for patients. In some cases, patients did not receive exactly the same product as they would have done if reserves had been normal. Although the service has always been good, the pressures we experienced may have had repercussions that we hope to limit in the future. These cases have all been reported and followed up as in 2022.

**Arbovirus cases were on the rise again in 2023. Can you tell us more about that?**

**P. M.:** In 2023, many regions were affected by the West Nile virus and, above all, by a virus from the same family: the Usutu virus, which has been reported as far inland as the Côte-d'Or. More than twenty cases



were detected during blood donations. This led to retrospective analyses of hundreds of donations and the systematic screening of all donations collected in the affected departments. Moreover, almost a thousand cases of dengue fever were reported, most of which originated from the West Indies. This increased the risk of indigenous cases, and led to mosquito control operations as far away as the Paris region. All of these precautionary measures were effective, but at the cost of the widespread mobilisation of teams. Feedback is currently being gathered in order to simplify procedures in 2024.

**What other measures has EFS introduced this year?**

**P. M.:** In addition to increased prevention of donor fainting and routine screening for hepatitis E, we have continued to organise a rare blood network. We are still very active in this regard, in particular through our rare blood awareness week, which is held annually.

**REMOTE ISSUING: FROM PROOF OF CONCEPT TO QUALIFICATION**

By the spring of 2023, three EFS sites had successfully assessed several innovative thermostatic chambers, allowing blood products to be delivered 24 hours a day, with teams working remotely. Deemed satisfactory, the proof of concept will be extended in 2024 with operational qualification of the equipment selected via a public contract. After regulatory and IT adjustments coupled with a health data safety audit, roll-out should begin at the end of 2025. These smart chambers will reduce the need for staff to be on-call and will therefore improve work-life balance for staff without compromising transfusion in any way.

**IS FRANCE UNDER THREAT FROM A NEW ARBOVIRUS?**

Transmitted by tick bite, the Crimean Congo haemorrhagic fever (CCHF) virus has been added to the list of viruses under surveillance. Although no human cases have been recorded to date in France, the presence of infected ticks and animals was reported in 2023 in the Pyrénées and Corsica. EFS remains on alert so that it can take the necessary steps if any human cases are reported.



**All donors routinely screened for hepatitis E**



Generally benign, but potentially dangerous for people who are immunocompromised or who have liver disease, hepatitis E has been screened in all donors since March 2023. Over the first six months, more than 1.2 million donations were tested and almost one in a thousand was found to be positive, in line with previous estimates. Donors who test

positive and their relatives are routinely deferred from donating blood for four months. Feedback is currently being gathered to identify any specific risk factors and adjust donor follow-up.

**185,180 TESTS FOR WEST NILE VIRUS IN 2023 compared to 52,000 in 2022.**



**A BRAND NEW BLOOD SCREENING FACILITY IN METZ-TESSY (HAUTE-SAVOIE)**

After several months of renovation and extension work, the new blood screening facility in Metz-Tessy was opened on 30 August 2023. Thanks to its more spacious premises and modernised equipment, the 60-strong workforce routinely screen all bags collected in the north-eastern quarter of France. This represents almost 3,000 donations to be tested every day, i.e. 18 million analyses each year.



**INVE  
STED  
IN  
THE MEDICINE OF TOMORROW**

Invested...

# IN RESEARCH, HOPE FOR MILLIONS OF PATIENTS

AS A PUBLIC BLOOD SERVICE COLLECTING TENS OF THOUSANDS OF BLOOD PRODUCTS EVERY DAY AND STORING THOUSANDS OF CELLS AND TISSUES IN ITS BANKS, EFS HAS DEVELOPED AN ENTIRE ECOSYSTEM OF RESEARCH INTO CELL AND TISSUE THERAPY OVER TIME. THIS RESEARCH SERVES THE MEDICINE OF TOMORROW, MAKING IT POSSIBLE TO IMPROVE TRANSFUSION OR OFFER NEW TREATMENTS TO TRANSPLANT PATIENTS AND THOSE WITH CANCER OR CHRONIC OR GENETIC DISEASES. RESEARCH IS ALSO BEING CONDUCTED INTO DONOR PROTECTION, SAFETY AND THE MOTIVATIONS FOR DONATION.

At EFS, 180 people are involved in research, working across the country in joint research units (UMR) in partnership with leading institutes such as INSERM, the CNRS and universities. *"Some of our research teams also work in laboratories of excellence (LABEX) or Carnot institutes"*, explains Grégory March, Deputy Director of Research and Technology Transfer.

## SERVING TRANSFUSION AND TRANSPLANT PATIENTS

They work on transfusion safety and on all blood components for the benefit of transfused or transplanted patients. *"In 2023, one of them won the SFGM-TC<sup>1</sup> Capucine prize for a project seeking to identify genetic markers expressed by NK<sup>2</sup> cells to improve the outcome of intra-family transplants in particular. Another helped to demonstrate the efficacy of gene therapy in sickle cell anaemia that increases foetal haemoglobin (non-diseased) in patients and reduces their diseased haemoglobin, which promotes the onset of deformed red blood cells."*

## IN SEARCH OF DONOR MOTIVATION

Their research also focuses on donors, working in the human and social sciences sector to establish motivation and barriers to donation in order to improve donor recruitment, retention and protection. *"Our work in 2023 included, for example, our research into the psychosociology of plasma donation and the PrédonPsy study into the role and prevention of stress in donor reactions during and after donation"* (see page 18).

## FOR INNOVATIVE DIAGNOSTICS AND GREATER RESERVES

In order to guarantee the safety of blood products, EFS is carrying out various research projects to monitor and gain a better understanding of the risk of infection (particularly arboviruses) and to develop innovative diagnostics. EFS is also working to develop "cultured" red blood cells and platelets from haematopoietic stem cells (HSC)

in order to improve blood products and boost blood reserves.

## TO CURB DISEASE

Finally, to fight the disease, EFS has invested heavily in cell therapy, which will play a crucial role in the medicine of tomorrow. Several research teams are therefore developing new therapeutic approaches based on the cell engineering of immune cells. *"One of them obtained RHU<sup>3</sup> funding in 2023 to develop a biotherapy to counteract Charcot disease. Several of our projects on CAR-T cells have led to the creation of start-ups which will be conducting clinical trials to treat leukaemia. Other biotherapies based on the engineering of B lymphocytes and NK<sup>2</sup> cells are also being studied."*



Besançon Joint Research Unit

1 - SFGM-TC: Société Française de Greffe de Moelle et de Thérapie Cellulaire (French Society of Bone Marrow Transplantation and Cellular Therapy)

2 - NK cells: "natural killer" cells, a type of white blood cell capable of killing tumour cells or infected cells

3 - RHU: University Hospital Health Research

 **214**  
**SCIENTIFIC PUBLICATIONS**  
 by EFS researchers



## SICKLE CELL DISEASE: AN AWARD FOR EFS'S WORK ON POST-TRANSFUSION RISKS OF GENETIC ORIGIN

How can sickle cell patients be prevented from developing a reaction and antibodies to the transfused blood cells, or even to their own red blood cells? This complication, known as delayed haemolytic transfusion reactions (DHTR), can be fatal. A research team has worked on this topic in order to identify the genetic mutations involved in this mechanism. Their work was highly commended by the American Society of Haematology (ASH) in 2023.

## STORHM: a study to transfuse whole blood in civilian hospitals

Whole blood transfusion simultaneously provides RBCC<sup>1</sup>, platelets and plasma. While it is common practice to transfuse whole blood to save people seriously injured in wartime, this does not yet apply to civilian hospitals. This faster transfusion method could save the lives of patients who have had a massive haemorrhage. This is the aim of the STORHM study, led by the French Armed Forces Transfusion Centre to which EFS has been contributing on the civilian side since 2019. Of the 200 patients scheduled for inclusion in this study, 67 were enrolled in 2023. Results are expected by the end of 2025.



## A STEP TOWARDS TRANSPLANTING MORE PATIENTS WITH STEM CELLS

A team has succeeded in producing functional, transplantable human haematopoietic stem cells (HSC) from specialised adult cells (iPSC<sup>2</sup>). These cells have been reprogrammed into stem cells capable of multiplying infinitely and transforming into any type of cell. It would therefore be possible to harvest skin cells from a patient, reprogramme them into iPSCs and then differentiate them into HSCs. These results, published in *Cell Stem Cell*, could be used to transplant more patients in future.



## EFS CANCER EXHIBITION THINKS BIG WITH "MINUSCULE"

The concept behind the "Minuscule" exhibition, which opened in October 2023, was to showcase in minute detail what EFS is doing in terms of large-scale cancer research. Visitors admired miniature scenes in which artist Pierre Javelle experimented with inverting scale relationships to tell the story of researchers' work. This artistic, enjoyable and educational exhibition will be touring France for two years.

1 - RBCC: red blood cell concentrates  
 2 - iPSC: induced pluripotent stem cells

## THE PEOPLE BEHIND EFS

# INTERVIEW



*Pr Francine  
Garnache-Ottou*

UNIVERSITY PROFESSOR, HOSPITAL PRACTITIONER (PU-PH) IN BIOLOGICAL HAEMATOLOGY,  
DEPUTY DIRECTOR OF UMR RIGHT IN BESANÇON (EFS BOURGOGNE FRANCHE-COMTÉ)

### **What is your background?**

As a pharmacist/biologist, I joined the Establishment just after my internship in 1996, working in the EFS Haematology Laboratory in Besançon. I began my career there as a biologist while continuing my research and writing my thesis. EFS gave me the opportunity to train on the job. This enabled me to develop and today I am a PU-PH, Scientific Director of EFS Bourgogne Franche-Comté and Deputy Director of our research laboratory, UMR Right.

### **How would you describe your day-to-day work?**

My day-to-day work is divided between running the laboratory, giving university lectures and conducting research. For the past twenty years I have been working with my team on a rare and very aggressive form of acute leukaemia, which we helped to diagnose in the 2000s and for which we are in the process of developing an advanced treatment. We have succeeded in developing a CAR-T cell, i.e. a genetically modified cell capable of recognising and eradicating cancer cells. This is an innovative treatment which is more effective than conventional chemotherapy for this type of leukaemia. We are currently working towards a clinical trial with this medicinal product.

### **What was your main achievement in 2023?**

My team and I took another stride forward this year by creating the Carla Biotherapeutics start-up, which should enable us to raise sufficient funding to launch clinical trials, hopefully by 2025. We are fortunate in Besançon to have one of EFS's advanced therapy medicinal product platforms, which will enable us to produce these CAR-T cells on site. The idea of providing better treatment for patients has been a constant driving force since I started working on this form of leukaemia. Today, we are finally close to achieving that goal.

Invested...

# IN THE BIOPRODUCTION INDUSTRY LED BY EFS IN FRANCE

AS THE LEADING ACADEMIC BIOPRODUCTION FACILITY IN FRANCE, EFS PLAYS A MAJOR ROLE IN THE MEDICINE OF TOMORROW. THE ESTABLISHMENT USES ITS CELL THERAPY EXPERTISE TO HELP LABORATORIES AND BIOTECHNOLOGY COMPANIES TREAT PATIENTS PRESENTING DISEASES THAT ARE OFTEN INCURABLE. IN FACT, ITS ADVANCED THERAPY MEDICINAL PRODUCT (ATMP) PRODUCTION PLATFORMS ARE CAPABLE OF GROWING CELLS AND MODIFYING THEM BEFORE THEY ARE TRANSPLANTED INTO PATIENTS.



## COMPLEX PROCESSES

*“Created from the know-how acquired in our cell therapy units and tissue banks, ATMPs utilise processes that are far more complex.”* The starting point is always a human cell collected from a healthy donor or from the patient. *“Depending on the desired outcome, these cells are then cultured and/or genetically modified before being transplanted directly into the patient or frozen in cell banks for allogeneic treatments<sup>1</sup>. They are then thawed as and when required.”*

## HOPE FOR MILLIONS OF PATIENTS

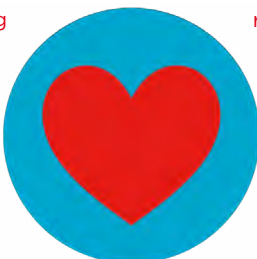
ATMPs represent a therapeutic revolution for many diseases for which there is no cure or satisfactory treatment. It starts with regenerative medicine to repair retinas, regenerate blood vessels following a stroke or cartilage damaged by osteoarthritis. *“But we can also repair tissue damaged by a heart attack. A project for which we obtained promising results in 2023”* (see p. 28). The second major area of ATMP application is cancer, and in particular leukaemia, which is treated using CAR-T cells. *“The main obstacle is that this treatment is still very expensive. This is why we have invested in the production of academic CAR-T cells. Barcelona University Hospital has selected us as the production centre for France, and we are about to start producing transfer batches. In addition to stimulating the production of CAR-T cells in France, EFS is all set to participate in the academic network launched by INCa<sup>2</sup>”,* concludes Christophe Soler.

**A** TMP activity at EFS involves around one hundred people (pharmacists, bioproduction engineers and technicians) across the Advanced Biotherapy Platform (PIBT) and the four ATMP production platforms in Besançon, Créteil, Grenoble and Nantes. *“Our mission is twofold,”* explains Christophe Soler, Head of Cell Therapy and ATMP at EFS. *“On the one hand, we help academic researchers and biotech companies to develop new processes that comply with good manufacturing practice – a mission carried out primarily by our PIBT. On the other hand, our ATMP platforms produce clinical batches for entities that do not have the infrastructure or know-how.”* In so doing, EFS is contributing to the development of new ATMPs for millions of patients with often incurable diseases. It is also helping to obtain marketing authorisations for medicinal products emerging from academic research at costs that are sustainable for our health care system.

1 – Allogeneic: the term “allogeneic treatment” is used when the patient is transplanted with cells taken from one or more healthy subjects  
2 – INCa: Institut national du cancer (French National Cancer Institute)

## CellProthera: stem cells to repair the heart

There is currently no solution for treating patients with chronic heart failure following a severe heart attack. But this could change thanks to an innovative treatment from the CellProthera start-up. The concept is based on collecting stem cells from the patient, amplifying them to make them capable of regenerating damaged heart tissue, and then



reinjecting them into the patient's heart. EFS has been contributing to this project since 2010, and in 2016 produced batches for the phase II clinical trial at its platforms in Nantes and Besançon. The last patients were treated in September 2023 and the trial ended in April 2024. Phase III will be initiated based on these results.



## BRENUS PHARMA: A NEW GENERATION OF IMMUNOTHERAPY FOR COLORECTAL CANCER

Colorectal cancer is one of the most common cancers and the second most common cause of cancer-related deaths worldwide. In 95% of cases, it is still treated with chemotherapy, which causes toxicity and resistance to treatment, resulting in patient relapse. Brenus Pharma has developed a therapeutic alternative in the form of novel vaccine immunotherapy to educate the patient's immune system to fight cancer. Development accelerated in 2023 with initial doses being produced at the EFS ATMP platform in Saint-Ismier. Clinical trials are due to start in 2024, with the majority of batches being produced by EFS.



**4** advanced therapy medicinal product (ATMP) PLATFORMS

**1** Biotherapies Bioproduction INTEGRATOR

AND **2** Biomonitoring LABORATORIES

## URGO: "ARTIFICIAL SKIN" TO TREAT CHRONIC WOUNDS

With its Genesis project, the French group Urgo has set itself the challenge of sparing patients with severe burns from multiple surgical procedures, long hospital stays and considerable pain, courtesy of a more effective solution in the form of "artificial skin". In 2023, the EFS platform in Nantes helped Urgo to develop the complex process needed to produce this reconstructed skin. Clinical trials are due to start in the next few years with EFS producing the batches required.

# ENGAGING WITH SOCIETY

Engaging...

# WITH VOLUNTEERS TO ACHIEVE OUR MISSION



THEY EPITOMISE BLOOD DONATION AND MAINTAIN SOCIAL LINKS IN THE REGIONS. THEY TAKE PART IN BLOOD DRIVES, RECRUIT, WELCOME AND SUPPORT DONORS. THEY PROMOTE ETHICS ALL THE WAY TO PARLIAMENT AND BEYOND. THE FRENCH VOLUNTARY BLOOD DONORS' ASSOCIATION (*FÉDÉRATION FRANÇAISE POUR LE DON DE SANG BÉNÉVOLE* – FFDSB) IS ESSENTIAL FOR ALL THESE REASONS. THE PARTNERSHIP WITH EFS WAS RENEWED IN 2023.

**T**his link goes back to the origins of transfusion. “It was consolidated in 1949 when our federation was founded,” explains Jacques Allegra, President of the FFDSB. “Today, it unites 40,000 active volunteers, mobilised to promote blood donation across the country.” Collaboration with the EFS teams is governed by a partnership agreement which was renewed for a further four years in 2023. It is a collaboration that is both operational and institutional as well as strategic.

## A MULTI-FACETED ROLE

On the ground, in addition to providing operational support at blood drives (finding locations, promoting blood donation, welcoming and supporting donors, providing refreshments), “our volunteers epitomise blood donation and are a factor in social cohesion,” emphasises Jacques Allegra. “We attend all of the major events in our communities. And we never miss an opportunity to talk about blood donation.” This is a role that makes the association presidents respected opinion leaders. They use this recognition to promote the ethics of blood donation to elected representatives. “Because they are involved in local life, volunteers are also ambassadors for blood donation on a political level”, acknowledges Lola Terrasson, EFS Communication Director. “This role proved

invaluable in 2023, particularly during the preparatory work for the future European regulation on substances of human origin, to defend the French ethical model alongside us.”

## CHALLENGES AHEAD

Like most associations, the No. 1 challenge facing the FFDSB is attracting and “recruiting new members. This is vital if we are to ensure the long-term future of our movement. But the expectations of volunteers have changed and we have to understand them, especially those of young people”, says Jacques Allegra. Lola Terrasson added: “Without interfering in the recruitment process, we can encourage participation by assigning them interesting tasks that have a real impact on donors.” Other challenges include the ethics and sovereignty of plasma collection. “We want to prevent blood-derived medicinal products from falling into the clutches of the private sector at all costs. Because we are convinced that only a powerful, public establishment is capable of delivering the collection and fractionation processes to meet the nation’s needs. We are therefore doing everything within our power to mobilise as many donors as possible”, concludes Jacques Allegra.





## Association française des hémophiles

### AFH liaises with the EFS Executive Board on behalf of patient associations

Recognised as a public interest organisation, the French Association for Haemophiliacs (AFH) represents 15,000 patients with haemophilia, Willebrand's disease and platelet disorders in France. "Thanks to our expertise in blood-related issues, we have also represented all patient associations on the EFS Executive Board for over twenty years," explains Dorothee Pradines, who sits on the Board as a representative

of health care system users. "Consequently, we have had numerous discussions with the associations." AFH therefore has a watchdog role in defending the interests of patients in all EFS activities, focusing specifically on product safety, which covers both the quality and volume of collections, in order to meet needs. "The public blood service has been set up to treat patients. We are there to serve as a reminder."



"People know about blood donation but don't always realise that it is needed every day. They respond to emergency appeals and then some forget. So we need to tell people again and again that blood donation is important all of the time, and that blood is irreplaceable. As volunteers, we are close to the donors. We don't have a professional relationship, so we don't strike the same chord. But it works even better when we talk about patients."

*Stéphanie Tartarat*

VICE-PRESIDENT OF A VOLUNTARY BLOOD DONATION ASSOCIATION IN AIN, CO-ORDINATOR OF A DEPARTMENTAL COMMITTEE AND FEDERAL DELEGATE FOR THE RHÔNE-ALPES REGION



*Clémentine Aigret*

"I have always wanted to help people. It's my vocation and that's why I chose to study pharmacy. Before fully embarking on my career, I applied to the FFDSB network. The director of the Étampes association contacted me and a few days later I was picking up my first leaflets to distribute in my village. And because I believe social networks are important nowadays - particularly for reaching out to young people - I created the association's Instagram account."

VOLUNTEER WITH ADSB ÉTAMPES AND PHARMACY STUDENT

## THE PEOPLE BEHIND EFS

# INTERVIEW



*Lucie Dumoulin*

DONATION PROMOTION OFFICER IN MONTPELLIER  
(EFS OCCITANIE)

### **What is your background and what brought you to EFS?**

After studying marketing, I started my career in an organic cosmetics company near Montpellier. I worked there for five years, until COVID-19 came along. I asked myself a lot of questions. I wanted to go back to a rewarding job. My father has been giving blood for years so I jumped at the chance when I saw a vacancy at EFS. I have been a Local Developer since March 2022. It is a role that allows me to combine communication, marketing and my values!

### **How would you describe your day-to-day work?**

That's a difficult question because my tasks are so varied! Let's say that my aim is to recruit donors, which can be done in several ways. There are, of course, the donor invitations – by email and SMS – but also through our social networks and local journalists. I also spend a lot of time out in the field looking for new partners, institutions, companies and universities where we could organise blood drives. And I'm in constant contact with donor associations, because volunteer support is crucial.

### **What was your main achievement in 2023?**

We are very proud of our successful seaside blood drives in the summer of 2023. This is a strategic period in the Gard and Hérault regions because of the influx of holidaymakers and therefore potential donors. We organised one mobile blood drive a day on the seafront in July and August. To achieve our collection targets, we worked upstream to improve our reminder system, canvassed tourist offices to publicise our appeals throughout the region, and then revised our posters to be more visible. The outcome was very positive, because we managed to reach many people who had never given blood before!

Engaging...

# WITH OUR PARTNERS TO PROMOTE AND CHAMPION BLOOD DONATION

WHETHER IN SPORT, CULTURE OR THE PUBLIC SERVICES, MANY STAKEHOLDERS IN CIVIL SOCIETY WORK ALL YEAR ROUND TO PROMOTE BLOOD DONATION. AS EFS PARTNERS, THEY PLAY A KEY ROLE IN RAISING AWARENESS, PROVIDING INFORMATION AND PROMOTING BLOOD DONATION. SOME TAKE PART IN BLOOD DRIVES ACROSS THE COUNTRY, WHILE OTHERS OPEN THEIR DOORS OR ORGANISE EVENTS. THEIR INITIATIVES AND COMMITMENT HELP EFS TEAMS TO RECRUIT AND RETAIN DONORS AND PROMOTE THE VALUES OF BLOOD DONATION: SOLIDARITY, GENEROSITY, CITIZENSHIP AND UNPAID DONATION.



Blood drive at the Panthéon on 14 June 2023



Blood drive at the Château de Bouges on 3 July 2023



Blood drive at Pierrefonds Castle on 20 September 2023

## WITH NATIONAL MONUMENTS FOR BLOOD DRIVES IN INCREDIBLE LOCATIONS

Once again in 2023, donors were able to give blood in unique locations thanks to the ongoing partnership between EFS and the Centre des monuments nationaux (CMN). Iconic blood drives were held from early summer onwards in Paris, Auvergne and Val-de-Loire. On 3 July in Bouges, in the Indre department, for example, donors were welcomed in the chateau's orangery before having an opportunity to explore the park and gardens. This donor experience will undoubtedly be indelibly etched in their minds. Overall, eight

exceptional locations agreed to open their doors from the beginning of June to the end of September: the Panthéon and the Hôtel de la Marine in Paris, the Château de Bouges in the Indre department, the Château de Villeneuve-Lembron in the Puy-de-Dôme department, Pierrefonds Castle in the Oise department, the Royal Monastery of Brou in the Ain department, the Fortress of Salses in the Pyrénées-Orientales department and the Château du Roi René in Angers.

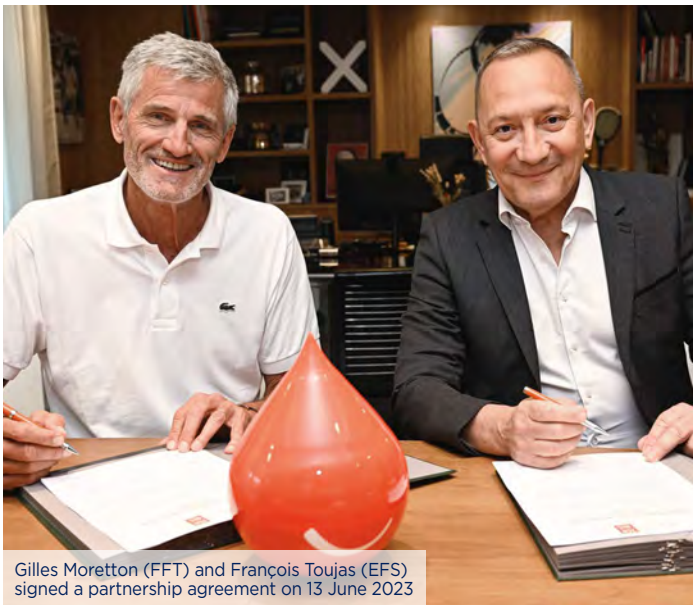


Landes fire service vehicles with blood donation publicity



### SAVING LIVES WITH THE FIRE SERVICE

*"We save lives, so does blood donation. Join us and become a donor."* This is the message displayed on the rear of fire engines on certain roads through the Nouvelle-Aquitaine region since the spring of 2023. The region's EFS has signed a partnership agreement with several departmental fire and rescue services. Launched in March in the Landes region, the scheme was extended to the Gironde region during the summer months and then to the Dordogne in November. An original way of raising the profile of blood donation for people who are often on the front line of operations requiring rapid transfusions. 12% of blood products are needed for vital emergencies. Moreover, many fire-fighters across France donate blood on a regular basis, and some even take part in blood drives. In the Var and Alpes-de-Haute-Provence departments, for example, they work in conjunction with voluntary blood donation associations. And in Malo-les-Bains, they have been organising an XXL five-day blood drive just before the Dunkirk carnival for the last six years.



Gilles Moretton (FFT) and François Toujas (EFS) signed a partnership agreement on 13 June 2023

**WITH SPORTS FEDERATIONS TO WIN OVER YOUNG PEOPLE**

EFS signed two new partnerships with major sporting movements in 2023, because not only do sport and blood donation share the same values of commitment and solidarity, but also because sport is an excellent way of recruiting young new donors. With the French Rugby Federation (FFR) at Marcoussis in March and with the French Tennis Federation (FFT) at Roland Garros in June. Through these partnerships, the federations are committed to organising blood drives in iconic locations as well as raising awareness among their clubs and members. This represents a huge potential. The FFR has nearly 2,000 clubs and 300,000 members, while the FFT has just under 7,500 clubs and a million members. For EFS, it is also a way of thanking donors by opening the doors of legendary venues to them.

This sporting momentum will accelerate right up to the Paris 2024 Olympic and Paralympic Games.



Signing of the partnership with the FFR on 14 March 2023 in the presence of some of the players of the French rugby team

Engaging...

# WITH EUROPE, TO STRENGTHEN AND PROMOTE THE ETHICAL MODEL OF DONATION

AT THE END OF 2023, AFTER MORE THAN A YEAR OF WORK AND DISCUSSIONS, THE EUROPEAN AUTHORITIES REACHED AGREEMENT ON THE FUTURE EUROPEAN REGULATION ON SUBSTANCES OF HUMAN ORIGIN (SoHO). THE LEGISLATION ENSHRINES THE ETHICAL MODEL OF NON-COMMERCIALISATION OF THE HUMAN BODY, SECURES THE SUPPLY OF BLOOD PRODUCTS AND GUARANTEES THE SAFETY OF DONORS AND PATIENTS. THIS IS A MAJOR STEP FORWARD FOR THE FRENCH DONATION MODEL ADVOCATED BY EFS, WHOSE VOICE HAS BEEN HEARD. INTERVIEW WITH NATHALIE COLIN-OESTERLÉ, MEP, RAPPORTEUR ON THE SoHO REGULATION.

**A political agreement on the draft European SoHO Regulation was reached on 14 December 2023. What advances have been made with this legislation?**

**Nathalie Colin-Oesterlé:** This is a sound agreement because it addresses three major issues for health and access to health care for all European citizens. The first is to guarantee donor and patient safety by updating quality and safety standards relating to substances of human origin. The second is to harmonise the legislative framework between all Member States, so that substances of human origin are considered in the same way throughout Europe and can therefore circulate



“The ethical model endorsed in the future regulation is essential for the safety of donors and patients alike.”

freely. The third challenge is to secure supplies through national plans in a bid to ensure European self-sufficiency. Today, we import 40% of our plasma requirements, mainly from the US, where donors earn up to 800 euros a month. This situation is unsatisfactory.

**In practical terms, how is the chosen ethical model a good thing for European citizens?**

**N. C.-O.:** The ethical model endorsed in this regulation is essential for the safety of donors and patients alike. In a remunerated donation system, donors are encouraged not to provide full disclosure about their state of health in order to be able to give blood and receive compensation in return. This can be dangerous not only for them but also for patients, as it increases the risk of pathogens being present. Furthermore, this type of system is only profitable for the private sector if a high donation frequency is permitted. While European health authorities recommend 33 plasma donations per year and France authorises 24, this figure rises to 60 in Austria and over 100 in the US. Such a high frequency can have repercussions on blood protein levels and therefore on donor health and the quality of the product delivered to patients.

**What was your role as rapporteur?**

**N. C.-O.:** First of all, I drew up a draft report summarising my position and that of the stakeholders, which was presented to the European Parliament committee. Following negotiations between the various political groups, the Parliament voted on its own position on 12 September 2023.

As a representative of the European Parliament, I then took part in the negotiations with the Council of the European Union, in the presence of the Committee. There I defended Parliament's position against that of the 27 EU health ministers. After several dozen hours of negotiations, an agreement was reached with balanced legislation. It incorporates most of the priorities of the Parliament and the Council to ensure that European patients benefit from substances of human origin that are safe, available in sufficient quantities and collected ethically.

Engaging...

# WITH THE WORLD THROUGH INTERNATIONAL COOPERATION

BECAUSE ACCESS TO HEALTH CARE IS A FUNDAMENTAL RIGHT, EFS FIRMLY BELIEVES THAT IT HAS A DUTY TO SHARE ON AN INTERNATIONAL LEVEL. TO THIS END, EFS PROMOTES AN ETHICAL BLOOD DONATION MODEL AND HELPS PARTNER COUNTRIES TO STRENGTHEN THEIR TRANSFUSION MEDICINE AND MAKE IT SAFER. THIS PUBLIC SERVICE MISSION TAKES THE FORM OF TECHNICAL AND INSTITUTIONAL COOPERATION INITIATIVES.



## UNIVERSITY COURSES IN AFRICA AND CHILE

In partnership with local universities, EFS is helping to develop degree courses in transfusion medicine by collaborating on teaching programmes and giving lectures. This applies to the Inter-university Diploma in Blood Transfusion at Cheikh Anta Diop University (UCAD), with the Université Paris-Est Créteil (UPEC) and the Campus Franco-Sénégalais, as well as the professional Master's Degree in Haemobiology, Transfusion and Cell Therapy at the Faculty of Pharmacy in Monastir, which has been awarded Campus EFS status. A university diploma in blood transfusion is also in the pipeline in Chile.

## EFS and the Lebanese Ministry of Public Health: ten years of cooperation

As long-standing partners, EFS and the Lebanese Ministry of Public Health celebrated ten years of cooperation in Beirut in July 2023. The occasion was an opportunity to review the progress made in blood transfusion across the country. This cooperation was strengthened in February 2023 with an agreement uniting EFS, the Lebanese Ministry of Public Health, the Ecole Supérieure des Affaires (ESA) and AFD<sup>1</sup> as financier. The objectives are to optimise the organisation of the transfusion system, improve the quality and safety of transfusions, introduce haemovigilance and promote blood donation.



Centre national de Transfusion sanguine, Dakar

## WHITE PAPER ON THE *RENCONTRES DE LA TRANSFUSION* CONFERENCES IN DAKAR

The aim of the white paper published following the first transfusion conference in Dakar is to present the outcome of collective reflection on transfusion in French-speaking Africa and propose guidelines that can be applied in the countries in question. In the paper, African scientists, EFS and other institutional stakeholders such as AFD<sup>1</sup> have summarised their recommendations for improving the response to the need for blood products, strengthening transfusion capacities and developing research. A researcher in health anthropology, supported by EFS, has also launched a study to improve access to blood products.

1 - AFD: Agence Française de Développement (French Development Agency)

## THE PEOPLE BEHIND EFS

# INTERVIEW



*Christine Bécel*

GENERAL SECRETARY AND DEPUTY DIRECTOR  
OF EFS BRETAGNE

### **What is your background and what brought you to EFS?**

As an agri-food engineer, I wasn't destined to join EFS. My career path is the result of a series of encounters. In the 1990s, several directors wanted to draw on the experience of the agri-food industry to implement quality procedures in the blood transfusion sector. After an initial experience in Nantes, I joined the Rennes site in 1998 as Quality Manager. EFS, as we know it today, did not exist back then. I helped to harmonise practices and establish a culture of continuous improvement within the Establishment. This mission led me to the post of General Secretary of EFS Bretagne in 2011, and then Deputy Director in 2017.

### **What are your day-to-day tasks?**

As a senior executive, I have to manage the Establishment and implement national objectives, making sure that financial commitments are met. In practical terms, I am in constant contact with the teams and involved in all activities. For instance, we are currently working hard with the departments to improve working conditions. My role, along with the Management Committee, is to come up with solutions, even when resources are limited. This is vital if we are to gain support and move forward.

### **What were you particularly proud of in 2023?**

I would like to mention a topic that is close to my heart – sustainable development. EFS is committed to a socially responsible approach and, in Brittany, we launched an in-house participatory process to generate new ideas. Employees got on board! They put forward numerous proposals and we are currently rolling out a programme to implement the best actions, depending on the feasibility of each one. One of the things I am most proud of is that we have succeeded in involving our teams in the Establishment's projects.



Engaging...

# WITH OUR TEAMS TO TAKE ACTION ON OSR

JUST AS EFS HAS BEEN DOING FOR OVER TWENTY YEARS, TAKING CARE OF BLOOD, AN IRREPLACEABLE MATERIAL, THE ESTABLISHMENT IS ALSO COMMITTED TO LOOKING AFTER ALL OTHER PRECIOUS RESOURCES. EFS HAS SET OUT FOUR PILLARS TO ORGANISE ITS OSR ACTIONS IN ORDER TO PROTECT THE TEAMS AND THE ENVIRONMENT.

**T**his commitment translates into societal, social, economic and environmental actions, all of which come under corporate social responsibility (CSR). However, as EFS is a public organisation, the term “OSR” is used, which stands for Organisational Social Responsibility”, explains Émilie Allard, Hygiene, Safety and Environment (HSE) and Sustainable Development National Manager at EFS.

### A COMMITMENT SPANNING MORE THAN TWENTY YEARS

EFS has been promoting OSR on all levels for over twenty years. “Today, our actions are structured within several policies or plans that meet regulatory requirements.” This applies to the Eco-responsible Public Services (SPE) plan, the multi-year roadmap for promoting socially and economically responsible purchasing (SPASER) 2023-2025 and the Hygiene, Safety and Environment (HSE) policy, which includes the forward-looking action plan for improving working conditions (PAPRI Pact).

### FOUR PILLARS

“To give meaning to all of the actions set out in these plans and to bring them together under a single policy, in 2022 we launched a diagnostic investigation and interviews



with some of our employees, our main suppliers, some of our partners and some donors.” Four challenges have emerged, corresponding to the four OSR pillars: reducing our environmental footprint, protecting and developing our human capital, promoting a culture of civic solidarity and structuring a sustainable business model.

### PROGRESS AS OF 2023

On the environmental front, EFS has updated its carbon footprint assessment, which dated back to 2019. “In order to monitor our actions accurately on an ongoing basis, we intend to bring this updating back in-house from 2024 onwards.” In terms of mobility, the installation of electric recharging points has continued. “As for waste management, a national audit will allow us to improve our processes. In the social sphere, we are in the process of rolling out a plan to prevent sexual harassment and sexist behaviour.” In addition to a procedure for reporting and dealing with such situations, a national communication plan will be launched along with a number of training courses for managers and all employees. “Moreover, support for our managerial team has also been stepped up” (see p. 40) and the disability agreement has been renewed. Finally, from a societal perspective, numerous initiatives have been taken via SPASER, including, for example, clauses to set down local roots for certain markets.





## CAMPUS EFS: A UNIQUE TRAINING PROGRAMME

Whether they work for EFS, hospitals or laboratories, whether they are nurses, technicians, doctors or pharmacists, transfusion professionals can train courtesy of the Campus EFS programme. This catalogue was fully harmonised and reviewed in 2023 and is now structured around 14 topics, which are clearer and accessible to all. The programmes are designed and run by hospital practitioners or university academics and, of course, by EFS experts. Nearly 6,600 people took part in the programmes in 2023, 70% of whom worked at EFS and 1,934 in the hospital sector.



## Managers equipped to meet the new challenges facing the Establishment

The 1,200 managers at EFS are the real pillars of the organisation, responsible for driving forward the Establishment's strategic objectives and supporting its transformation. Thanks to a dedicated managerial support programme available since 2021 (customised training, workshops for exchanging managerial practices, seminars, etc.), EFS intends to equip its managers to be able to carry out their role fully. In 2023, this programme was enhanced with a three-pronged support package. Part one focuses on training to acquire core management skills and competencies specific to each role. The second component is designed to embed the skills and practices in everyone's day-to-day work through discussion workshops and online content. And the third component focuses on individual or group coaching.

At each stage, EFS aims to give managers the resources they need to foster team engagement and support staff development. For example, the digitisation of career appraisals, which began in 2023, has allowed discussions to focus on the essentials: the professional development and career pathways of each employee. This is all the more relevant given the Public Health Code review in November (see page 13). The new regulations benefit nurses in particular, thus giving managers the opportunity to offer accelerated and more attractive career pathways.



# GOVERNANCE AND RESULTS

# EXECUTIVE COMMITTEE

December 2023



1. **Frédéric PACOUD**  
President
2. **Pascal MOREL**  
Responsible Person for  
Labile Blood Products
3. **Sophie LE CAM**  
Deputy Managing Director of  
the Blood Transfusion Chain,  
Therapeutic Activities and  
Development
4. **Frédéric JAMBON**  
Deputy Managing Director for  
Resources and Performance
5. **Bruno DANIC**  
Director of EFS Bretagne
6. **Nathalie MORETTON**  
Chief of Staff
7. **Didier BAICHÈRE**  
Social Strategy Director
8. **Lola TERRASSON**  
Communication Director
9. **Frédéric GAZDA**  
President's Advisor

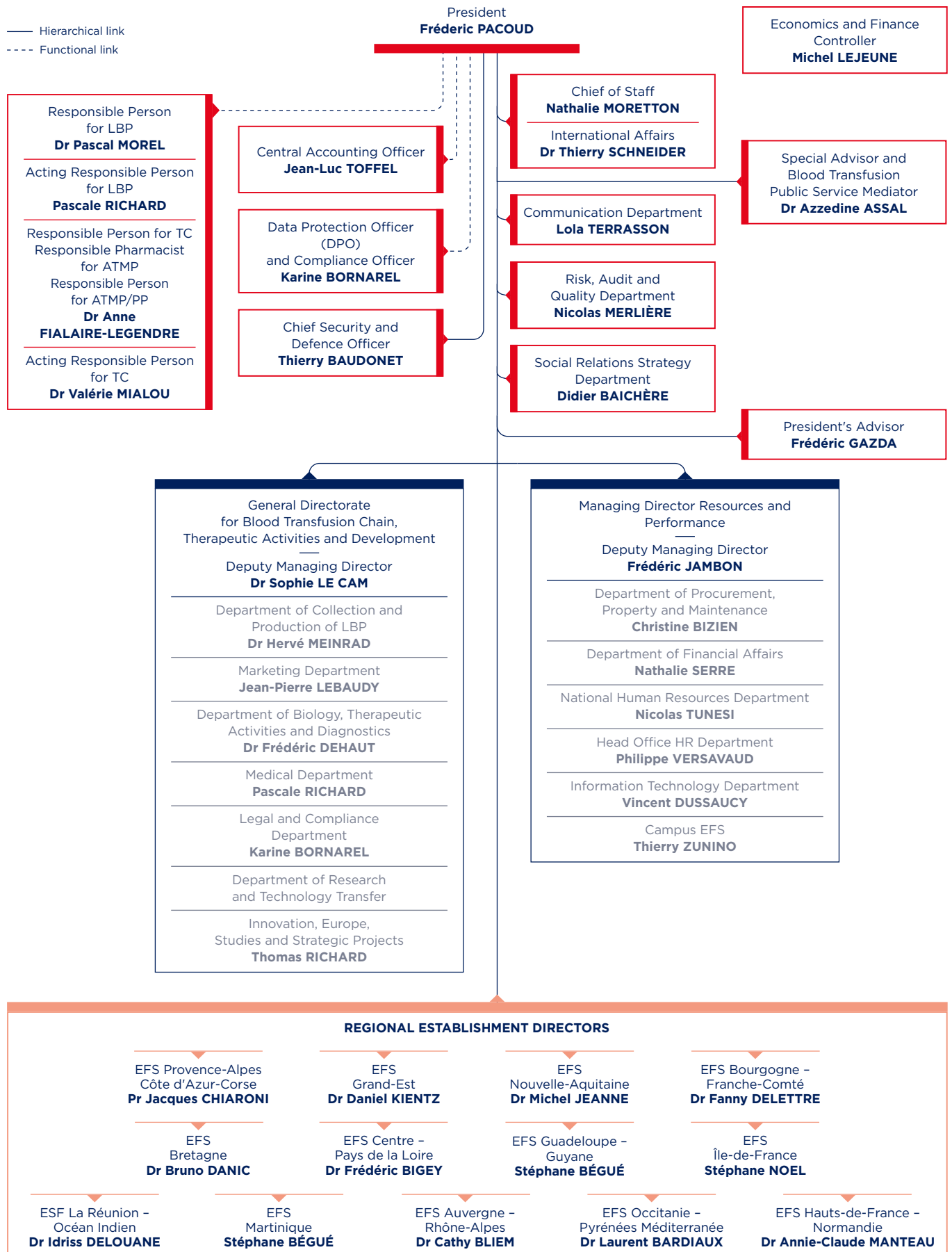
# NATIONAL DIRECTORS' COMMITTEE

December 2023



# ORGANISATION CHART

December 2023



# OUR MANAGEMENT AND GOVERNANCE BODIES

## EXECUTIVE BOARD (EB)

The Executive Board is the steering body of EFS. It sets out the Establishment's general policies, in particular those concerning the deployment of EFS's activities, the promotion of donation and the medical and research policy. It meets at least three times a year.

## EXECUTIVE COMMITTEE

The Executive Committee is EFS's guidance, strategic arbitration and decision-making body that examines all the issues that affect the course taken by EFS and that require a wide range of views. It meets every fortnight and is composed of the President of EFS, the Person Responsible for LBP, the Chief of Staff, the President's Advisor, the Managing Director of Resources and Performance, the Managing Director of the Blood Transfusion Chain, Therapeutic Activities and Development, the Communication Director, the Social Strategy Director and an EFS regional establishment Director appointed for one year.

## NATIONAL DIRECTORS' COMMITTEE

The National Directors' Committee, which includes the regional establishment directors and national directors, is a forum for informing directors with a view to aligning the entire management structure of EFS. It is also a forum for dialogue and helps to draft the establishment's policies and strategic decisions. It issues opinions in order to clarify the Executive Committee's decisions. It meets every month.

## THE ESTABLISHMENT'S DIRECTORS' COMMITTEE

The Establishment's Directors' Committee is a forum for exchanging the latest information on regional establishments and for sharing experiences and good practices to promote the harmonising of organisations. It analyses the impacts of national projects and may propose topics to be investigated in greater depth by the Establishment.

## SCIENTIFIC ADVISORY BOARD

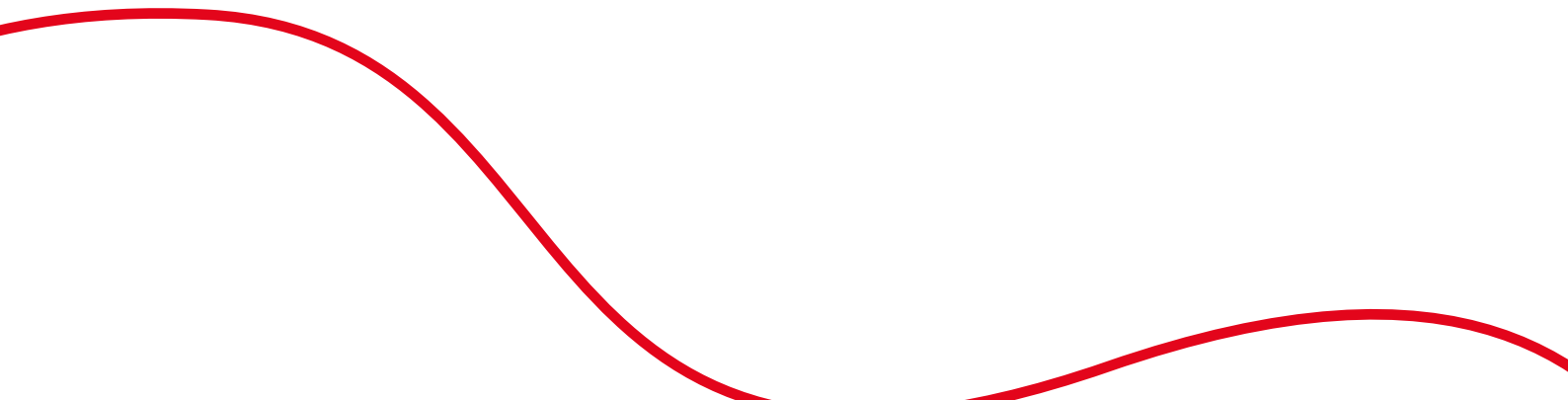
The Scientific Advisory Board is an independent, multidisciplinary, consultative body whose members are appointed by the French Ministry of Health and Prevention. It incorporates a wide range of experience and expertise including international members. The Scientific Advisory Board is responsible for giving opinions and recommendations on medical, scientific and technical issues and is involved in establishing the blood transfusion research policy and assessing research programmes conducted by the establishment. It meets three times a year.

## AUDITING COMMITTEE

The Auditing Committee informs the Executive Board on matters relating to accounting and financial issues, monitoring the effectiveness of the risk management and internal control systems, with priority given to processes with a strong impact on the accounts, and the examination and monitoring of internal and external auditing programmes. It meets three to four times a year, prior to the Executive Board meeting.

## ETHICS AND PROFESSIONAL CONDUCT COMMITTEE

The Ethics and Professional Conduct Committee is a multidisciplinary, pluralist, consultative and independent body created by the EFS Executive Board. It is responsible for ensuring the consistency of EFS's principles with all of its activities and assists the President and Executive Board in specific areas of competence. It issues independent, objective opinions and recommendations on the ethical and professional conduct issues involved in EFS's activities and operations. Comprising fourteen members representing a wide range of experience and expertise, it meets at least twice a year and at the request of the General Directorate for Health or the EFS President.



# EXECUTIVE BOARD

Frédéric Pacoud chairs the EFS Executive Board.

By decree\*, the following are appointed members of the Executive Board for three years:

## AS REPRESENTATIVES OF THE FRENCH GOVERNMENT

As representatives of the Ministers of Health and Social Affairs

- **Hélène Monasse**, permanent
- **Grégory Emery**, deputy
- **Laurent Butor**, permanent
- **Stéphanie Sahuc-Depeigne**, deputy
- **Emmanuelle Cohn**, permanent
- **Philippe Morlat**, deputy
- **Yann Debos**, permanent
- **Béatrice Tran**, deputy

As representatives of the Minister of Social Security

- **Timothée Mantz**, permanent
- **Charlotte Legresy**, deputy

As representatives of the Minister of Defence

- **Anne-Christine Mendes**, permanent
- **Jean-Jacques Lataillade**, deputy

As representatives of the Minister for the Budget

- **Louis Nouaille-Degorce**, permanent
- **Marie Chanchole**, deputy

As representatives of the Minister for the Economy and Finances

- **Roxane Spinardi**, permanent
- **Michel Roa**, deputy

As representatives of the Minister for Research

- **Catherine Perrault**, permanent
- **Francis Barin**, deputy

As representatives of the Minister for Higher Education

- **François Couraud**, permanent
- **Orianne Wagner-Ballon**, deputy

As representatives of the Minister for French Overseas Territories

- **Pierre-Emmanuel Bartier**, permanent
- **Corinne Locatelli-Jouans**, deputy

## AS REPRESENTATIVES OF ORGANISATIONS AND ASSOCIATIONS

As named Health Insurance representatives on the joint proposal of the Boards of Directors of the French National Health Insurance Agency for Salaried Workers (CNAM-TS), the French National Health Insurance Agency for Self-Employed Workers (CNAM-TNS) and the Central Agricultural Social Mutual Fund (CCSMA)

- **Pascale Vatel**, permanent
- **François-Emmanuel Blanc**, permanent

As representative of Health System User Associations accredited under the conditions provided for in Article L 1114-1, Member of the French Association for Haemophiliacs

- **Dorothee Pradines**, permanent

As representatives of blood donor associations, appointed on the proposal of the French Federation for Voluntary Blood Donation

- **Maryannick Jaouen-Ravasse**, permanent
- **Jacques Allegra**, permanent

As representative of the French Hospital Federation (FHF)

- **Christine Broissand**, permanent

As representative of Private Hospital Organisations

- **Guillaume Fevre**, permanent

As EFS Employee Representatives\*\*

- **Stéphanie Thiriot**, permanent
- **Damien Clemencon**, deputy
- **Frédéric Benard**, permanent
- **Leila Haise**, deputy

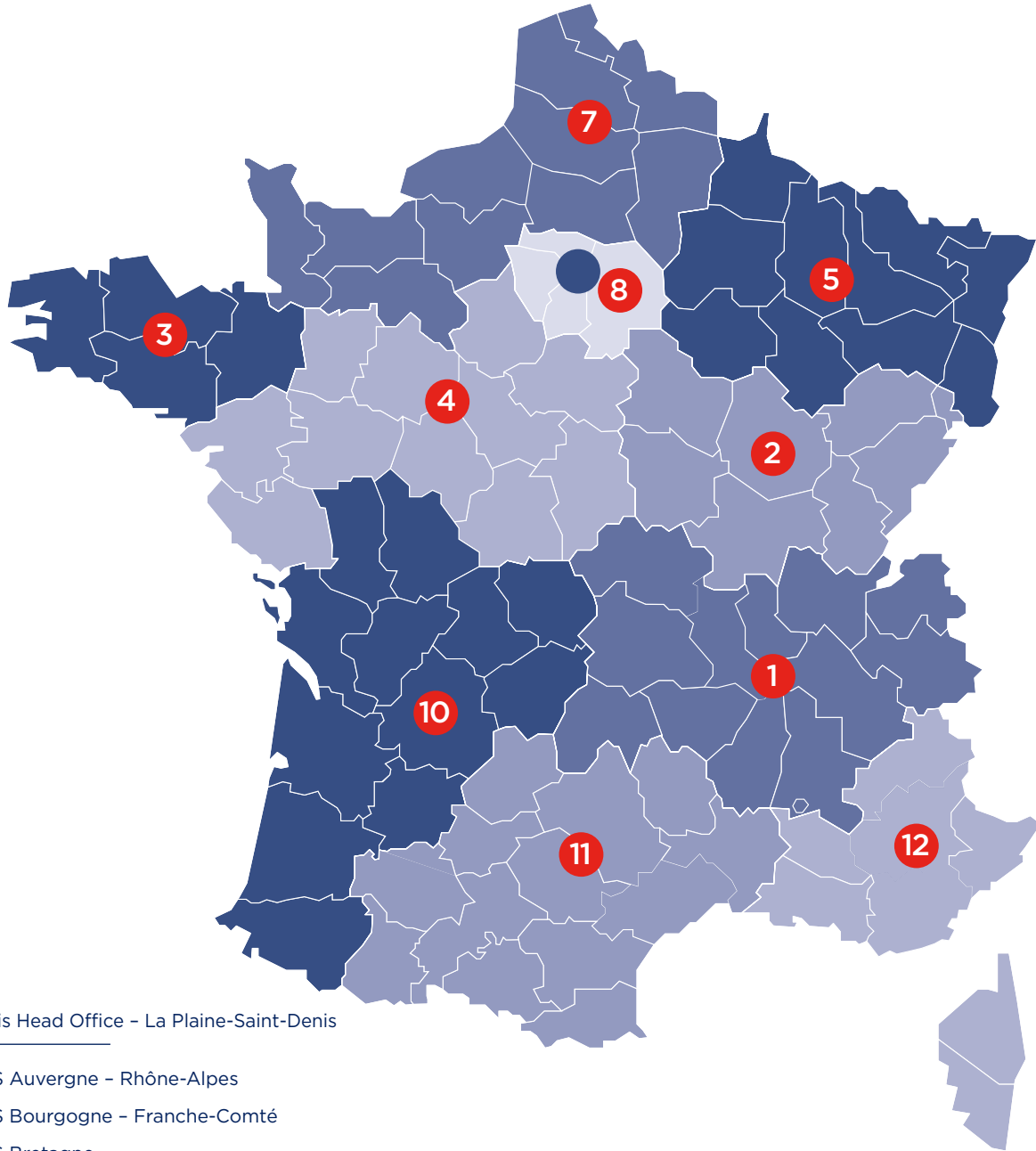
As qualified experts

- **Bernard Lassale**, permanent
- **Macha Woronoff**, permanent

\* Decree for appointment to the EFS Executive Board dated 2 July 2022, 27 December 2022, 2 March 2023, 19 May 2023, 7 September 2023 and 4 December 2023.

\*\* Without decree.

# OUR TERRITORIAL ORGANISATION



● Paris Head Office - La Plaine-Saint-Denis

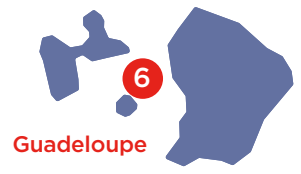
- 1 EFS Auvergne - Rhône-Alpes
- 2 EFS Bourgogne - Franche-Comté
- 3 EFS Bretagne
- 4 EFS Centre - Pays de la Loire
- 5 EFS Grand-Est
- 6 EFS Guadeloupe - Guyane
- 7 EFS Hauts-de-France - Normandie
- 8 EFS Île-de-France
- 9 EFS Martinique
- 10 EFS Nouvelle-Aquitaine
- 11 EFS Occitanie
- 12 EFS PACA - Corse
- 13 EFS La Réunion - Océan Indien



Martinique



Mayotte Reunion



Guadeloupe French Guiana



# SOCIAL DATA REPORT

as at 31 December 2023



**9,666**

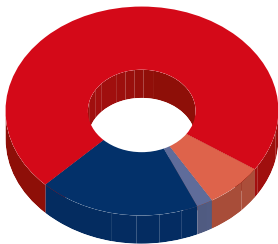
EFS employees



**758**

hired on permanent contracts throughout the year

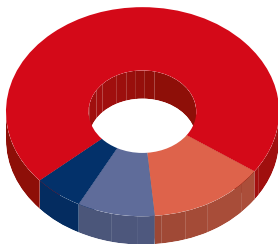
## Breakdown of the workforce by activity



TRANSFUSION ACTIVITIES\* 72% ■  
 CROSS-COMPANY AND SUPPORT ROLES 19% ■  
 ANCILLARY AND RELATED ACTIVITIES 7% ■  
 RESEARCH 2% ■

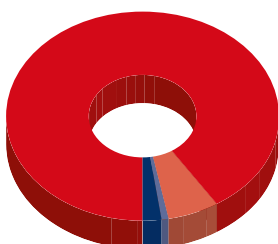
- \* • of which Collections 47%
- of which Preparation 8%
- of which Medical Biology and Distribution 37%
- of which blood screening and other transfusion activities 8%

## Breakdown of the workforce by category



TECHNICIANS AND SUPERVISORS 71% ■  
 NON-MEDICAL MANAGERS 14% ■  
 MEDICAL MANAGERS 9% ■  
 EMPLOYEES 6% ■

## Breakdown of the workforce by employment contract



PRIVATE-LAW EMPLOYEES 91% ■  
 TEMPORARY WORKERS 6% ■  
 PERSONNEL MADE AVAILABLE FROM THE PUBLIC SECTOR 2% ■  
 SECONDED FROM PUBLIC SERVICE 1% ■  
 Contracted public servants (2 persons) 0%

## Who are our employees?



**43** average age

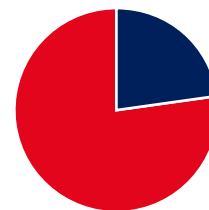


**WOMEN** account for the majority

**72%** female  
**28%** male

Most employees are

**FULL TIME**



FULL TIME 77% ■  
 PART TIME 23% ■



**12 YEARS** of service on average

# INCOME STATEMENT

Results as at 31/12/2023

**€1,058.1M**

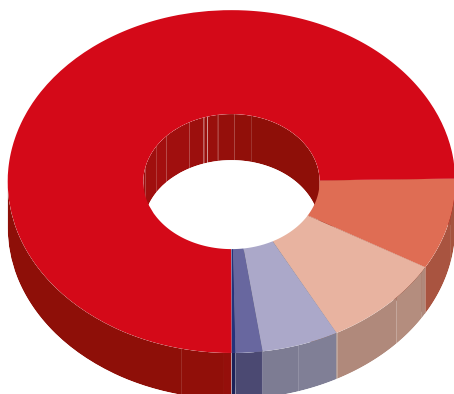
of revenue (operating revenues)

**€1,069.3M**

of expenses (operating expenses)

	2023 In €k	2022 In €k	2023 versus 2022 In €k	2023 versus 2022 As a %
Operating revenues	1,058,051	994,877	63,174	6.3
Operating expenses	1,069,303	1,036,207	33,096	3.2
Operating results	-11,252	-41,330	30,078	72.8
Non-operating revenues and expenses	401	383	18	4.7
Extraordinary profit or loss	0	0	0	
Corporate taxes	2,184	575	1,609	279.6
<b>NET ACCOUNTING RESULTS</b>	<b>-8,667</b>	<b>-40,372</b>	<b>31,705</b>	<b>78.5</b>

## Breakdown of revenue (operating revenues)



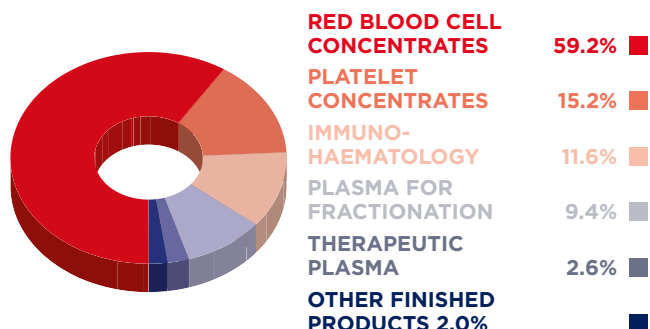
TRANSFUSION ACTIVITIES	74.8%
WRITE-BACK OF AMORTISATIONS AND PROVISIONS	9.0%
NON-TRANSFUSION ACTIVITIES	8.5%
OPERATING SUBSIDIES	5.6%
OTHER OPERATING REVENUES	1.9%
MERCHANDISE SALES	0.1%

**€883.5M**

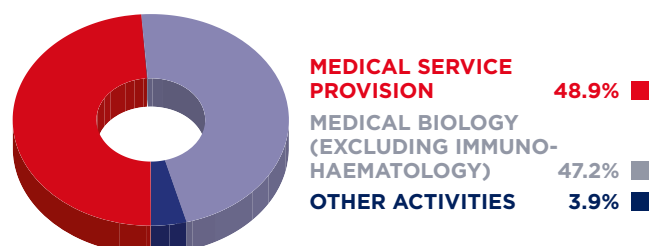
turnover (+1.2% compared to 2022)

Of which: Transfusion activities €791.6M (+0.7% compared to 2022)  
Non-transfusion activities €90.3M (+5.1% compared to 2022)

## Breakdown of turnover from transfusion activities



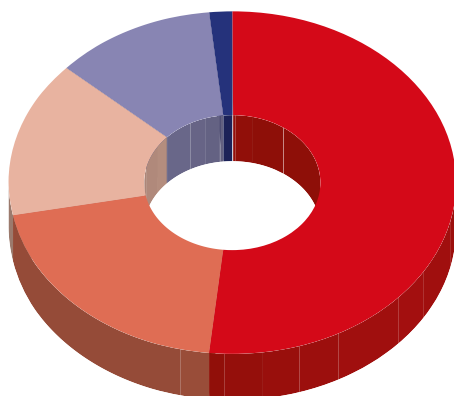
## Breakdown of turnover from non-transfusion activities



## Analysis of turnover

- The turnover generated by therapeutic LBP stood at €609.7M in 2023, down €0.3M compared to 2022 (-0.1%) as detailed below:
  - Turnover for red blood cell concentrates fell by €6.5M (-1.4%) due to the 4.3% decrease in the volume issued. This was partly offset by the 3% price increase on 1 January 2023.
  - The turnover generated by platelet concentrates increased by €7.0M (+6.2%) in line with price increases on 1 January 2023 and 1 August 2023. The proportion of units of pooled platelet concentrates (PPC) stood at 71.0% at the end of December 2023 compared to 70.6% at the end of December 2022.
  - The therapeutic plasma turnover fell by €0.8M (-3.7%), in line with the decrease in the total volume issued (-7.9%).
- The 2023 immunohaematology turnover stood at €91.6M, a decrease of €2.1M compared to 2022 due to the drop in the price of biomedical analysis value units on 1 February 2023.
- The turnover from plasma units stood at €74.5M in 2023, increasing by €8.0M (+12.0%) compared to 2022. The volumes issued (827 thousand litres) increased by 44.9 thousand litres.
- Non-transfusion activities amounted to €90.3M in 2023, accounting for 10.2% of total EFS turnover. These increased by 5.1% compared to the previous financial year.

## Breakdown of expenses (operating expenses)



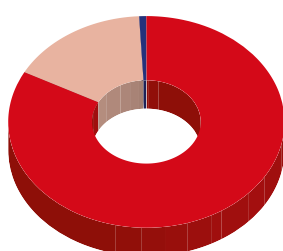
PERSONNEL COSTS	51.8%
SUPPLY PURCHASES	20.3%
EXTERNAL SERVICES	14.8%
DEPRECIATION ON INVESTMENTS AND OTHER ALLOWANCES	11.6%
OTHER EXPENSES	1.5%

**€38.5M**

**in investments**

Of which: Intangible assets €4.5M  
Tangible assets €33.9M

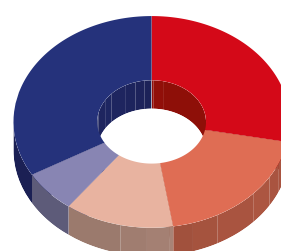
## Breakdown of supply purchases



MEDICAL SUPPLIES	83%
NON-MEDICAL SUPPLIES	16.4%
OTHERS	0.6%

Supply purchases increased by €15.4M in 2023. Energy costs alone account for 87% of this increase.

## Breakdown of external services



PROPERTY AND EQUIPMENT LEASES	28.2%
MAINTENANCE AND REPAIRS	19.4%
TRANSPORT	12.7%
LAUNDRY AND CLEANING	6.5%
OTHERS (TELECOMMUNICATIONS, INFORMATION TECHNOLOGY, ETC.)	33.2%

# BALANCE SHEET

Results as at 31/12/2023

## ASSETS

Expressed in €	Gross value	Prov. Amort.	31/12/2023	31/12/2022
<b>INTANGIBLE ASSETS</b>				
Development costs				
Licenses, patents and similar rights	90,021,896	82,753,165	7,268,732	5,375,740
Goodwill	1,028,120	635,120	393,000	568,800
Other intangible assets	296,311	291,928	4,383	11,161
Intangible assets, current, advance payments and down payments	2,568,168		2,568,168	4,009,512
<b>TANGIBLE ASSETS</b>				
Land	13,334,459	2,181,305	11,153,154	11,031,686
Buildings	438,125,533	307,267,254	130,858,279	135,450,127
Mechanical and electrical systems, equipment, tools	246,751,498	172,590,614	74,160,884	76,876,162
Collections	6,850		6,850	6,850
Historic and cultural assets				
Other tangible assets	76,148,720	62,942,411	13,206,309	14,895,194
Pending assets	19,300,267	112,858	19,187,409	15,567,004
Advance payments and down payments	184,392		184,392	43,700
Assets unencumbered by rights				
Tangible assets (live assets)				
<b>FINANCIAL ASSETS</b>				
Investments	3,879,905		3,879,905	3,879,905
Investment-related receivables				
Other long-term investments	16,043		16,043	16,043
Loans	23,687,553		23,687,553	22,908,510
Other financial assets	1,593,442	4,393	1,589,050	1,600,056
<b>FIXED ASSETS</b>	<b>916,943,159</b>	<b>628,779,048</b>	<b>288,164,111</b>	<b>292,240,449</b>
<b>INVENTORY AND WORK IN PROGRESS</b>				
Raw materials, supplies	36,018,037	535,415	35,482,623	36,656,147
Work in progress: goods	11,446,415	4,790,411	6,656,003	6,604,398
Work in progress: services				
Intermediate and finished products	93,383,613	65,928,202	27,455,411	25,109,608
Merchandise	574,370	897	573,473	581,930
<b>ACCOUNTS RECEIVABLE</b>				
Accounts receivable - public entities (State, other PE)	23,049,960		23,049,960	14,859,927
Trade accounts receivable	196,067,887	1,378,053	194,689,834	173,640,093
Debts owing (tax affected)				
Advance payments and down payments on orders	477,806		477,806	163,307
Account balances (contingency plan)	66,899		66,899	
Other accounts receivable	10,502,263	3,994,617	6,507,646	5,743,773
<b>PREPAYMENTS</b>				
Prepayments	6,146,847		6,146,847	5,383,592
<b>CURRENT ASSETS (NOT CASH)</b>	<b>377,734,098</b>	<b>76,627,596</b>	<b>301,106,503</b>	<b>268,742,777</b>
Marketable securities				
Liquid assets	9,840,208		9,840,208	38,682,149
Other				
<b>CASH</b>	<b>9,840,208</b>		<b>9,840,208</b>	<b>38,682,149</b>
Accrual accounts				
Conversion rate adjustment - assets	12		12	8,349
<b>GRAND TOTAL</b>	<b>1,304,517,477</b>	<b>705,406,644</b>	<b>599,110,833</b>	<b>599,673,723</b>

# LIABILITIES

Expressed in €	31/12/2023	31/12/2022
<b>FUNDING RECEIVED</b>		
State funding	55,748,271	54,960,088
Funding by third parties	9,982,293	11,534,649
Equity		
Revaluation variance		
Statutory or contractual reserves		
Regulated reserves (of which res. for share price fluctuations)		
Other reserves (of which purchase of works by original artists)	154,742,692	154,742,692
Carried forward	44,452,230	84,824,247
<b>RESULT FOR THE FINANCIAL YEAR (profit or loss)</b>	<b>(8,667,228)</b>	<b>(40,372,017)</b>
Regulated provisions	0	0
<b>EQUITY</b>	<b>256,258,257</b>	<b>265,689,659</b>
Provisions for liabilities	28,211,085	29,449,659
Provisions for expenses	127,304,478	128,098,817
<b>PROVISIONS FOR LIABILITIES AND EXPENSES</b>	<b>155,515,563</b>	<b>157,548,476</b>
<b>FINANCIAL DEBTS</b>		
Convertible bond loans		
Loans and debt from credit institutions	10,125,000	11,625,000
Financial debts and other loans	159,236	154,716
<b>FINANCIAL DEBTS</b>	<b>10,284,236</b>	<b>11,779,716</b>
<b>OPERATING DEBTS</b>		
Trade account payables and related accounts	129,046,362	114,531,475
Tax and social security liabilities	42,457,352	43,855,473
Advance payments and down payments		
<b>SUNDRY DEBTS</b>		
Liabilities in respect of fixed assets and related accounts		
Other debts	1,092,764	1,094,539
<b>ACCRUAL ACCOUNTS</b>		
Deferred income	4,455,921	5,173,995
<b>NON-FINANCIAL DEBTS</b>	<b>177,052,400</b>	<b>164,655,481</b>
<b>CASH</b>		
Other aspects of passive cash flow		
<b>CASH</b>		
Accrual accounts		
Conversion rate adjustment	378	391
<b>GRAND TOTAL</b>	<b>599,110,833</b>	<b>599,673,723</b>

# BLOOD COLLECTION



**1,571,605**

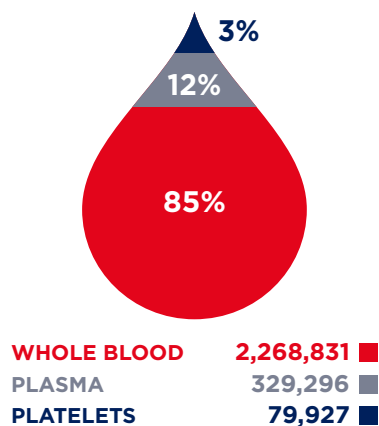
donors in 2023



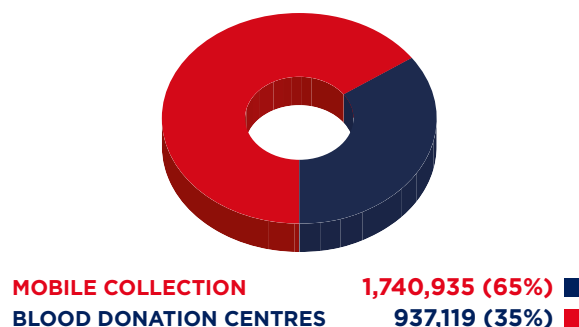
**2,678,054**

donations given in the year

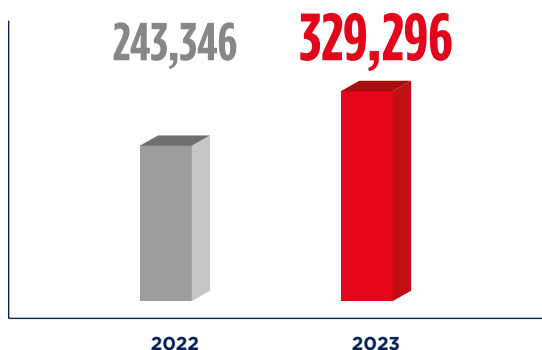
## Breakdown of donations



## Breakdown of donations by collection type



## Changes in plasma donations



**+31%**

increase in the number of plasma donors

**+67.9%**

increase in new plasma donors

**2,988,766**

applications to donate

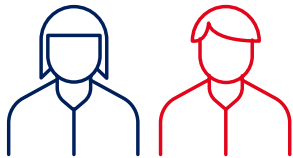
**10%**

of applications do not lead to a donation

**7%**

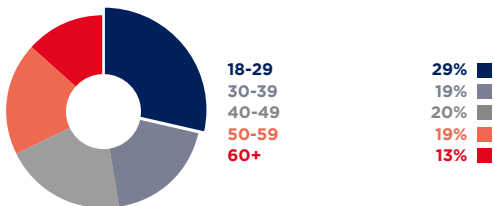
deferrals on medical grounds

## Who are the donors and how do they donate?

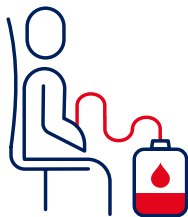


**3.6%** of the population of donor age  
**17%** new donors

### All population age groups represented

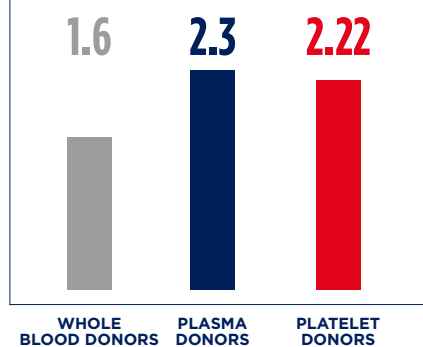


**53%** female  
**47%** male



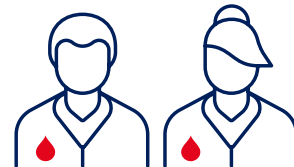
**1.7** donations per year on average

AVERAGE NUMBER OF DONATIONS PER YEAR



## Resources deployed

### TO COLLECT DONATIONS



**47%** of staff involved



**104** blood collection centres



**32,475** mobile collections

### IN THE PREPARATION AND SCREENING OF DONATIONS



**11%** of staff involved



**18** preparation facilities

Two alternative methods for preparing LBP were rolled out in 2023:  
- production of fresh frozen plasma (FFP) from thawed plasma  
- production of manual PPCs to guarantee the business continuity plan for platelet products.

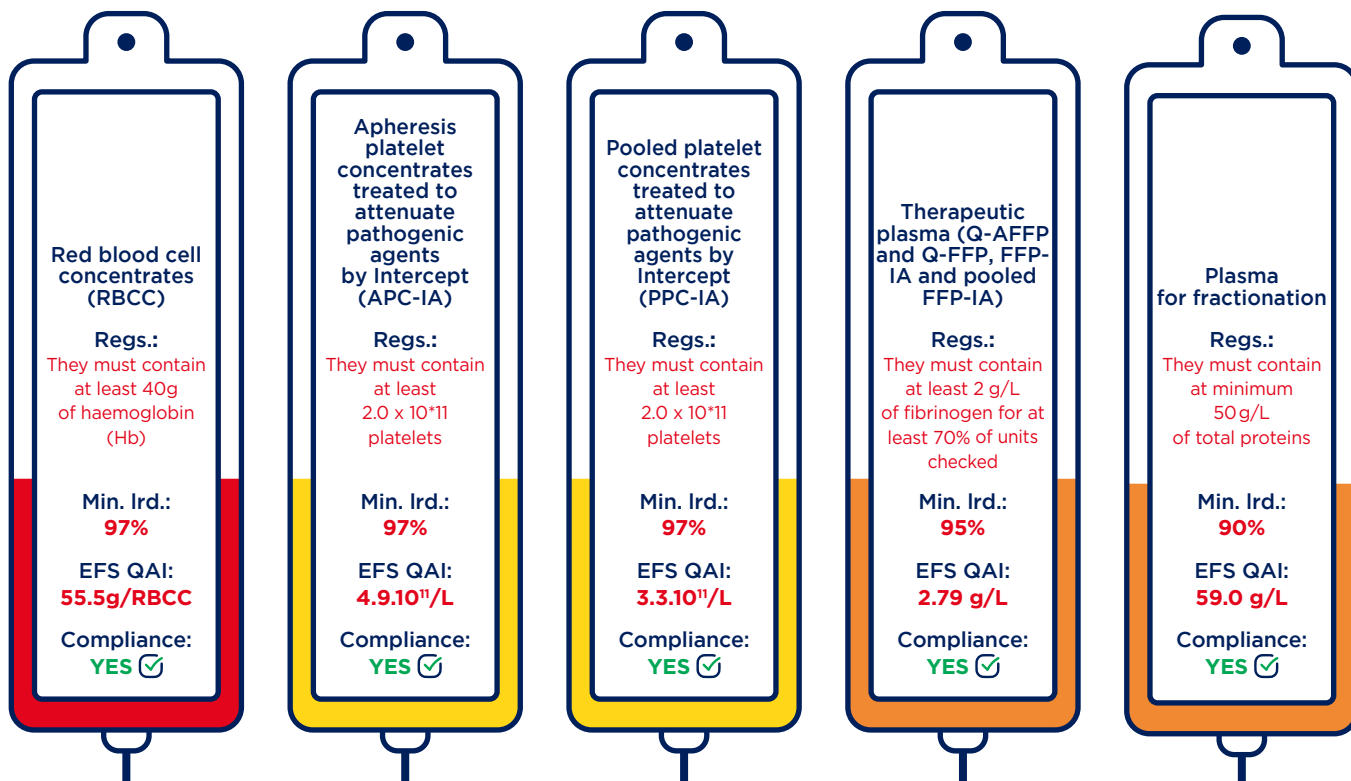
**7** blood screening laboratories

**4** biobanks

More than 5 million samples were stored in 2023 for a permanent stock of around 18 million samples kept for haemovigilance investigations, epidemiological studies or research.

# BLOOD PRODUCTS

## QUALITY CONTROL OF PRODUCTS



Regs.: Regulations - Min Ird.: Minimum leukoreduction - EFS QAI: EFS 2023 quantity in active ingredient - Compliance: Compliance with regulatory characteristics

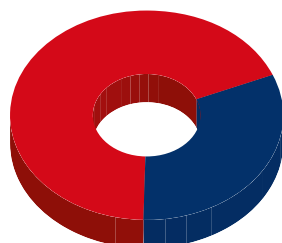
## MEDICAL BIOLOGY



# 510 MILLION BIOMEDICAL ANALYSIS VALUE UNITS

The medical biology activity carried out by EFS in 2023 (-1.6% compared to 2022)

### Breakdown by activity



IH RECIPIENTS  
349 MILLION BIOMEDICAL ANALYSIS VALUE UNITS (68.4%)

OTHER LABORATORY TESTS  
161 MILLION BIOMEDICAL ANALYSIS VALUE UNITS (31.6%)

### Resources deployed



14 multi-site medical biology laboratories in operation 24/7 as closely as possible with health care establishments

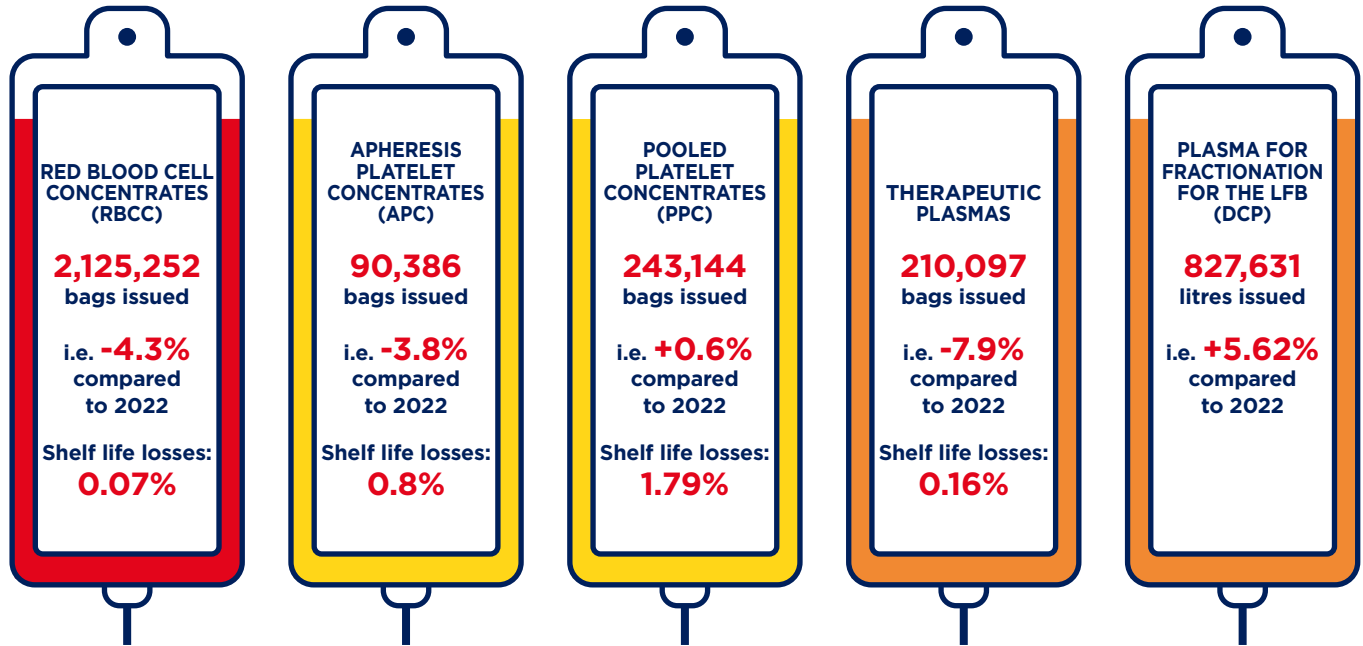
They comprise:  
132 RIH (recipient immunohaematology) sites ensuring transfusion safety and obstetric follow-up

14 HLA (histocompatibility) sites that contribute to the treatment of transplant patients

8 of these sites are reference laboratories recognised at national level and testing for specific diseases.



# PRODUCT ISSUING



## Resources deployed



Every day, EFS issues the blood products most suited to patients **24 hours a day** in conjunction with its medical biology activities. It also provides transfusion advice for health care establishments and for blood banks.

EFS manages **141** issuing or distribution sites

- "Issuing" is the nominative issuing of LBP to an identified patient
- "Distribution" is the supply of LBP to health care establishments managing blood banks

There are **619** blood banks within health care establishments placed under the authority of a doctor or pharmacist, including **441** vital emergency blood banks

# HAEMOVIGILANCE

## 295.5

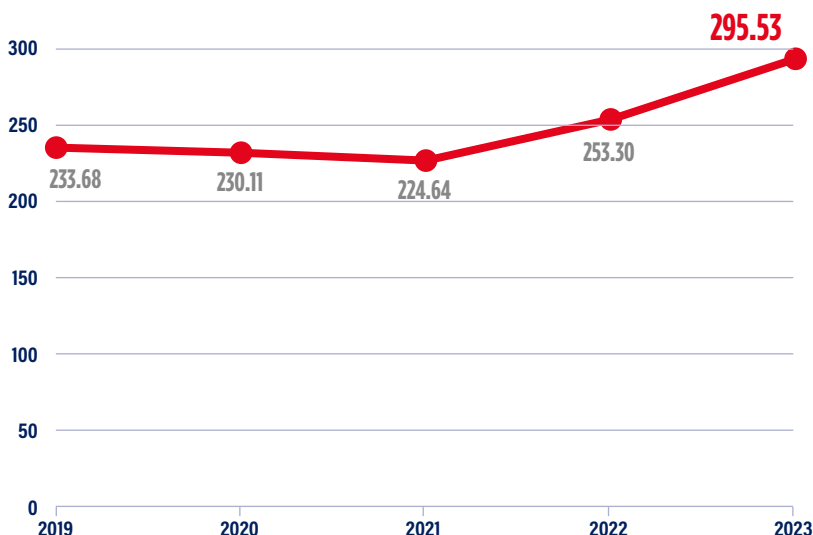
**severe donor adverse events,** possibly attributable to blood donation, reported during the year per 100,000 donations, including 86.3% reported as vasovagal reactions

## 72.6

**items relating to post-donation information in 2023** for 100,000 donations compared to 83.1 in 2022

### Changes in the number of severe donor adverse events

PER 100,000 DONATIONS

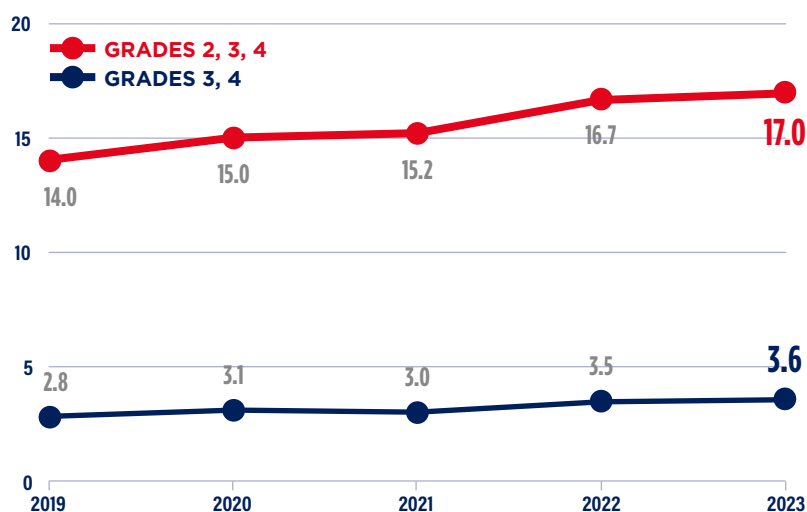


## 318.2

**recipient adverse events,** taking all grades of severity into account and possibly attributable to transfusion, reported in the year per 100,000 transfusions, of which 91.9% grade 1 (non-serious) cases

### Changes in the number of recipient adverse events considered to have a probable and certain imputability level

PER 100,000 TRANSFUSIONS



**2 deaths attributable to transfusion,** compared to 4 in 2022

The cause was circulatory overload (acute pulmonary oedema).

**1,150 serious incidents in the transfusion chain,** compared to 1,028 in 2022

Of all the incidents which occurred between the blood collection process and transfusion of the patient, 265 occurred at EFS and 885 outside.

# HEALTH CENTRES, CELL THERAPIES AND TRANSPLANTS



## PROCEDURES IN HEALTH CENTRES

**8,925**

apheresis procedures (not including HSC)

**748**

collections for the production of CAR-T cells

These procedures were carried out in

**20**

health centres across the regional establishments

of which

**2,511**

plasma exchanges

and

**2,791**

red blood cell exchanges

**2,762**

collections of haematopoietic stem cells



## BONE MARROW DONATIONS

**111%**

of the target of bone marrow donation centres reached in 2023

**13,915**

voluntary prospective bone marrow donors registered in the year with the French Bone Marrow Transplant register

**16**

bone marrow donation centres managed by EFS

promote donation and register voluntary donors in the French Bone Marrow Transplant register. EFS also collects haematopoietic stem cells and prepares grafts in its cell therapy units.



## CELL AND TISSUE THERAPIES

EFS currently manages over

**50%**

of national activity in the preparation of human cells and tissues for therapeutic purposes

In its

**15**

cell therapy units, EFS prepared in 2023:

- **1,639** autologous HSC
- **1,197** allogeneic HSC
- **613** extracorporeal photochemotherapy procedures
- **134** units of placenta blood

In its

**8**

tissue banks, EFS received in 2023:

- **5,346** corneas and **2,433** patients transplanted
- **755** arteriovenous tissues and **420** patients transplanted
- **1,706** bone tissues and **1,045** patients transplanted
- **159,459 cm<sup>2</sup>** of skin and **47** patients transplanted

# RESEARCH AND ADVANCED THERAPY MEDICINAL PRODUCTS

## RESEARCH AND TECHNOLOGY TRANSFER

**22** ongoing clinical research projects  
8 of which are being sponsored by EFS and 9 where EFS is the investigator

**214** scientific publications  
of which 39 have been published by departments other than research (e.g. HLA laboratory) and 75% have been published in journals with an impact factor >3

Breakdown of publications according to research topic



**4** new inventions for which a patent application has been filed

**8** new invention disclosures received

**71** patent families in the EFS portfolio  
A patent family includes all the applications filed or patents granted for the same procedure in different countries around the world.

Breakdown of portfolio patents per family



**92** technology transfer contracts under discussion, of which 33 were signed in 2023

**5** licensing and operating agreements signed in the year

Breakdown of technology transfer contracts signed by type



## Resources deployed FOR RESEARCH



**183** employees  
and a **€16.6M** budget  
of which **€11.4M** directly  
financed by research

**11** projects with ANR  
(French National Research  
Agency) funding  
and **3** ongoing projects with RHU  
(University Hospital Research)  
funding



EFS IS PART OF:  
**5** laboratories of excellence  
(LABEX)  
**2** Carnot Institutes

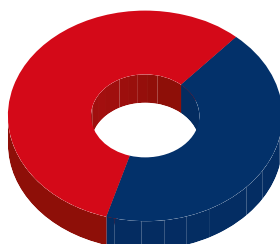
## ADVANCED THERAPY MEDICINAL PRODUCTS (ATMP)

**254** batches produced  
in accordance with Good  
Manufacturing Practices (GMP)  
since the activity began

**28** active ATMP  
projects in 2023

**2<sup>nd</sup>** ATMP-pp developed by EFS  
(advanced therapy medicinal products  
prepared punctually)  
This medicinal product is designed to  
treat the effects of GVHD (graft-versus-  
host disease) following allogeneic  
haematopoietic stem cell transplants.  
It is produced solely by EFS in France.

### Breakdown of active ATMP projects



**COLLABORATIVE PROJECTS**  
**PROJECTS FOR PRIVATE PARTNERS**

**16** ■  
**12** ■

## Resources deployed FOR ATMP



**90** individuals working on advanced therapy  
medicinal products

**1** industrial integrator  
(advanced biotherapy platform, PIBT) based in  
Besançon. It provides a link between the RIGHT  
research unit and the ATMP platform in Besançon.

Active EFS participation in the French health  
technology sector:

- 5** individuals within the France Biolead  
working groups
- 2** individuals on the France Biotech committees
- 4** partnerships with competitiveness clusters

# Reagents and Biological Resources

## REAGENTS

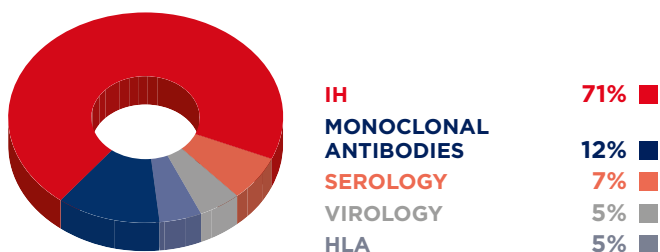
Almost **1.3** million tubes or bottles of reagents produced

**173** litres of monoclonal antibody raw material produced

**€10.7M** of turnover, of which **54%** generated with external clients (compared to 57% in 2022)

**30** Products with a CE label

### Breakdown of the reagent production activity



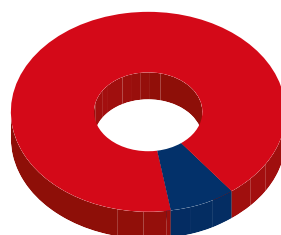
## BIOLOGICAL RESOURCES

**€11.7M** of turnover (compared to €10.6M in 2022)

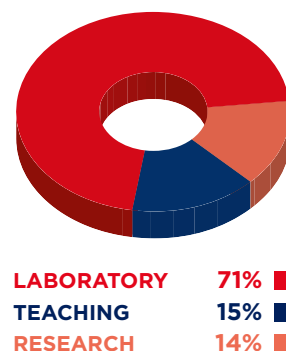
**405,784** products issued (compared to 448,653 in 2022)

**812** external clients

### Breakdown of biological resources issued



### Breakdown of external issuing of biological resources



## Resources deployed

### FOR THE REAGENT PRODUCTION ACTIVITY

**65** employees, of whom:  
**52** are in production  
**7** are in quality assurance/regulatory affairs  
 and **6** in R&D  
**6** production sites

The marketing and sales unit of the Department of Biology, Therapeutic Activities and Diagnostics is developing a structured, voluntary strategy to acquire new partners and secure customer loyalty. Enhancing the value of reagent activities generates an increase in external sales, which

generates a margin and guarantees internal supplies at a preferential cost. Recent initiatives have produced satisfactory initial results in terms of both turnover and the number of new prospective customers/partners.

### FOR THE BIOLOGICAL RESOURCES ACTIVITY

**101** employees  
 equivalent to **47.32** FTEs

Products that cannot be used for transfusion (non-compliant products, products with antigenic characteristics, tube bottoms, etc.) are recycled and are given to:

- research scientists to advance science;
- students for training purposes;
- manufacturers of IVDs (in-vitro diagnostic medical devices) to produce the reagents needed for transfusion safety;
- donors permanently or temporarily excluded from therapeutic donation in an act of citizenship



**Giving  
blood**  
*the power*  
**to heal**

ÉTABLISSEMENT FRANÇAIS DU SANG  
20, AVENUE DU STADE DE FRANCE  
93218 LA PLAINE SAINT-DENIS

[www.efs.sante.fr](http://www.efs.sante.fr) - [dondesang.efs.sante.fr](http://dondesang.efs.sante.fr)