octapharma

Annual Report 2021

Enhancing human life

Since 1983, we have imagined a healthier, better world, believing that together we can invest to make a difference in people's lives.

Our more than 9,000 employees are unified by our vision – to provide new health solutions advancing human life. Driven by the strength of our passion and guided by our values, we work every day to help thousands of patients across the world now and in the future.

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PBM and use of factor concentrates are key to successful separation of conjoined twins

A new Patient Blood Management (PBM) strategy played a pivotal role in life-changing surgery to separate conjoined Haitian twin girls at the Exequiel Gonzalez Cortés Hospital in Santiago, Chile on October 13, 2021.

"When I founded Octapharma 39 years ago, I could never have anticipated that we would grow into a global company of more than 9,000 employees around the world, working together to provide life-saving medications to tens of thousands of patients every year. Our work has never felt more relevant than over the past two years."

Wolfgang Marguerre
Chairman and CEO, Octapharma Group

“Throughout 2021, we have continued to engage with a growing number of key opinion leaders in our industry on our newly launched science hub and through our participation in many global congresses.”

9,977 employees
(2020: 9,067)

€2.51bn revenue
(2020: €2.4bn)

€459m operating income
(2020: €451m)

When I founded Octapharma 39 years ago, I could never have anticipated that we would grow into a global company of more than 9,000 employees around the world, working together to provide life-saving medications to tens of thousands of patients every year. Our work has never felt more relevant than over the past two years. It has been extremely gratifying to see how everyone at Octapharma has gone the extra mile during the pandemic, to be there for the people who truly need us.

In this year’s report, we again speak to some of those patients whose lives are being impacted by our products. The stories of Debbie, Kellie Jo, Terézia and József remind us of the impact that our products have every day on our patients all around the world.

Among our achievements in 2021, we received important regulatory approvals. The US Food and Drug Administration (FDA) approved the use of octagam® 10% for the treatment of adult dermatomyositis. The decision was quickly followed by other jurisdictions, providing a safe, proven treatment option for patients with this rare autoimmune disorder. The FDA also approved our manufacturing site in Springe as an additional site for Fraction II production. This is a very important step as it is the first FDA approval for our Springe site.

We also made good progress with several other clinical trials in 2021, including our PRO-SID (Primary Infection Prophylaxis with panzyga® in Secondary Immunodeficiency in Chronic Lymphocytic Leukaemia (CLL)) study to evaluate the efficacy and safety of immunoglobulin (IVIg) for primary prophylaxis for infection control in patients with CLL. We also commenced a clinical trial with a new 20% subcutaneous immunoglobulin, and enrolled our first patients in a phase III, multi-centre superiority study to compare the effectiveness of panzyga® versus placebo in patients with paediatric acute-onset neuropsychiatric syndrome (PANS).

Our patient-centred research approach was once again visible with the publication of a paper reporting the main findings of the ProCID study into the efficacy and safety of panzyga® in patients with chronic inflammatory demyelinating polyneuropathy (CIDP) in BRAIN, a leading medical journal. Throughout 2021, we have continued to engage with a growing number of key opinion leaders in our industry on our newly launched science hub and through our participation in many global congresses.

In addition, we continue to invest heavily in opening new plasma donation centres in the USA. We now operate more than 180 plasma donation centres across our fleet in Germany and the USA. We have also launched a range of new initiatives to increase capacities at our production sites across Europe as part of an ambitious plan to grow our business.

Despite the significant challenges posed by the ongoing pandemic to all aspects of our business, we managed to achieve revenues of €2.51 billion and a net income of €438 million, representing growth of 4.9% and 16.7% respectively over the 2020 results. As I look forward to 2022 and beyond, I believe that Octapharma is well placed to continue to grow well into the future.

Wolfgang Marguerre
Chairman and CEO, Octapharma Group

Pushing through the pain: The long road to a dermatomyositis diagnosis

Autoimmune disorders are not straightforward. They can manifest in many ways, there is usually no simple test for them, and symptoms can closely resemble those of other disorders. As a result, the average time for diagnosis of a serious autoimmune disease in the USA is 4.6 years, during which time patients typically see an average of 4.8 doctors, according to the American Autoimmune Related Diseases Association (AARDA).[1]

For Kellie Jo, the journey to her diagnosis began in 2011. "At that time, I was in and out of hospital for over 16 weeks seeing a cardiologist and an endocrinologist. Diagnosis for me has been an awful struggle, as it is for so many others," she explains.

Facing her struggle

As hard as things were, life really turned upside down for Kellie Jo in 2015. In just a short space of time, she first lost a close childhood friend; then her sister, to addiction; and then her brother, to liver cancer. "To say I was devastated is a huge understatement," she remembers. "It felt like huge parts of me had been removed. Just gone. I knew I had to somehow stay positive for my two boys, but I also started to feel like my body couldn't take another thing."

Kellie Jo had no choice but to focus her attention on her health when she developed a rash on her chest and back. "My primary care doctor assumed it was because of all the stress," recalls Kellie Jo. She started taking steroids, and they did initially help.

But Kellie Jo was soon in constant pain. "I know now that what dermatomyositis does is affect the skin and the muscle tissue, and my legs got so weak I could not walk for the pain," says Kellie Jo. "I had to sell my pickup because I couldn't shift it into reverse."

Like many others with the condition, Kellie Jo now believes she spent many years of her life under the care of different specialists without getting an accurate diagnosis to explain the root cause of her recurring symptoms.

Above Kellie Jo has dedicated many hours to conducting her own research on dermatomyositis.

1 autoimmune.org/wp-content/uploads/2017/04/tips_for_auto_diagnosis.pdf

Autoimmune disorders
Dermatomyositis is one of over 100 autoimmune diseases and many occur in clusters.

Achalasia Addison's disease Adult Still's disease Agammaglobulinemia Alopecia areata Amyloidosis Ankylosing spondylitis Anti-GBM/Anti-TBM nephritis Antiphospholipid syndrome Autoimmune angioedema Autoimmune dysautonomia Autoimmune encephalitis Autoimmune hepatitis Autoimmune inner ear disease Autoimmune myocarditis Autoimmune oophoritis Autoimmune orchitis Autoimmune pancreatitis Autoimmune retinopathy Autoimmune urticaria Axonal & neuronal neuropathy Baló disease Behcet's disease Benign mucosal pemphigoid Bullous pemphigoid Castleman disease Celiac disease Chagas disease Chronic inflammatory demyelinating polyneuropathy Chronic recurrent multifocal osteomyelitis Churg-Strauss syndrome Cicatricial pemphigoid Cogan's syndrome Cold agglutinin disease Complex regional pain syndrome Congenital heart block Coxsackie myocarditis CREST syndrome Crohn's disease Dermatitis herpetiformis **Dermatomyositis** Devic's disease Discoid lupus Dressler's syndrome Endometriosis Eosinophilic esophagitis Eosinophilic fasciitis Erythema nodosum Essential mixed cryoglobulinemia Evans syndrome Fibromyalgia Fibrosing alveolitis Giant cell arteritis Giant cell myocarditis Glomerulonephritis Goodpasture's syndrome Granulomatosis with polyangiitis Graves' disease Guillain-Barre syndrome Hashimoto's thyroiditis Hemolytic anemia Henoch-Schonlein purpura Herpes gestationis or pemphigoid gestationis Hidradenitis suppurativa IgA nephropathy IgG4-related sclerosing disease Immune thrombocytopenic purpura Inclusion body myositis Interstitial cystitis Juvenile arthritis Juvenile diabetes Juvenile myositis Kawasaki disease Lambert-Eaton syndrome Lichen planus Lichen sclerosus Ligneous conjunctivitis Linear IgA disease Lupus Lyme disease chronic Meniere's disease Microscopic polyangiitis Mixed connective tissue disease Mucha-Habermann disease Multifocal motor neuropathy Multiple sclerosis Myasthenia gravis Myelin oligodendrocyte glycoprotein antibody disorder Myositis Narcolepsy Neonatal lupus Neuromyelitis optica / devic disease Neutropenia Ocular cicatricial pemphigoid Optic neuritis Palindromic rheumatism PANDAS Paraneoplastic cerebellar degeneration Paroxysmal nocturnal hemoglobinuria Pars planitis Parsonage-Turner syndrome Pemphigus Peripheral neuropathy Perivenous encephalomyelitis Pernicious anemia POEMS syndrome Polyarteritis nodosa Polyglandular syndromes type I, II, III Polymyalgia rheumatica Polymyositis Postmyocardial infarction syndrome Postpericardiotomy syndrome Primary biliary cholangitis Primary sclerosing cholangitis Progesterone dermatitis Progressive hemifacial atrophy Psoriasis Psoriatic arthritis Pure red cell aplasia Pyoderma gangrenosum Raynaud's phenomenon Reactive arthritis Relapsing polychondritis Restless legs syndrome Retroperitoneal fibrosis Rheumatic fever Rheumatoid arthritis Sarcoidosis Schmidt syndrome or Autoimmune polyendocrine syndrome type II Scleritis Scleroderma Sjögren's Disease Stiff person syndrom Susac's syndrome Sympathetic ophthalmia Takayasu's arteritis Temporal arteritis/giant cell arteritis Thrombocytopenic purpura Thrombotic thrombocytopenic purpura Thyroid eye disease Tolosa-Hunt syndrome Transverse myelitis Type 1 diabetes Ulcerative colitis Undifferentiated connective tissue disease Uveitis Vasculitis Vitiligo Vogt-Koyanagi-Harada disease Warm autoimmune hemolytic anemia

Above Kellie Jo's treatment with Octapharma's IVIg therapy continues and her life has returned to normal.

Devastating words

Luckily, Kellie Jo is nothing if not persistent and she spent many hours doing her own research. "I finally came across some information leading me to muscular dystrophy. But still there was the question of the rash," she remembers. By now her skin was fire red, across her face, chest, neck and shoulders, and she was unable to climb steps without help.

Finally, fully six years after her symptoms began to take over her life, Kellie Jo went back to her primary care doctor in 2017 with a one-word note, "dermatomyositis", which she handed over. She was sent to a dermatologist, who confirmed her worst fears. "He took one look at me and said nearly the most devastating words I have ever heard: 'You have dermatomyositis.'"

A rare and debilitating disease

Dermatomyositis is a rare autoimmune disorder, affecting about 20 – 90 people per million globally.[2] Autoimmune disorders cause the body's immune system to attack its own cells and tissue, and dermatomyositis is a rare inflammatory disease marked by muscle weakness and a distinctive skin rash.

Affecting more females than males, the condition is found in both adults and children, usually occurring in adults in their late 40s to early 60s, whilst in children it most often appears between the ages of five and 15 years.

Finding a cure

Laboratory tests and biopsies confirmed her diagnosis definitively and Kellie Jo was able to begin a treatment. "I was given the usual suspects," she recalls, "from more steroids to methotrexate – another immunosuppressant drug." But her body rejected everything and she found herself in hospital several times. "I was declining rapidly," says Kellie Jo, adding: "I was so weak, I was not able to even sit up."

At last, Kellie Jo's doctor proposed octagam® 10% – Octapharma's intravenous immunoglobulin (IVIg) therapy. She seems to remember being told she would need to take it for approximately six months to see a real difference. "But we were able to tell the difference a little bit after three months and at month eight, my life came back!" says Kellie Jo, in tears of joy as she relives that time. "I am so very thankful for this medication and for the physician who prescribed it."

2 orpha.net/consor/cgi-bin/OC_Exp.php?lng=EN&Expert=221

"I get so much personally from working with our clients and my story shows them, through my journey, that to succeed you really have to feel the fight in you."

All roses and sweet tea?

Kellie Jo's treatment with Octapharma's IVIg continues and her life has returned to a kind of normal. Almost. Looking back, she realises that – without her own tenacity and hard work to find out what was wrong with her – her diagnosis might have taken much longer than it did, but she is grateful she has gotten where she is.

She now runs an addiction recovery centre which she opened after losing her sister and having seen several friends fight their own demons. "I get so much personally from working with our clients and my story shows them, through my journey, that to succeed you really have to feel the fight in you."

Reflecting on her life now, under treatment and committed to work, Kellie Jo says: "The centre has been a blessing to me. I'm not going to tell you that all my days are roses and sweet tea, but 9 out of 10 of them are..."

Diagnosing autoimmune disorders

4.6 years[3]

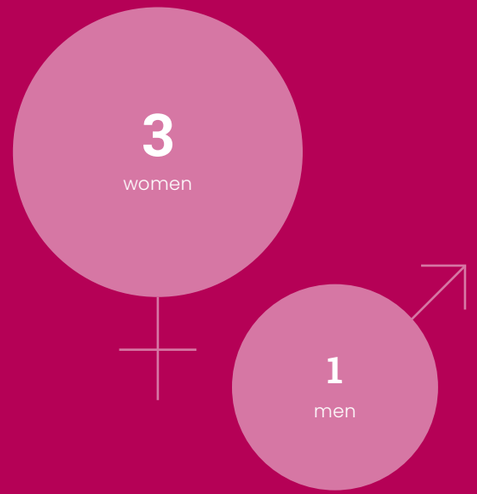
Average time for diagnosis of a serious autoimmune disease in the USA

4.8 doctors[3]

Patients typically see an average of 4.8 doctors before reaching definite diagnosis

"At that time, I was in and out of hospital for over 16 weeks seeing a cardiologist and an endocrinologist. Diagnosis for me has been an awful struggle, as it is for so many others."

Dermatomyositis is more common in women than in men, with a ratio of approximately 3:1



3 autoimmune.org/wp-content/uploads/2017/04/tips_for_auto_diagnosis.pdf

Towards the successful treatment of dermatomyositis

Dermatomyositis (DM) is a rare autoimmune disorder of unknown cause that affects about 20 – 90 people per million globally.[1] Until recently, those living with the disease in the USA mostly relied on off-label medications but, on 16 July 2021, the US Food and Drug Administration (FDA) approved octagam® 10% – Octapharma's intravenous immunoglobulin (IVIg) therapy – for use by adults with DM. Further approvals followed in Europe and around the world.

"Patients with DM, especially those with refractory disease, had a poor prognosis and suffered from lack of approved treatment options," recalls Rohit Aggarwal, MD MS, Medical Director of the Arthritis and Autoimmunity Center at the University of Pittsburgh School of Medicine, USA, adding: "When Octapharma took a bold leap to pursue the possibility of IVIg treatment options for DM, I felt it was a great opportunity to use my expertise to help advance the field."

Dr Aggarwal, an internationally recognised expert on myositis, was a member of the Advisory Board who discussed the Progress in DERMatomyositis (ProDERM) study's design before becoming a member of the Study Steering Committee and sub-investigator for the phase III clinical trial.

The ProDERM study: IVIg to treat DM

The intention of the ProDERM study was to evaluate the efficacy, safety and long-term tolerability of IVIg in patients with DM. Back in 2016, when Board Member Wolfgang Frenzel, responsible for R&D at Octapharma, first asked Irene Beckmann, Global Clinical Project Manager for Immunotherapy, to lead the study, she was immediately eager to start work, recognising that DM represented a huge unmet need. "I felt both excited and really happy to lead the ProDERM team. I knew it would be a challenging project, but I was not afraid of that. And what truly motivated me was that it was clear from the start we were principally doing it for the patients," says Irene.

1 https://www.orpha.net/consor/cgi-bin/OC_Exp.php?lng=EN&Expert=221

Patients with DM (usually adults in their late 40s to early 60s, but also children between the ages of five and 15) commonly suffer from skin rashes, chronic muscle inflammation and progressive muscle weakness. Complications can include difficulty swallowing, aspiration pneumonia, breathing problems and calcium deposits on muscles, skin and connective tissues.

Critical patient participation
After gaining FDA approval of the protocol, and subsequent wider approval by other national authorities, the study enrolled 95 patients from 36 sites in 10 countries. "The design of the ProDERM study, allowing patients to switch treatment if they deteriorated, facilitated recruitment of a large number of patients for such a rare disease," explains Dr Aggarwal.

Terézia, a 65-year-old retired former civil servant from Budapest in Hungary, and József a 42-year-old Hungarian lorry driver and sports fanatic, both took Octapharma's IVIg therapy. "I was not scared at all," recalls Terézia. "The doctors provided me with a good amount of detailed information about the treatment. I also had great support from my family who encouraged me – because it could make a difference to my life."

When Terézia first experienced symptoms of DM at the age of 33, she saw a range of doctors, including a rheumatologist, but none of them could find an underlying cause. Many linked her skin rashes and hair loss to an allergy. "I was constantly tired. I couldn't lift my arms, indications which I now know are typical of the disease appeared on my fingers, and I lost weight suddenly, dropping from 54 to 44kg. I could not sit up from lying down – the muscles around my shoulders and in my upper arms were severely inflamed and 'deflated'." Terézia's health was worsening, and her family was beginning to lose hope until a professor of dermatology made a conclusive diagnosis.

József was diagnosed in 2014. "I was originally misdiagnosed and treated by the Department of Dermatology," he remembers, adding: "When we finally learned what my disease was, it was obviously hard for me and my family and it proved to be an ongoing challenge – physically, mentally and financially."

"All the physicians and researchers involved were keen to make the study successful. I think we all saw the obvious need for IVIg for these patients and understood what it would mean for their lives."

Irene Beckmann
Global Clinical Project Manager for Immunotherapy

Below Based in Vienna, Irene Beckmann played an instrumental role in the ProDERM study.

Unfortunately, misdiagnosis is common. Dr Aggarwal explains: "Diagnosis of DM can often be confused with other autoimmune disorders such as lupus or psoriasis if physicians have not already encountered it, and patients usually have to undergo a series of tests and procedures to be certain."

As his condition progressed, József's life changed radically. Basic everyday tasks such as sitting, walking and swallowing became difficult. "When I started IVIg treatment, I could climb one step again and I could swallow. Since then – because I was mentally positive and did everything I physically had to do – my condition has been gradually improving."

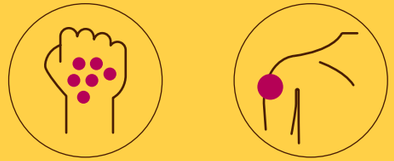
Treatment of DM with octagam® 10% now likely worldwide
IVIg is a concentrated solution of antibodies derived from donated human plasma. While it has been used to treat a variety of autoimmune diseases for decades, its use in DM and for myositis generally was, until summer 2021, off-label in Europe and the USA. "Now, however, with the approval we have gained as a result of the study, we have given a treatment option and renewed hope to our DM patients," explains Irene.

It is a result everyone had been eager to see. "All the physicians and researchers involved were keen to make the study successful. I think we all saw the obvious need for IVIg for these patients and understood what it would mean for their lives," recalls Irene.

Zoltan Griger MD PhD, Division of Clinical Immunology, Faculty of Medicine, University of Debrecen, Hungary, another member of the Advisory Board and sub-investigator in the ProDERM study, shares a similar view: "The ProDERM study has given patients hope. You can see it in their eyes. One patient told me that, as she put it, life can take everything away from you in the blink of an eye – material things, your loved ones, your health – but not your faith or your willpower to be able to start over.

"Since the trial, she has felt a sense of renewed strength, which is allowing her to write and paint, and to feel fully alive again," Zoltan recalls, adding: "It is not about the milestones or the innovation; it is about improving the lives of patients."

Dermatomyositis signs and symptoms



Skin rashes

Chronic muscle inflammation and progressive muscle weakness

"Patients with DM, especially those with refractory disease, had a poor prognosis and suffered from lack of approved treatment options."

Rohit Aggarwal, MD, MS
Medical Director of the Arthritis and Autoimmunity Center at the University of Pittsburgh School of Medicine, USA

Dermatomyositis complications[2]

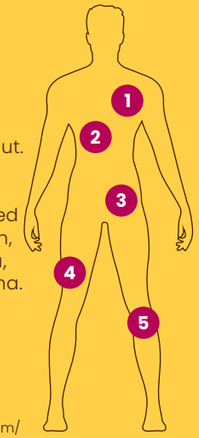
1. Cardiac
Arrhythmias or defects in ejection fraction may be present but are rare.

2. Pulmonary
Interstitial lung disease is common manifesting in a non-productive cough and breathing problems. This is the leading cause of death among dermatomyositis patients.

3. Gastrointestinal
Complications occur such as dysphagia; impaired gastric motility; aspiration pneumonia and bleeding due to vasculopathy of the gut.

4. Malignancy
Cancers commonly associated include ovarian, breast, colon, nasopharyngeal, melanoma, and non-Hodgkin's lymphoma.

5. Joints
Joint stiffness is a common complication.



2 https://managedermatomyositis.com/

Haematology

Wearing her bruises with pride: Living with von Willebrand disease

“Girls sometimes only find out when they start menstruating, and a lot of people do not ever find out that they have bleeding disorders.”

Growing up, Debbie was told many times that she would never have children and was unlikely to live into her forties. Today, aged 59 and married with two children, she sometimes finds it difficult to believe just how far she has come and how much she has achieved.

Born in Johannesburg, South Africa, Debbie was about six weeks old when a mosquito bite on her lip would not stop bleeding. Her uncle, a paediatric neurologist, suggested running a test for a bleeding disorder which showed Debbie had type 3 von Willebrand disease (VWD). “This was back in 1962, and only one other woman in South Africa had been diagnosed with type 3 at that time,” explains Debbie.

Type 3 is the rarest and most severe type of VWD, occurring in just 3% of people diagnosed with the disease. A person with type 3 VWD has very little or no von Willebrand factor (VWF), and without VWF to act as a carrier, factor VIII levels in the blood also drop significantly. Type 3 patients usually show severe bleeding symptoms and benefit from prophylaxis with VWF concentrates. VWD is predominantly an inherited condition resulting from the affected gene being passed from the parents to the children, but in some cases a mutation in the VWD gene can occur spontaneously.

Growing up

During her early childhood, Debbie experienced many significant nosebleeds which landed her in hospital, where she was given plasma or whole blood as these were the only treatment options available to her. “The bleeds were torrential,” she recalls. “It could sometimes take hours for us to stop the bleeding.” Later, she had ankle bleeds at least once a week throughout high school. It was around 1972 when Debbie started using plasma cryoprecipitate (cryo), a frozen blood product prepared from blood plasma, as a treatment.

When she started to menstruate, she almost immediately developed severe menstrual bleeding, lasting up to 30 days. She was given full blood transfusions and recalls once, when her haemoglobin was particularly low, being sent home by a doctor who told her family: “We have done all that we can for her; I do not think she is going to make it.” Fortunately, a gynaecologist prescribed hormonal therapy which helped control her heavy menstrual bleeding.

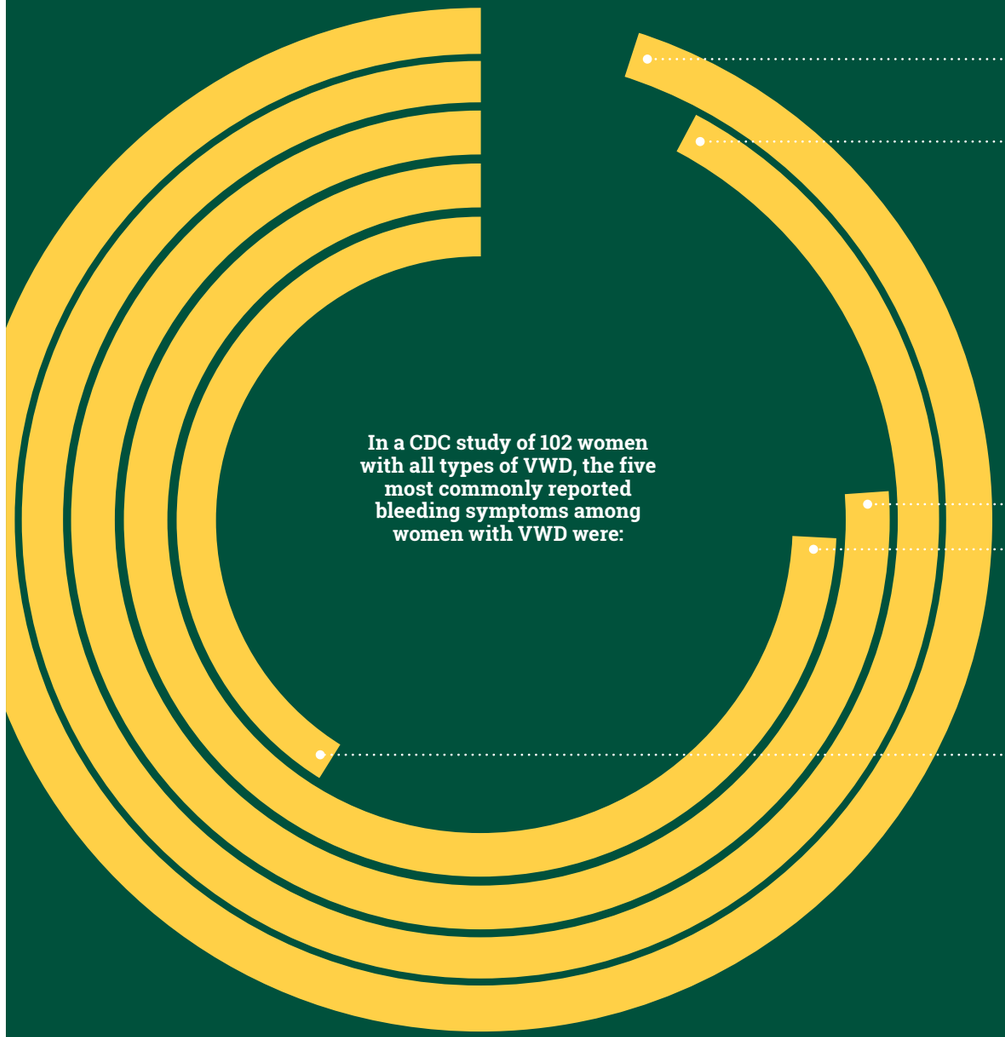
Despite this difficult childhood, Debbie feels fortunate to have been diagnosed so early. “Men can be adults when they find out. Girls sometimes only find out when they start menstruating, and a lot of people do not ever find out that they have bleeding disorders,” notes Debbie. VWD is the most common hereditary bleeding disorder. It is estimated that up to 1% of the population is affected by VWD. It is estimated that 90% of those needing treatment are unaware they have the disease and are left untreated.

Living through the tragedy of the 1980s

People with bleeding disorders require regular infusions of clotting factors. In the early 1980s – with none of the sophisticated screening for transfusion-transmissible infections (TTIs) and the viral reduction steps used in today’s manufacturing processes – contaminated blood products reached the global haemophiliac population which imported USA-made concentrate, including people in South Africa. Infusions with infected concentrates led to a devastatingly high number of recipients being infected with blood-borne pathogens such as HIV and hepatitis C.

Von Willebrand disease[1]

Von Willebrand disease (VWD) is an inherited genetic disorder in which the blood does not clot properly.



Treating VWD[2]

Treatment choice is based on VWD type, the nature and severity of the bleeding and its site.

Desmopressin stimulates the release of stored clotting factors and can be used to treat some type 1 and type 2 patients. However, it is not suitable for all VWD patients.

VWF-containing concentrates are used when desmopressin is ineffective or not indicated.

Antifibrinolytic medications such as tranexamic acid and aminocaproic acid slow the breakdown of blood clots.

Fibrin glue can be used to seal a bleeding site and can be useful after a tooth extraction.

For women with menorrhagia, contraception such as an intrauterine device or hormone medication can sometimes reduce menstrual bleeding.

1 Adapted from https://www.cdc.gov/ncbddd/vwd/data.html
2 Adapted from https://vwdtest.com/vwd-treatments/

1962

Debbie was about six weeks old when a mosquito bite on her lip would not stop bleeding.

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"Men can be in their teens when they find out. Girls sometimes only find out when they start menstruating."

"Every single boy that I grew up with in South Africa who had haemophilia died of AIDS."

1981

Debbie moved to the USA, hoping to launch her acting career. Sadly, at that time, people with bleeding disorders could not get insurance to work on stage or screen.

2021

Today, Debbie likes to spend her time at home with her family and raises awareness of VWD in her free time, and does a lot of work with the New York Blood Center.

"I do motivational speaking for them, speaking to potential and actual donors, some of whom donate hundreds of units a year."

Debbie knew many haemophiliac boys using factor products at that time, though she could not access the products herself because they had not been licensed for people with VWD. Debbie lost many friends and loved ones to AIDs contracted via the contaminated concentrate: "Every single boy with whom I grew up in South Africa who had haemophilia died of AIDS," she remembers with great sadness. She believes the doctor who refused to give her factor saved her life, though she was infected with hepatitis C (almost certainly from a contaminated blood product), which was to lie dormant for 25 years before being later cured in an early clinical trial.

Octapharma was the first company to apply solvent-detergent (S/D) virus inactivation in the routine production of plasma-derived products. The S/D process, in conjunction with other critical viral inactivation steps, has delivered a proven record of no known viral transmissions for three decades.

Starting a new life in the USA

In 1986, whilst still on cryo, Debbie moved to the USA, hoping to launch her acting career. Sadly, at that time, people with bleeding disorders could not get insurance to work on stage or screen. "I had spent years training to be an actor," remembers Debbie. "But if I was not going to be able to act, then I had to find a new dream, so I went into working behind the scenes in a production company. I met Howie soon after, we got married, and I got pregnant very quickly."

Debbie accepts that she has been very fortunate to have the best doctors around her, even when pregnant: "I always felt like I was in good hands." Nevertheless, she faced enormous challenges. For the six months after she gave birth to her son, she had many bleeds and had to infuse every single day. "And then, just three months later I was pregnant with my second child. You would think you would not want to go through it again, but I did."

"I just say, wear your bruises with pride. They're part of you and part of your journey. If you wear them with confidence, if you own them, now that's a thing."

Left Debbie has tried all sorts of treatments, but today she uses Octapharma's von Willebrand/coagulation factor VIII concentrate.

Debbie has experienced all aspects of this painful disease: "I cannot describe to you how painful a bleed is. It is just off the charts painful. Imagine a tiny little joint has this fluid pumping into it, and it is just getting bigger and bigger, and it has no place to go, so it is sending these signals to your body," explains Debbie. She is, occasionally, very depressed. "There are times where I just want to curl up and go to sleep and say, 'Leave me alone, I do not want this'..."

Debbie has tried all sorts of treatments, but today she uses wilate® – Octapharma's von Willebrand/coagulation factor VIII concentrate. She is confident about the safety of its manufacture and she is optimistic. "Now that I have learned how to infuse at home and I am doing regular prophylaxis, I have real hope for my future. Things feel more stable. There is still a part of me that is preparing for the point where I am not going to be able to infuse myself, but we will plan for that and I know we will get through."

VWD made me who I am

Keen to see more people with bleeding problems get diagnosed and receive the treatment they need, she raises awareness of VWD in her free time and does a lot of work with the New York Blood Center. "I do motivational speaking for them, speaking to potential and actual donors, some of whom donate hundreds of units a year," explains Debbie. "Even though I am not necessarily getting their blood plasma, they love to meet me and have a face to put to their donations."

Debbie admits there have been limitations in her life, but she has learned to adapt and believes VWD has made her who she is.

"I read about women saying they have terrible bruises and feel so embarrassed because people think that somebody is beating them," says Debbie. "I just say, wear your bruises with pride. They are part of you and part of your journey. If you wear them with confidence, if you own them, now that's a thing..."

Strong foundations for growth

"Despite the significant challenges posed by the ongoing pandemic to all aspects of our business, we managed to achieve revenues of €2.51 billion and a net income of €438 million, representing growth of 4.9% and 16.7% respectively over the 2020 results. As I look forward to 2022 and beyond, I believe that Octapharma is well placed to continue to grow well into the future."

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>180
plasma donation centres

9,977
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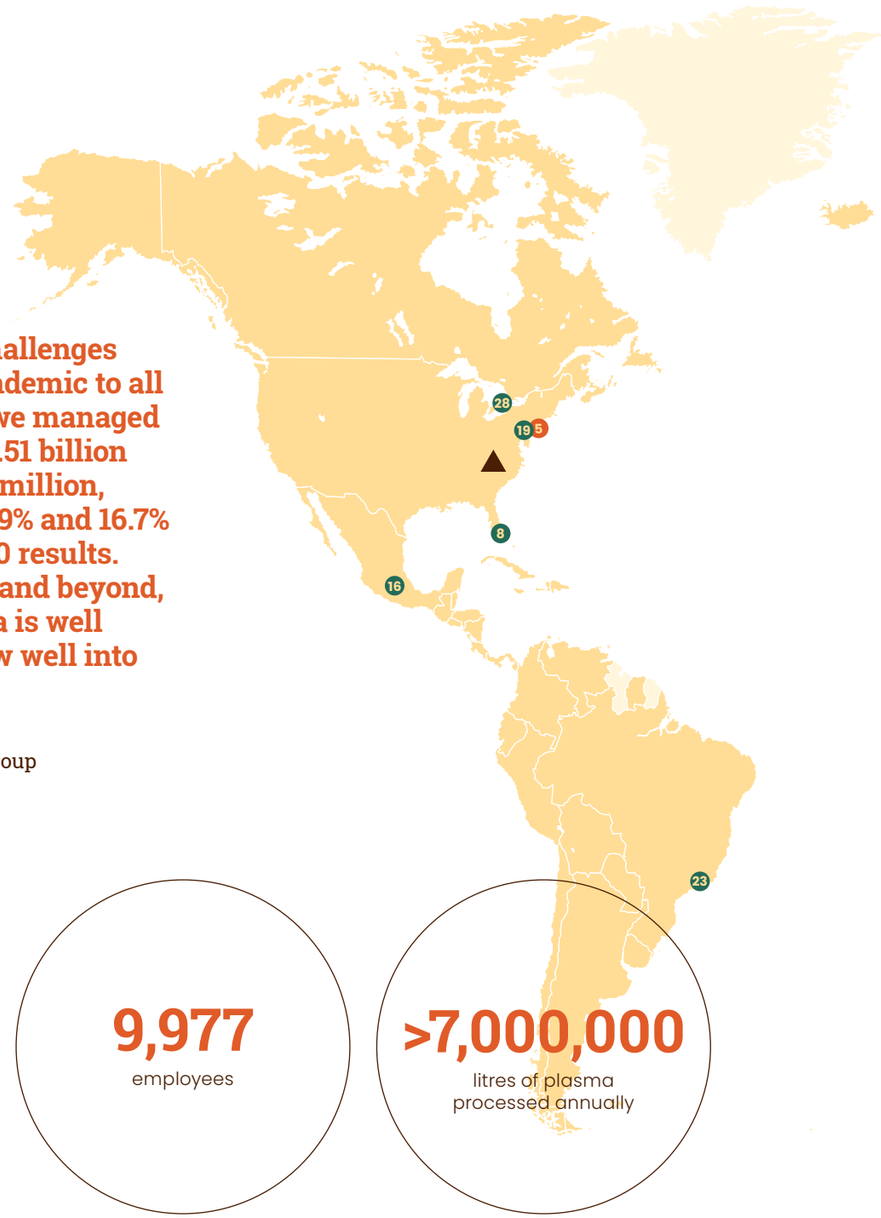
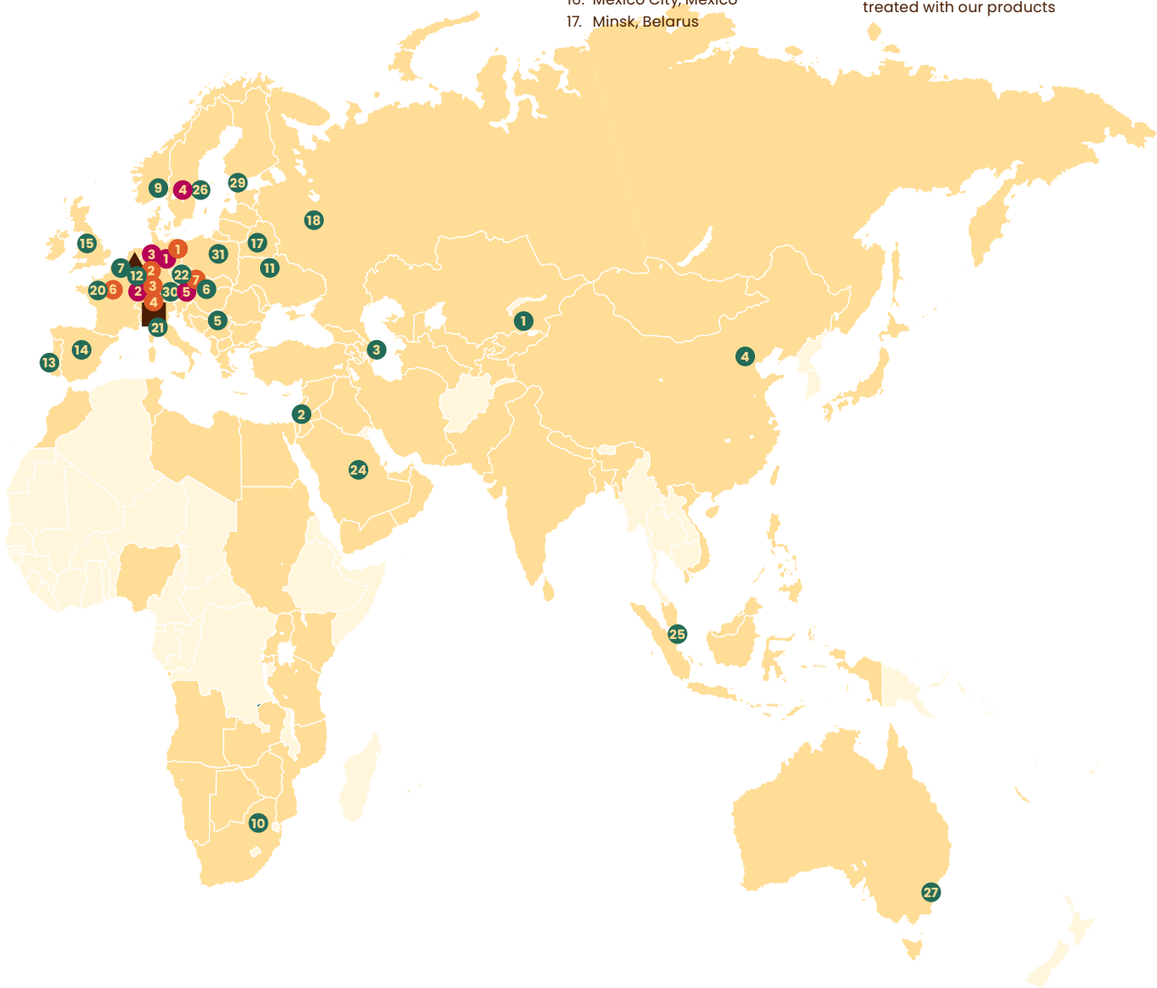
litres of plasma processed annually





Octapharma Global HQ
Lachen, Switzerland

Plasma collection sites
1. Octapharma Plasma, Inc., Charlotte, USA
2. Octapharma Plasma GmbH, Langenfeld, Germany

Manufacturing sites
1. Dessau-Rosslau, Germany
2. Lingolsheim, France
3. Springe, Germany
4. Stockholm, Sweden
5. Vienna, Austria

R&D sites
1. Berlin, Germany
2. Frankfurt, Germany
3. Heidelberg, Germany
4. Lachen, Switzerland
5. Paramus, USA
6. Paris, France
7. Vienna, Austria

Octapharma sales locations
1. Almaty, Kazakhstan
2. Amman, Jordan
3. Baku, Azerbaijan
4. Beijing, China
5. Belgrade, Serbia
6. Bratislava, Slovakia
7. Brussels, Belgium
8. Miami, USA
9. Jessheim, Norway
10. Johannesburg, South Africa
11. Kiev, Ukraine
12. Langenfeld, Germany
13. Lisbon, Portugal
14. Madrid, Spain
15. Manchester, UK
16. Mexico City, Mexico
17. Minsk, Belarus
18. Moscow, Russia
19. Paramus, USA
20. Paris, France
21. Pisa, Italy
22. Prague, Czech Republic
23. Rio de Janeiro, Brazil
24. Riyadh, Saudi Arabia
25. Singapore
26. Stockholm, Sweden
27. Sydney, Australia
28. Toronto, Canada
29. Vantaa, Finland
30. Vienna, Austria
31. Warsaw, Poland

Countries where patients are treated with our products

At Octapharma, we foster a culture that brings out the best in our people. We believe we can drive innovation, performance and reputation – and enhance our people's work experience – through our culture.

Watch our values in action videos
octapharma.com/values

Dina Dickson
CRM Project Manager, Octapharma USA

Our values in action

Ownership at Octapharma
For me, **ownership** means claiming unlimited responsibility and accountability for something of importance. A great example was the implementation of Veeva Vault PromoMats, which is a comprehensive solution for compliant, commercial content and digital asset management. Previously, promotional documents were printed and routed throughout the company in folders for review and approval, but that process was not very efficient or sustainable.
Our goal was to streamline the review/approval process and house compliant promotional content in one place, and I was tasked with system implementation, customisation (we did not simply use the out-of-box solution), configuration and administrator management.

After months of collaborating with cross-functional teams, leveraging resources and testing multiple configurations, Veeva Vault PromoMats was successfully deployed in 2017. Its deployment has exceeded expectations and gone far beyond the original goal of simply streamlining a process. Its success is a testament to the drive and enthusiasm of a whole range of contributors, and it is a project which I am extremely proud to have been engaged on.

The ownership and responsibility of managing Veeva Vault PromoMats continues to evolve, and we are currently in the process of deploying even more functionality.

Thomas Stork
Sales Manager, Octapharma Germany

Integrity at Octapharma
During over 20 years with Octapharma, I have been fortunate to witness the development of the company into one of the key suppliers of plasma products in the German market. **Integrity** has been one of the crucial factors in establishing a solid presence in that market: all members of the sales and distribution teams have worked hard with our customers to build a mutual system of reliability and trust. Over the years, during various shortages, we have been able to solve critical supply problems through open communication and reliable actions that ultimately served both sides and increased our standing within the sector.

The integrity we demonstrated in earlier supply disruptions made many stakeholders – patients, physicians, distributors and hospitals alike – turn to us to solve their critical needs during the COVID-19 pandemic.

Leadership at Octapharma
Leadership can mean supporting employees and thus investing in the future. At Octapharma, I have been fortunate to benefit from good leadership and support myself. After starting as a research associate in the quality control laboratory, I am currently completing on-the-job training to become an expert pharmacist in pharmaceutical analysis and technology. Like me, many other colleagues benefit from similar opportunities, with some of my team also studying part-time or continuing their education in other fields. This simultaneously both increases our enthusiasm for work and helps improve the knowledge base of the entire company.

Taking responsibility – for our processes, for our products and ultimately for our patients – is also an essential aspect of leadership.

At the research and development site in Heidelberg, we work on new projects to develop innovative medicines. As a pharmacist, it is and always has been important to me to help patients, first in a pharmacy and now at Octapharma. In my new position as a Qualified Person, I also have responsibility for guaranteeing the quality of new drugs. This gives me the opportunity to have a real impact on the safe development and manufacture of new medicines and thus significantly improve the lives of our patients.

Michele Noll
Research Associate Quality Control/ Qualified Person, Quality Control, Octapharma Biopharmaceuticals, Germany

Alma Torokoff
Pharmaceutical Technician, Biopharmaceutical Production, Octapharma Sweden

Sustainability at Octapharma
The best example of a project in which I have been involved where **sustainability** featured prominently involved two small-scale studies.

These aimed to replace the environmentally harmful chemical detergent Triton X-100 with a more environmentally sound alternative, Poloxamer.

In our large-scale processing, we use three regeneration solutions and one storage solution to clean and regenerate two chromatography columns after the product has passed through. The first of these solutions contains Triton X-100. In the study, we used a scaled-down version of our actual process, with smaller chromatography columns and sample volumes. Everything else remained identical to our large-scale process except for the first regeneration solution, in which we replaced Triton X-100 with Poloxamer.

The results were fantastic. We found that Poloxamer was just as effective at regenerating both columns as Triton X-100 is, with no negative impact on the final product.

We are still in the process of implementing the change of chemical used in our large-scale process, but this project was crucial to be able to get everything approved.

Entrepreneurship at Octapharma
Working with a group of colleagues who continuously challenge each other to achieve the near impossible, I get to witness Octapharma's culture of **entrepreneurship** every day.

One project that I have been involved in that exhibits our commitment to being a driver of innovation in the plasma industry is our Donor Experience project. The main goal of this project is to enhance the overall experience of our donors while in our donation centres.

Taking an entrepreneurial approach, we have sought out ways to not only change the donor experience but also to revolutionise the entire donation process.

Though this is an ongoing project, tremendous strides have already been made in differentiating Octapharma from our competitors when it comes to donor experience, which is great both for our donors and for our continuing relationship with them.

Andra Jones
Senior Director, Operations, Octapharma Plasma, Inc.

Critical care

PBM and use of factor concentrates are key to successful separation of conjoined twins

Implementation of a Patient Blood Management (PBM) strategy played a pivotal role in life-changing surgery to separate conjoined Haitian twin girls at the Exequiel Gonzalez Cortés Hospital in Santiago, Chile in October 2021 – during the peak of the COVID-19 pandemic in the country.

The girls, born in September 2020, were joined at the pelvis. Prior to the surgery, extensive preparatory studies were performed to determine the extent of abdominal fusion and to assess the potential role of PBM.

Using fibrinogen concentrate to reduce bleeds

"The critical point of surgery was to perform pelvic osteotomies (surgery to reshape the pelvic bones) to facilitate the closure of the abdominal wall and contain the pelvic organs," explains Dr Ignacio Sarmiento Goldberg, consultant anaesthesiologist and member of the international NATA scientific committee, adding: "The length of the surgery suggested an expected loss of at least 20% blood volume for each twin. So, a revolutionary haemostatic management strategy was planned and implemented."

During the 16-hour surgery, the coagulation status of the two children was constantly assessed to ensure they each individually received personalised supplementation of both prophylactic and therapeutic fibrinogen concentrate to reach normal values during the marathon procedure. "I think this strategy was fundamental to reducing bleeding during separation and certainly during osteotomy," suggests Dr Sarmiento Goldberg.

"The critical point of surgery was to perform pelvic osteotomies (surgery to reshape the pelvic bones) to facilitate the closure of the abdominal wall and contain the pelvic organs."

Dr Ignacio Sarmiento Goldberg
Consultant Anaesthesiologist and member of the international NATA scientific committee

2005[1]

The term "Patient Blood Management" was coined by an Australian haematologist, Professor James Isbister, in 2005. He realised that the focus of transfusion medicine should be changed from blood products to the patients themselves.

Multi-disciplinary[2]

As well as transfusion medicine specialists, PBM involves anaesthesia and intensive care unit professionals, surgeons involved in planned operations and any other specialists who have a role in diagnostic and therapeutic care.

Patient Blood Management

Patient Blood Management (PBM) is an interdisciplinary patient-centred strategy that aims to optimise the utilisation of blood components and consequently improve clinical outcomes.

Evidence demonstrates that PBM significantly improves outcomes and safety while reducing cost.

Three pillars of PBM[3]

A multi-disciplinary team determines the best approach to:

1. optimise the patient's own blood volume

2. minimise blood loss

3. optimise the patient's physiological tolerance of anaemia

Each pillar involves various practices which can be initiated in the pre-, intra- or post-operative stages of surgery.

From a product focus

Blood transfusion aims to replace blood that is lost through surgery or injury. The patient might be given four types of blood product through blood transfusion: whole blood, red blood cells, platelets and plasma.

- ⊕ Conventional standard
- ⊖ Time consuming
- ⊖ Can create waste
- ⊖ Associated with potential transfusion reactions

...to a patient focus

In a targeted point-of-care guided bleeding management setting, only those factors that are needed are supplemented.

- ⊕ Avoids risk of transfusion-triggered adverse reactions
- ⊕ Decreases hospital and ICU stays
- ⊕ Lowers costs

1 Franchini, Massimo, et al. (2019), Patient Blood Management: a revolutionary approach to transfusion medicine. Blood Transfusion, 17(3): 191–195
2 Franchini, Massimo and Manuel Muñoz (2017). Towards the implementation of patient blood management across Europe. Blood Transfusion, 15(4): 292–293
3 Adapted from https://www.blood.gov.au/patient-blood-management-pbm#whatispbm

The role of Patient Blood Management (PBM) and importance of fibrinogen

PBM is a multi-disciplinary, evidence-based approach to individualising patient care in order to minimise the use of blood products and improve patient outcomes. In the case of the conjoined twins, the surgical separation involved the key participation of an anaesthesiologist, as well as digestive and plastic surgeons, urologists and traumatologists.

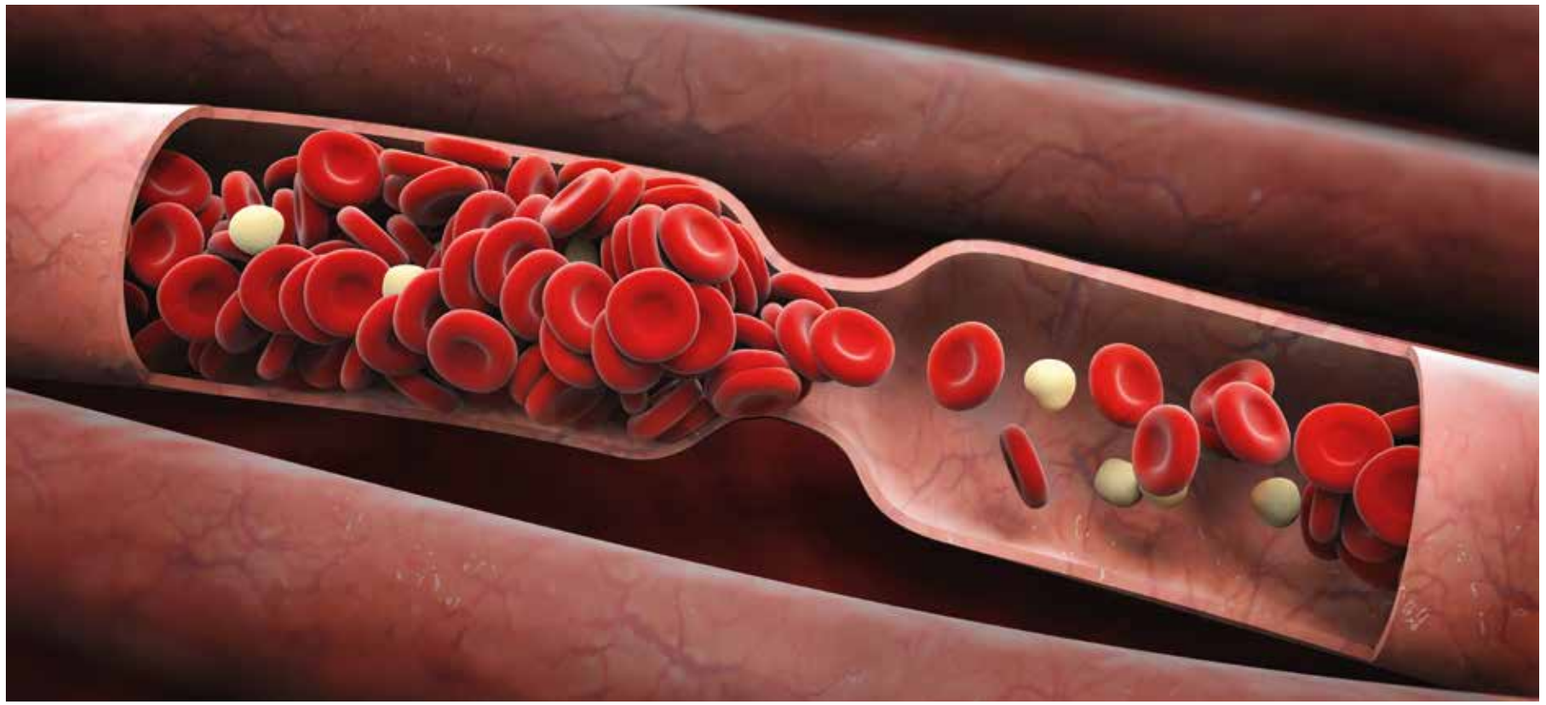
The use of fibrinogen in lieu of standard transfusion to avoid and control bleeding is an important topic for clinical research. Fibrinogen, also known as factor I, is a glycoprotein found in plasma. It is essential for binding blood platelets and forming a stable blood clot by polymerisation, which is critical for stopping excessive bleeding – for example in traumatic injuries, or during surgery.

Fibrinogen is the first blood factor to become deficient during perioperative bleeding or trauma and is often the only deficiency that needs to be treated. Fibrinogen concentrate allows the administration of a precise dose to reach the desired target level. It is immediately available, and has an excellent safety profile.

Individualised solutions for improved outcomes

In the case of the twin girls, Dr Sarmiento Goldberg is sure that the point-of-care assessment and management of coagulation disorders – primarily hypofibrinogenaemia – were pivotal in the successful separation. "In the last case of conjoined twins separated in Chile 10 years ago, massive exposure to blood products was a serious problem and resulted in morbidity. This time, the permanent haemostatic assessment through viscoelastic testing and the use of fibryga®, Octapharma's high-purity human fibrinogen concentrate, proved to be essential for our achieving a successful outcome," he explains. "After 16 hours of surgery, and thanks to the control of haemostasis achieved with fibryga®, only one unit of red blood cells was used in one of the girls. That was really impressive."

Octapharma provided PBM educational programmes throughout 2021 and continues to support its implementation around the world. As Dr Oliver Hegener, VP Head of IBU Critical Care, describes: "Octapharma is committed to raising awareness of PBM within the medical community, particularly among those anaesthesiologists and intensivists who want to go the next steps towards individualised treatment solutions for improved outcomes and safety."



"Octapharma is committed to raising awareness of PBM within the medical community, particularly among those anaesthesiologists and intensivists who want to go the next steps towards individualised treatment solutions for improved outcomes and safety."

Oliver Hegener
VP Head of IBU Critical Care

The essential role of PBM during the pandemic

Measures to counter COVID-19 severely affected the availability of blood products around the world and forced many healthcare facilities to cancel elective surgical procedures and restrict non-essential care. One innovative strategy used by hospitals to help manage the resulting shortages in the blood supply has been the expansion of Patient Blood Management (PBM) programmes.

Large hospitals in New York City adopted multiple strategies to stabilise their blood supply, including encouraging and supporting blood donation, diversifying blood suppliers, enhanced auditing and triaging of provider orders for blood products, and increased education about PBM practices – a concept to proactively treat anaemia and to avoid unnecessary transfusion, including the individualised use of coagulation factor concentrates.

"I became very concerned when local hospitals had blood shortages due to decreased supply. Many blood donors were not comfortable donating early in the pandemic due to safety concerns. Remote work, COVID-19 illness in donors and staff, and the limits that colleges, hospitals and businesses have placed on the number of people allowed in public spaces have all reduced the capacity for large blood drives," explains Dr Melissa Cushing, the Director of Clinical Laboratories and Director of the Transfusion Medicine Division at a large academic medical centre in New York City and a consultant for Octapharma.

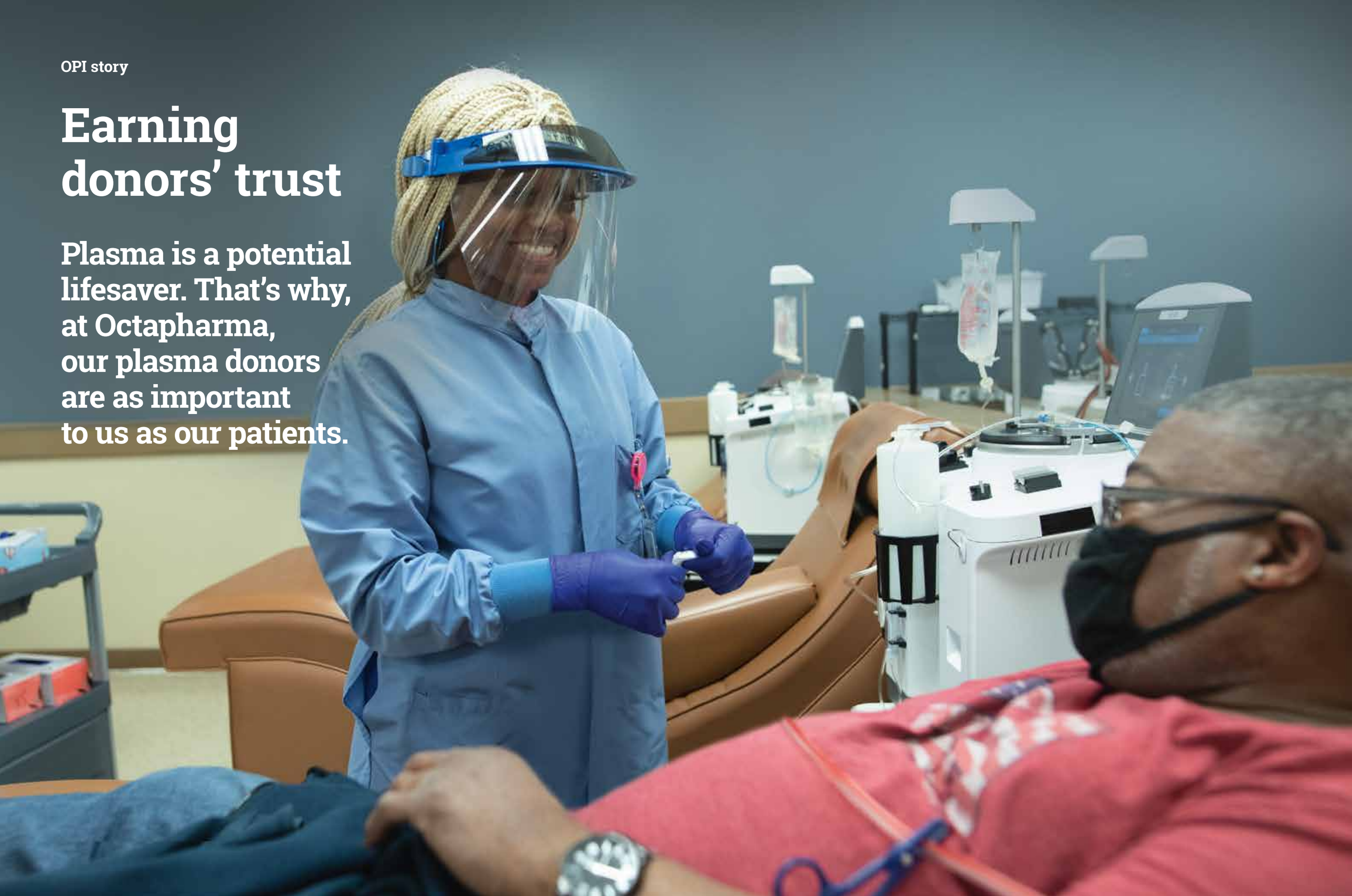
Replacing conventional blood components with purified coagulation factors, such as fibrinogen concentrate, was a natural step. Many hospitals are using factor concentrates in cases of trauma, post-partum haemorrhage, cardiac surgery, and liver transplants to provide low-volume potent haemostatic resuscitation. "Hospitals comfortable using fibrinogen concentrate were able to get through the pandemic-induced blood shortages without any cryoprecipitate shortages," says Dr Cushing.

"Transfusion services in New York City worked on launching a communication campaign to educate our physicians about the blood shortage and asked providers to reconsider the necessity of each blood transfusion order," she adds. "Looking back now, I greatly appreciate the advantage of having had a strong PBM programme going into the pandemic, with a strong PBM committee that was willing to expand and support the initiative during the pandemic. In the end PBM does improve patient outcomes and has proved to be more important than ever during the pandemic!"

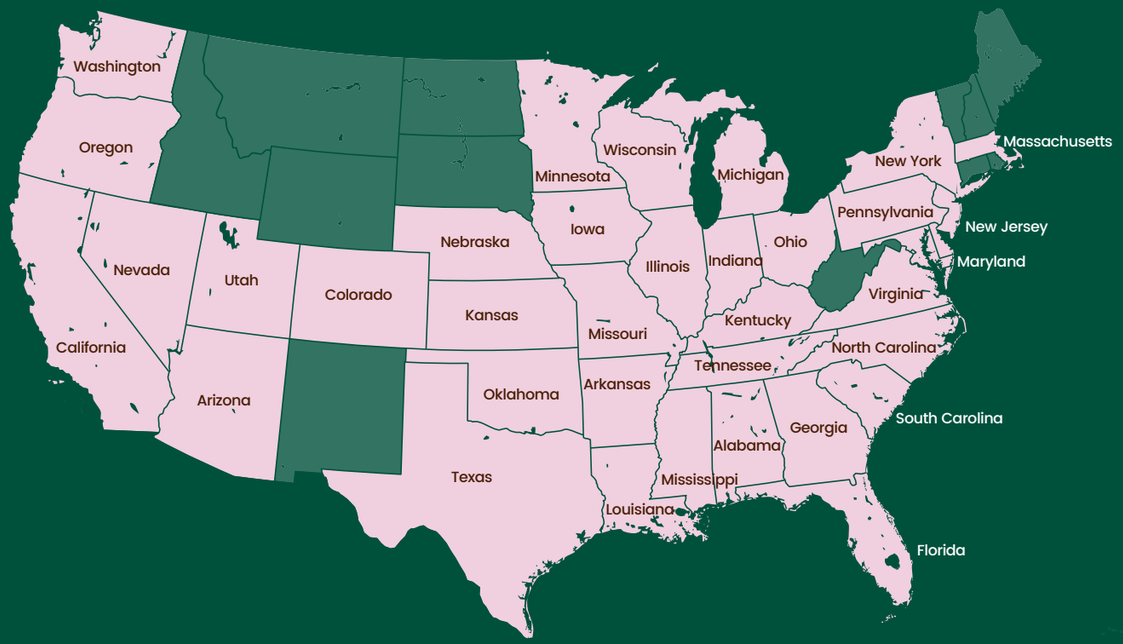
OPI story

Earning donors' trust

Plasma is a potential lifesaver. That's why, at Octapharma, our plasma donors are as important to us as our patients.



Expanding our OPI fleet



States with donation centres

>160

centres in the USA

130,000

About 130,000 donors donate plasma at our OPI donation centres each month

"I always feel very safe and welcomed at the centre. Yes, I was initially concerned about others around me possibly having COVID-19. However, the centre was very clean and OPI takes donor safety very seriously. Donating is now part of my normal weekly routine."

Lee
Donor, Houston

250 – 880ml

A standard plasma donation is approximately 250 – 880ml. This represents a small portion of the blood in a person's body, as the average adult has about 5 litres.

"You never know what impact you might be having on someone's life. There's an OPI donor centre near my mother's home. She had non-Hodgkin's lymphoma and needed plasma for liver cirrhosis. I started donating due to her illness and still donate twice a week. It feels like family here. And I guess it still feels the right thing to do."

Becky
Donor, Pasadena

Source of plasma used in the manufacture of Octapharma products

85%
from company-owned donation centres

15%
from third party donation centres

More than 80% of the plasma used to manufacture Octapharma products is sourced from company-owned donation centres.

In the body, plasma helps protect us from infection and blood disorders, and prevents blood clots. In its medical application, plasma has helped thousands of people survive and manage life-threatening diseases such as immunodeficiency disorders or haemophilia through the development of plasma-derived therapies.

Plasma is a potential lifesaver. That's why, at Octapharma, our plasma donors are as important to us as our patients.

Above 85% of the plasma used to manufacture Octapharma products is sourced from company-owned donation centres.

Improving our donors' experience

The COVID-19 pandemic continues to pose significant challenges to our plasma donation centres and, when that is combined with increasingly competitive pressure, our centres find themselves in a very challenging environment. In 2021, to combat these challenges, Octapharma Plasma, Inc. (OPI) embarked on an ambitious strategy to increase donor engagement and, by association, to increase plasma volumes.

"Donors are our fundamental stakeholders," says Alice Stewart, Chief Operating Officer of OPI. "In 2021, we took a much more tactical approach towards donor engagement. We have rebuilt our business with an emphasis on providing a safe, inclusive and rewarding environment, not only for each donor but also for our employees."

In a competitive industry, OPI is focused on fostering a culture and environment where each donor can expect exceptional personalised service – "something that will differentiate their experience with Octapharma positively," adds Alice.

Investing in customer focus

To do this in the best way possible, OPI brought in fresh talent from customer-focused industries, such as financial services and retail, and is now using technology and data to better understand donors and engage with them in exciting new ways.

"OPI has increased the size of its marketing team, adding experience and skills in areas of growing need such as digital marketing, brand strategy and social media," explains Tom Hewitt, Senior Director, Marketing & Donor Relations. "The team has been put together very intentionally to strengthen specific marketing skillsets and leadership experience."

Engaging closely with donors

One example of the new team's work was the launch of OctaApp in September 2021, to help streamline and enhance donor interactions while also generating data to drive engagement and increase plasma volumes. Less than two months after launch, the app was downloaded by more than 100,000 donors.

OctaApp allows donors to easily manage their donations, access their donation history, determine their eligibility and review their compensation. It also allows OPI to provide more personalised communication and donor incentives, and to use data analytics to generate better insights into what motivates donors to give their plasma.

"The app puts timely, relevant information into the hands of our donors, which will create more engagement and expand their relationship with Octapharma. This gives us access to donors in ways we cannot replicate with email or text messaging," explains Bill Griner, Senior Director, Operations & Marketing. "This deeper level of interaction and service should strengthen donor loyalty in what is a very competitive industry."

The goal of the app, Bill stresses, is also to support OPI colleagues in their everyday tasks and to eliminate manual and cumbersome processes. "All the tools that we are building are in fact helping teams to do their jobs more easily and more efficiently."

Another way OPI has engaged donors was the launch of donor surveys in October 2021. These surveys give donors a voice and provide OPI with instant feedback on all phases of the donation process. Centres use this data to continuously improve the donor experience. In the first six weeks, OPI received over 30,000 completed donor surveys.

Below OctaApp allows donors to easily manage their donations and access their donation history.

Creating centres of the future

OPI is also making plans to improve the donor experience at each donor centre – ensuring continuing strict safety measures and providing a friendly welcome from trained staff in re-designed interiors. "In this increasingly competitive industry, we know the donation experience drives donor preference and frequency," says Andra Jones, Senior Director, Operations. "That is why investing in process innovation, the design of our centres and our team is so essential."

"The app puts timely, relevant information into the hands of our donors, which will create more engagement and expand their relationship with Octapharma. This gives us access to donors in ways we cannot replicate with email or text messaging."

Bill Griner
Senior Director, Operations & Marketing, OPI

The journey of plasma from the USA to Europe

The donor provides plasma via an apheresis machine. The donation is stored in a plastic bottle. The plasma donation is frozen and stored below -25°C. It is recorded in a Donor Management System.

Days 1–3
Collected samples are sent for pathogen testing in different labs, including Octapharma Plasma, Inc.'s Charlotte, NC (USA) laboratory.

Days 7–10
Plasma bottles of suitable donations are packed in cartons and stacked on pallets. They are then ready for pickup.

Days 10–13
Pallets are transported by truck to Octapharma Plasma, Inc.'s central warehouse in Charlotte, NC (USA).

Day 25
After a documentation check, the plasma pallets are loaded into a container and sent by truck to a port on the East Coast, Norfolk, Virginia, USA.

Day 31
Following customs clearance (which may take a day or two), the containerised pallets are placed in a ship's hold.

Day 44
The sea crossing to Bremerhaven (Germany) takes approximately 13 days.

Days 45–46
The container is transferred to a truck bound for the Vienna or Stockholm Octapharma sites.

Days 47–50
After customs clearance at Vienna (Austria), the truck arrives at the Octapharma Vienna plant or the external warehouse. The pallets of plasma are labelled, registered and moved to the main freezer warehouse.

Days 54–58
A large amount of received plasma (60%) is transferred every week in temperature-monitored trucks to other fractionation sites, such as Lingolsheim (France) and Springe (Germany).

Days 61–65
In production, the plasma bottles are cut open and put into the thawing tank. Once all donations are thawed together to form a plasma pool, samples are taken for additional virus testing at the pool level. Most of these tests are performed by our dedicated laboratory in Frankfurt (Germany).

Securing our future by boosting capacity

In 2021, Octapharma launched a number of production improvement initiatives to transform our manufacturing capabilities and boost capacity.

"We are ever conscious that patients around the world depend on Octapharma to maintain a reliable supply of medicines," explains Olivier Clairotte, Chief Production Officer. "To honour our commitments, and to become an even stronger and better company, we have an ambitious goal to massively increase our capacity over the next few years. In 2021, we successfully delivered the first improvements needed to achieve these initiatives and are looking forward to further success in the future."

Embracing new ideas

One example of these improvements comes from Octapharma Sweden (OAB) in Stockholm, where the fractionation teams have implemented a range of measures to optimise production efficiency and increase capacity. The fractionation teams of about 100 employees, jointly headed by Max Färestål, produces Fraction I+II+III, Fraction II, cryoprecipitate, Fraction V and Antithrombin III (ATIII) intermediate which is then later used in the production process of octagam® 5% and 10%, octanate®, Albumin and atenativ®.

"Our objective is to increase manufacturing output by 15% in 2022, to ensure Octapharma can continue to fulfil our commitment to our patients and to secure our leading market position," says Max. "With that in mind, we have improved some process steps enormously and are constantly looking to make further improvements."

Right at the start of the process, a large project team was gathered. "The group we assembled had one target – to focus on how we could increase volume," explains Max.

Very quickly, variations in process times were identified as an area the fractionation teams needed to focus on. "We saw that our product process times were fluctuating, and we had to

"We had to dig deep and examine every production step to identify bottlenecks and areas of improvement – challenging at times, but also rewarding and mostly fun."

Max Färestål
Section Head, Fractionation, Octapharma Sweden

understand why – not an easy task since a single batch takes about five days to complete," explains Max. Workshops were held to facilitate creativity and encourage a clear thought process. "A lot of the workshops were focused on finding tools to visualise, making prioritisation easier for any critical steps later, increasing the information flow and allowing the standardisation of methods," continues Max.

Embracing new ways of doing things
As a result, new working standards and scheduling tools to pace production and decrease variation were put in place, as well as new systems to remove obstacles.

"We had to dig deep and examine every production step to identify bottlenecks and areas of improvement – challenging at times, but also rewarding and mostly fun," explains Max. "Early in the process, our filter press and automatic cleaning systems (CIPs) became the focus of attention.

"After close analysis, we were able to significantly reduce total manual interventions in the filter press by 30 minutes per week, allowing an additional four batches per month to be processed, resulting in a 5% capacity increase by itself. Our improvements to the CIPs have seen them move from hitting only 50% of target process times in 2020 to now reaching 85% of their target performance, and still improving."

"Beyond targeting these two bottlenecks, the team has also succeeded in reducing total average loss in plasma thawing from 1.8% to 1.4%, and our standard variation in process times has been greatly reduced, increasing our predictability by over 50%," concludes Max.

"We worked on production organisation, of course, but also on equipment reliability, and communication within the Fractionation department."

Laurent Contet
Operational Excellence Manager
Lingolsheim, France

Below The company's objective is to increase manufacturing output by 15% in 2022.

Scaling up across the company
The fractionation teams in Stockholm is not the only one to embrace change: the production site at Lingolsheim in France also set itself a similar goal, with the ultimate objective of increasing production volume by 16%. "We worked on production organisation, of course, but also on equipment reliability, and communication within the Fractionation department," explains Laurent Contet, Operational Excellence Manager, adding: "Several functions have been involved in the transformation wave, including Supply Chain, Quality and the Technical Unit."

The Lingolsheim teams implemented a new meetings cascade to pilot the revised operations, with changes steadily adopted right across the site as the benefits of this new way of managing production became increasingly evident. The new meetings host discussions focused on production issues but also on safety, quality in operation and batch releases, and have become the forum for making immediate and important decisions needing site-wide commitment.

"From my perspective, the main lesson was that any team can achieve great things simply by dividing larger goals into realistic small changes," enthuses Julien Correia, Head of Fractionation.

"From my perspective, the main lesson was that any team can achieve great things simply by dividing larger goals into realistic small changes."

Julien Correia
Head of Fractionation
Lingolsheim, France

Quality focus

FDA approval
While pursuing our transformation, Octapharma maintains a constant focus on quality. In 2021, the US Food and Drug Administration (FDA) approved the Octapharma production facility in Springe, Germany, as an additional manufacturing site for Fraction II. The FDA approval, given after its stringent assessment process, means Octapharma can produce Fraction II – which is used to produce octagam® 5% and 10% – in Vienna for distribution in the USA, and can now also offer our products in a new fill volume.

Inspection Readiness initiative
The Inspection Readiness initiative aims to integrate all aspects of an official inspection into our day-to-day activities. In concrete terms, this process consists of identifying issues at risk of observation during inspection based on the Good Manufacturing Practice (GMP) Quality Risk Management International Conference on Harmonisation (ICH) Q9 model. Identified risks are then assessed and prioritised, and necessary actions taken to mitigate them. All Octapharma production sites have their Inspection Readiness initiatives in place.

The right leadership to ensure we rise to every challenge and continue to evolve and grow

Wolfgang Marguerre
Chairman and CEO, Octapharma Group

Tobias Marguerre
Managing Director, Octapharma Nordic AB

Roger Mächler
Chief Financial Officer

Wolfgang Frenzel
Research and Development

Norbert Müller
Board Member

Flemming Nielsen
President Octapharma USA Inc.

Matt Riordan
Board Member

Olaf Walter
Board Member

Josef Weinberger
Corporate Quality and Compliance Officer

Olivier Clairotte
Chief Production Officer

“The Octapharma Group once again delivered strong results in 2021, with record sales, operating profit, profit before tax and net profit despite the continuing challenges of COVID-19. Sales increased by 4.9% to €2.51 billion, compared with the prior year, and the company generated an operating income of €459 million.”

Roger Mächler
Chief Financial Officer

Measures to combat COVID-19 had a significant impact on plasma collection in 2021, resulting in lower plasma volumes. This was offset by strong demand for our products, notably within our Immunotherapy product portfolio, as well as in sales of Albumin and fibryga®, which supported price increases that boosted overall sales revenue.

In addition, collective actions by employees across our business helped to keep our supply chains open, maintain our strong relationships with key stakeholders, implement our strategy to simplify and improve operations, find new ways to attract donors, and continue to produce and deliver our life-saving medications to tens of thousands of patients around the world.

The dedication and commitment of Octapharma employees was reflected in our results. Gross profit in 2021 was €808 million, down 3.8% from the prior year, while gross margin declined by 2.9 percentage points to 32.2%, which was largely due to higher costs associated with COVID-19. Our strong focus on costs, however, saw total operating expenses for the year fall to €349 million from €390 million in 2020. The Group's effective tax rate was also significantly reduced by a deferred tax asset recognised in 2021, following corporate tax reform in Switzerland.

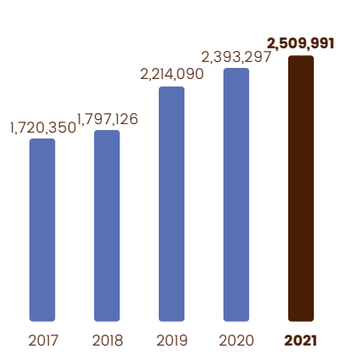
As a result, profit before tax was a record €464 million and net income a record €438 million, up from €376 million in 2020. Net cash from operating activities was €481 million. Our capital position remains extremely strong, with an equity ratio of 80%.

As in prior years, significant investments were made in new donor centres, improved production capacity, operational efficiency and R&D to expand our product portfolio and capabilities.

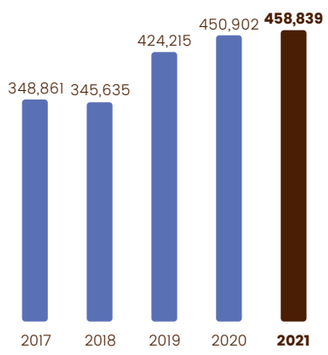
As a result, our company is well positioned for future growth, which we expect will be supported by a significant return of plasma collection volumes in the coming year, our continued investment in talent, the delivery of our operational transformation strategy and the introduction of new production capacity, including the new fractionation line in Springe and the start of validation of the capacity extension project in Vienna which is expected to be operational from early 2024.

Roger Mächler
Chief Financial Officer

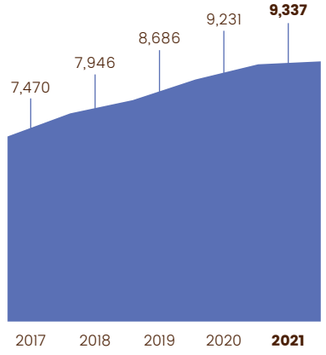
Revenue in 1,000 EUR



Operating income in 1,000 EUR



Average headcount



"As in prior years, significant investments were made in new donor centres, improved production capacity, operational efficiency and R&D to expand our product portfolio and capabilities."

€459m operating income
(2020: €451m)

€2.51bn revenue
(2020: €2.4bn)

4.9% increase in revenue
(2020: 8%)

Key figures of the Octapharma Group

(Monetary figures are in 1,000 EUR)	2021	2020	2019	2018	2017
Operating income	**458,839**	450,902	424,215	345,635	348,861
Operating profit margin*	**18.3%**	18.8%	19.2%	19.2%	20.3%
Net profit of the year	**438,333**	375,693	403,445	303,480	252,116
Year-end headcount	**9,977**	9,067	9,307	8,314	7,674
Return on investment*	**11.8%**	11.1%	13.5%	11.5%	10.2%
Profit from operations per employee*	**49**	49	49	43	47
Cash ratio	**188%**	193%	120%	174%	187%
Days of sales in receivables*	**133**	117	141	126	126
Days of inventory range*	**204**	225	239	250	217
Cash flow from operations	**480,859**	600,496	257,180	261,393	350,837
Expenditures to ensure future prosperity	**266,973**	306,310	307,804	240,183	287,197
Research and development	**77,915**	79,471	75,748	87,291	86,508
Capital expenditures and investments in activities	**189,058**	226,839	232,056	152,892	200,689

* Key figures are determined as follows:
Operating profit margin: Operating income/revenue
Return on investment: (Net profit of the year + interest expense)/average total assets
Profit from operations per employee: Operating income/average headcount
Days of sales in receivables: Trade receivables/revenue * 365
Days of inventory range: Average inventories/material – and production cost (part of cost of sales) * 365

Financial statements of the Octapharma Group*

Consolidated income statement of the Octapharma Group

(All figures in 1,000 EUR)	2021	2020
Revenue	**2,509,991**	2,393,297
Cost of sales	**-1,701,783**	-1,552,814
Gross profit	**808,208**	840,483
Research and development	**-77,915**	-79,471
Selling and marketing	**-184,818**	-217,808
Regulatory affairs	**-20,441**	-22,535
General and administration	**-65,112**	-79,587
Other income	**7,869**	11,967
Other expenses	**-8,952**	-2,147
Total operating expenses	**-349,369**	-389,581
Operating income	**458,839**	450,902
Non-operating income and expenses	**5,500**	-64,710
Profit before taxes	**464,339**	386,192
Income tax	**-26,006**	-10,499
Net profit of the year	**438,333**	375,693

* The following summary financial statements are derived from the consolidated financial statements of Octapharma Nordic AB, Stockholm and comprise the summary income statement for the period from 1 January to 31 December 2021, the summary balance sheet and the summary cash flow statement for the year then ended, aggregating non-material financial statement captions.

Consolidated statement of financial position of the Octapharma Group

(All figures in 1,000 EUR)	2021	2020
Assets		
Cash and cash equivalents	**777,867**	682,783
Trade receivables	**915,691**	766,010
Other receivables and current assets	**69,557**	77,540
Loans granted	**37,570**	191
Derivative financial instruments	**102**	9,548
Inventories	**913,984**	869,335
Total current assets	**2,714,771**	2,405,407
Financial investments	**3,750**	1,172
Deferred tax assets	**189,785**	131,673
Loans granted	**38,149**	676
Property, plant and equipment	**1,174,271**	1,084,777
Intangible assets	**809**	4,009
Total non-current assets	**1,406,764**	1,222,307
Total assets	**4,121,535**	3,627,714

(All figures in 1,000 EUR)	2021	2020
Liabilities and equity		
Trade payables and other payables	**115,136**	104,905
Derivative financial instruments	**11,580**	192
Income tax payables	**48,809**	33,586
Short-term lease liabilities	**13,724**	14,011
Accruals	**185,994**	142,830
Current provisions	**37,854**	57,626
Total current liabilities	**413,097**	353,150
Non-current provisions	**94,641**	99,048
Long-term lease liabilities	**257,067**	216,497
Deferred tax liabilities	**65,116**	45,713
Other non-current liabilities	**4,961**	5,534
Total non-current liabilities	**421,785**	366,792
Total liabilities	**834,882**	719,942
Share capital	**120**	100
Retained earnings	**3,281,760**	2,939,284
Currency translation adjustments	**4,773**	-31,612
Total equity	**3,286,653**	2,907,772
Total liabilities and equity	**4,121,535**	3,627,714

Consolidated statement of cash flows of the Octapharma Group

(All figures in 1,000 EUR)	2021	2020
Net profit for the year	**438,333**	375,693
Depreciation of property, plant and equipment and intangibles	**167,987**	159,963
Change in fair value of non-current assets	**19,435**	-8,061
(Profit) loss on sale of property, plant and equipment and equity investments	**-3,561**	1,877
Changes in long-term liabilities and provisions	**10,123**	21,276
Finance cost	**15,534**	12,663
Tax expense	**26,095**	12,585
Unrealised foreign currency (gain) loss	**-15,252**	18,538
Cash flow before changes in working capital	**658,694**	594,534
(Increase) decrease of working capital	**-177,835**	5,962
Net cash from operating activities	**480,859**	600,496
Acquisition of property, plant and equipment	**-189,058**	-226,839
Change of financial investments	**-77,158**	307
Proceeds from sales of property, plant and equipment	**3,969**	78
Interest received	**2,861**	2,727
Net cash used in investing activities	**-259,386**	-223,727
Financing activities	**-99,432**	-97,596
Payments of lease liabilities	**-29,953**	-26,163
Net cash used in financing activities	**-129,385**	-123,759
Net change in cash and cash equivalents	**92,088**	253,010
Cash and cash equivalents beginning of period	**682,783**	434,845
Effect of exchange rate fluctuation on cash held	**2,996**	-5,072
Cash and cash equivalents end of period	**777,867**	682,783

Report of the Independent Auditor on the summary financial statements

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REPORT OF THE INDEPENDENT AUDITOR ON THE SUMMARY FINANCIAL STATEMENTS

Octapharma Nordic AB, Stockholm

Opinion

The accompanying summary financial statements on pages 51 to 54, which comprise the summary balance sheet as at December 31, 2021, the summary income statement and summary cash flow statement for the year then ended, and related notes, are derived from the audited financial statements of Octapharma Nordic AB, Stockholm, for the year ended December 31, 2021.

In our opinion, the accompanying summary financial statements are a fair summary of the audited financial statements, on the basis described on page 51 of the annual report 2021.

Summary Financial Statements

The summary financial statements do not contain all the disclosures required by International Financial Reporting Standards (IFRS). Reading the summary financial statements and the auditor`s report thereon, therefore, is not a substitute for reading the audited financial statements and the auditor`s report thereon.

The Audited Financial Statements and Our Report Thereon

We expressed an unmodified audit opinion on the audited financial statements in our report dated February 14, 2022.

Management`s Responsibility for the Summary Financial Statements

Management is responsible for the preparation of the summary financial statements on the basis described on page 51 of the annual report 2021.

Auditor's Responsibility

Our responsibility is to express an opinion on whether the summary financial statements are a fair summary of the audited financial statements based on our procedures, which were conducted in accordance with International Standard on Auditing (ISA) 810 (Revised), *Engagements to Report on Summary Financial Statements*.

KPMG AG

Toni Wattenhofer Anna Pohle

Zurich, 14 February 2022

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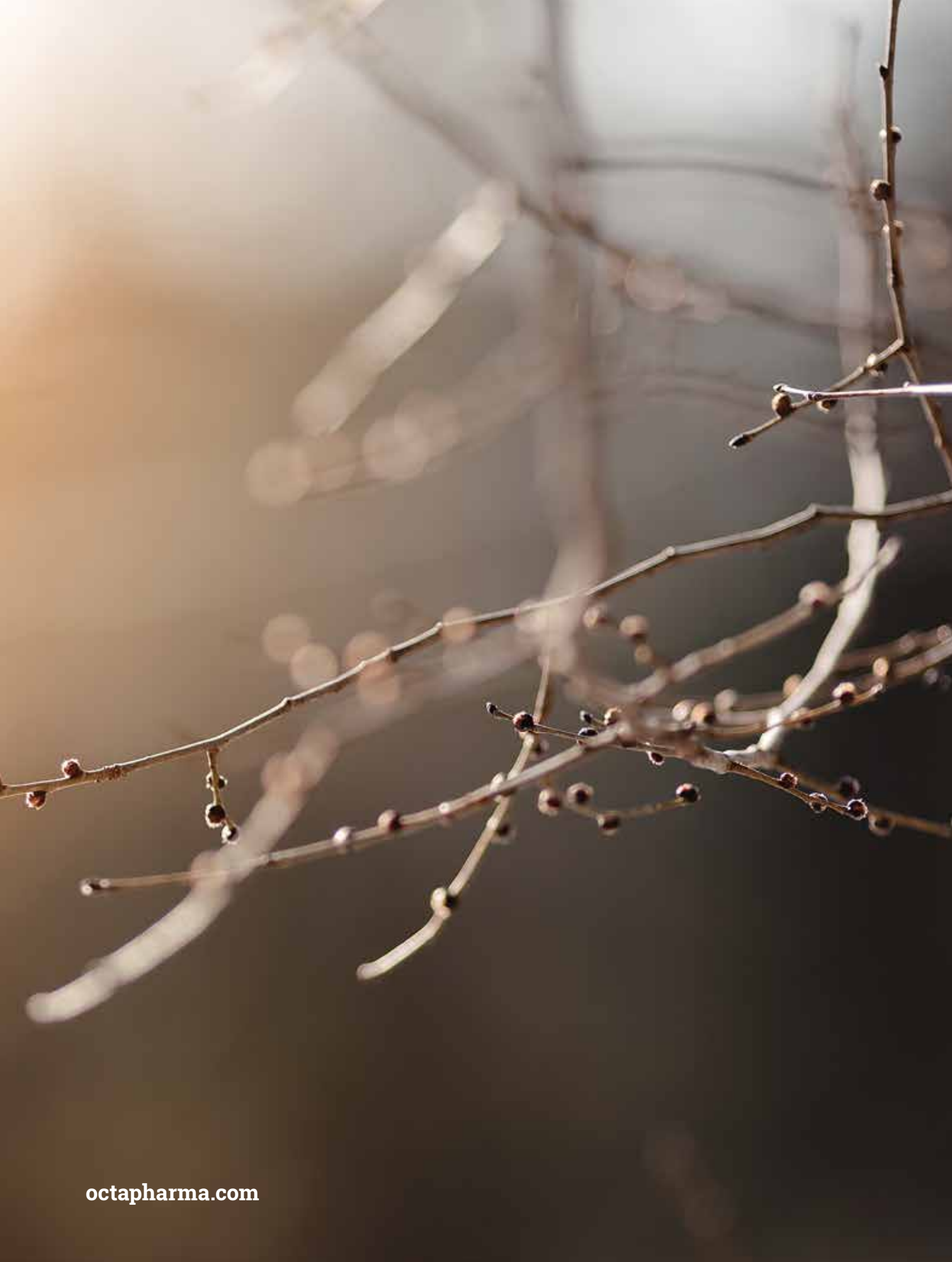

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