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OUR RAISON
D'ÊTRE.

life

ANNUAL REPORT
MANIFESTO





Our raison d'être. *life.*

For over twenty years, life has been at the heart of our mission at EFS. It is quite simply our raison d'être. It is the beating heart of our patients but also of our teams, our partners and the donors who take action to save lives. By promoting blood donation and its values, by supplying each patient with the bag of blood they need to treat them, by safeguarding the transfusion chain from donor to recipient, and by bringing tomorrow's treatments to life thanks to our research teams, we save lives. And improve quality of life throughout life.

We serve this raison d'être with rigour, conviction, solidarity and ethics. It is what guides and motivates us in all we undertake. To bring our vision to life, to give life to our projects, to facilitate the lives of our donors and to provide a stimulating work environment for our teams.

This publication covers all of these life stories. Those of the patients, the donors, the volunteers, the elected representatives and the stakeholders who work alongside us to save lives, and those of our employees who embody this vast chain of solidarity and life on a daily basis. Through them, we invite you to discover our raison d'être. *life.*


 A woman with long dark hair, wearing a red long-sleeved top, is sitting in a chair and holding a newborn baby. She is looking down at the baby with a gentle smile. The baby is wrapped in a red blanket. The background is a plain, light-colored wall.

Give

Life

“WHEN RÉPHAËL
NESTLES AGAINST ME,
WHEN I FEEL HIS WARM
LITTLE BODY RELAX AND
I BREATHE IN THE SCENT
OF HIS HAIR, I THINK
BACK TO THE MOMENT
OF THAT TERRIBLE
HAEMORRHAGE AND
I FEEL THAT WE ARE
MORE ALIVE THAN EVER,
THE TWO OF US.”

THROUGH THE EYES OF...

AURÉLIE, 34, MOTHER
TO RÉPHAËL, 6 MONTHS

PORTRAIT

NARRATIVE/ During the night of 25 October 2019, Aurélie arrives at the hospital for the delivery of her baby, which appears to be going well. But nothing goes as planned, and it is ultimately a transfusion that will save her life. After 14 hours of contractions, the baby has still not arrived. Fearing for her health, the doctors transfer Aurélie to surgery for a caesarean section. It is 6pm. Things start to accelerate.

The baby is barely out when a haemorrhage is triggered. Aurélie loses almost 2 litres of blood. It is 9pm. In intensive care, she is transfused the next day. She is exhausted but happy. Her newborn son Réphaël is waiting for her.

LIKE **AURÉLIE**, BETWEEN 5 AND 10% OF WOMEN IN LABOUR SUFFER HAEMORRHAGES DURING DELIVERY. SOMETIMES A TRANSFUSION IS CRITICAL TO THEIR RECOVERY, EXPLAINS **GWENNAELLE SALMON**, A MIDWIFE FOR AROUND TWENTY YEARS.



GWENNAELLE SALMON, 45, INDEPENDENT MIDWIFE SINCE 2020, AFTER 16 YEARS ON THE MATERNITY WARD AT PITIÉ-SALPÊTRIÈRE HOSPITAL IN PARIS.

“**P**ostpartum haemorrhages, which occur in 5 to 10% of labours, are unfortunately on the increase because risk factors such as obesity and uterine scarring are also increasing. But it is something that midwives know how to handle. A haemorrhage is declared when 1/2 litre to 1 litre of blood is lost.

At this point the gynaecologist checks that there is no tearing. To stop the haemorrhage, a Bakri balloon is inserted into the uterus, and oxytocin administered to help it contract, while the haemoglobin levels are monitored. If haemoglobin levels fall, for example from 12 g/dl to 6, a transfusion is given. This happens in one out of ten cases. But postpartum haemorrhage is not the only case where EFS is involved. During pregnancy, EFS fills out a blood type card and identifies any rare blood types. A blood bag is systematically planned for the day of delivery for

1/10
The average number of women transfused during a postpartum haemorrhage

rare groups. This is also the case for at-risk patients, for example, those who have already had several caesarean sections. The patient is also monitored throughout the pregnancy to ensure she is not anaemic. Then, if a transfusion was performed, it is the responsibility of the independent midwife to follow up the mother after her return home. Since I've been

in practice, I ask each patient to show me her medical report and her transfusion record. I check that her antibodies have been followed up to prevent the risk of rejection, and I prescribe iron to help with the recovery. Some young mothers who have received a transfusion may sometimes be in shock. We are there to help.”



SOPHIE PRIGENT
Blood collection doctor, head of the Quimper *maison du don* (EFS Bretagne)

“As a doctor, saving lives is the very foundation of my profession. A job that is all the more meaningful at EFS even though, paradoxically, I'm surrounded by people in good health, and not patients. But these people, these donors, who are making a gratuitous gesture of solidarity, are both altruistic and generous. It is one of the reasons why I love to welcome them and most of all make them want to come back. I ask what motivates them. To the younger ones, I explain the beauty of their act and remind them that three lives are saved by each donation. I invite them all to reflect on this, to think of the patients who will receive their blood. It is by thinking on this each day myself that I feel truly useful. Which is why I'm still here after thirteen years.”

“**Postpartum haemorrhage is not the only case where EFS is involved. During pregnancy, EFS fills out a blood type card and identifies any rare blood types.**”

Gwennaelle Salmon, midwife

“**IT'S AMAZING TO BE SURROUNDED BY ALL THESE DONORS IN GOOD HEALTH WHO ARE MAKING A GRATUITOUS GESTURE OF SOLIDARITY TO SAVE LIVES.**”

Discover

PORTRAIT

“THE LITTLE FACE OF MY FLORIAN AND HIS TWINKLING EYES, THE STRENGTH OF HIS BODY PREVIOUSLY SO STRAINED, HIS LITTLE TANNED ARMS THAT THEY DIDN'T KNOW WHERE NEXT TO INFUSE, THEY ARE A TRUE MIRACLE. I NEVER TIRE OF SEEING HIM LIVING LIFE TO THE FULL.”

THROUGH THE EYES OF...
MANU, FATHER OF FLORIAN, 6 YEARS OLD

Life

NARRATIVE/ In February 2015, when Charlotte and Manu learn that their young son Florian has Wiskott-Aldrich syndrome, they have no idea what to expect. Repeated infections, eczema and bruising, and multiple transfusions, are followed by much more harrowing treatments. Before finding a donor who can save his life.

Almost two years go by with mounting hospitalizations and transfusions. Finally, with no compatible donor found, his last hope was his father, who donated his bone marrow on 8 December 2016. Today, Florian is cured. The chance of the transplant taking was less than one in three.

LIKE **FLORIAN**, 1 LITTLE BOY IN 100,000 IS BORN EACH YEAR IN FRANCE WITH WISKOTT-ALDRICH SYNDROME (WAS). FLORIAN HAD THE GOOD FORTUNE TO RECEIVE A BONE MARROW TRANSPLANT, BUT IT IS IMPORTANT TO RAISE AWARENESS AMONG THE DONORS OF TOMORROW. THIS IS ONE OF THE MISSIONS OF **GHYSLAINE DUPONT**, LIFE SCIENCES TEACHER.



GHYSLAINE DUPONT, 40, LIFE SCIENCES TEACHER AT ANNE-FRANK COLLEGE, MORIÈRES-LÈS-AVIGNON (VAUCLUSE).

“**M**

y (middle school) students, some colleagues and I have organized a big blood collection competition since 2015. An initiative that becomes more ambitious with each passing year. It all started with a request from EFS, which suggested we circulate donation pledges among our students so that they could recruit donors

from among their relatives. Since I was working with my 6th grade on the supply of oxygen and nutrients to the cells at the time, it seemed like a good opportunity. That year, we received about twenty donation pledges. In subsequent years, we went further, introducing an inter-class challenge, blood collection in the school and students welcoming donors. The result: 190 pledges in 2017, 235 in 2018, 305 in 2019 and up to 145 bags of blood collected. This year we spiced up the challenge with a “police investigation” on the theme of blood donation that I designed

305 donation pledges received by students at Anne-Frank college in Morières-lès-Avignon, in 2019

“Over the last five years, this initiative has made young people a lot more aware of the importance of blood donation, but also its values, while expanding their knowledge.”

Ghyslaine Dupont, life sciences teacher

with my physics colleague, Stéphanie Blanc, so that our 8th grade could deepen their knowledge of the sciences curriculum. Centred on the disappearance of a bag containing documents needed for blood collection, this investigation extended across most of the school year and included a variety of puzzles on genetics, immunology, and chemical reactions, as well as English and French. The students never imagined it was a game: they really believed that all the clues were real! The blood collection took place this year but without the students, due

to the health crisis. Over the last five years, this initiative has made young people a lot more aware of the importance of blood donation, but also its values, while expanding their knowledge. I hope that some of them will become future donors, as children are very receptive at that age. I thank the school management for supporting this project from the outset, and the teams at EFS for helping us to implement these initiatives. We were barely out of lockdown when they began asking me to plan next year’s event!”



OUR TALENTS
SAVE
LIVES

JOSÉ LAQUEMBÉ
Inventory clerk in Fort-de-France (EFS Martinique)

“I have been an inventory clerk here since 2008. My work consists, among other things, of receiving reagents and consumables, supplying laboratories and updating the inflow/outflow file. I form part of a chain that saves lives. Because without reagents, we cannot analyse the blood bags to make sure they are safe, which means they won’t get to patients. It was particularly important to monitor stocks during the health crisis as all the airports were on go-slow. And it’s difficult to have them brought in as an emergency. Throughout the epidemic and lockdown, my neighbours greeted me differently, more warmly. They didn’t applaud, but they smiled at me. I’m proud of this job. It is nothing like the same job anywhere else. At the end of the chain are patients, not just consumers.”

“IN CHARGE OF REAGENT STOCKS, I FORM PART OF A CHAIN THAT SAVES LIVES. IT’S AN EXCITING JOB.”

Live

Life

to the full

“I DANCE, MY PULSE RACES AND MY VEINS SWELL. I CLOSE MY EYES AND I LIVE, BECAUSE THE BLOOD FROM A DONOR ONE DAY REPLACED MINE WHICH WAS SICK. I’M STILL DANCING, AND I SMILE AT ALL THOSE WHO SAVED ME. THANK YOU...”

THROUGH THE EYES OF...
CASSIDY, 17, SCHOOL STUDENT

PORTRAIT

NARRATIVE/ Cassidy has learned to live with her sickle-cell anaemia. Like living with your nemesis, for fourteen years. An enemy that has made life hard, with its outbreaks, pain and transfusions. One that has prevented her from doing the most simple things, like playing in water, wearing tight clothing or getting on a plane. And that has also destroyed her organs.

Up until her kidneys were affected and she was admitted to a sterile room in hospital. She was warned: there’s no guarantee of a transplant. But Cassidy had an appointment with life. That was three years ago. Today, she wants to become a doctor, but in the meantime... she dances.

LIKE **CASSIDY**, 5 MILLION PEOPLE WORLDWIDE SUFFER FROM SICKLE-CELL ANAEMIA. THE TREATMENT OF THIS DISEASE NEEDS RESEARCH TO PROGRESS. RESEARCH IS PRECISELY ONE OF THE COMMITMENTS OF MP **AUDREY DUFEU**.

AUDREY DUFEU, 40, MP FOR LOIRE-ATLANTIQUE (8th CONSTITUENCY) - MEMBER OF THE COMMITTEE FOR SOCIAL AFFAIRS.



“**B**

lood donation is an act of citizenship that saves lives. A free, anonymous and voluntary donation. Personally, it makes me instantly think of EFS, which, as a former healthcare professional, I know well. An institution with secure management that provides great quality of service to all those living in our country. An institution whose innovative and pedagogical communication

methods play a huge part in reaffirming the community values of blood donation. Beyond this indispensable public service mission, I count on EFS to help French research innovate. Especially when it comes to innovative therapies, which are a huge public health challenge. Let's take one example. Private laboratories today charge over €300,000 for a CAR T-cell injection* even though it costs

them 8 to 10 times less. EFS has a role to play in making treatment accessible to all, thanks to academic research and production. I hope we will vote on a feasibility report for this academic production in the upcoming Social Security Finance Law. The ring-fencing of public health budgets and missions is essential, as the current crisis once again demonstrates. My other battle is

5 advanced therapy pharmaceutical platforms at EFS and 17 cell therapy units

“I count on EFS to help French research innovate. Especially when it comes to innovative therapies, which are a huge public health challenge.”

Audrey Dufeu, MP

health democracy, as set out in the “Ma santé 2022” bill (healthcare reform strategy) voted in July 2019. In order to extend this democracy to research, the programmes must be extended beyond university hospitals. Hospitals that also have research departments must work with the university hospitals and the local EFS establishments, within the same regional

hospital group. This will be one of the challenges of the next research programming law.”

** Advanced therapy medicinal products (ATMPs) that treat certain refractory cancers (lymphoma or myeloma) spectacularly.*



CATHERINE STRASSEL
Researcher in Strasbourg (EFS Grand Est)

“I work on the cellular and molecular mechanisms that control platelet biogenesis. Thanks to the knowledge gained, I've been able to develop a culture method patented by EFS, which enables us to produce platelets in a laboratory from circulating blood stem cells. We are due to reach clinical trial stage at the end of 2021, by transfusing the platelets produced into a healthy volunteer in order to assess their ability to recirculate and their life span. We hope one day to be able to produce cultured platelets on a large scale. In the long term, these could fill the transfusion shortfalls that are sometimes still encountered. But not for another ten to fifteen years. Science takes a long time, which is something many people have understood with COVID-19. So yes, even if researchers weren't applauded during lockdown, it has encouraged us to continue our research efforts so that we can continue to assist doctors in the development of new therapeutic strategies.”

“**WITHOUT RESEARCH, WE CANNOT MAKE PROGRESS AND SAVE LIVES.**”

A new lease of life

PORTRAIT

“MY ACUTE MYELOID LEUKAEMIA CARRIED ME AWAY LIKE A TIDAL WAVE THEN WASHED ME UP ON THE SHORE, EXHAUSTED. SINCE THEN I’VE BEEN LEARNING TO LIVE AGAIN, TAKING SMALL STEPS AT A TIME. I WILL BE CELEBRATING THE FIRST ANNIVERSARY OF MY NEW LIFE OUT IN THE COUNTRYSIDE, WITH MY FRIENDS.”

THROUGH THE EYES OF...
ISABELLE, 47, IN REMISSION

NARRATIVE/ When Isabelle had a blood test on 13 June 2019, she never imagined that within a few hours her whole world would be turned upside down. True, she was tired, had nose bleeds and some bruising, but she had not had a holiday for a while, surely that was the reason. The results arrived at 3pm bearing bad news. She had to go to the hospital, where she was told she had leukaemia.

Three days later, she started her first chemotherapy cycle lasting a month, and the bad times kept coming. Only transfusions allowed her body to recover. She would undergo around thirty. On 4 November, she was declared to be in remission. She had thrown down a challenge, and told her leukaemia: “You’re not going to get me!”

LIKE **ISABELLE**, APPROXIMATELY 3,000 PATIENTS ARE DIAGNOSED WITH ACUTE MYELOID LEUKAEMIA EVERY YEAR IN FRANCE. THEY ARE DEPENDENT ON DONORS LIKE **MAEL ZAYAN** FOR TREATMENT.



MAEL ZAYAN, 19, REGULAR PLASMA DONOR, INFORMATION AND COMMUNICATION AND DEGREE STUDENT.



donate my plasma about every fortnight since becoming an adult. Why plasma and not whole blood? Because it allows me to donate more often: every two weeks instead of eight. But also because plasma is extremely useful. It enables patients with serious haemorrhages, burns

or injuries, haemophiliacs and immunosuppressed children to be treated. It is also used to manufacture medicines. Moreover, it has a longer shelf life, up to one year when frozen, unlike platelets which have to be used within a week or red blood cells that keep for 42 days. So, even though donation takes longer and is more intimidating, I prefer to give plasma. It takes 40-45 minutes compared to 10-15 for normal blood donation. And it's done by apheresis, i.e. using a machine that takes whole blood, but keeps the plasma and reinjects the

45

minutes, the average time it takes to collect plasma

“I try to convince other students it’s as painless as having a blood test, and that it’s useful.”

Mael Zayan, donor

platelets and red blood cells. Only a few students I know give blood, some because they have a fear of needles, others because they haven't really thought about it. I try to convince them that it's as painless as having a blood test, and that it's useful. Last time I took a friend along with me to show her how simple it was: you make an appointment by phone or using the app, then simply turn up at the *maison du don* collection centre or one of the mobile collection units, on the university campus, for example. She realised, like me each time I donate

blood, how welcoming and friendly the nurses, doctors and volunteers are. And like me, she felt truly useful afterwards. Recently, I was asked to donate whole blood occasionally as it is in particularly high demand. But that won't stop me from donating plasma as well.”



MATHILDE ROUSSELET

Head of Quality Control for cell therapy products and ATMPs in Toulouse (EFS Occitanie)

“Without cell therapy products, patients with certain cancers such as leukaemia would be terminally ill. Transplantation of stem cells originating in bone marrow, frozen then transfused in a concentrated form, forms part of the treatment for these patients. Our laboratory also develops advanced therapy medicinal products (ATMPs). The ACellDREAM protocol, based on adipose tissue stem cells, is one of these. It is currently in phase 2 clinical trials. Thanks to these medicinal products, some diabetic patients whose legs are sometimes severely affected, do not need amputation as their vessels regenerate. At EFS, we have the opportunity to work on this type of innovative project. And I am proud of that.”

“THANKS TO OUR CELL THERAPY PRODUCTS AND ATMPs, SOME PATIENTS WITH CANCERS OR OTHER DISEASES CAN BE TREATED.”

Feel

alive

“AFTER MY OPEN-HEART SURGERY, IT TOOK ME A LONG TIME TO GET BACK ON MY FEET. TEN YEARS LATER, IT IS MY GREATEST JOY TO BE BACK IN THE MOUNTAINS, THAT I TAKE SUCH PLEASURE IN EXPLORING WHENEVER I GO HIKING.”

THROUGH THE EYES OF...
JOËL, 61, RETIRED

PORTRAIT

NARRATIVE/ Flu sometimes turns ugly, as Joël knows, having struggled to recover from influenza A at the end of 2009. A spry fifty-year-old, very active. He told himself it would pass, but it got worse. Until he ended up in surgery because one of his heart valves was seriously affected.

After five and a half hours of open-heart surgery and five units of transfused blood, he pulled through. But he still needed two weeks of intensive care and a long period of rehabilitation, to truly recover. When he tells his story at the blood donor association he has always been involved with, the donations surge.

FOLLOWING A STROKE, JOËL NEEDED FIVE UNITS OF BLOOD TO SURVIVE. A RECIPIENT, HE IS ALSO A VOLUNTEER, LIKE JANINE BARBIER, WHO HAS GIVEN BLOOD FOR THIRTEEN YEARS.



JANINE BARBIER, 67, VOLUNTEER, CHAIR OF THE ISÈRE DEPARTMENTAL UNION OF BLOOD DONORS AND CHAIR OF THE SAINT-EYNARD DONORS ASSOCIATION.

“**A**

s a volunteer in a blood donor association for thirteen years, I was plunged into this universe when I was very young. My mother took me along with my brother and sisters when she gave blood. My parents arrived from Italy in 1952, and for our family it was a way to thank the country that welcomed us in, and to help us integrate.

My first donation was with the same association that I now chair. That was thirty years ago. I started off as a simple volunteer, then became area manager. Our role is to recruit donors by advertising blood drives and spreading the word, then organizing the rooms to facilitate the installation of the EFS teams and, finally, welcoming donors on the day. We look after first-time donors by explaining what will happen and the ethics of blood donation in France. Then, after the collection, we accompany them to the rest area, where they will be

76,000 donors received and **750** collections organised each year by the Isère departmental union (UD)

monitored. It's an essential role. Elsewhere, in communes where associations are dwindling, collections are falling. Our departmental union currently has over 76,000 donors and runs 750 drives a year. As the Chair of the departmental union, I travel across the area several times a month to meet the various associations, especially during their general assemblies. This gives me the opportunity to emphasise our two priorities: self-sufficiency and ethics. I also explain how the transfusion chain works. Because the screening and processing work required for blood bags is not always well known.

From an ethical viewpoint, I fiercely defend the gratuity of donations and the public service because it enables everyone to access blood products. For example, the French Fractionation and Biotechnologies Laboratory (LFB) manufactures medicinal products for various diseases including orphan diseases from donor plasma. Without the altruistic acts of all these donors and the associative and institutional partners of EFS, the patients could not be treated.”

“I travel across the department to meet the various associations. This gives me the opportunity to emphasise our two priorities: self-sufficiency and ethics.”

Janine Barbier, volunteer



**OUR TALENTS
SAVE
LIVES**

DAVID LAVANANT
LBP processing technician
in Bois-Guillaume
(EFS Hauts-de-France - Normandie)

“My work consists of processing donations to separate the constituents, by isolating the plasma, the red blood cells and the platelets. The first is frozen, the second kept refrigerated, and the latter assembled in batches of eight to form a platelet concentrate that can be transfused. Analyses are performed in parallel to safeguard the donations. All these operations are traced, thus guaranteeing blood safety. All this is done as quickly as possible to supply our hospitals. I take great pride in working for a public institution in the service of patients and with donors who have always come forward voluntarily. On the day after the 13 November 2015 attacks, as well as in the wake of the COVID-19 epidemic.”

“EVEN IF WE DON'T MEET THE PATIENTS, WE ARE PROUD THAT OUR BAGS SAVE LIVES. THANKS TO EFS, WHICH PURSUES A PUBLIC SERVICE MISSION, AND THE DONORS WHO HAVE ALWAYS BEEN THERE.”