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Thanks to the important results achieved in 2018, Kedrion Biopharma confirms itself as one of the world’s most important players in the plasma-derived products industry.

Turnover, now close to 700-million-Euro, grew by 14.2% compared to 2017, and adjusted profitability also improved, reaching 148.7 million (+6.3% compared to 2017).

Kedrion’s strategic plan looks to a future of sustained growth for both revenues and profitability, made possible by an increasingly efficient global organization that offers innovative, effective medicinal specialties designed to meet the expectations of patients around the world.

From a commercial point of view, our presence on the world markets is well-balanced, with a focus on developing our most promising markets: 41% of our turnover is generated in the United States, 25% in Italy and 11% in the rest of Europe, where we are strengthening our presence in Germany and Hungary. There are interesting commercial developments underway also in Turkey and Russia.

The rest of the world accounted for 23% of our revenues, and subdividing it into homogeneous geographical areas allowed us to cover the most important markets, and to access those with the greatest growth potential, among which I would like to mention Mexico, Brazil and Vietnam.

In 2018, we proved we know how to meet the challenges generated by a highly competitive industry. An example of this was the launch - on the global market - of alternative therapies for the treatment of Hemophilia and congenital hemorrhagic disorders, to which we responded also by encouraging the medical and scientific communities to reflect on the use of these new treatments, and on Factor VIII’s key role as a standard of care.

Regarding the supply of human plasma - the raw material for our production processes - in 2018, we continued to implement the collection strategy pursued in recent years, the purpose of which is to ensure that our global production system is in position to plan fractionation and purification activities so that the needs of product distribution are met with the greatest possible efficiency.

Irrespective of the results achieved in 2018, the long-term sustainability of our business lies in industrial research and development investments; in projects that promote our international activities; in a special focus on process and product innovation, and on efficient business management.

In terms of worldwide visibility, the launch in the United States, the global awareness campaign developed for the 50th anniversary of the first use of Anti-D Immunoglobulins, were very successful, and two very good examples to follow in other therapeutic and market areas.

The global Anti-D campaign in particular grew throughout the year. We supported worldwide awareness-raising initiatives, including two events at Columbia University in New York, activities in Italy and Russia, and projects in the United Arab Emirates, Brazil, Canada and Nigeria. These, as well as our ongoing commitment to patients, donors and prestigious academic and scientific communities, represent a blueprint to reference in the near future.

For these reasons, and in view of the results produced under challenging and demanding conditions, I am convinced that 2019 will be a year of further growth for us, and that our company’s human and professional resources are among our most important assets.

In keeping with this belief, we will continue to build our intellectual infrastructure, and to enhance the wealth of cultural diversity from our presence in 13 countries around the world, employing people of 23 different nationalities.

The Annual Report you are about to read - updated compared to previous editions - reflects the trust, enthusiasm and passion with which I join the over 2,600 people working for Kedrion around the world as we strive to live our values, and contribute to shaping the future of this company.

Paolo Marcucci, Kedrion Chairman and CEO
THE FACTS

Kedrion Biopharma is a biopharmaceutical company that collects and fractionates blood plasma to produce and distribute worldwide plasma-derived treatments for rare and serious conditions including Hemophilia, Primary Immunodeficiencies and Rh sensitization.

Founded and headquartered in Tuscany, Kedrion is Italy’s leader in the plasma-derivative sector. In the last decade it has expanded operations globally and is now the 5th most important provider of plasma-derived products in the world.

As a long-time partner with the Italian National Health System, Kedrion Biopharma has advocated and supported the goal of national self-sufficiency in the production of crucial plasma-derived products in Italy. The company offers its unique expertise and experience to work with other countries toward pursuing this goal.

BEHIND THE NUMBERS

Kedrion Biopharma creates bridges.

Indeed, when it comes to its fundamental activity – collecting plasma, turning it into medicines and therapies to treat serious and rare conditions and distributing them to caregivers and patients – Kedrion is a bridge.

But even beyond that, Kedrion Biopharma brings people and resources together to help others around the world. We are committed to patients who are seeking a way across the troubled waters of rare diseases and threatening conditions.

* Including Castelvecchio Pascoli plant (Lucca, Italy), completion impending
** Source: Marketing Research Bureau. “The Worldwide Plasma Protein Market 2016” and publicly available information. As of December 31, 2018
WHY A BRIDGE

A bridge is a fitting metaphor for Kedrion Biopharma and its activities.

A bridge is a connector, joining places and people and even ideas.

A bridge provides a way across a troubled landscape, deep and dangerous valleys, rough waters.

A bridge is a means to get from where you are to where you want to be.

In music a bridge can link one movement to another, maintaining the whole.

At its most literal, the bridge describes Kedrion’s role connecting donors to those who need the drugs derived from their plasma.

Kedrion’s primary business is in offering a way – once again, a “bridge” – from plasma to therapies. And we are committed to bringing the various communities in which we work together: researchers with practitioners, patients with caregivers, our personnel with local needs.

If we think of the challenges of rare diseases as the dark shadows of life’s valleys, then the kinds of plasma-derived therapies Kedrion provides can be seen as a bridge of relief for people faced with them.

KEDRION BIOPHARMA.
WE BRING PEOPLE AND IDEAS TOGETHER.
GROWING TALENT

Central to our commitment to people is the Kedrion Biopharma family, the people who make us who we are with their work and dedication.

Respect and fair compensation are fundamental and essential, but so too is another kind of bridge – one that offers every employee, every manager, every leader a way to learn, advance and achieve his or her personal and professional goals.

This has taken the form of formal review processes, on-going technical training and partnership with external educational opportunities.

In 2018, a new Leadership Model was introduced, “providing staff with a ‘compass’ of key managerial competencies and individual essential skills they can refer to and adopt in their daily work.”

An important part of Kedrion Biopharma’s bridge to continuing education and training is the Scuola Kedrion, where the communication of ideas, experiences, practices and values is essential to our mission. Serving top and middle-level management, Scuola Kedrion provides access to theoretical and practical curricula. Attendance engenders and promotes corporate culture and identity.

PEOPLE

At the heart of all of Kedrion’s business activities, all of our plans and aspirations, are people: the people we serve; the people who partner with us; and the people who make up our company.

This primary and fundamental commitment to people is made meaningful only if, in all of our business practices and decisions, we:

- Observe and practice Social Responsibility as a central consideration
- Protect and – where possible – improve the environments in which we operate
- Act as good neighbors in the communities we serve
- Encourage and contractually oblige our partners and collaborators to likewise observe socially and environmentally responsible practices and principles.

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As of December 31st, 2018

2,613 PEOPLE IN THE WORLD

<table>
<thead>
<tr>
<th>Country</th>
<th>People</th>
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<tbody>
<tr>
<td>ITALY</td>
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<td>HUNGARY</td>
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<td>MEXICO</td>
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<td>INDIA</td>
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<td>PORTUGAL</td>
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<td>COLOMBIA</td>
<td>3</td>
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<tr>
<td>BRAZIL</td>
<td>2</td>
</tr>
</tbody>
</table>

As of December 31st, 2018
GROWING TALENT

24,133 hours of training provided in 2018

Technical / Functional 8,930

Technical Skills Program
For Kedrion employees to protect, enhance and develop technical knowledge and expertise to be more competitive in achieving current and future business targets. A program of standardized education in plasma sciences, providing an overall perspective of the plasma management process focusing on the fundamentals of quality and ethics.

Kedrion Operational Excellence
Spreading the Six Sigma cultural strategies through green belt training.

Managerial / Behavioral 5,128

Kedrion Management Development Program
Helping managers to develop leadership skills and the ability to anticipate and respond to the complex challenges in today’s business environment. Main contents: leadership, creative thinking, performance excellence, economics, markets.

Feedback and Individual Development Plan
Teaching how to manage continuous feedback as well as the year-end feedback meetings. Focus on understanding and practice in identifying development needs and writing a tailored individual development plan.

Leadership Model
Offering a practical guide to understand the model and apply it to our daily lives.

Management Team Collaboration
For Senior Managers to facilitate cooperation within senior manager group, with practical training and role-playing, addressing priority-setting, establishing vision/mission, etc.

Leader Culture Assessment
Training leaders across all US units, to increase productivity and engagement to achieve individual and collective deliverables, while encouraging understanding of, and commitment to the overall mission, vision, and goals of Kedrion.

People Management Journey
For newly appointed managers to see themselves in the role of “leader” (and the changes that implies), offering practical “tools” for managing people and creating a community to exchange experiences as “new leaders”.

Training Provided By:

- Scuola Kedrion
  Developing and communicating brand identity and company culture, theoretical and practical training courses for directors and managers.

- Human Resources

- Human Resources and Operations

- HR

- HR/ops

- Technical / Functional 8,930

- Technical Skills Program

- Kedrion Operational Excellence

- Language 5,914

- Other 362

- EHS 2,917

- Labor Compliance US 882

140 attendees | 9 nationalities | attendees from all departments | classroom teaching and webstream learning
# PRODUCTS

## 1 | RARE DISEASES

**HEMATOLOGY / HEMOPHILIA**
- EMOCLOT / HUMACLOT / PLASMACLOT / EMOWIL / KLOTT**
- KOLE**
  - Factor VIII / Von Willebrand Factor concentrate
- NUWO**
  - Recombinant Factor VIII
- WILFACTIN**
  - Von Willebrand Factor concentrate
- AIMAFIX / KEDRIFIX / DEED*
  - Factor IX concentrate
- EMOSINT

**IMMUNOLOGY / NEUROLOGY**
- Ig VENA / HUMAGLOBIN Liquid / KEDRIGAMMA / VENITAL*
  - Standard i.v. Immunoglobulin 5%
- GAMMAMED***
  - Standard i.v. Immunoglobulin 10%
- NAXIGLO / KEYCUTE*
  - Standard s.c. Immunoglobulin

**HUMAN ALBUMIN / HUMAN SERUM**
- UMAN ALBUMIN / UMAN SERUM / KALBI / HUMAN ALBUMIN / KEDRAB / ALBITAL* / KEDBUMIN*** / ALBUKED*** / ALBUMINA LFB**
  - Human Albumin solution
- KEDRAB***
  - Human Rabies Immunoglobulin
- VENBIG / KEYVENB
  - Anti-Hepatitis B i.v. Immunoglobulin
- IMMUNOHIB / UMAN BIG / KEDHB*
  - Anti-Hepatitis B i.m. Immunoglobulin
- TETANUS GAMMA / TETIG
  - Anti-Tetanus i.m. Immunoglobulin
- UMAN COMPLEX / KEDCOM*
  - Prothrombin Complex concentrate
- AT III KEDRION / ATKED*
  - Antithrombin concentrate
- KOLFB / SILKETAL*
  - Fibrin sealant
- K FLEBO
  - Potassium aspartate

*Products for the Italian Self-Sufficiency Program  **Products in license  ***Products only available for the US market

As of March 2019

## 2 | MATERNAL HEALTH

- RhoGAM / ImmunoRHO / KeyRho / MICRhoGAM
  - Anti-D i.m. Immunoglobulin

## 3 INTENSIVE CARE & TRANSPLANTATION

**UMAN ALBUMIN / UMAN SERUM / KALBI / HUMAN ALBUMIN / KEDRAB / ALBITAL* / KEDBUMIN*** / ALBUKED*** / ALBUMINA LFB**
  - Human Albumin solution

**SERVICES**

## 1 | PLASMA PROCESSING FOR NATIONAL SELF-SUFFICIENCY PROGRAM (ITALY AND ABROAD)

## 2 | TECHNOLOGY TRANSFER

## 3 | VIRUS AND PRION CLEARANCE STUDIES (BioSC)

## 4 | TRANSFUSION MEDICINE

**CERUS INTERCEPT**
  - Plasma and platelets pathogen inactivation

**PLASMASAFE / PLASMACGRADE**
  - Pharmaceutical grade plasma
HIGHEST INDUSTRY STANDARDS IQPP CERTIFICATION EXTENDED TO NEW KEDPLASMA CENTERS IN HUNGARY

The outcome of the inspections carried out by the Plasma Protein Therapeutics Association (PPTA) on the two new centers opened in 2017 in Miskolc and Debrecen, Hungary, was successful, and in January they were awarded the IQPP (International Quality Plasma Program) voluntary certification. This certification confirms that collection centers have adopted the highest PPTA standards in terms of plasma quality and safety, and bears witness to the high levels of care given to donors, ensuring their experience is as safe and smooth as possible. The PPTA audit also re-certified KEDPLASMA’s Budapest collection center.

SCUOLA KEDRION - SECOND EDITION OF THE KEDRION MANAGEMENT DEVELOPMENT PROGRAM (KDMP) LAUNCHED

A unique opportunity for 20 managers from all of Kedrion’s offices in Italy and around the world to learn more about topics such as leadership, innovation and achieving higher quality results. More than a mere training course, the program is designed to foster individual growth, and is supported by Senior Management, who offer their distinct experience. KDMP builds on the training program launched in 2017 by Scuola Kedrion, in partnership with Fondazione Campus Lucca, to offer long-term training packages designed to respond to specific professional needs. KDMP and Scuola Kedrion’s activities in general, stand out for their international, interdisciplinary and digital contents, as well as for their innovative teaching methods (which include classroom learning but also coaching, mentoring, collaborative learning, teamwork, and remote training). Scuola Kedrion is an ideal learning context, in which higher-level skills are developed, talent is promoted and the company’s identity is collectively built.
KEDRION GRANTED 10.5 MILLION EUROS TO INVEST IN KIG10 PROJECT

At the Ministry for Economic Development (MISE) in Rome, the Minister and the President of the Tuscany Region signed three agreements for research and development projects in businesses in Tuscany. The first grants the company 10.5 million Euros (of which 9 million from MISE and 1.5 million from the Tuscany Region) to finance a research and development program for the production of a new preparation of 10% Immunoglobulin to be carried out in the production plant of Castelvecchio Pascoli (Lucca, Italy).

KEDRION MAKES “PREMIO EQUITA” PODIUM FOR BOND ISSUED IN 2017

Kedrion Biopharma was runner-up among 140 companies competing for Italian investment bank EQUITA S.p.A’s Premio EQUITA in the category “Raising capital in the Bond Market”. The award took note of “the innovative nature and effectiveness of the transaction carried out in the capital markets as a boost for the development of the company.” The creative strategy allowed Kedrion Biopharma to reduce the cost of its debt significantly.

50TH ANNIVERSARY OF ANTI-D CELEBRATIONS: INAUGURAL EVENT AT COLUMBIA UNIVERSITY IN NEW YORK

New York’s Columbia University provided a prestigious setting for the event on February 5, celebrating the 50th anniversary of the first use of Anti-D Immunoglobulin for the prevention of Rh sensitization during pregnancy. Rh sensitization can result in Hemolytic Disease of the Fetus and Newborn, a mortally dangerous condition. The event was also the occasion to launch a Kedrion supported commitment finally bringing this life-saving medical breakthrough to the millions of women for whom it is still not available.

To learn more, visit page 38 for an in-depth article.

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KEDRION SITS FRONT ROW WITH LEADING ITALIAN LIVER TRANSPLANTOLOGISTS AT LAUNCH OF NEW EPATEAM WEBSITE

New digital multimedia platform Epateam.org – a website focusing entirely on the topics of liver transplants and hepatology, where experts and patients share their skills and experiences – goes online. The only one of its kind in Italy, it is part of the broader EPATEAM educational project that Kedrion has been supporting since its launch in 2017, making the company one of Italian liver transplantation’s leading partners.

To learn more, visit page 48 for an in-depth article.

FEBRUARY
A Kedrion study that supported the revision of the European Pharmacopoeia Monograph for Human plasma (pooled and treated for virus inactivation) was presented at the 2018 PDA (Parenteral Drug Association) VIRUS FORUM. The research was carried out by our Biological Safety Centre (BioSC) and sought to demonstrate the capacity of Anti-HAV antibodies present in S/D Plasma to immunoneutralize the Hepatitis A virus (HAV). The results were presented to the Expert Group 6B to propose a further decrease in the Anti-HAV antibodies titer from 0.6 UI/ml to 0.3 UI/ml (the first revision proposal was from 1.0 IU/ml to 0.6 IU/ml). Based on the scientific evidence, the Group 6B accepted the suggested update. This represents a prestigious acknowledgment of Kedrion's ongoing dedication and commitment to research.

Known as the “Technical Skills Program”, this Italian pilot project aims to promote and spread the company’s technological-scientific and processing know-how, specifically in relation to fractionation and purification. The company’s ambition is to establish - under the Scuola Kedrion umbrella - a Technical Academy offering on-demand training courses globally that can be configured into learning packages. Such courses would ensure that specialist skills are passed between generations and that individual knowledge becomes a shared asset.

The first KEDRAB® products are officially available in the United States. This Human Rabies Immunoglobulin (HRig) was developed for post-exposure prophylaxis (PEP), and Kedrion holds the exclusive commercial rights for the US market, where it is estimated that over 40,000 people are exposed to rabies infection every year. To learn more, visit page 54 for an in-depth article.
THE FIRST “EIGHT” EVENT ON HEMOPHILIA A AND ITS TREATMENT TAKES PLACE IN BUDAPEST, HUNGARY

“EIGHT” is the global educational initiative dedicated to the present and future of replacement therapies for Hemophilia A. From its inception, it has been supported by Kedrion with an unconditional grant. The inaugural EIGHT Conference brought together seventy experts from fourteen different countries to discuss key issues such as the prevention and eradication of inhibitors, immune tolerance induction, and personalized prophylaxis.

To learn more, visit page 52 for an in-depth article.

IN RIO DE JANEIRO, BRAZIL, FIGO RELEASES HDFN STATEMENT

The 50th anniversary of Anti-D was celebrated at the XXIII World Congress of Gynecology and Obstetrics, during which Professor Gian Carlo Di Renzo, Secretary General, and Professor Gerard Visser, Head of the Committee for Safe Motherhood and Newborn Health, released a statement on the eradication of Hemolytic Disease of the Fetus and Newborn (HDFN) in which FIGO commits to “improving awareness of this disease and its prophylaxis, drawing attention to the existing critical issues.”

To learn more, visit page 38 for an in-depth article.

IPOPI’S PID GENIUS APP UPDATE PRESENTED IN LISBON, PORTUGAL

The updated PID GENIUS app, available in more languages, was presented by IPOPI, the International Patient Organization for Primary Immunodeficiencies, at the meeting of the European Society for Immunodeficiencies (ESID) in Lisbon, Portugal. Kedrion renewed its commitment to IPOPI by supporting the update of this App, the first to be designed and developed by Primary Immunodeficiencies (PID) patients with the company’s technical and financial support.

To learn more, visit page 44 for an in-depth article.
DECEMBER

KEDRION BACKS “SMART WORKING” FOR A MORE AUTONOMOUS AND PRODUCTIVE WORKFORCE

A little over six months into the pilot project, Kedrion decided that it would extend “Smart Working” options to more Italian staff members employed in smart working compatible departments. The decision was taken on the basis of the results and the positive feedback received from those involved in the flexible work pilot project. Smart working confirmed itself to be a tool that increases autonomy, trust and accountability, also allowing for a better work-life balance. Overall productivity actually improved, with managers noting their associates’ greater autonomy as well as an increased capacity to coordinate and share information with the team.

It is anticipated that 180 employees will participate in the program in Italy by the end of 2019.

NOVEMBER

FIRST ANNUAL INTERNATIONAL SYMPOSIUM FOR THE GLOBAL ERADICATION OF RH DISEASE AT COLUMBIA UNIVERSITY IN NEW YORK

Culminating a year of celebration activities for the 50th anniversary of Anti-D, the First Annual International Symposium for the Global Eradication of Rh Disease brought together researchers, healthcare professionals, policy-makers and NGO’s committed to ending Rh disease worldwide. This is an ongoing commitment, supported by Kedrion Biopharma. The program included a talk by Nobel Prize winner Peter Agre, one of the first to clone and sequence the Rh gene, presented as the third “John Gorman Lectureship.” The lectureship, established by Columbia University Medical Center in honor of one of the researchers who developed the Anti-D prophylaxis, is funded in perpetuity by Kedrion Biopharma.

To learn more, visit page 38 for an in-depth article.
Kedrion’s bridges to the communities where we work allow us to support and participate in projects and initiatives of public value. We aspire to be responsible citizens wherever we are. In 2018, this commitment led us to support projects in the fields of research and medical-scientific training, to volunteer our time and to take part in initiatives that safeguard human rights.

In Italy, this commitment was reflected in our support of, among others:

- Fondazione Veronesi (for scientific progress)
- The Robert F. Kennedy Foundation of Italy (activities and special events)
- Fondazione Telethon (donations in memory of Eugenio Aringhieri)
- Medici con l’Africa (Doctors with Africa) CUAMM
- The Circle Italia Association (fundraising for women’s rights and gender equality)
- Local charities and volunteer associations in the Lucca province (voluntary activities)

Similarly in the US, Kedrion Biopharma lent a hand where we could, supporting, for example:

- The people of Savannah, Georgia, following the severe damage wrought by hurricane Matthew
- KEDPLASMA USA donors affected by Hurricane Michael
- Jersey Cares School Supply Collection. Kedrion Biopharma employees in the Fort Lee, NJ, headquarters donated backpacks, notebooks, calculators, etc. for disadvantaged youth in their community
- A week of giving at the end of the year, during which the Sales and Marketing team individually performed community service in their local towns for a day. The employees worked at local food pantries, homeless shelters, animal shelters, with Meals on Wheels, etc.

In Hungary, Kedrion and KEDPLASMA staff members took part in a fundraiser for the foundation named after Doctor Sándor Lumniczer, which works to support local public health and is based in Gödöllő (Budapest).

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At the beginning of 1968, Marianne Cummins of Fair Lawn, New Jersey, was pregnant. She was anxious. She knew that the child she carried was threatened with serious, even fatal, complications. Marianne had Rh Negative blood; her husband, Dennis, was Rh Positive. This mismatch in blood types can cause serious problems when it comes to having a child. If the developing fetus also has Rh Positive blood (about 75% likely), the mother’s immune system might recognize the baby’s blood as a foreign invader. Her immune system will go into action, manufacturing antibodies that will attack the fetal red blood cells. The result? Hemolytic Disease of the Fetus and Newborn (HDFN), also known as Rh disease, causing miscarriage, stillbirth, early post-natal death, brain damage.

Now, even if the mother’s immune system begins to produce these antibodies, it will take time, and the first baby is almost always safe. But once the immune system is “sensitized”, it will be ready to strike the next time it detects Rh Positive blood in a subsequent pregnancy. Marianne had escaped this tragedy in two prior pregnancies. She was not yet sensitized. But the odds were getting grim, and she and Dennis wanted to have more children.

One day Marianne came across an article in the New York Times describing a medical breakthrough of great importance to her. A team of researchers at Columbia University Medical Center had developed a way to protect Rh Negative women from becoming sensitized when they were pregnant with an Rh Positive baby. It involved a single injection just after giving birth and it was to be approved by the US regulatory agency for use in the near future. Marianne Cummins became the first woman to be protected with the approved drug that would become RhoGAM® (Rh Immunoglobulin). Her third child was healthy, and – most notable – so was her fourth.

2018 was the 50th anniversary of that momentous first injection. Until then, as many as 10,000 babies were dying each year in the United States alone, and hundreds of thousands around the world, from the complications caused by Rh sensitization. Kedrion Biopharma felt this deserved a celebration.

And celebrate we did. Teaming up with Columbia University - where much of the Anti-D research was carried out fifty years ago - and with experts in the field from around the world, including some of the researchers involved in the earliest development of the Rh immunoglobulin, we gave our support to a global unbranded educational campaign consisting of dedicated events in several countries.

Two of them – a “kick-off” gathering in February and an event in November, both held at Columbia - attracted representatives from Pediatrics, Obstetrics and Gynecology, Transfusion Medicine, NGOs and industry. On the very day, fifty years after the first regulatory-approved use of Anti-D Immunoglobulins, Kedrion feted Marianne Cummins with a reception held at the Kedrion US headquarters in Fort Lee, NJ, just a couple of miles from where it all began.

I’m very grateful to the developers of this drug that has prevented so many deaths. A friend of mine was one of eight children but only four survived, because four died from Rh disease. So it really makes me grateful. I’m also grateful for the donors, who give countless hours giving their own blood [...] to save children.

Marianne Cummins at Columbia University, February 2018
If I really can get people out of their silos, then there may be a chance of doing something terrific!

Dr. Steven Spitalnik at Columbia University, November 2018

But there is more to this story.

And more to Global Rh-sensitization activities supported by Kedrion in 2018.

While there was much to celebrate in the US and Europe, in Canada and Australia, where Rh disease is essentially eradicated, the threat remains for half the women in the world. Fifty years after a solution became available, this tragedy stalks the reproductive lives of millions of women in countries where effective protocols for the prevention of HDFN do not currently exist because of lack of awareness, infrastructure and/or funding.

We are committed to doing something about this.

Aza’s story is one that illustrates well one of the most surprising dimensions of the Rh disease tragedy. She is from Eastern Europe. Her first child was born in 1998, a healthy girl. Ten years later, she again became pregnant, but this time her baby boy suffered from jaundice. “He had a yellow nose and eyes.” He was treated successfully. The doctors gave her no reason for the complications.

In 2012, Aza and her family moved to Rome, Italy, searching for new opportunities and she became pregnant again in 2015. This time, the doctors at the Policlinico Umberto I tested her blood and determined that she was carrying the Rh protein antibodies and that her fetus was Rh positive. “They told me there was a problem with my blood.” The obstetricians monitored her blood closely and decided to bring the baby into the world early to avoid damage from increasing antibody levels. Baby Eva was healthy except for mild jaundice (a consequence of HDFN), which was treated for two weeks.

Aza’s fourth and final pregnancy came a year later. Aza’s blood was checked every ten days and once again, the doctors determined she should give birth early. This time the situation was more grim: baby Barbara (Babi) not only had jaundice, but was severely anemic - another consequence of HDFN - and in danger. “We thought there was no hope. We cried, but my husband tried to reassure me. Every day he came to the hospital right after work to stay close to me and Barbara. “They kept Babi in a separate room, it was hard for me to see another mother in the bed next to me holding her baby close while I was not able to see and pamper mine.”

Aza was discharged after a week, but Babi stayed on for another week of treatments. In fact, the baby needed drug treatments for almost another year. Today she is healthy.

In most of Eastern Europe today, awareness, infrastructure and the availability of the Rh-sensitization prophylaxis are all abundant.

Kedrion Biopharma is working to increase awareness of Rh Disease in those regions of the world most in need of it.

On November 1st, Kedrion Biopharma joined a coalition of researchers, NGO’s, policy-makers and practitioners for the 1st Annual International Symposium for the Global Eradication of Rh Disease at Columbia University Medical Center. This historic gathering, led by Dr. Steven Spitalnik, Professor of Pathology & Cell Biology, Director of Clinical Laboratories, and supported by an unrestricted grant from Kedrion, served as the culmination of a year of celebration and established a permanent coalition of partners committed to eradicating Rh disease.

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Anti-D Immunoglobulin is derived from special plasma; where does it come from?

The plasma used to make Anti-D Immunoglobulin-based drugs must come from a person whose immune system has been sensitized to the Rh or D protein. This can be a man or a woman. All of the plasma used to make Kedrion’s specialties used to prevent Rh sensitization around the world each year is collected in a single KEDPLASMA collection center in Williamsville, near Buffalo (New York, USA).

Many donors donate over 100 times a year, and each of those donations can be made into about 40 doses of Anti-D Immunoglobulin. That is a lot of protection.

Among those generous folks are three people who have been donating a combined total of more than 100 years! And they are sisters: Janet Wachowicz, Eileen McCarthy and Kathleen Starkey have together donated enough plasma for some 370,000 protective injections for Rh Negative expectant mothers.

“It’s a labor of love. I have two Rh Negative nieces that needed [the prophylaxis]. Being a part of the plasma donor program is incredibly rewarding,” says Janet, a 40-year veteran of the donor community.

As part of the 2018 “50 Years of Anti-D” anniversary celebration, an appreciation event to recognize all Anti-D plasma donors and honor their altruistic and voluntary gift, was held at KEDPLASMA’s Somerset Labs collection center in Williamsville (New York, USA) in April.

Kedrion received a Proclamation from the New York State Assembly commemorating the anniversary.

Paolo Marcucci, Kedrion CEO, at Columbia University, February 2018
While it is rare, it is also thought to be grossly under-diagnosed and under-treated. A 2012 article in the Journal of Clinical Immunology estimated there were as many as 6,000,000 people living with PID worldwide. But only an estimated 27,000 – 60,000 were identified, that is, diagnosed and under treatment. Treatment for PID’s vary among specific conditions, but most require long-term immunoglobulin replacement. Kedrion Biopharma includes several immune globulins in its portfolio and is prominent in the treatment of PID’s.

It is difficult to imagine that anyone who meets Matteo would think he suffers from any major illness. He is fit, very active, filled with energy. But Matteo suffers a rare disorder grouped under the general diagnosis of Primary Immunodeficiency or PID. More than 300 different diseases are labeled PID. What they have in common is that some component(s) of the immune system do not work properly – hence the name Immunodeficiency. People with a PID are more prone to infection and are less able to overcome illness. It is chronic, life-long and life-threatening.

But thanks to assertive treatment, Matteo, aged 38, a photographer living in Paris, France, lives not just a “normal” life, but one filled with active challenges.

“I moved from Pavia (Italy) to Paris 10 years ago with my partner Sara, with the idea of ‘let’s see what happens if we live abroad for a year.’ But for 10 years we have been ‘happily’ stranded here, where we also have two beautiful twins.”

I have a very full life here. I’m a freelance photographer, so one day is very different from the next. Sometimes I teach, sometimes I take pictures, other days I make videos, sometimes I stay at home on the computer to answer emails and to do post-production or to look for customers. I alternate working with sports, going out with friends, etc. I am lucky to have a normal life in spite of the disease and not to have limitations due to the immune deficiency that I have always carried within me.

One useful aid to Matteo’s busy life is the PID GENIUS, the first mobile application developed by a patient organization for people with Primary Immunodeficiencies for worldwide use.

“I use PID GENIUS in a very basic way to keep a record of my activity and to monitor levels and treatment, in case I can no longer find my documentation or if I don’t have it on hand.

Everything is on your phone, and the phone is always with us,” notes Matteo. “Over the years, I have met doctors in the hospital who had no idea of who I was, or what my clinical history was. Being able to quickly have an idea of who you are or how you are doing can be very useful.”

LIVING WITH PID

“When I introduce myself, I don’t say, ‘Hi, I’m Matteo and I have an immune deficiency.’”
Matteo has made his condition part of his work and his work has become a cause.

In 2015, here in France, I started to take photo portraits of adult patients (I’m focusing on adults, because there is already a lot of work being done for children). I suddenly realized that the simple fact of meeting another patient, who was one of them, made these adults willing to open up and talk about themselves. What they told me was very powerful and very intense, but I could not capture this in photographs. So I came up with the idea of making a video documentary. Filming began in December 2018 and my wife Sara is the director.

This documentary will also feature Matteo cycling – in under 24 hours – the route stretching 400+ km between Paris and London. “Despite my disease, I have always been a sportsman, and I still train every week. But this goes far beyond my usual training routine. I realize all this may be perceived as slightly mad, but it is a personal challenge I have had in mind for a while, and my way of helping the French Association of Patients with Immunodeficiencies (IRIS), which I have been supporting for some time now. Together with my four teammates – all as crazy as myself – I will be delivering young patients’ drawings from the Hôpital Necker in Paris to Gosh Hospital in London.”

“I see many messages behind this: cycling and sports, the challenges we all face, and giving hope to the parents of children who are diagnosed today by telling them ‘your children can have a normal future in spite of this disease.’ Many years ago, in the faces of my own parents, I saw, if not despair, at least concern. When you’re told that your child has a genetic disease, you ask yourself ‘what will he do when he grows up?’ even before asking ‘can he even grow up?’ To today’s parents, I want to say that yes, your child can grow up and can even do crazy things such as this insane bike race. And that they should never feel alone.”

PID GENIUS was produced by the International Patient Organization for Primary Immunodeficiencies (IPOPI), thanks to an unrestricted grant by Kedrion Biopharma.

PID GENIUS provides user-patients an easy and dynamic way of keeping track of their treatments, day-to-day symptoms, vaccinations, contacts, and important documents. PID GENIUS also offers the possibility of displaying stored information in dashboards, facilitating discussions between patients and their medical specialists.

In October, Kedrion Biopharma attended the 18th edition of the Biennial Meeting of the European Society for Immunodeficiencies held in Lisbon, Portugal. The objective of this event is to improve awareness of the treatment of Primary Immunodeficiencies, by promoting scientific research and early diagnosis.

During the Meeting, IPOPI presented an updated and improved version of its PID GENIUS App.

“I am very happy to announce that in 2018 we have re-launched PID GENIUS, now with new functionalities and available in five languages. And more to come in the next few months.”

Martine Pergent, IPOPI Chairperson

Kedrion’s partnership with IPOPI – and with the local patients’ organizations from over sixty countries that are part of its network – goes back many years, and will stretch a long way ahead, to build a better future for each and every person affected by Primary Immunodeficiencies.

Despite my disease, I have always been a sportsman, and I still train every week.
My name is Alessia, I received a liver transplant in 1992 at the Policlinico of Milan when I was 14 months old. The problem was a biliary atresia, which was discovered when I was 40 days old. I was supposed to receive the transplant in Paris or Brussels, because in Italy, knowledge of pediatric transplants was still in its infancy, but when the liver arrived, my doctors decided to do it in Milan.

After the transplant, I was kept in hospital in Milan for three months and then was sent home, where they had a big party because I was healed (or at least, I was doing better). After that, I periodically underwent all the examinations and followed the medical routine, but there was no dramatic episode, I was always fine.

I’ve always been like this and for me, this was normal. In fact, I’ve always done everything that the others did: swimming, summer camps, school trips, and I never had any problems. I went to high school, then I immediately started working, and I still work in a supermarket. I have two wonderful children and my life is...normal. I grew up with a transplant and I don’t feel different from the others.

With the treatments available today, you can live a quiet and peaceful life just like everyone else, especially if – as in my case – you are so lucky as to have a family or someone to love and support you on a daily basis. You need a little attention at first, and then you start to live again and it’s a great life. I get blood tests every four to five months, and an ultrasound scan once a year - I’m being treated at the Molinette Hospital in Turin - and every day, in the morning, I take anti-rejection drugs.

I was worried during pregnancy, but biliary atresia is not genetic and is very rare, so my doctors kept me under supervision, and eventually my children were born very healthy.
The Epateam.org digital platform has enabled us to considerably broaden our potential following. We went from an audience consisting only of specialists (hepatologists) to a more general public, because on the Internet, we are all a part of the audience. During 2018, we developed the idea of creating increasingly closer contact with the general public. We chose to give a voice to transplant patients because, on the one hand, these patients may need further clarification and support and, on the other hand, they can have the opportunity to tell and share their stories. Surgical team and the doctor who follows the patient before and after transplantation.

Once back home, the patient should be able to find all the required assistance in his or her area of residence, without going periodically back to the transplant centers, unevenly located in relation to the patient’s base. This enhanced communication can improve the already good medical assistance profile, resulting in a better quality of life for patients.

To address an even wider audience, including doctors, patients, family members, patient associations, etc., EPATEAM developed an online campaign. Epateam.org is the first Italian digital platform entirely dedicated to hepatology and liver transplantation and features video interviews with Italy’s best-known liver transplantation experts, both surgeons and hepatologists.

The intended audience of these clips is medical doctors outside the transplant centers as well as patients, to improve awareness about liver diseases, transplantation, and pre- and post-transplant patient care management. Additional contents include footage of patients sharing their experiences, and testimonies by other professional figures such as anesthesiologists, psychologists, nurses and supporting staff.

Alessia was a lucky little girl. Although liver transplant surgery was quite advanced in 1992, there are many more medical centers around the world – and especially in Italy - performing liver transplantations today, and the immunosuppressant and protective drugs are increasingly effective.

Unfortunately, awareness of this success in Italy remains low, and until recently, there has been no way for all the various “players” in this dramatic “medical miracle” to share information and thoughts.

This is one of the goals of EPATEAM, a wide-ranging initiative aimed at the medical and scientific communities, as well as the general public, to spotlight liver transplantation, and increase awareness of the outstanding results achieved by Italian liver transplant medical community.

EPATEAM is made possible by an unrestricted grant from Kedrion Biopharma, partnering with the Italian Association of Hospital Gastroenterologists and Digestive Endoscopists (AIGO), the Italian Liver Transplant Patients Association (AITF), the Italian Association of Gastroenterology and Digestive Endoscopy (SIEDEG) and the Italian Society of Organ Transplantation (SITO).

Kedrion manufactures an Anti-Hepatitis B Immunoglobulin intended to prevent Hepatitis B from recurring in HBsAg-positive liver transplant patients.

All of this began in 2017 with the need to strengthen the connection and collaboration between liver transplantation center specialists and hepatologists who work outside the transplant centers but treat patients with chronic liver disease who may need a transplant. EPATEAM was created to promote knowledge about liver transplantation, so that it is carried out at the right time and with the most appropriate criteria, and to facilitate the patient’s follow-up by establishing a connection between the transplant center and the doctor who follows the patient before and after transplantation.

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Dr. Lucio Caccamo, EPATEAM Faculty Promoter
A special session of the Conference was focused on patient needs, which were addressed to increase patients’ sense of empowerment, and thereby their engagement – but also that of healthcare professionals (mainly Hemophilia treaters) – in the care path. In recent years, new therapies for Hemophilia A have emerged, making an assessment of the use and value of Factor VIII appropriate and beneficial.

The cornerstone for Hemophilia patients is still represented by replacement therapy which has a specific unrivalled role, actions and characteristics, and this is the core concept discussed at the meeting. The aim of this conference was to provide all attending physicians with an update on «hot topics» in Hemophilia in this time of innovations, enabling them to improve further their day-to-day care and follow-up of Hemophilia patients.

Prof. Pier Mannuccio Mannucci
EIGHT 2018 Scientific Director

Until recently, before the advent of the new therapies, talking about Factor VIII in Hemophilia seemed trivial. Today, however, it is of great importance and relevance to discuss and understand how to use it in the light of these new alternative therapies that can compete or that can also be associated or combined with Factor VIII. In my opinion, the proliferation of new therapies makes it even more necessary for specialists to discuss Factor VIII.

The conference has been credited with stimulating a serious and profound reflection on Factor VIII among a wide audience of international experts on Hemophilia and congenital hemorrhagic disorders, and also encouraging them to review and re-evaluate current perspectives on Factor VIII as a standard of care.

Prof. Elena Santagostino
School of Clinical and Experimental Hematology, University of Milan

Thanks to unrestricted educational funds granted by Kedrion Biopharma, a global educational initiative on Hemophilia and its treatment, “EIGHT 2018, The International Conference on FVIII and Its Physiologic and Therapeutic Role”, was held in Budapest, Hungary in the fall. The first of its kind dedicated entirely to present and future states of knowledge and practice of replacement therapy for Hemophilia A, the two day event drew seventy experts from fourteen countries. The conference addressed three major topics of concern:

- Standards of care (choice of therapies)
- Access to care
- Patient engagement

Hemophilia A is caused by a missing or defective blood protein that is central to the clotting process. This protein is known as Factor VIII, hence the name of the conference. People suffering from Hemophilia A must receive Factor VIII, derived from human plasma or from recombinant technologies, all their lives to treat (called “on demand”) or prevent (prophylaxis) bleeding.

Prophylactic administration of Factor VIII, irrespective of its source, is the standard treatment for Hemophilia A, but it is not adequately available in many countries and regions.

The EIGHT 2018 Conference took up the extent of inadequate global access to either prophylaxis or on demand treatment, impediments to access and possible solutions. Kedrion Biopharma is committed to expanding access to Hemophilia treatment, including prophylaxis, wherever it is needed.

A significant path to better access and treatment lies in engaging patients as partners with the healthcare community in informing and educating other patients and healthcare systems.

Having a medical-scientific community that understands and adopts a vision of therapies and patients that sees Factor VIII at the center - and I stress FVIII, not our brand - and supports the idea that personalized therapy made possible by FVIII concentrates is the best way to allow these patients to have a normal life and enjoy their lives to the full according to their expectations, needs and desires: this is the benefit we tend to with EIGHT 2018.

Prof. Alessandro Gringeri
Kedrion Chief Medical and R&D Officer
Rabies is a rare disease, but 100% fatal. It is contracted from the bite of a rabid wild animal – primarily bats, raccoons, skunks and foxes – as well as rabid pets. The Human Rabies Immune Globulin (HRIG) is administered at the bite-wound site and is a part of the post-exposure prophylaxis (PEP) protocol, along with vaccine, and is recommended for both bite and nonbite exposure.

According to the US Centers for Disease Control and Prevention, the estimated public health expenditures on Rabies disease diagnostics, prevention, and control in the US is $245 million to $510 million annually, including vaccination of companion animals (dogs and cats), national Rabies diagnostic testing, and for biologics for Rabies and pre-exposure prophylaxis (PreEP). However, the total expenditures on Rabies accounting for associated healthcare costs, animal control measures, and time lost from work is much greater.

The number of PEP treatments administered each year in the United States is estimated to be 40,000 to 60,000. The time between exposure to the onset of symptoms – the incubation period can vary widely, from a few days to months, but once symptoms develop, it is essentially always fatal. Timely administration of PEP is considered 100% effective, when administered in a timely manner.

The Kedrion Biopharma Human Rabies Immune Globulin is produced in Israel with high-titer Anti-Rabies plasma originating in KEDPLASMA collection centers.

In keeping with our commitment to provide bridges to healthcare communities and patients, facilitating the sharing of knowledge and experience, we assured that all Kedrion personnel involved with the marketing, sales and distribution of the product be deeply knowledgeable, not only about the product, but about the condition it is meant to treat. The depth of this knowledge quickly became apparent outside the company and already in January, a Kedrion representative was interviewed by Outbreak News Radio for a podcast titled, “Rabies: What should you do if you’re exposed?” Shortly after, the New York City Society of Health-System Pharmacists inquired about the possibility of Kedrion Biopharma presenting an educational discussion of Rabies and Rabies prevention. This presentation was scheduled for January 2019, and more such opportunities to share our knowledge are anticipated.

Distribution of this new product began in March 2018, and the first hospital deliveries were made in April. By the end of the year Kedrion had already garnered 10% of this approximately $180 million market – a significant accomplishment, that can be attributed to our establishment as a source of expertise and general knowledge of the disease and its course of treatment and our willingness to share this knowledge with all relevant stakeholders.
DONORS: AT THE FOOT OF THE BRIDGE

Donating plasma is a profound example of “giving of oneself.” Giving. Selfless, altruistic, generous ... one could even say noble. It is ultimately an act of hope – in humankind as well as in the lives of those who will ultimately receive this gift of life and healing. We are fortunate in this world that thousands – hundreds of thousands – of people are willing to give of themselves.

PLASMA COLLECTION IN THE US AND EUROPE

Kedrion Biopharma, through KEDPLASMA, collects this precious raw material in 27 collection centers (as of 2018) in three countries. During 2018, collected volume increased significantly in all three.

Plasma is a crucial, life-sustaining substance and we continually strive to protect and extend its use through efficient practice and technological innovation. In 2018, KEDPLASMA introduced new, state-of-the-art plasmapheresis units in all its US centers. These also allow a reduction in donation times. We achieved significant growth in collection volume in the US, registering an approximate 30% increase over 2017, due in part to the opening of eight new collection centers. We expect to increase the number of centers in the US to more than 40 by 2022.

KEDPLASMA celebrated its tenth anniversary as a direct presence in Germany in 2018, and the volume of collected plasma increased by 10% over the previous year.

In Hungary, too, where the number of plasmapheresis centers throughout the country is increasing, significant growth was achieved: 20% over 2017, due in part to the addition of a seventh center in the city of Nagykanizsa in the south of the country. In appreciation and to honor its most loyal donors, the Hungarian centers have established a “Club of Heroes” for all donors who have made more than 45 donations.

A delegation of these “Heroes” joined a group of patients from the Hungarian National Association for Patients with Immunodeficiencies (MIBE) for a visit to the Gödöllő production plant, where they had the opportunity to learn more about the different stages of plasma transformation. In a sense, they saw the fundamental Kedrion Biopharma bridge: from plasma to product.

Éva Gönczy is a Hero. She has made more than 80 donations at the KEDPLASMA Budapest 2 center.

“"I began donating plasma for my mother, who fifteen years ago, was able to overcome a serious illness. I donate plasma in the belief that if I help other patients, my mother - if she needed it again - would also receive help from others, just as she received it 15 years ago. Today, my mother is over 70 years old; she is well and, for this reason, I continue to donate plasma. It's my way of restoring and preserving my sense of inner balance.”

Éva Gönczy, plasma donor at KEDPLASMA Collection Center Budapest 2, Hungary

It is our great privilege and deep responsibility to connect these special donors to the people who need the medicines their plasma makes possible. We are the bridge.

DONORS: AT THE FOOT OF THE BRIDGE

My father passed away to complications from a serious illness. His time with us was extended by receiving products made from plasma. This is my way of giving back in his memory. Megan Evenson, plasma donor at KEDPLASMA Collection Center, Lincoln, Nebraska (USA)

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KEDRION AND THE ITALIAN DONORS SIDE BY SIDE, EVERY DAY

Kedrion’s long-standing support of Italian donors stems from our deep roots in the culture and our long association with the Italian Blood System. These donors are the cornerstone of that system, donating generously, without remuneration and out of a deep sense of responsibility.

Donor associations play a key role in the Regional Blood Transfusion System, encouraging donation, protecting the health and interests of donors, and raising awareness.

Kedrion has always been part of this story. Similarly, in 2018, we confirmed our support of the activities carried out at an international level by the International Federation of Blood Donor Organizations (IFBDO).

Among the examples of Kedrion-supported initiatives aligned with Italian donors in 2018, Kedrion supported a study to understand more about plasma donation and donors in Italy – why they give and what psychosocial and organizational variables affect donation.

Research was carried out by the IMT School for Advanced Studies in Lucca in collaboration with the Tuscan regional branch of the voluntary blood donor association Associazione Volontari Italiani del Sangue (AVIS).

The study was carried out using “Asky”, a dedicated web app that offered a short, anonymous questionnaire aimed at identifying differences between donors, based on their reasons for donating. The survey was directed first to a sample group of AVIS Toscana plasma donors, and then to groups of donors from other Italian regions.

Gaining a better understanding of plasma donation in Italy will help increase donor participation and involvement.

We also continued to support Scuola Nazionale di Formazione AVIS, the educational program promoted by Kedrion with AVIS Nazionale and the Fondazione Campus Lucca – which in 2018 was in its fourth edition.

The advanced learning curriculum is designed to train a new generation of leaders for the Italian donor community. The Scuola – under the academic direction of Professor Salvatore Veca, Fondazione Campus President, and whose scientific coordinator is Corrado del Bò, Associate Professor in the Philosophy of Law – aims to increase participants’ knowledge of key aspects of donation, including its ethical implications and the running of not-for-profit organizations.

Leading AVIS and proposing policies for growth and development that combine legislative requirements with the ethical spirit and support of donors, is a complex commitment that requires competence and professionalism. We need to be able to capture the enthusiasm of our volunteers and direct their availability. For this reason, we believe very much in training young people: new managers who are engaged and dedicated, while also having the necessary knowledge and scientific rigor with regard to social issues and ‘ethical and voluntary’ donations. They must also know how to combine human and operational inspiration while having the capacity to discern and understand the processes involved. In my opinion, the Scuola AVIS […] is a valid tool to guarantee that this need is met.

Gianpietro Briola,
President of AVIS Nazionale

I have enjoyed this training experience as a path of personal growth.

In addition to enriching our knowledge and skills, the added value of the Scuola AVIS was to create a real community made up of young people, who today are able to respond in the best possible way to the needs existing at the local and national levels.

Tommaso Riccitelli,
Scuola AVIS participant

Finally, during 2018, Kedrion continued its commitment to expand awareness of plasma’s remarkable journey across the bridge from donor to patient by welcoming donors, young students and representatives of relevant institutions to our production sites, and by visiting local voluntary associations throughout the country.

These activities have been part of the “Kedrion Meets” program for many years, a commitment we intend to continue in 2019 with the same energy and dedication to donors and patients.

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Leading AVIS and proposing policies for growth and development that combine legislative requirements with the ethical spirit and support of donors, is a complex commitment that requires competence and professionalism. We need to be able to capture the enthusiasm of our volunteers and direct their availability. For this reason, we believe very much in training young people: new managers who are engaged and dedicated, while also having the necessary knowledge and scientific rigor with regard to social issues and ‘ethical and voluntary’ donations. They must also know how to combine human and operational inspiration while having the capacity to discern and understand the processes involved. In my opinion, the Scuola AVIS […] is a valid tool to guarantee that this need is met.

Gianpietro Briola,
President of AVIS Nazionale

I have enjoyed this training experience as a path of personal growth.

In addition to enriching our knowledge and skills, the added value of the Scuola AVIS was to create a real community made up of young people, who today are able to respond in the best possible way to the needs existing at the local and national levels.

Tommaso Riccitelli,
Scuola AVIS participant

Finally, during 2018, Kedrion continued its commitment to expand awareness of plasma’s remarkable journey across the bridge from donor to patient by welcoming donors, young students and representatives of relevant institutions to our production sites, and by visiting local voluntary associations throughout the country.

These activities have been part of the “Kedrion Meets” program for many years, a commitment we intend to continue in 2019 with the same energy and dedication to donors and patients.
THE PLASMA PROCESS: CROSSING OVER

The bridge between donor and patient, between donation and product is essentially the manufacturing process, which turns the raw product into usable therapies. This is an undertaking of the highest responsibility and the men and women of Kedrion Biopharma maintain the corresponding highest standards.

OUR PRIORITIES: RESEARCH, INNOVATION AND CONTINUOUS IMPROVEMENT

All of Kedrion Biopharma's activities are in the service of our commitment to patients. To best serve them, we are dedicated to research, innovation and a tireless pursuit of improvement. The KIg10 project is an important example of Kedrion's dedication to continuing and increasing efforts in research and development.

Research and innovation requires and is enhanced by an active exchange of experience and know-how with doctors, researchers, universities and public and private professional and patient organizations in all the communities in which we operate.

Our commitment to patients is also reflected in the quest for continuous improvement of our production processes. Efficiency, consistency and sustainability are goals that serve both our business and patients. We pursue what is known as Operational Excellence in all our production plants, which demands an enhanced work culture that empowers people and maximizes opportunities for growth.

We have continued to implement specific training activities at our production sites in Italy and Hungary and to integrate and harmonize our Quality System across all production sites.

THE PLASMA NETWORK: PLASMA TRANSFORMED

The work of turning precious plasma into essential therapies takes place in a number of plants located in Italy, the United States and Hungary. In these high-tech facilities, plasma is fractionated into various constituents and processed to produce products distributed around the world.

Melville, New York, manufacturing plant in the United States is an essential asset that will enable Kedrion to maintain a leading role in the plasma-derivative market. The past two years have been a time of refitting after a significant plant renovation project. A great deal of energy and many resources have been devoted to resuming production activities.

This has been a team effort, drawing on the work and expertise of the Kedrion workforce from all over the world, including plant experts from Italy and Hungary, and management specialists. By the end of 2018, all planned work has been completed.

At the same time, we have continued the technological transfer of the production process for Anti-D Immunoglobin RhoGAM®. We expect to be able to achieve the entire production cycle by the beginning of 2020.

In the last two years, Kedrion has also invested heavily in another strategic project: the development of a new 10% Immunoglobulin (known as KIg10) for treatment of Primary Immunodeficiencies. The clinical lots submitted to the FDA for the Investigational New Drug (IND) application were produced at our Gödöllő plant in Hungary, where Kedrion celebrated the tenth anniversary of its direct presence in 2018.

The Melville facility is an essential asset that will enable Kedrion to maintain a leading role in the plasma-derivative market. The past two years have been a time of refitting after a significant plant renovation project. A great deal of energy and many resources have been devoted to resuming production activities.
PROMOTING THE WELL-BEING OF EMPLOYEES, COMMUNITIES AND THE ENVIRONMENT

Caring for people, a fundamental commitment of our corporate mission, includes the responsibility to take care of the communities and the environment in which they live.

We confirmed our commitment to health, safety and the environment in 2018, by renewing voluntary certifications such as the OHSAS 18001, the ISO 14001 and the EMAS registration, in our company’s various production sites and administrative offices around the world.

With the goal of ensuring the highest environmental standards, we subject our procedures to careful and constant monitoring. We followed up on the Life Cycle Assessment activities with the goal of extending the voluntary International EPD® (Environmental Product Declaration) certification to all products manufactured at our Bolognana, Italy plant. Our Factor VIII has been awarded this certification and we anticipate EPD® for Albumin and Immunoglobulins produced at Bolognana in 2019.

At the same time, we have continued to improve the company’s energy performance. For example, in Italy, we have achieved significant results in terms of energy saving and sustainability thanks to the installation at our Bolognana site of a new refrigeration unit, which will reduce consumption by more than half a million kWh per year.

One indication of the success of our efforts to maintain and improve the safety of our operations is our record at the Italian Sant’Antimo facility, where there have been no accidents in the last two years.

TRAINING AND EDUCATION: THE PATH FORWARD

The sharing of knowledge, expertise and talent is a key commitment of Kedrion to its employees and to the communities where we work. During 2018, we launched the first edition of the Technical Skills Program. This training course was created to promote and disseminate technical and scientific know-how internally, ensuring that specialist skills are passed down generations and that individual knowledge becomes a shared asset.

Contributing to our community, in Italy we continue to support PharmaMark, the Master's Degree in Pharmaceutical Marketing at the “PIN - University Center, City of Prato”. We have also renewed our support for the two-year courses organized in Tuscany by the “Fondazione Vita. Istituto Tecnico Superiore per le Nuove Scienze della Vita”.

64

65
leadership, thanks in part to our participation in the national self-sufficiency program (which guarantees more than 70% of Italian market needs) and to a 5% increase in sales of Ig VENA®.

In fact, Kedrion achieved its strategic objectives for every product line in its commercial product portfolio. Significantly, sales of Nuwiq® — the recombinant "human-like" Factor VIII distributed in Italy by Kedrion, increased 29%.

2018 was the first full year in which Kedrion Biopharma exclusively marketed and distributed in Italy the INTERCEPT Blood System™, produced by CERUS Corporation. This medical device inactivates a broad range of pathogens such as viruses, bacteria and parasites that may be present in blood components.

In providing this technology, Kedrion responds to the country’s growing demand to stay ahead of new threats such as the Chikungunya and West Nile viruses.

The Emilia-Romagna Region has decided to test this device in several of its blood transfusion centers because of the outbreaks experienced in recent years. Testing is already underway in Parma and Cesena, and will begin at a later stage in Bologna, as part of a project aimed at assessing at a Regional system level the feasibility of introducing the viral inactivation process as a preventative strategy and to control contamination by pathogens.

Kedrion expects a significant growth in use of this technology in Italy in the near future.

The project was launched in response to the Region’s need to be able to cope with a possible new epidemiological emergency. Adopting a long-term perspective, we started this experiment because we believe that viral inactivation is an essential tool for increasing the level of safety in cases of new critical situations. This, of course, does not exclude the possibility - if the Region decides to permanently adopt the device - of extending its use to routine activities. In any case, this is a choice that must be made from a systemic and synergistic point of view at a Regional level.

Dr. Vanda Randi, Director of the Emilia-Romagna Regional Blood Center

Kedrion Biopharma is committed to providing a bridge over which those affected by rare and serious diseases and conditions can cross to a better life. We feel a deep sense of responsibility to increase access to such bridges around the world, expanding availability of plasma-derived treatments to those whose therapeutic needs are still unmet.

In Italy, our commitment to support the National Blood System’s strategic objectives is ongoing, especially in relation to achieving national self-sufficiency in plasma-derived products. We are dedicated to efficiencies that result in increasing output and providing the greatest number of medicinal products from each liter of plasma to meet patient needs.

Despite an increasingly complex and rapidly evolving context, with the introduction of competitive tenders for the processing of plasma collected by the Italian Regions, we have retained our market position. In the Immunoglobulin market, we have confirmed our leadership, thanks in part to our participation in the national self-sufficiency program (which guarantees more than 70% of Italian market needs) and to a 5% increase in sales of Ig VENA®.

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We continue to support Scuola FedEmo, a training project carried out by the Italian Federation of Hemophiliac Associations in collaboration with the Fondazione Campus of Lucca. In the three years of our support, the school has succeeded in building a close-knit group of young people who are able to respond to the needs of local associations and face the challenges of tomorrow.

Kedrion Biopharma is committed to increasing and improving patients’ and clinicians’ understanding of various diseases and available therapeutic solutions. We supported a clinical study of interest to the community of patients with Common Variable Immunodeficiency (CVID) treated with Immunoglobulin. The study, conducted by a research group led by Prof. Isabella Quinti of the Sapienza University of Rome, showed that in patients treated with Immunoglobulin there are no substantial differences in terms of the improvement of quality of life related to the different formulations of the product or the different methods of administration.

In the United States, we have been personally involved in various initiatives for local patient communities. For example, in September, a Kedrion team participated in the annual “Gears for Good” cycling event, sponsored by the American Hemophilia Federation’s Helping Hands program for children with Coagulation disorders. In October, colleagues from Kedrion and KEDPLASMA participated in two “Walks for Primary Immunodeficiency” organized by the American Immune Deficiency Foundation (IDF) to “improve the diagnosis, treatment and quality of life of persons with Primary Immunodeficiency diseases through advocacy, education and research.”

Throughout the year, Kedrion also collaborated with various Italian Regions and the Italian National Blood Center (CNS) in projects aimed at less developed countries. In support of humanitarian donations, with the goal of ensuring the fastest possible delivery of medicines, we have worked to prepare the necessary export documentation, borne the costs of shipping and provided logistical support.

In other European Union countries, we have once again recorded excellent growth of 28.7% in 2018. Sales in all countries grew, with double-digit increases in Austria, Portugal, Poland and Germany.

Our position in Latin America continues to strengthen. Mexico, where in 2018, we celebrated the tenth anniversary of our direct commercial presence, was the leading country, followed by Colombia and Brazil.

Turkey was once again the leading market in the Middle East and Africa area, followed by Saudi Arabia and United Arab Emirates. Vietnam and India were the key countries in Asia while Kedrion maintained its position in Russia, where significant growth was achieved in the Anti-D Immunoglobulin market.

OUR GLOBAL COMMITMENT TO PATIENTS

An essential part of this solid and continuous growth is our commitment to the international medical and scientific community and patient associations. Major events and initiatives described elsewhere in this Report, included:

- The 50th anniversary of the development of Anti-D Immunoglobulin prophylaxis for Rh sensitization and the campaign to end Rh disease worldwide
- The EIGHT educational initiative on Hemophilia A and its treatment (Budapest, Hungary)
- The Italian EPATEAM project increasing awareness and sharing information about liver transplantation among professionals and patients
- Collaboration with the International Patient Organization for Primary Immunodeficiencies (IPOI), notably in the development of the app PID GENIUS for better management of Primary Immunodeficiency by patients.

With the goal of promoting the education and continuous updating of the medical and scientific communities in the different therapeutic areas in which the company operates, we have supported other initiatives in Italy, for example, in Alessandria, the symposium on “Hemophilia in the Third Millennium: Access to Care, Social Aspects, Projects” and in Florence, an event dedicated to Von Willebrand disease: “One Day Focus on Von Willebrand Disease: Multidisciplinary Aspects”.

We have continued with our commitment in the field of Hemophilia, maintaining support of the European Hemophilia Consortium (EHC) in the PARTNERS project, an initiative to improve access to treatment for coagulation disorders.

We continue to support Scuola FedEmo, a training project carried out by the Italian Federation of Hemophiliac Associations in collaboration with the Fondazione Campus of Lucca. In the three years of our support, the school has succeeded in building a close-knit group of young people who are able to respond to the needs of local associations and face the challenges of tomorrow.

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THE WAY FORWARD
For Kedrion, 2019 will be a year of development and anticipating the future. Continuing along the path that we have mapped out, with confidence, enthusiasm and passion.

The results which have already been obtained in the first months of this year are destined to create value in the long term: FDA approval of all intermediates produced at the Melville plant (in New York, USA); authorization to begin clinical studies on our new 10% Immunoglobulin (Klg10) in the United States; completion of technology transfer activities to the US plant for our Anti-D Immunoglobulin (RhGAM®), for which we have obtained the FDA’s go-ahead to perform the filling and packaging phases of the product in Melville. These are important milestones, which demonstrate the validity of investments in projects that we believe are the most strategic for Kedrion’s growth.

In 2019, we will complete the upgrading of the Castelvecchio Pascoli plant (in Lucca, Italy) for the new Klg10 production process, which will be purified in this plant once the clinical trial is completed. We will also be opening new offices and laboratories at the Sant’Antimo plant (in Naples, Italy).

In 2019, we will continue our commitment to ensure the long-term availability of plasma as a raw material. Part of this strategy is to streamline our supply chain and in early 2019, we will be transferring our collection centers in Germany to another party, while increasing our United States centers to a total of more than 40 by 2022.

With the ultimate goal of ensuring that more and more patients worldwide will have access to the plasma-derived therapies they need, we will continue to support awareness campaigns in other therapeutic areas and in other countries around the world, such as the 2018 Anti-D campaign. We will also continue to promote training initiatives and the sharing of medical and scientific knowledge.

We are convinced that the contribution of each employee is essential for facing the next challenges; therefore, we will continue to promote talent, by investing in the growth and professional development of all our people.

Kedrion Biopharma has accumulated a wealth of knowledge, skills and experience and is committed to investing in the future.
ECONOMIC AND FINANCIAL INDICATORS
REVENUES (€ MLN)

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>659.3</td>
</tr>
<tr>
<td>2017</td>
<td>602.5</td>
</tr>
<tr>
<td>2018</td>
<td>687.9</td>
</tr>
</tbody>
</table>

Kedrion ended 2018 with Euro 687.9 million in turnover, with an increase of 14.2% compared to the previous year. The US, which grew by 15.4% compared to 2017, is the group’s top market (41% of turnover), followed by Europe, where Italy is the leading market (36.2% of turnover). In line with the ongoing internationalization process, aimed at consolidating Kedrion’s presence on the main global markets, exports in 2018 represented 74.7% of turnover.

Revenues from the sales of plasma-derivatives amounted to Euro 513.9 million, up by 4.9% compared to 2017 thanks to the positive performance - both in terms of volumes and prices - of our Immunoglobulin products. The US plasma-derived sales increased by approximately 14% compared to the previous year and all other strategic markets are growing, led by Italy, Germany and Mexico.

The plasma segment experienced an increase in the volumes available to the group that, once the internal production requirements had been met, allowed for a substantial increase in sales to third parties, generating a turnover of Euro 155.1 million compared to Euro 93.9 million in 2017.

Adjusted EBITDA in 2018 was Euro 148.7 million, up by 6.3% compared to the previous year, and the margin percentage was 21.6%.

COMPLETION OF THE MELVILLE PLANT REFITTING

In the course of the year, the group completed the refitting project for the Melville plant (USA), which involved full renovation of the existing fractionation line in order to fully align and integrate it with the other plants of the Kedrion group as well as building a fractionation and purification line for the Anti-D Immunoglobulin (RhoGAM®). This important project, in which the group invested Euro 83.6 million in 2016-2017 and an additional Euro 3.9 million in 2018, was completed, from an industrial standing, in the second half of the year when fractionation operations resumed. The FDA inspected the fractionation plant in August 2018 and final authorizations were received in February 2019. The regulatory process for the new RhoGAM product line began in November 2018, when the FDA carried out an inspection to grant the authorizations needed to start the new production line’s initial filling and packaging activities. The FDA issued its authorization for these activities in March 2019.

KIG10

During the financial year, the project to build a plant for the purification of a 10% Immunoglobulin (Kig10) which uses the chromatographic method was also continued in Castelvecchio Pascoli (Lucca, Italy). In December 2018, a request was submitted to begin clinical trials and continue product development. The FDA approved this request in January 2019.

THE KEDRAB® PRODUCT

During the first months of 2018, the sales of an Anti-Rabies Hyperimmune Immunoglobulin concentrate developed in partnership with Israeli pharmaceutical company Kamada Ltd. (KEDRAB®) began. Kedrion is KEDRAB®’s exclusive distributor for the US market. Turnover for the first year of activity amounted to Euro 12.9 million.

PROPRIETARY PLASMA COLLECTION CENTERS

Activities in this segment included both the sale of six plasma collection centers and the purchase/start-up of eight centers in the United States and one in Hungary, for a total of 27 proprietary centers at the close of the year.
USA

Turnover reached Euro 282.1 million in this commercial area, which retained its leading market position with a 41% share of total revenues. Plasma sales were the main driver of this year’s revenue growth, followed by the Anti-Rabies Immunoglobulin, Albumin, Standard and Anti-D Immunoglobulin (RhoGAM®), while there was a decrease in the volumes of Factor VIII sold. In addition to sales of plasma-derived products, turnover was also generated by activities carried out for third parties at our Melville site, but these were negatively affected because of the restart of the plant.

ITALY

At December 31st, 2018, the Italian market turnover had increased by 6.5% compared to the previous year - reaching Euro 174.2 million and 25.3% of total revenues, thanks to sales of finished products on the commercial market and to contract manufacturing operations carried out for the Italian National Health System. Such growth was mainly due to the increase of Contract Manufactured volumes invoiced to the Italian National Health System and to higher sales of Nuwiq® recombinant Factor VIII and CERUS products.

EUROPEAN UNION

European Union turnover at December 31st, 2018, was Euro 75.2 million, or 10.9% of total revenues. This significant (28.7%) increase on 2017 was the result of higher sales of plasma to European – mainly German - customers, which amounted to Euro 7.4 million, and of the larger volumes of standard Immunoglobulin sold at rising prices in Germany, Austria, Poland and Portugal. In 2018 these countries, together with Hungary, were our main European markets.

THE REST OF THE WORLD

At December 31st, 2018, turnover in this region had reached Euro 156.4 million, or 22.8% of total revenues, recording a 14.9% increase compared to 2017. Mexico outperformed Turkey, despite the fact that both countries were again affected by the weakness of their local currencies, to became the area’s top market with Euro 28.4 million turnover, followed by Switzerland (mainly for plasma sales) and Turkey. Together with Russia, Saudi Arabia, Vietnam, Israel and the United Arab Emirates, these countries accounted for approximately 73% of the area’s total revenues.
CONSOLIDATED INCOME STATEMENT (in thousands of Euro) YEAR ENDING AT 12/31/18

<table>
<thead>
<tr>
<th>Description</th>
<th>2018</th>
<th>Change 2018 vs 2017</th>
<th>Change 2018 vs 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues from sales and services</td>
<td>687,939</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of sales</td>
<td>518,482</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross operating margin</td>
<td>169,457</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other income</td>
<td>37,494</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General and administrative expenses</td>
<td>83,659</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales and marketing expenses</td>
<td>46,314</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research and development expenses</td>
<td>48,127</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other operating costs</td>
<td>8,286</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating result</td>
<td>20,565</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial charges</td>
<td>27,678</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial income</td>
<td>15,387</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Result before tax</td>
<td>8,274</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income taxes</td>
<td>(3,367)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net result for the period</td>
<td>11,641</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group result</td>
<td>10,165</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minorities result</td>
<td>1,476</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DISTRIBUTION OF SALES BY GEOGRAPHIC AREAS (€ MLN)

- **Europe**: 2016 - 59.6%, 2017 - 58.4%, 2018 - 75.2%
- **Rest of the World**: 2016 - 9.0%, 2017 - 9.7%, 2018 - 10.9%

CAGR 12.4% ↑

CAGR 7.7% ↑
### OTHER COMPREHENSIVE INCOME (In thousands of Euro)

<table>
<thead>
<tr>
<th>YEAR ENDING AT 12/31/18</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Profit for the period</strong></td>
<td>11,641</td>
</tr>
<tr>
<td>Other comprehensive income to be reclassified to profit or loss in subsequent periods:</td>
<td></td>
</tr>
<tr>
<td>Net movement on cash flow hedges</td>
<td>71</td>
</tr>
<tr>
<td>Income tax effect</td>
<td>(17)</td>
</tr>
<tr>
<td>Exchange differences on translation of foreign operations</td>
<td>8,251</td>
</tr>
<tr>
<td>Income tax effect</td>
<td>0</td>
</tr>
<tr>
<td><strong>Net other comprehensive income to be reclassified to profit or loss in subsequent periods</strong></td>
<td>8,305</td>
</tr>
<tr>
<td>Other comprehensive income not to be reclassified to profit or loss in subsequent periods:</td>
<td></td>
</tr>
<tr>
<td>Re-measurement gains (losses) on defined benefit plans</td>
<td>104</td>
</tr>
<tr>
<td>Income tax effect</td>
<td>(30)</td>
</tr>
<tr>
<td><strong>Net other comprehensive income not to be reclassified to profit or loss in subsequent periods</strong></td>
<td>74</td>
</tr>
<tr>
<td><strong>Other comprehensive income for the year, net of tax</strong></td>
<td>8,379</td>
</tr>
<tr>
<td><strong>Total comprehensive income for the year, net of tax</strong></td>
<td>20,020</td>
</tr>
<tr>
<td>Attributable to:</td>
<td></td>
</tr>
<tr>
<td>Equity holders of the parent</td>
<td>18,436</td>
</tr>
<tr>
<td>Non-controlling interests</td>
<td>1,584</td>
</tr>
</tbody>
</table>

### CONSOLIDATED STATEMENT OF FINANCIAL POSITION (In thousands of Euro)

<table>
<thead>
<tr>
<th>YEAR ENDING AT 12/31/18</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NON CURRENT ASSETS</strong></td>
<td></td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>266,038</td>
</tr>
<tr>
<td>Investment property</td>
<td>2,327</td>
</tr>
<tr>
<td>Goodwill</td>
<td>230,554</td>
</tr>
<tr>
<td>Fixed term intangible assets</td>
<td>83,331</td>
</tr>
<tr>
<td>Investments in associated companies</td>
<td>331</td>
</tr>
<tr>
<td>Investments in other companies</td>
<td>2,194</td>
</tr>
<tr>
<td>Other non current financial assets</td>
<td>10,124</td>
</tr>
<tr>
<td>Deferred tax assets</td>
<td>12,341</td>
</tr>
<tr>
<td>Other non current assets</td>
<td>1,262</td>
</tr>
<tr>
<td><strong>TOTAL NON CURRENT ASSETS</strong></td>
<td>608,502</td>
</tr>
<tr>
<td><strong>CURRENT ASSETS</strong></td>
<td></td>
</tr>
<tr>
<td>Inventories</td>
<td>344,118</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>106,154</td>
</tr>
<tr>
<td>Contractual activities</td>
<td>19,555</td>
</tr>
<tr>
<td>Current tax credits</td>
<td>7,739</td>
</tr>
<tr>
<td>Other current assets</td>
<td>38,220</td>
</tr>
<tr>
<td>Other financial current assets</td>
<td>712</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>116,325</td>
</tr>
<tr>
<td><strong>TOTAL CURRENT ASSETS</strong></td>
<td>632,823</td>
</tr>
<tr>
<td>Assets available for sale</td>
<td>1,554</td>
</tr>
<tr>
<td><strong>TOTAL ASSETS</strong></td>
<td>1,242,879</td>
</tr>
</tbody>
</table>
### CONSOLIDATED STATEMENT OF FINANCIAL POSITION (in thousands of Euro)

**YEAR ENDING AT 12/31/18**

#### SHAREHOLDERS’ EQUITY

**GROUP SHAREHOLDERS’ EQUITY**

<table>
<thead>
<tr>
<th>Share capital</th>
<th>Reserves</th>
<th>Group net income</th>
</tr>
</thead>
<tbody>
<tr>
<td>55,186</td>
<td>316,399</td>
<td>10,165</td>
</tr>
</tbody>
</table>

**TOTAL GROUP SHAREHOLDERS’ EQUITY** 381,750

#### MINORITIES SHAREHOLDERS’ EQUITY

<table>
<thead>
<tr>
<th>Minorities capital and reserves</th>
<th>Minorities net income</th>
</tr>
</thead>
<tbody>
<tr>
<td>277</td>
<td>1,476</td>
</tr>
</tbody>
</table>

**TOTAL MINORITIES SHAREHOLDERS’ EQUITY** 1,753

**TOTAL SHAREHOLDERS’ EQUITY** 383,503

#### NON CURRENT LIABILITIES

<table>
<thead>
<tr>
<th>Medium/long-term debt</th>
<th>Financial liabilities</th>
<th>Provisions for risks and charges</th>
<th>Payables for employee benefits</th>
<th>Other non current liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>490,136</td>
<td>515</td>
<td>922</td>
<td>9,028</td>
<td>5,085</td>
</tr>
</tbody>
</table>

**TOTAL NON CURRENT LIABILITIES** 505,676

#### CURRENT LIABILITIES

<table>
<thead>
<tr>
<th>Financial liabilities</th>
<th>Current portion of medium/long-term debt</th>
<th>Provisions for risks and charges</th>
<th>Trade payables</th>
<th>Current tax payables</th>
<th>Other current liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>68,001</td>
<td>64,915</td>
<td>1,450</td>
<td>170,959</td>
<td>743</td>
<td>47,632</td>
</tr>
</tbody>
</table>

**TOTAL CURRENT LIABILITIES** 353,700

**TOTAL LIABILITIES** 859,376

**TOTAL SHAREHOLDERS’ EQUITY AND LIABILITIES** 1,242,879

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### CONSOLIDATED CASH FLOW STATEMENT (in thousands of Euro)

**YEAR ENDING AT 12/31/18**

Net cash flow generated by operating activities (A) 36,309

Net cash flow absorbed by investment activities (B) (65,226)

Net cash flow absorbed by financing activities (C) 40,478

**Total net cash generated/(absorbed) flow D=(A+B+C)** 11,561

Cash and cash equivalents opening balance (E) 104,522

Net effect of conversion of foreign currencies on cash and cash equivalents (F) 240

**Cash and cash equivalents closing balance G=(D+E+F)** 116,323