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#### **ANNUAL GENERAL MEETING**

Wednesday, 17 October 2018 at 1pm Clarendon Auditorium Melbourne Convention and Exhibition Centre (MCEC), South Wharf, Melbourne 3000

#### **AGM LIVE WEBCAST**

The CSL Limited Annual General Meeting will be webcast through CSL's website CSL.com

Log on to the home page of CSL's website and then click on the item called Annual General Meeting webcast.

#### **SHARE REGISTRY**

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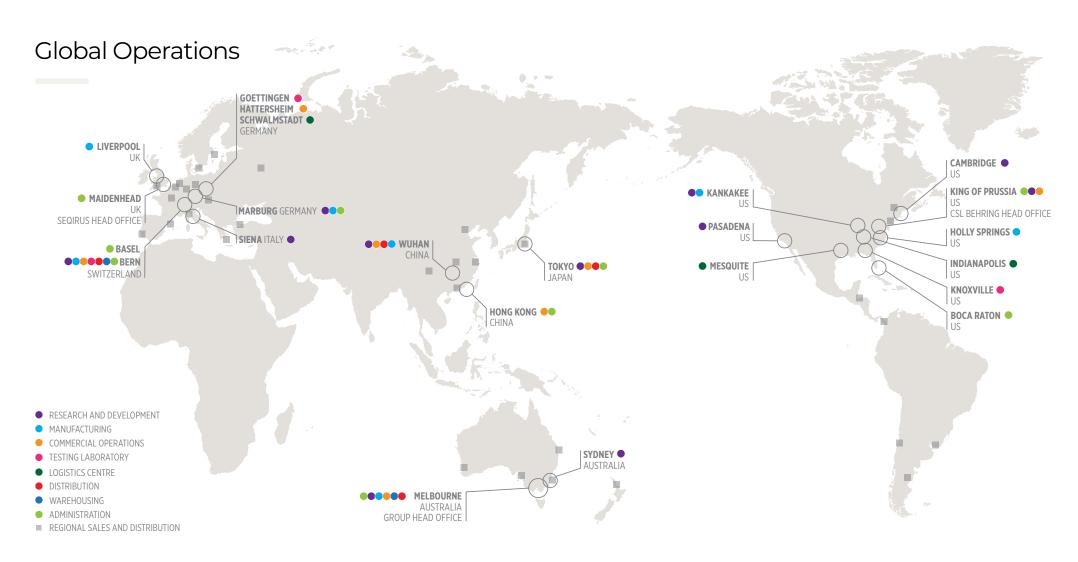
Please see inside back cover for legal notice

#### 2018

15 August	Annual profit and final dividend announcement
11 September	Shares traded ex-dividend
12 September	Record date for final dividend
12 October	Final dividend paid
17 October	Annual General Meeting
31 December	Half vear ends

#### 2019

13 February	Half year profit and interim dividend announcement
13 March	Shares traded ex-dividend
14 March	Record date for interim dividenc
12 April	Interim dividend paid
30 June	Year ends
14 August	Annual profit and final dividend announcement
10 September	Shares traded ex-dividend
11 September	Record date for final dividend
11 October	Final dividend paid
16 October	Annual General Meeting
31 December	Half year ends



# **About CSL**

Driven by our promise, CSL is a global biotechnology leader which develops and delivers innovative medicines that save lives, protect public health and help people with life-threatening medical conditions live full lives. Our Group Values guide us in creating sustainable value for our stakeholders.

Delivering on promises is what we do at CSL. Starting more than a century ago in Melbourne, Australia, we made a promise to save lives and protect the health of people who were stricken with a broad range of serious medical conditions.

Today, that same promise has never been stronger. As a leading global biotechnology company, CSL delivers medicines to patients in more than 60 countries, and employs more than 22,000 people who are driven by a deep passion to serve thousands of patients and other stakeholders around the world.

CSL applies its world-class research and development (R&D), commercial strength and patient-focused management, along with its high-quality manufacturing, to develop and deliver innovative biotherapies, influenza vaccines and support programs – all to help save lives and treat people with lifethreatening medical conditions.

Innovation has been in the DNA of CSL since our beginning in 1916 and continues as the core of everything we do today. Innovation spans all across our organisation – reflected in our 1,700-plus dedicated scientists who focus every day on solving patients' unmet needs, through the advancement of recombinant proteins and gene therapy technology, to our unique capability in creating one of the largest and most efficient plasma collection networks in the world.

CSL supports patient, biomedical and local communities by improving access to therapies, advancing scientific knowledge, supporting future medical researchers, and engaging our staff in the support of local communities. We also contribute to humanitarian programs and relief efforts around the world.

CSL's continuing priority is to ensure the ongoing safety and quality of our medicines, while improving access to innovative therapies that make a real and lasting difference to the lives of people who need them. To achieve this, we drive a culture of continuous improvement in quality and compliance and undertake capacity expansions around the world.

CSL also invests in life-cycle management and market development for our existing products, and in the development of new product opportunities for the longer term. We understand the unique challenges faced by people stricken with life-threatening medical conditions because of our long experience, deep knowledge and dedicated focus on preventing and treating serious diseases. We expect that

emerging new innovations and support programs can provide unprecedented opportunities to improve patient wellbeing unlike any other time in history.

CSL's commercial capability, combined with a focused global R&D organisation and proven operational excellence, give us the confidence to efficiently identify, successfully develop, and reliably deliver innovations that patients need and want.

For more than 100 years, CSL has earned a reputation as a passionate yet responsible organisation which is driven to care for patients and deliver on its commitments. Today, our future has never looked brighter.



# **Our Businesses**

#### **CSL BEHRING**

CSL Behring is a global leader in biotherapies with the broadest range of quality products in our industry and substantial markets in North America, Latin America, Europe, Asia and Australia. Our therapies are indicated for treatment of bleeding disorders including haemophilia and von Willebrand disease, primary and secondary immunodeficiencies, hereditary angioedema, neurological disorders and inherited respiratory disease. Our products are also used to prevent haemolytic disease in newborns, for urgent warfarin reversal in patients with acute major bleeding, to prevent infection in solid organ transplant recipients and treat specific infections, and to help victims of trauma, shock and burns.

From our family of recombinant coagulation products that aim to dramatically improve the lives of patients with bleeding disorders, to industry-

leading immunoglobulin and specialty products that are shifting treatment paradigms around the world, CSL Behring knows how to meet the needs of these unique populations.

With an integrated manufacturing platform and production facilities located in the United States (US), Germany, Switzerland, Australia and China, we use the most sophisticated production methods available to meet or exceed stringent safety and quality standards around the world.

CSL Plasma, a division of CSL Behring, operates one of the world's largest and most efficient plasma collection networks, with more than 200 centres in the US and Europe. Each step of our manufacturing process – from plasma donor to patient – reflects CSL Behring's unyielding commitment to ensuring our products are safe and effective.

### **SEQIRUS**

Seqirus was established on 31 July 2015, following CSL's acquisition of the Novartis influenza vaccines business, and subsequent integration with bioCSL. Seqirus is one of the world's largest influenza vaccine companies and a major partner in the prevention and control of influenza globally. It is a reliable supplier of influenza vaccine for Northern and Southern Hemisphere markets and a transcontinental partner in pandemic preparedness and response.

Seqirus operates state-of-the-art production facilities in the US, the United Kingdom (UK) and Australia and utilises both egg-based and cell-based manufacturing technologies as well as a proprietary adjuvant. It has leading R&D capabilities, a broad and differentiated product portfolio and commercial operations in more than 20 countries.

In Australia and the Asia Pacific region, Seqirus is a leading provider of in-licensed vaccines and specialty pharmaceuticals. It is also the world's only supplier of a unique range of products made in the national interest for the Australian Government, including antivenoms and Q fever vaccine.

### RESEARCH AND DEVELOPMENT (R&D)

CSL continues to develop innovative biotherapies that address unmet medical needs or enhance current treatments.

Global R&D activities support innovation in new products and technology, improved products and manufacturing expertise to ensure our continued growth and commitment to fulfil patients' needs.

Our balanced research and development portfolio includes new therapies that align with our commercial and technical capabilities in immunoglobulins, specialty products, haemophilia and coagulation therapies, breakthrough medicines, transplant and vaccines.



# **Key Business Highlights**

CSL continues to deliver on its strategy, with an 11%# increase in total revenue. The strength of our results reflects the execution of our strategic plan and patient-focussed workforce.



Strategic Objective

#### **GROWTH**

Maximize portfolio value & deliver new product launches

Immunoglobulin sales up by 11%# on the prior comparable period.

IDELVION®, recombinant coagulation factor for the treatment of haemophilia B, sales exceeded forecast and is the market leader in a number of countries.

Specialty products portfolio grew by 24%# driven by strong performance in KCENTRA® and HAEGARDA®, which achieved nearly 50% of the prophylaxis hereditary angioedema (HAE) market in the United States (US).

Exercised the option to acquire 100% of Chinese plasma fractionator.



Strategic Objective

#### **EFFICIENCY**

Be the most efficient, highest quality plasma player

CSL Plasma opens 27 new collection centres in the US – a growth rate unmatched in the industry. Across the US and Europe, CSL Plasma now holds more than 200 collection centres.

Launch of a new CSL Plasma donor management system.

Investments in large-scale Group-wide capital initiatives, across all regions, remain on track.



Strategic Objective

#### **INFLUENZA**

Deliver on influenza strategy

Seqirus delivers on its commitment to achieve profitability just three years after the business was formed.

Influenza sales grew 53%\*, with FLUAD, an adjuvanted influenza vaccine, reporting sales up by 142%\*.

The Holly Springs facility in the US, which utilises innovative cell-based technology, quadrupled the number of FLUCELVAX® QUADRIVALENT influenza vaccine doses for the US market.



Strategic Objective

#### INNOVATION

Pursue new opportunities to diversify portfolio and enhance growth

Approval of immunoglobulin products PRIVIGEN®, in the US, and HIZENTRA®, in the US and Europe, provides patients with a convenient treatment for chronic inflammatory demyelinating polyneuropathy (CIDP).

Acquisition of Calimmune provides CSL with a promising gene therapy platform.

CSL and Vitaeris announce strategic partnership to support an emerging transplant portfolio.

CSL112, our cardiovascular disease product, moves into Phase III clinical trial.

<sup>#</sup> Growth percentages shown at constant currency to remove the impact of exchange rate movements, facilitating comparability of operational performance. For further detail please refer to CSL's Financial Statements for the Full Year ended 2018 (Directors' Report).

## CSL at a Glance



Strategic Objective

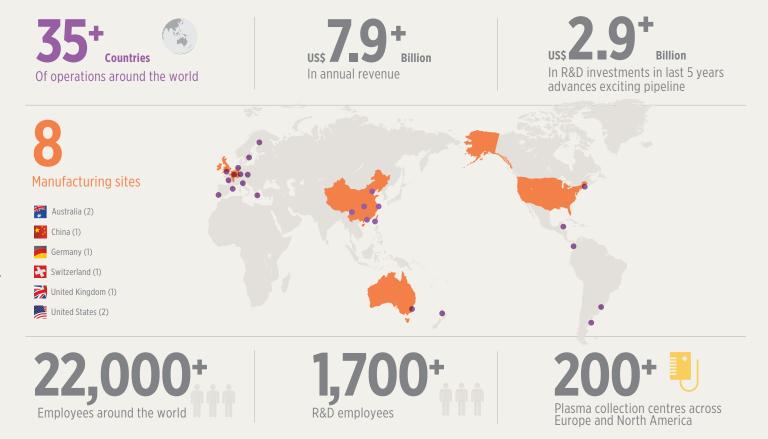
#### PEOPLE & CULTURE

Create a culture that attracts, retains and develops the best talent

Named one of the world's Top 50 employers by Forbes (2017) Global 2000: World's Best Employers.

Total workforce continues to grow, achieving employee engagement index scores higher than the global IBM norms.

New people manager programs launched to develop skills and capabilities at every stage of their career.



# **Financial Highlights**

Five-Year Summary

All figures are in US\$ million unless stated otherwise	<b>2017-18</b> Constant Currency <sup>(1)</sup>	<b>2017-18</b> Reported <sup>(2)</sup>	2016-17 Reported	2015-16 Reported	2014-15 Reported	2013-14 Reported
Total Operating Revenue	7,717	7,915	6,947	6,115	5,612	5,504
Sales Revenue	7,394	7,588	6,616	5,909	5,459	5,335
R&D Investment	685	702	667	614	463	466
Profit before Income Tax Expense	2,260	2,281	1,690	1,556	1,714	1,604
Net Profit after Tax	1,713	1,729	1,337	1,242	1,379	1,307
Net Cash Inflow from Operating Activities		1,902	1,247	1,179	1,364	1,361
Capital Investment		992	861	566	414	402
Return on Invested Capital (%)		25.9	24.5	26.8 <sup>3</sup>	31.7	31.8
Basic Earnings per Share (\$)		3.822	2.937	2.689	2.923	2.701
Dividend per Share (\$)		1.720	1.360	1.260	1.240	1.130

<sup>1</sup> Constant currency removes the impact of exchange rate movements, facilitating comparability of operational performance. For further details please refer to CSL's Financial Statements for the Full Year ended 2018 (Directors' Report).

<sup>&</sup>lt;sup>2</sup> The Group's reported results are in accordance with the Australian Equivalents to International Financial Reporting Standards (A-IFRS).

<sup>&</sup>lt;sup>3</sup> 2016 figure includes the gain on acquisition of Novartis' global influenza vaccine business of US\$176.1 million.

## Our Financial Performance

**DIVIDENDS** 

Interim Unfranked dividend of

per share

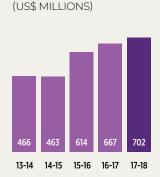
Final Unfranked dividend of

per share (1)

**Total Ordinary** dividends 2018

per share





**CSL R&D INVESTMENT** 



**CSL TOTAL OPERATING** 

**REVENUE (US\$ MILLIONS)** 



**CSL NET PROFIT** 

(US\$ MILLIONS)

For shareholders with an Australian registered address, dividends will be paid in A\$ at an amount of A\$1.278192 per share (at an exchange rate of A\$1.3744/US\$1.00), and for shareholders with a New Zealand address, dividends will be paid in NZD at an amount of NZ\$1.408671 per share (at an exchange rate of NZ\$1.5147/US\$1.00).

# Year in Review

# DIVIDENDS AND FINANCIAL RESULTS

CSL's reported net profit after tax was US\$1,729 million for the year ended 30 June 2018. On a constant currency basis, net profit after tax was US\$1,713 million.

On 13 April 2018, CSL shareholders received an interim unfranked dividend of US\$0.79 per share. A final unfranked dividend of US\$0.93 per share will be paid on 12 October 2018. Total ordinary dividends for the year were US\$1.72 per share.

CSL business operations reported here include CSL Behring, Seqirus and our global R&D activities.

#### **CSL BEHRING**

CSL Behring's focused execution delivered outstanding results for the year. Total sales in constant currency grew 10% over the previous year to US\$6.6 billion with sales increases at constant currency of 11% for immunoglobulins, 24% for the specialty portfolio, 7% for albumin, and 5% for haemophilia products.

Immunoglobulins (Ig) represent our largest therapy area and contributed sales of US\$3,145 million, up 11% in constant currency over last year. Sales were driven largely by increased demand across the globe. Sales of our subcutaneous immunoglobulin product, HIZENTRA®, Immune Globulin Subcutaneous (Human) 20% liquid, increased by 12% at constant currency, fuelled by strong demand in primary immunodeficiency (PID), as well as its expanded indication to treat CIDP.

HIZENTRA was granted marketing authorisation to treat CIDP by the European Commission (EC) in March 2018. The US approval and launch followed that same month, and since that time Europe has begun the commercial launch in eight key markets including the reimbursement process for Belgium, France, Italy and Spain. HIZENTRA represents the first and only subcutaneous immunoglobulin for maintenance therapy to treat CIDP, a rare and serious autoimmune disorder that affects the peripheral nerves and may cause permanent nerve damage. New patient starts and patients converting from intravenous immunoglobulins (IVIg) are also key drivers of HIZENTRA growth.

IVIg sales growth was underpinned by solid global demand for PRIVIGEN®, Immune Globulin Intravenous (Human) 10% Liquid, with sales up 13% in constant currency over the prior comparable period. Excellence in execution, a focused approach to growth in the non-acute segments, as well as increased

diagnosis and treatment of primary and secondary immunodeficiencies, CIDP, and competitor supply constraints, have contributed to this impressive growth.

Our specialty products grew 24% in constant currency terms to sales of US\$1,490 million. Sales of KCENTRA®, 4 Factor Prothrombin Complex Concentrate, in the US were particularly solid driven by our team's effort to achieve deeper penetration into targeted accounts. RESPREEZA®, a maintenance treatment for severe alpha-1 antitrypsin deficiency, continued to grow in Europe due to further strong uptake, aided also by competitor supply disruptions in France. RESPREEZA has been shown to slow the progression of hereditary emphysema. Europe saw growth of BERINERT®, C1-esterase inhibitor concentrate, in the treatment of HAE aided also by competitor supply disruptions in Europe.

During 2017/18 we successfully launched HAEGARDA®, C1 Esterase Inhibitor Subcutaneous (Human), in the US, a transformational therapy for adolescent and adult patients with HAE. HAEGARDA, the first and only subcutaneous C1 esterase inhibitor therapy, garnered nearly half the prophylaxis HAE market in its first year, and provides unprecedented reduction in oedema attacks and significantly reduces the need for rescue medication.

Overall, the haemophilia product franchise increased 5% in constant currency, versus the prior year to US\$1,113 million. Growth in this franchise was due predominantly to the strong uptake of our recombinant therapy IDELVION®, Coagulation Factor IX (Recombinant). Albumin Fusion Protein, as well as sales of AFSTYLA®, Antihemophilic Factor (Recombinant), Single Chain, in new and existing markets.

IDFI VION saw robust demand and the product is now launched in 12 countries; it is quickly becoming the new standard of care for haemophilia B patients. IDELVION delivers highlevel protection, maintaining factor IX activity levels above 5% in most patients over 14 days, resulting in a median annualised spontaneous bleeding rate of zero. Appropriate patients can go up to two weeks between infusions and achieve excellent bleeding control. The flexibility to reduce their dosing cycle is an important attribute for patients who require a prophylactic regimen but don't want treatment to disrupt their active lives.

This year we also launched AFSTYLA in Japan, which complements the launch of IDELVION in the previous year. AFSTYLA, the first and only single-chain product for haemophilia A, is specifically designed for long-lasting protection from bleeds with the ability to dose twice weekly. Both products are delivering solid uptake with ongoing approvals in various countries and launches planned in the coming year.

CSL Behring's portfolio of albumin products yielded sales of US\$921 million. an increase of 7% at constant currency, primarily driven by strong ongoing global demand. Our team in China delivered another remarkable year of albumin growth, up 11% fuelled by ongoing successful sales penetration into lower tier cities and hospitals.

CSL completed its acquisition of plasmaderived therapies manufacturer Wuhan Zhong Yuan Rui De Biological Products Co. Ltd. from Humanwell Healthcare Group Co. Ltd in August 2017. The acquisition provides CSL with a strategic presence in the Chinese domestic plasma fractionation market and complements the leadership position that CSL Behring has built over the past 20 years as a provider of imported albumin in China.

CSL Behring also continues to invest in state-of-the-art manufacturing facilities around the world to meet growing demand for its products, increase efficiency and support its cohesive global manufacturing network.

In an effort to sustain future growth, we invested almost US\$1 billion in capital to expand our manufacturing capabilities across all regions, strengthening our global manufacturing footprint and ability to secure the reliable supply of therapies.

In Australia. 2018 commenced under the newly signed national fractionation agreement for Australia (NaFAA) - a new nine-year agreement with the National Blood Authority to continue to manufacture a range of products from plasma collected by the Australian Red Cross Blood Service.

Overall, our results for the 2017/18 fiscal year reflect our market leadership positions around the world, and robust demand for our differentiated products. Investments in production and commercial capabilities have positioned us well for sustainable growth and to continue to deliver on our promise to patients with rare and serious diseases.

#### **SEQIRUS**

When Seqirus was established three years ago, we set out an ambitious agenda to turn the business around and achieve a break even result by 2017/18. Seqirus has not only delivered on this commitment, but has exceeded its financial targets, posting an EBIT of US\$52 million. We've built a strong global business that serves a significant public health need and is well positioned for future growth and success.

Total revenue for the reporting period totalled US\$1,088 million, representing constant currency growth of 16% compared to the prior year. Seasonal influenza vaccine sales in the US continued to generate the majority of our revenue with solid contributions from our global pandemic franchise as well as our vaccine and pharmaceutical in-licensing business in Australia and New Zealand.

The most significant driver of growth was the ongoing shift in our product mix from standard trivalent influenza vaccines to cell-based quadrivalent and adjuvanted products, particularly in the US. Segirus continues to have one of the broadest and most differentiated influenza vaccine portfolios in the industry.

The accelerated development of cell-based manufacturing technology at our state-of-the-art facility in Holly Springs enabled us to deliver approximately 20 million doses of FLUCELVAX QUADRIVALENT® to the US market for the NH 2017/18 season, representing a four-fold increase in output in just two years. Ongoing process innovation will help us meet increased demand for the vaccine in the US, support commericalisation plans in Europe and further strengthen pandemic response.

Seqirus was also successful in using a cell-derived H3N2 candidate vaccine virus in the production of the NH 2017/18 formulation of FLUCELVAX QUADRIVALENT, making the end-to-end production of this particular strain exclusively cell-based. There is strong scientific rationale to suggest that cell-based technology may potentially overcome the challenges of egg-based influenza virus mutations, leading to higher vaccine effectiveness.

AFLURIA QUADRIVALENT® achieved an expanded age indication for use in people from 5 years and above in the US for the NH 2017/18 season, and similar approvals were achieved for AFLURIA TETRA and AFLURIA QUAD® in Canada and Australia. We were also first to market in Australia with AFLURIA QUAD for the 2018 season, reinforcing Seqirus as a reliable local partner, and went back into production at the request of the Australian Government to meet unprecedented demand for influenza vaccine following the severe season in 2017.

Our in-licensing division in Australia and New Zealand also performed well during the period with the launch of GARDASIL® 9, Human Papillomavirus 9-valent Vaccine, Recombinant; the continuation of the ZOSTAVAX<sup>TM</sup> shingles vaccine on the National Immunisation Program; and strong growth of PALEXIA® in the pain portfolio. We also announced new in-licensing agreements for hay fever and ophthalmology products.

In Latin America, Seqirus successfully delivered on our AGRIPPAL®, influenza vaccine, commitments in Argentina and won a seasonal influenza vaccine

tender in Mexico for the first time. We established a stronger presence with the opening of the Seqirus Argentina office, investing in the future growth of this significant market.

In the UK, we achieved regulatory approval for our adjuvanted influenza vaccine FLUAD® and a subsequent preferential recommendation by public health authorities. This means FLUAD will be the only influenza vaccine used in the 65 years and above population in the UK next season. The Australian health authorities also recognised the clinical importance of FLUAD for the older adult population, fast tracking the introduction of the vaccine into the National Immunisation Program for the 2018 season.

We experienced strong growth in our global pandemic franchise through extending a number of agreements for pandemic preparedness with governments around the world. There is increasing interest in our proprietary adjuvant, MF59, for its ability to boost immune response and its dose-sparing benefits. Our new purpose-built laboratories in Cambridge, Boston,



Operators at Segirus' Liverpool site. This year, Segirus announced a £40 million investment for a new fill and finish facility at our UK Liverpool site, planned for 2020.

achieved special certification during the period enabling it to respond to public health emergencies requiring biologics (BSL3) agent containment.

During the period. Segirus announced a £40 million investment for a new fill & finish facility at our UK Liverpool site, planned for 2020. Bringing this important capability in-house will help meet growing demand for FLUAD, strengthen reliability of supply and further strengthen pandemic response. We also announced a US\$9 million warehouse

expansion project in Holly Springs and completed the first FLUAD formulation in Holly Springs for the US market.

As part of our corporate responsibility efforts, Segirus continued its support for the Pandemic Influenza Preparedness Framework operated by the World Health Organization, which aims to build pandemic preparedness capacity in low and middle income countries. In response to Hurricane Harvey, Segirus donated 22,500 doses of influenza

vaccine to the Texas Department of State Health Services, to help displaced residents fight the onset of influenza. We also donated €250,000 to the Global Initiative for Sharing of Influenza Data (GISAID) to support open and rapid sharing of genetic data for influenza viruses.

Additionally, Segirus entered a new partnership to help save the lives of people bitten by venomous snakes in Papua New Guinea (PNG), with the PNG Department of Health, the Australian

High Commission, and the Charles Campbell Toxinology Centre (CCTC), at the University of PNG. PNG has some of the highest rates of snakebite mortality in the world and Segirus will provide an annual donation of 600 vials of antivenoms, with an approximate value of more than A\$1 million annually, as part of a holistic program that will include secure warehousing, cold-chain distribution and data collection on snake bites and antivenom use to help improve the program.

#### RESEARCH AND DEVELOPMENT

CSL's global R&D activities focus on the development of innovative new and improved products and manufacturing processes thereby ensuring our continued growth. Our R&D portfolio is divided into five strategic areas – specialty products, haemophilia, breakthrough medicines, immunoglobulins and transplant. Over the past year, we have achieved successes in all five strategic areas with new registrations, exciting new collaborations, positive results in our clinical trials and the initiation of the largest clinical trial ever undertaken by CSL.

#### SPECIALTY PRODUCTS

CSL's HAEGARDA, the first subcutaneous preventative treatment for patients with HAE, represents a new standard of care for HAE patients, reducing HAE attacks by 95% and the need for rescue medication by 99%. In order to remain at the forefront of innovation in HAE treatment, in May 2018, CSL announced an exclusive license agreement with CEVEC Pharmaceuticals to develop highly differentiated recombinant C1-INH proteins. Building

on our deep knowledge and expertise of HAE and plasma derived C1-INH, CSL aims to leverage CEVEC's expertise in the production of recombinant C1-INH using their proprietary CAP®Go technology. The technology provides the opportunity to develop innovative proteins with improved half-life and more convenient administration, further improving the quality of life for patients suffering from HAE.

#### **HAEMOPHILIA**

CSL remains focused on easing the burden of care and improving the lives of haemophilia patients. In September 2017, Japan's Ministry of Health, Labour and Welfare approved AFSTYLA.

In May 2018, the FDA approved a new 3500 IU vial size for IDELVION, our long-acting fusion protein linking recombinant coagulation factor IX with recombinant albumin for the treatment of haemophilia B. For patients requiring high doses of IDELVION, the larger vial size will reduce the reconstitution time needed to prepare multiple smaller vials for a similar

dose. IDELVION is currently licensed for treatment intervals of up to 14 days. An ongoing Phase III extension study (PROLONG-9FP) is currently evaluating the possibility of extending the dosing interval to every 21 days. Global regulatory submissions to gain approval of the extended dosing regimen are planned for 2019.

#### **BREAKTHROUGH MEDICINES**

Our commitment to remain at the forefront of innovation is stronger than ever. In August 2017, CSL acquired Calimmune Inc., a biotechnology company focused on the development of gene and stem cellbased therapies. The acquisition introduced a new ex vivo haematopoietic stem cell gene therapy (CAL-H) for the treatment of sickle cell disease into our breakthrough medicines pipeline. Clinical trials using CAL-H are anticipated to start in 2019. In addition, Calimmune's proprietary platform technologies have the potential to develop new treatments for a wide range of other rare diseases that complement CSL's product portfolio and expertise.

Over the past year we have continued to make strong progress in our breakthrough medicine portfolio with the completion of two Phase I trials and the initiation of a third using three of CSL's novel monoclonal antibodies. CSL312 is a fully human anti-factor XIIa monoclonal antibody that is being studied for use in multiple indications, including as a subcutaneous therapy for HAE with the potential for administration once every two to three weeks. A Phase I study in healthy volunteers was completed in November 2017 and confirmed that CSL312 is safe and well tolerated with good bioavailability. A Phase II trial designed to evaluate the efficacy, safety and pharmacokinetics of CSL312 in the prophylaxis of angioedema attacks in HAE patients is anticipated to start in 2018/19.

CSL324 neutralises G-CSF activity and may provide a new treatment for rare inflammatory diseases associated with overactive neutrophils (white blood cells). The completion of a Phase I trial in healthy volunteers in January 2018 demonstrated that CSL324 can block receptors and lower neutrophil counts. A subsequent Phase Ib trial in patients with neutrophil-driven

disease is anticipated to start in 2018/19 and aims to show proof of mechanism of this novel product.

CSL346 targets VEGF-B and could potentially be used to control glucose absorption in Type 2 diabetics by targeting fatty acid metabolism. CSL346 may also be beneficial in the treatment of diabetic nephropathy, one of the most common kidney complications associated with Type 2 diabetes, where VEGF-B levels have been shown to be elevated in patients. A Phase I trial in healthy volunteers commenced in November 2017 in order to demonstrate that CSL346 is safe and well tolerated.

The largest clinical trial ever to be undertaken by CSL was announced in December 2017. CSL112 is a novel plasma derived apolipoprotein A-1 infusion therapy that has been shown to have an immediate and significant impact on the removal of cholesterol from arteries. The ApoA-1 Event reducin**G** in Ischemic **S**yndromes II (AEGIS-II) Phase III trial will enrol over 17,000 patients from approximately 1,000 medical centres around the world (please see page 32 for more information).



In March 2018, the US FDA and the European Medicines Agency granted approval for HIZENTRA® (Immune Globulin Subcutaneous [Human], 20% liquid) to treat CIDP.

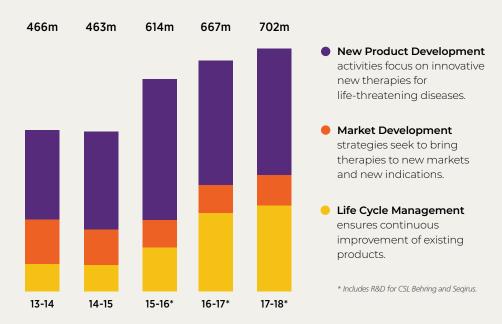
#### **IMMUNOGLOBULINS**

The expansion of our Ig portfolio continued over the past year with successful regulatory approvals in neurology. In September 2017, the US FDA approved PRIVIGEN for the treatment of CIDP, a rare and progressing disease that may cause permanent nerve damage. The FDA approval represents a significant milestone for patients with this debilitating and progressive disease.

In the largest ever clinical study to investigate the treatment of CIDP and the first to evaluate the subcutaneous administration of Iq for the treatment of CIDP (the Polyneuropathy And Treatment with Hizentra or PATH study), HIZENTRA maintained stable disease and prevented relapse for up to 24 weeks. The subcutaneous formulation will allow patients the flexibility to self-administer their treatment at a time, place and schedule that's convenient for them.

Collaboration with external partners continues to provide CSL with important new opportunities to develop novel therapies for patients and address areas of unmet medical need. In January 2018, CSL and Momenta Pharmaceuticals, Inc. announced the initiation of a Phase I study in healthy volunteers to evaluate the safety and tolerability of the potential first-inclass recombinant Fc multimer protein M230/CSL730 in development to control inflammation associated with autoimmune diseases Preclinical studies in animal.

## Research and Development Investment



models of autoimmune disease have shown that CSL730 matched potency and efficacy of intravenous immunoglobulin at significantly lower doses. CSL730 offers CSL the potential to further grow and expand our long-term global leadership in helping patients with autoimmune diseases that are treated with immunoglobulins.

#### TRANSPLANT

Solid organ transplantation is a complex procedure as the organ to be transplanted may become damaged due to the interruption and restoration of blood supply to the organ. In addition, graft rejection can occur after transplantation when the patient's immune system recognises the transplanted organ as 'foreign' and attacks it, resulting in potentially debilitating and life-threatening complications.

Antibody-mediated rejection (AMR) is a major cause of kidney transplant failure and is often associated with the activation of complement, a set of proteins that work with antibodies and play a role in the development of inflammation and tissue damage. C1-esterase inhibitor (C1-INH) present in human plasma regulates the complement pathway. Administering

additional C1-esterase inhibitor to patients after solid organ transplantation is expected to reduce the action of the complement system, therefore reducing the likelihood of the transplanted organ being rejected. CSL's plasma-derived C1-INH. registered as BERINERT, has been used clinically for over 30 years, and has an excellent safety record in both acute and chronic prophylactic therapies for HAE. In October 2017, we received orphan designation in Europe for the use of human C1-INH in solid organ transplantation to control rejection. In November 2017, CSL initiated a Phase III trial to evaluate the efficacy and safety of plasma-derived C1-INH (CSL842) in the treatment of refractory AMR in renal allograft recipients.

In December 2017, CSL and Vitaeris announced a strategic partnership to expedite the development of clazakizumab (an anti-IL-6 mAb, formerly ALD518) as a therapeutic option for solid organ transplant rejection. Clazakizumab is a best-in-class IL-6 antagonist that has been studied in clinical trials involving over one thousand patients worldwide. IL-6-driven chronic inflammation has been implicated in the development of AMR, and a clinical

study to further evaluate the role of IL-6 blockade as a means to preserve renal function and prevent renal allograft loss from AMR is anticipated to start later in 2018. Our expertise in immunology, our pipeline and strategic partnerships are full of promise to address unmet needs in the transplant community.

#### **VACCINES**

Our Segirus R&D team continued to advance the pipeline during the period, which is critical to future growth. Key clinical trials are underway to support the registration of FLUAD QUADRIVALENT in the older adult population and to expand the age indication of FLUCELVAX OUADRIVALENT down to six months. We also have a number of research and development programs in place to further optimise our adjuvant and cell-based technologies. Segirus also has early stage collaborations that are exploring other transformational approaches including universal projects, synthetic technology and new delivery devices.

Investment in R&D remains a key driver for CSL's future growth. We have a high quality and potentially valuable portfolio of projects in various stages of development. We continue to make a balanced investment in the life cycle management and market development of existing products that bring short to mid-term commercial benefits, and we make strategic investments in longer term, higher risk and high opportunity new product development activities. In 2017/18, CSL invested US\$702 million on R&D and was supported by an R&D workforce of approximately 1,700 scientists worldwide.

#### CORPORATE RESPONSIBILITY

In August 2017, Hurricane Harvey, a Category 4 storm, struck the east coast of the US causing an estimated US\$125 billion in damages. With operations and employees in affected areas, such as Greater Houston, Texas, CSL committed US\$150,000 in support of relief efforts and matched in full a further US\$25,195 raised by employees. A total of US\$200,391 was donated to United Way of Greater Houston to support families and individuals affected by the second costliest hurricane to hit the US

Over the reporting period, CSL remained a FTSF4Good index constituent and became a constituent of the Dow Jones Sustainability Index Asia Pacific. These global indices recognise strong environmental, social and governance (ESG) performance that assists investors with investment decisions

In November 2017, CSL published its ninth Corporate Responsibility (CR) Report, detailing our performance across key sustainability topics. Our latest report adopted the Global Reporting Initiative's (GRI) G4 reporting framework, the leading global framework for sustainability reporting. A full version of the report, including detailed disclosure of our material sustainability topics, is available at CSL.com.

Also in 2017, following participation in the CDP (formerly the Carbon Disclosure Project). CSL achieved a B for its submission to CDP water and a C for its climate impacts submission. CDP is a not-for-profit organisation that runs a global disclosure system enabling companies, cities, states and regions to measure and manage their environmental impacts, while providing investors with the most comprehensive environmental data for informed decision making. CSL is one of few Australian companies that has supported CDP water with annual submissions since its inception in 2012. Our participation in both initiatives demonstrates a continued commitment to measuring and assessing our environmental impacts.

#### **OUR PEOPLE**

CSL is passionate about keeping its promises – to patients, communities and employees. CSL employees are committed to saving lives and protecting the health of people around the world every day. In return, we are committed to creating a workplace environment where employees can fulfill their individual career aspirations and potential and are inspired by a purpose-driven organisation with a values-based culture. CSL works to foster a collaborative and innovative workplace

where the best and brightest can succeed and where individual's professional and personal lives are respected.

A key underpinning of our Promising
Futures employee brand is the investment
we make in the growth, learning and
development of our people. Over the past
year, CSL introduced global leadership
capabilities to provide guidance around
the capabilities expected at every stage of
a leader's career from first line manager
to executive. We also introduced training
programs for our people managers that

allow them to develop their skills through both instructor-led and virtual learning experiences on a range of topics, including building effective teams, coaching, managing change, and delivering effective feedback. Leaders were also invited to leadership days at locations around the world as an opportunity to continually enhance their personal leadership skills. The program included management discussions, external thought leaders, networking opportunities, and development resources. We also pay special attention to our talent by

requiring managers to create development plans and provide career coaching to enhance their overall career experience. All employees are also encouraged to complete an online career profile to share their career experiences and future interests as a way of further supporting meaningful development conversations with their manager.

To help ensure we are living up to our commitment to employees, we conduct an employee feedback survey twice a year to solicit feedback on everything from

#### **CSL Values**



Patient Focus
We deliver on our promise to patients.



**Innovation**We turn innovative thinking into solutions.



Integrity
We walk the talk.



**Collaboration**We are stronger together.



**Superior Performance**We take pride in our results

decision-making and development to whether or not we are living the CSL values. In the most recent survey conducted in April/May 2018, CSL employee engagement index is three points above global IBM norms. Our employees report being very proud to work for the company and they believe that there is a promising future for them at CSL.

We are proud of the external recognition that our talented people and innovative workplace and programs have earned. Recognition of note includes being named one of the world's Top 50 employers by Forbes and one of Australia's top 20 most innovative companies. Kankakee, in the US, was the proud recipient of the Pinnacle Award from United Way for their community fundraising efforts. We also received the Patient Impact Award from Life Sciences Pennsylvania for developing HAEGARDA and Healthcare Innovator of the Year by the *Philadelphia Business* 

Journal. In addition, East Coles Australia recognised CSL with a 2017 Best Investor Relations Award (out of the S&P/ASX100) and the Global Equity Organization awarded CSL with the "2018 Best Plan Effectiveness" award.

CSL continues to have gender, ethnic and generational diversity in our workforce. Further information regarding CSL's diversity position can be found at CSL.com.

#### **OUR THANKS**

It has been a full and rewarding year driven by the commitment of our employees. Your Board of Directors recognises the continued focus of our expanding workforce on delivering against our strategic objectives and in their dedication to applying our Group Values as the guide for achieving sustainable growth.



# **CSL Behring**

### **PROFILE**

CSL Behring has been at the forefront of biotherapeutics research and development for more than 100 years. Our roots are traced to Emil von Behring, the first Nobel Prize recipient in physiology and medicine. CSL Behring and the collective group of CSL businesses have a heritage of outstanding contributions to medicine and human health

Throughout the years our passion and commitment to delivering on our promise to save and improve the lives of people with rare and serious diseases has remained strong. We are proud of our history, and we're excited about the future

Our ability to innovate and deliver lifesaving products for patients with unmet medical needs around the world continues to grow in response to the demand for our products.

Today, we are one of the largest and fastest-growing protein biotherapeutics businesses in the world, delivering medicines to patients in more than 60 countries. We offer the broadest range of quality plasma derived and recombinant therapies in the protein biotherapeutics industry, and have substantial markets in North America, Europe, Asia, Latin America and Australia.

Our products are used around the world to treat the following conditions:

- immunodeficiency and autoimmune diseases;
- · hereditary bleeding disorders;
- · hereditary angioedema;
- · alpha-1 antitrypsin deficiency;
- · neurological disorders;
- · transplantation; and
- · critical care.

#### WE ARE PATIENT-FOCUSED

Our patients are our focus. The people who trust and rely on our products come first in everything we do. We are keenly aware that our therapies are essential to their health and well-being, and we bring that sense of purpose to work every day. We are passionate about meeting the needs of our customers, which begins with listening to them and their healthcare providers.

We work with patient groups, plasma donors, researchers, physicians, nurses, pharmacists and home healthcare companies to achieve better results. This includes promoting quality care, improving patient access to care, expanding educational and outreach efforts, and affecting public healthcare policy.

### RECOGNISED AND RESPECTED BY PATIENT, INDUSTRY AND BUSINESS ORGANISATIONS WORLDWIDE

We strive to be the best at what we do, and we are proud that our pioneering work in developing therapies to treat rare and serious conditions has received recognition from patient organisations and others worldwide. This includes:

 being listed among the Top 50 employers in the world by Forbes magazine;

- Paul Perreault, CEO & Managing
   Director, receives 2018 Humanitarian of
   the Year Award from the Hemophilia
   Association of New Jersey, USA;
- the 2017 Industry Innovation Award presented by the National Organization for Rare Disorders (NORD);
- the 2017 Journal Progress Award for Innovation in Manufacturing
- the 2017 Healthcare Innovator of the Year Award presented by the Philadelphia Business Journal;
- the 2016 Innovator Break-Through Award presented by Marcum and SmartCEO magazine;
- the National Hemophilia Foundation's 2015 Leadership Award, and
- Best Places to Work awards in Switzerland, Germany and Italy in 2015.

The thousands of talented employees at CSL Behring who share our vision, values and passion for saving lives are the engine that drives our superior performance.

# Major Therapeutic Products Marketed by CSL Behring

#### **BROADEST RANGE OF THERAPIES TO** TREAT RARE DISEASES

CSL Behring is a global leader in immunoglobulins (Ig). Our portfolio of innovative medicines includes a wide range of recombinant and plasmaderived products for treating bleeding disorders, and our specialty products treat hereditary angioedema and inherited respiratory disease.

CSL Behring also manufactures critical care products that are used in cardiac surgery and organ transplantation, and to treat trauma, shock, burns and acquired bleeding. They are also used to reverse the effects of warfarin and to prevent haemolytic disease in newborns.

### WORLD-CLASS R&D: UNLOCKING THE PROMISE OF PROTEINS

Innovation has been in our DNA since 1916 and continues at the core of everything we do today. Our integrated R&D global organisation is driven by an experienced team of research experts who work collaboratively at worldwide locations. They continually explore new innovations to unlock the promise of biotherapies. Their contributions to medicine and human health have been possible because we continually grow our investment in R&D.

#### **HAEMATOLOGY**

#### **RECOMBINANT THERAPIES**

Factor VIII Single Chain

- AFSTYLA®

Recombinant Factor IX Albumin Fusion Protein

- IDELVION®

#### Factor VIII

- Helixate® FS
- Helixate® NexGen
- Iblias<sup>®</sup>

#### PLASMA-DERIVED THERAPIES

#### Factor VIII and von Willebrand Factor

- Beriate®
- Monoclate P<sup>®</sup>
- Humate P®
- Haemate P®
- Voncento<sup>®</sup>
- Biostate®
- Aleviate®

#### Factor IX

- Berinin® P
- Mononine®
- MonoFIX®–VF

#### Factor I (Fibrinogen)

Haemocomplettan® P / RiaSTAP®

#### Factor X

Factor X P Behring®

#### Plasma-derived Factor XIII

 Corifact® / Fibrogammin® P / Cluvot®

#### Other Products

- Stimate<sup>®</sup>
- Octostim\*

#### SPECIALTY CARE

#### C1-Esterase Inhibitor

- Berinert®
- Haegarda®

#### Prothrombin Complex Concentrates

- Beriplex® P/N / Confidex® / Kcentra®
- Prothrombinex® VF

#### Fibrinogen Concentrate

Haemocomplettan® P

#### Albumin Management

- Albuminar®
- Alburex® / AlbuRx®
- Albumex<sup>®</sup>
- Human Albumin Behring
- Humanalbin®

#### Plasma-derived Antithrombin III Concentrate

- Kvbernin® P
- Thrombotrol® VF

#### Other Products

Wound-healing therapies are used to facilitate healing.

- Beriplast® P Combi-Set
- Fibrogammin® P
- Tachocomb\*\*

#### **PULMONOLOGY**

Respreeza® / Zemaira®

#### **IMMUNODEFICIENCY DISEASES**

#### Intravenous Immunoglobulins

- Privigen®
- Carimune® NF
- Sandoglobulin® / Sanglopor®
- Intragam®10
- Intragam®P

#### Subcutaneous Immunoalobulins

- Evogam®
- Hizentra®

#### Specific Immunoglobulin

- Beriglobin® P / Normal Immunoglobulin-VF
- Berirab® P
- Hepatitis B Immunoglobulin P Behring<sup>®</sup> / Hepatitus B Immunoglobulin - VF
- Rhophylac® / Rh(D) Immunoglobulin VF
- Tetagam® P / Tetanus Immunoglobulin VF
- Varicellon® P / Zoster Immunoglobulin VF
- Cytogam®/CMV Immunoglobulin VF

#### **TOLL FRACTIONATION**

CSL Behring performs plasma fractionation for Australia, Canada, Denmark, Hong Kong, Malaysia, New Zealand, Singapore and Taiwan

- \* Octostim is a trademark of Ferring GmbH
- \*\* Tachocomb is a trademark of Nycomed

Product availability varies from country to country, depending on registration status.

For more information about these products, see CSLBehring.com

# CSL Behring **Meeting Growing** Need for Novel Therapies in Russia

Russia has a population of more than 144 million people, so its potential market is substantial. There is also a tremendous unmet medical need in the rare disease. community, reflected in part by the wide gap between the approximately 2,000 von Willebrand disease (VWD) patients in Russia's patient registry and the statistical prevalence rate of patients with severe VWD, or approximately 15,000 patients.

The consumption of immunoglobulins, which is 10 to 15 times lower per capita in Russia than in the US and some European countries, is another indicator of unmet need. It is explained by several factors including poor diagnostics, lack of medical application knowledge by health care providers (HCPs), diminished access to care caused by a restricted supply of plasma from local sources, and pricing barriers for imported products.

CSL Behring has been working to make a difference, collaborating with the Russian Federation, HCPs, patient groups and the scientific community to provide many more patients with its innovative therapies. Since opening its first office in Russia in 2015, the CSL Behring regional team has almost doubled to help meet the growing demand. This has enabled the field force to cover more territories, reach more HCPs in the far regions and increase sales. For example, sales of HAEMATE®, human plasma coagulation factor, in Russia grew significantly in the past year.

CSL Behring's licensed portfolio also continued to arow in 2017 with the launch of two therapies - RHESOGAM®, intravenous Rh-d immune globulin, and COAPLEX®, human prothrombin complex, increasing the number of commercialised brands in Russia to eight. Currently, CSL Behring is working to file dossiers for our recombinant products for haemophilia as well as HIZENTRA®, subcutaneous immunoglobulin, for primary immune deficiency and chronic inflammatory demyelinating polyneuropathy.

During the past decade the development of the Russian pharmaceutical industry has become a priority because of the poor quality of many of the industry's products. This includes plasma-derived therapies, which the government considers a national security issue. The Russian Ministry of Industry and Trade's Pharma 2020 strategy seeks to modernise the industry with the goal of producing nearly 90% of its own essential medicines in Russia by 2020.

CSL Behring's response to this challenge has been to forge lasting partnerships that will offer meaningful solutions and support patients with rare and serious conditions. This includes exploring opportunities to partner with the Russian Government and contribute to the development of the Russian pharmaceutical industry.

While CSL Behring's entry in the Russian market has not been without challenges, including a competitive environment and stringent state procurement regulations, we will continue to deliver on our promise to make our novel therapies available to patients around the world, including in Russia.



## **Cheryl Blackwell-Johnson finds** strength in her family's unique bond

Cheryl Blackwell-Johnson was diagnosed with hereditary angioedema (HAE) at the age of 15. HAE is a rare disease that can cause swelling in certain parts of the body, such as the stomach, hands and face. The swelling can be painful and, in some cases, life-threatening. It's also genetic, meaning it runs in families. Cheryl, who lives in Baltimore, US, has 15 family members with HAE and credits them with helping her manage the condition.

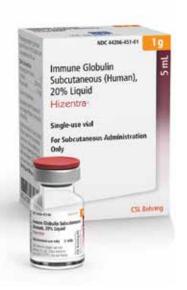
"We stay in touch with each other to ensure everyone is doing what they're supposed to do," Cheryl said.

Her husband, Michael, also plays a pivotal role in Cheryl's care. For nearly 30 years, he's shuttled her back and forth to emergency rooms, attended full-day doctor's appointments and once spent three days in the critical care unit of a hospital while Cheryl struggled through a serious HAE attack.

"Didn't go to work, didn't go anywhere until they moved her to another room," he recalled. "As long as she needs that support, I'm always going to be there for her."

## Delivering on Our Promise to CIDP Patients

Achieving Our Vision in 2018: CSL Behring is the worldrenowned leader in Ig therapy, delivering innovations that enhance patients' lives.



We care deeply about the patients we serve. Driven by our innovation, CSL Behring's immunology team successfully delivered global launches, showcased the largest chronic inflammatory demyelinating polyneuropathy (CIDP) trial to date, and expanded the use of existing products in 2018.

Our formula for commercial success is simple: quality science, creative vision, meticulous launch planning and a robust base of scientific evidence. We delivered exceptional performance for patients, physicians and communities across the globe in 2017/18. Because of our lengthy history and experience with rare and serious diseases, we understand better than most the tremendous promise of biotechnology, and we are working tirelessly to unlock its potential.

Our three-pronged strategy for building a solid neurology offering entailed building on the momentum and the proven successes of CSL Behring's history in primary immunodeficiency (PI) and intravenous immunoglobulin (IVIg), using PRIVIGEN®, intravenous immunoglobulin, approval for CIDP to lay the foundation, and then expanding the portfolio with Hizentra.

Our teams first launched PRIVIGEN for the treatment of CIDP in Europe in 2013 and in the US in 2017. As a follow-up to PRIVIGEN, the team introduced HIZENTRA®, subcutaneous immunoglobulin, to complement the portfolio and deliver a much-needed option for CIDP patients.

HIZENTRA is the first and only subcutaneous immunoglobulin for maintenance therapy to treat CIDP.

The European Commission (EC) granted marketing authorisation for HIZENTRA in CIDP in March 2018. The US approval and launch followed closely and to date, is approved in over 30 countries to treat CIDP.

These approvals were based on data from the Phase III PATH (Polyneuropathy And Treatment with Hizentra) study, which is the largest randomised controlled clinical study in CIDP patients. Combined with the PATH extension study, the PATH program is also the longest CIDP research period to date.

Results from the PATH study demonstrated that after switching from IVIg, the percentage of CIDP relapse or withdrawal for any other reason during subcutaneous Ig treatment was significantly lower with Hizentra versus placebo. PATH results also showed that three times as many patients preferred subcutaneous treatment over intravenous treatment.

CSL had a strong commercial and scientific presence at four major neurology congresses throughout 2018. In addition to symposia and poster presentations, CSL Behring teams designed a simulation that allowed visitors to walk in the shoes of a CIDP patient. We partnered with the GBS/CIDP foundation and created an awareness program, which raised over US\$50,000 in support of CIDP patients.

According to Lisa Butler, Executive Director of GBS/CIDP Foundation International, the impact on patients is clear. "Patients who were once burdened by travelling to the infusion centre or hospital may now have the flexibility to self-administer their treatment at a time, place and on a schedule that's convenient for them." said Butler.

"Hizentra will offer clinicians a safe and effective subcutaneous therapy option for patients with CIDP," said Prof. Dr. Ivo N. van Schaik, principal investigator and professor of neurology at the University of Amsterdam's faculty of Medicine

(AMC-UvA). "It will also allow clinicians

the flexibility to adjust doses based on

their patient's clinical response and

needs"

CIDP is a rare autoimmune disorder that affects the peripheral nerves and may cause permanent nerve damage. The myelin sheath, or the protective covering of the nerves, is damaged, which may result in numbness or tingling, muscle weakness, fatigue and other symptoms

over a period longer than eight weeks.

The effects of CIDP can worsen over time, leading to significant activity limitations and a decreased quality of life. Approximately 30% of CIDP patients will progress to wheelchair dependence if not treated. Until now, the only immunoglobulin therapy to treat CIDP was intravenously administered, by infusion.

## Listen to your body

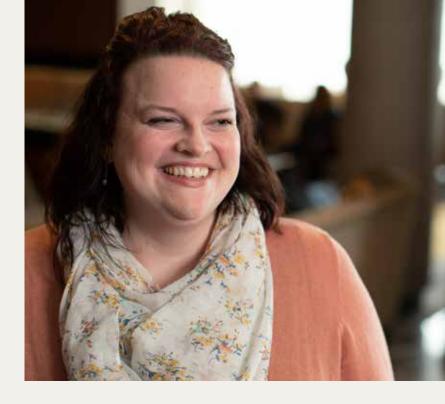
Beth Thirtyacre is a nurse at the Ohio State University Wexner Medical Center in Columbus, Ohio, US. She works with patients with neurological disorders such as CIDP, Guillain-Barré syndrome (GBS) and multiple sclerosis, and she understands first-hand the challenges her patients face because she has walked in their shoes.

"I was 25 and in nursing school when I was diagnosed with GBS," Beth said. "At first I thought I was overworked and not getting enough rest, so I ignored my symptoms for several months before I saw my doctor. She recognised that I had some neurological deficits and referred me to a neurologist."

The neurologist initially diagnosed Beth with GBS and recommended a wait-and-see course of action, particularly since she was feeling better and her symptoms were starting to subside. One year later, Beth relapsed. "It was really scary. I couldn't open water bottles or carry a basket of laundry."

Following various diagnostic tests, including a lumbar puncture, Beth's diagnosis was changed to CIDP, a chronic condition that grows progressively worse. CIDP attacks the central nervous system and can lead to life in a wheelchair if not treated appropriately.

Beth considers herself fortunate to have been diagnosed with CIDP early on and she urges people to "listen to what your body is trying to tell you. Do what's right for your body." She said it was especially difficult for her to visualise what her life was going to be like after being diagnosed with CIDP. "I learned that I needed to grieve the loss of normalcy in my life and not worry about looking silly or people judging me."



"Coping with a chronic condition is difficult for me and my family," she said. "My husband is very supportive and helps remind me to consider my health when making decisions. A strong support system of family and friends as well as my faith in God, have helped me advocate for myself and live with CIDP."

Beth was initially treated with intravenous immunoglobulin (IVIg) and started getting strength back in her fingers. But her infusions took several hours. She elected to take part in a clinical trial for HIZENTRA®, which is self-administered subcutaneously and was subsequently approved by the US Food & Drug Administration for the treatment of CIDP. Beth has been treated with HIZENTRA since 2015.

"It gave me back a lot of control in my life. I treat myself at home at my convenience. Sometimes I work three 12-hour shifts and even pick up additional hours. Without early diagnosis and appropriate treatment, I wouldn't be capable of maintaining my career."

## CSL Plasma

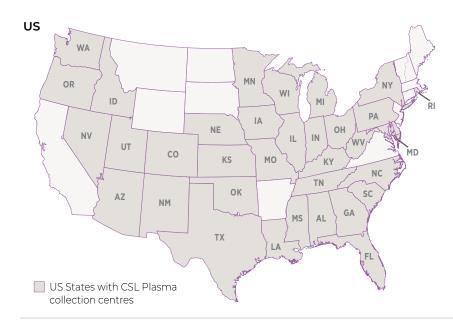
Since beginning its program of expansion in 2011, CSL Plasma, a division of CSL Behring, has grown to become one of the largest plasma collection networks in the world, providing human plasma to CSL Behring for the manufacture and distribution of plasma protein biotherapeutics. Its expanded laboratory and logistics operations have increased CSL Plasma's testing and storage capacity to meet the growing need for plasma-derived therapies.

CSI Plasma has over 200 collection. centres globally (US, Germany, and Hungary) with plasma testing laboratories and logistics centres in the US and Germany.

The Global and US headquarters of CSL Plasma is located in Boca Raton, Florida. with the European (EU) headquarters located in Marburg, Germany. Within the US and Germany, logistics centres are located in Indianapolis, Indiana (US), Mesquite, Texas (US) and Schwalmstadt, Germany, while the plasma testing laboratories are located in Knoxville, Tennessee (US) and Goettingen, Germany.

In a highly regulated industry, CSL Behring and CSL Plasma use the most sophisticated systems and continue to explore avenues of innovation.

For our donors, CSL Plasma has developed the most efficient processes and systems that focus on donor and plasma safety, along with donor satisfaction.



#### **GERMANY**

German cities with CSL Plasma collection centres



#### **HUNGARY**



**US HEADQUARTERS** Boca Raton, Florida **US TESTING LABORATORY** Knoxville, Tennessee

US LOGISTICS CENTRES Indianapolis, Indiana Mesquite, Texas

**EU HEADQUARTERS** Marburg, Germany **EU TESTING LABORATORY** Goettingen, Germany

**EU LOGISTICS CENTRE** Schwalmstadt, Germany



Left to right: Kansas City CSL Plasma employees Bruce Nevils. Kimberly Mangold and Cristina Ceniceros display just some of the items that were collected by Kansas City, Missouri, employees and donors to support Hurricane Harvey relief efforts.

In times of crisis, CSL Plasma employees step up to help and give unselfishly

Hurricane Harvey was a Category 4 storm that hit Texas, US, on 25 August, 2017. According to the US National Hurricane Center, it caused US\$125 billion in damage and affected 13 million people in multiple states, but none was hit harder than the state of Texas

CSL Plasma has multiple locations in Texas with many being in the path of the hurricane. Along with hundreds of local community members, our employees and donors, who lived in the particularly devastated areas of Houston and Port Arthur, relocated to local shelters or resided with family and friends to shield themselves from the devastating storms.

With many people experiencing significant personal loss due to inundating floods, CSL Plasma set up multiple giving campaigns to help impacted communities. The Adopt-a-Family Campaign enabled employees to donate urgent supplies for their peers and families. CSL Plasma also sent donation boxes to all US-located plasma centres, logistic centres, and corporate offices. Boxes full of non-perishable food items, clothing, nappies, toiletries and cleaning supplies were shipped to emergency intake facilities.

In addition to providing essential daily products, CSL Plasma employees and peers from other sites donated funds via local payroll deduction facilities or other workplace fundraising campaigns, raising US\$25,195.86 which was matched in full by CSL. Together with CSL's corporate donation of US\$150,000 to the Greater Houston United Way, a total of US\$200,391.72 was raised in support of hurricane relief efforts.

# Segirus

**PROFILE** 

## The 1918 Influenza Pandemic: 100 Years On

2018 marks the centenary of the 1918 influenza pandemic – a devastating, global public health tragedy that killed an estimated 50 million people worldwide. We reflect on CSL's role in the pandemic, the leading contributions it has made to the global influenza system since, and the critical work it is now undertaking through Seqirus to help protect the world from the catastrophic impact of future influenza pandemics.



Towards the end of World War I, a deadly form of influenza began to spread around the world and threatened Australian shores. The newly formed Commonwealth Serum Laboratories (CSL) swung into action, producing three million doses of a mixed bacterial vaccine to help protect the nation. The pandemic took the lives of 12,000 Australians, but the death toll could have been far worse. The experience left an indelible mark on CSL and the company has been on the front line of influenza protection ever since.

During the 1930s, influenza was found to be caused by a virus, and with World War II looming, the race began to develop a new vaccine. In 1942, CSL produced one million doses of the new virus vaccine using an egg-based method pioneered by the Australian virologist, Macfarlane Burnet. Seasonal production began thereafter, and in 1952, CSL was asked to assist the World Health Organization (WHO) with global surveillance of the ever-changing virus.

Regular production of influenza vaccine meant that CSL was in a constant state of pandemic readiness for Australia. This capability was tested with great effect during the Asian Flu Pandemic in 1957 and the Hong Kong Flu Pandemic in 1968/69. In 1973, CSL scientists began adapting influenza strains so they would grow better in eggs, boosting speed of production. In the early 1990s, our expertise was recognised as a WHO influenza collaborating centre.

In the mid-2000s, CSL expanded into Northern Hemisphere markets, with increased seasonal production further supporting pandemic vaccine capacity and our ability to support governments with preparedness plans. Around this time, the H5N1 virus – or 'Bird Flu' – emerged as a threat and CSL worked with countries to make vaccine stockpiles. It was in fact an H1N1 virus that caused the next pandemic, which was declared in 2009. Nonetheless, CSL was one of the first in the world to develop and roll-out a pandemic vaccine to global markets.

In 2015, CSL created Seqirus to continue its important work in seasonal influenza and pandemic response. Seqirus combines the influenza heritage and expertise of CSL with the innovative technologies and production facilities developed by Novartis. As a result, Seqirus is one of largest influenza vaccine companies in the world and a global leader in pandemic preparedness and response.

Seqirus has three state-of-the-art manufacturing facilities on three different continents, together with a global fill and finish network located close to our end markets. Our facility in the US, built in a partnership with the US Government, is particularly unique as it utilises cell-based technology for influenza vaccine production which has the potential for the rapid ramp up of pandemic vaccine production.

Each Seqirus facility provides pandemic preparedness to their host countries as well as other countries in their respective regions through reservation of capacity as well as stockpiling vaccine for those who would respond first in the event of a pandemic, such as healthcare workers. We have also incorporated a proprietary adjuvant, MF59, to our pandemic vaccines

produced in the US and the UK, which can help boost immune response as well as production output due to its dosesparing benefits.

While there have been significant advances in the global influenza system since the 1918 Pandemic, our interconnected world and population growth makes pandemic preparedness today just as critical, if not more so. Influenza vaccine plays a central role in pandemic response but the fact remains that if an influenza pandemic was declared today, demand for pandemic vaccine would vastly outstrip supply.

So what's needed? All countries should have robust pandemic preparedness plans in place that incorporate vaccines as well as other pandemic countermeasures. WHO is working to strengthen preparedness in low and middle income countries through the Pandemic Influenza Preparedness (PIP) Framework and Seqirus has committed 10% of our real-time production capacity to support this in the event of a pandemic.

While cell-based production and the use of adjuvants represent a significant step forwards in the production of

influenza vaccine, we need to continue to invest in new technologies that offer faster and broader responses. Seqirus continues to optimise these technologies while also working on other early stage opportunities such as synthetic seeds, novel antigens, innovative delivery devices and a universal vaccine.

Finally, one of the most powerful ways to build pandemic preparedness is to increase seasonal influenza vaccination around the world. Too many countries today continue to have either very poor seasonal influenza vaccine uptake or no programs at all. Increasing seasonal demand builds supply chains and throughput that can be quickly switched to pandemic production. It also builds vital in-country infrastructure as well as knowledge and skills that are needed for effective pandemic response.

Standing on the front line in the fight against influenza, Seqirus is committed to working with governments and public health partners to strengthen pandemic preparedness and response and protect the world from the potentially catastrophic impact of another pandemic.



Major Vaccines, **Pharmaceutical** and Diagnostic **Products Marketed** by Segirus

#### **SEASONAL INFLUENZA PRODUCTS**

Segirus markets a comprehensive portfolio of influenza products in various countries around the world:

Afluria®^ Trivalent influenza vaccine Afluria® Quadrivalent+ Ouadrivalent influenza vaccine Aggripal®# Trivalent influenza vaccine,

egg-based

Fluvirin® Trivalent influenza vaccine,

egg-based

Fluad® ~ Adjuvanted trivalent influenza

vaccine, egg-based

Quadrivalent influenza vaccine, Flucelvax® Quadrivalent

cell-based

Rapivab® Intravenous influenza antiviral

^ Also marketed as Enzira™, Fluvax™ and Nilgrip™ in various different markets

+ Also marketed as Afluria® Quad, Afluria® Tetra

# Also marketed as Begripal™, Fluazur™, Sandovac™, Agriflu™, Chiroflu™

~ Also marketed as Chiromas™, and Fluad Pediatric™

#### PRE-PANDEMIC INFLUENZA VACCINES

Foclivia® H5N1 influenza vaccine, egg-based Aflunov® H5N1 influenza vaccine, egg-based

#### **PANDEMIC VACCINES**

Panyax® & Panyax® Junior H1N1 influenza vaccine, egg-based Panvax® & Panvax® Junior H5N1 adjuvanted influenza vaccine,

egg-based

Celtura® H1N1 influenza vaccine, cell-based

#### **VACCINES & PHARMACEUTICALS**

Segirus also markets a broad range of vaccines and pharmaceuticals in both Australia and New Zealand:

Vaccines	Prevention of:
ADT™ Booster	Diphtheria and Tetanus
Dukoral™*	Cholera
Gardasil™*	Cervical cancer and genital warts
Gardasil™*9	Cervical cancer and genital warts
H-B-Vax <sup>TM*</sup> II	Hepatitis B infection
Jespect™*	Japanese encephalitis
M- $M$ - $R$ <sup>TM*<math>II</math></sup>	Measles, mumps and rubella
Pneumovax™* 23	Pneumococcal infection
ProQuad™*	Measles, mumps, rubella and varicella
RotaTeq™*	Rotavirus-induced gastroenteritis
Vaqta™*	Hepatitis A infection
Varivax™*	Varicella
Vivotif™ Oral*	Typhoid infection
Zostavax™*	Shingles and post herpetic neuralgia
Pharmaceuticals	For the treatment of:

Acarizax<sup>TM\*</sup> Allergic rhinitis and allergic asthma BenPen™ Bacterial infections Caldolor™\* Pain and fever

Grazax™\* Grass pollen allergy Post herpetic neuralgia Nervoderm™\*

Palexia™\* Moderate to severe chronic pain

Tramal™\* Moderate to severe pain Versatis™\* Post herpetic neuralgia Tetrabenazine™\* Movement disorders

Additional products are also marketed in New Zealand only, details of which can be found at Segirus.co.nz.

#### PRODUCTS OF NATIONAL SIGNIFICANCE

Segirus manufactures and distributes a range of uniquely Australian products in the national interest under contract with the Commonwealth Department of Health.

#### **Antivenoms**

For treatment of envenomation from land snakes:

- Black snake antivenom
- Brown snake antivenom
- Death adder antivenom
- Taipan antivenom
- Tiger snake antivenom
- Polyvalent antivenom

For the treatment of envenomation from spiders:

- Funnel web spider antivenom
- Red back spider antivenom

For the treatment of envenomation from marine animals:

- Box jellyfish antivenom
- Sea Snake antivenom
- Stone fish antivenom

#### Diagnostic product

- Snake Venom Detection Products (used to detect venom in snakebite victims and indicate the appropriate monovalent antivenom for treatment)

#### Vaccines

- Q-Vax® for the prevention of Q fever
- Q-Vax® Skin Test for the detection of Q fever antibodies

#### **TRADEMARKS**

- Registered trademark of CSL Limited or its affiliates.
- \* Trademarks of companies other than CSL and referred to on this page are property of their respective owners as listed below.

ALK-Abelló A/S – Acarizax, Grazax

Cumberland Pharmaceuticals Inc. - Caldolor

Grunenthal GmbH - Tramal, Palexia, Versatis, Nervoderm

iNova Pharmaceuticals (Australia) Pty Ltd - Tetrabenazine

Merck & Co. Inc. - Gardasil, Gardasil 9, H-B-Vax II, M-M-R II, Pneumovax, ProQuad, RotaTeq, Vaqta, Varivax, Zostavax

PaxVax Vera GmbH - Vivotif Oral

Valneva Inc - Jespect, Dukoral

Sandoz - Sandovac

# Research and Development

**PROFILE** 

Seeking to Reduce Early Recurrent Cardiovascular Events in Heart **Attack Survivors** 

Cardiovascular disease (CVD) is the leading cause of death globally, claiming 17.7 million lives or an estimated 31% of all deaths. worldwide (World Health Organization CVDs - Fact Sheet, 2017), Heart attacks and strokes result in 80% of all CVD deaths. Nearly one in five survivors of acute myocardial infarction (MI), or heart attack, will experience a recurrent cardiovascular event (non-fatal MI, stroke, cardiovascular death) within one year of the initial event. The majority of these recurrent events happen within 90 days and are associated with a high rate of morbidity and mortality.

Early recurrent cardiovascular events are commonly caused by the rupture or erosion of cholesterol-rich plaque in the arteries resulting in the obstruction of blood flow. Cholesterol is known to be removed from the lipid-rich atherosclerotic plaque and transported to the liver for elimination from the body by the action of apolipoprotein A-I (apoA-I), the primary functional component of high-density lipoprotein (HDL). CSL112 is a novel formulation of apoA-I and may offer a new approach for rapidly stabilising atherosclerotic lesions through the rapid enhancement of cholesterol efflux capacity. It is derived from human plasma collected by our extensive plasma collection network and comprises apoA-1 reconstituted with phosphatidylcholine to form HDL particles suitable for infusion.

In March 2018. CSL announced the first patient enrollment in a Phase 3 clinical trial to evaluate the efficacy and safety of CSL112 in reducing the risk of major CV events in patients with acute coronary syndrome (ACS). Prior research has shown that CSL112 can produce an immediate and significant enhancement in cholesterol efflux capacity, a measurement of the body's ability to remove excess cholesterol from cells. CSL112 is the only apoA-I therapy to proceed to a large-scale Phase 3 cardiovascular clinical trial.

Results from the previous Phase 2b AEGIS-I study (ApoA-I Event reducinG in Ischemic **S**yndromes I) demonstrated that primary safety endpoints were met as CSL112 did not cause significant changes in liver or kidney function and was well tolerated when administered to patients who had experienced a heart attack. The study also confirmed CSL112's mechanism of action, cholesterol efflux enhancement, as demonstrated by an immediate increase in cholesterol efflux capacity approximately four-fold compared to baseline. An additional Phase 2 trial demonstrated the renal safety of CSL112 in patients with moderate renal impairment who experienced a heart attack.

The AEGIS-II Phase 3 study represents an exciting and unique opportunity for CSL. The double-blind, randomised, placebocontrolled, parallel group study will enrol over 17.000 patients from approximately 1,000 sites in 40 countries around the world, making it the largest Phase 3 trial in CSL's history. The trial is the final research step to evaluate whether our novel apoA-I infusion therapy reduces cardiovascular events in high-risk patients during the critical 90 days following a heart attack. Patients will be randomised in a 1:1 ratio and will receive either CSL112 or placebo, administered through IV infusion once weekly for four consecutive weeks. The primary endpoint is the first occurrence of major adverse cardiovascular events (MACE) within 90 days from the time of randomisation. Patients will continue to be followed for one vear.

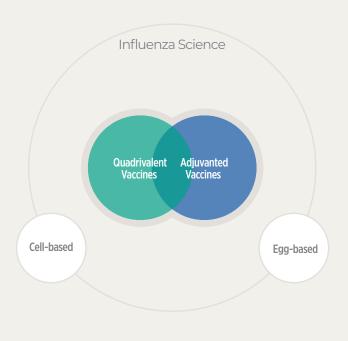
The AEGIS-II trial is being conducted under the academic leadership of the PERFUSE Group at Beth Israel Deaconess Medical Center, the Duke Clinical Research Institute. and the Stanford Cardiovascular Institute and is expected to take around four years to complete. If successful, CSL112 will be a transformative growth driver for CSL and has the potential to address one of the world's most prevalent and devastating diseases.



Depiction of particles of CSL112, an investigational intravenous formulation of human apoA-I.

# Research and Development Strategy





#### **Immunoglobulins**

Plasma-derived products such as HIZENTRA® and PRIVIGEN® and novel recombinant Fc multimer proteins to treat autoimmune diseases.

**Direction:** Maintain leadership position through focussing on improved patient convenience, yield improvements, new indications, new formulation science and specialty immunoglobulins.

#### Breakthrough Medicines

Innovative protein-based therapies including novel monoclonal antibodies such as anti-factor XIIa (CSL312), a novel plasma-derived apolipoprotein A-1 infusion therapy (CSL112) and a new stem cell gene therapy (CAL-H) for the treatment of sickle cell disease.

**Direction:** Leverage clinical and technical insight in developing novel proteinand gene-based therapies for significant unmet medical needs and multiple indications.

### Haemophilia Products

Plasma-derived products such as HAEMATE P® and VONCENTO® and recombinant coagulation factors such as IDELVION® and AFSTYLA®.

Direction: Support and enhance plasma products and develop a novel recombinant portfolio with a focus on scientific and product innovation and patient benefit.

## Specialty Products

Plasma-derived products for the treatment of hereditary angioedema (HAE) such as HAEGARDA® and for acquired and perioperative bleeding including KCENTRA®. BERIPLEX® and ZEMAIRA®.

**Direction:** Leverage our high quality, broad specialty plasma products portfolio through new markets, novel indications and new modes of administration.

## Transplant

Plasma derived products such as C1 Esterase Inhibitor (BERINERT®) and Alpha1 antitrypsin (ZEMAIRA®) and an anti-IL6 monoclonal antibody (clazakizumab) as a therapeutic option for solid organ transplant rejection.

Direction: Develop CSL and other novel therapies with the potential to improve transplant outcomes.

#### Vaccines

Quadrivalent egg or cellculture derived influenza vaccines such as AFLURIA® and FLUCELVAX QUAD®.

**Direction:** Support improving the effectiveness of current influenza vaccines and manufacturing processes, while exploring early stage opportunities in novel formulations and alternate delivery technologies.

# Research and Development Pipeline

#### **CORE CAPABILITIES**

Immunoglobulins

Haemophilia/Coagulation

Specialty Products

Breakthrough Medicines

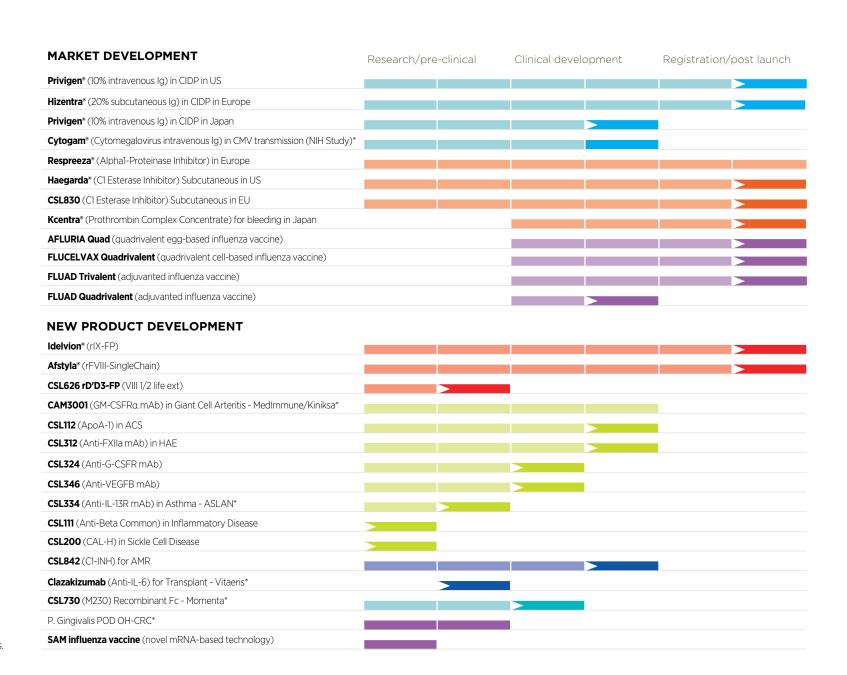
Transplant

Vaccines and Licensing

Important advances in 2017-18

\* Partnered projects

CSL's R&D pipeline also includes Life Cycle Management projects which address regulatory post marketing commitments, pathogen safety, capacity expansions, yield improvements and new packages and sizes.



# On the Front Line of Influenza Protection

One of the big challenges in influenza vaccine production is the requirement to make a new vaccine twice a year – once for the Northern Hemisphere (NH) winter and again for the Southern Hemisphere (SH) winter. This is needed because the influenza virus mutates as it infects humans and can vary between NH and SH seasons. The change in strain of virus can have quite a profound influence on the process of vaccine production. The Segirus R&D group provides support to ensure the conditions are optimised for efficient manufacture of the vaccine. Segirus' R&D activities also focus on improving the effectiveness of current influenza vaccines and manufacturing processes. The portfolio is divided into quadrivalent (four strain) vaccines made in either eggs or cell culture, and enhanced vaccines for elderly and children. At the same time, we continue to explore early stage opportunities in novel formulations and alternate delivery technologies.

#### QUADRIVALENT INFLUENZA VACCINE

In the recent US influenza season (over the winter of 2017/18), the H3N2 virus was the predominant strain circulating in the US and an important cause of illness and deaths related to influenza infection. For the first time, a cell-derived candidate vaccine virus (CVV) was included in FLUCELVAX QUAD, our vaccine made in cell culture, for the H3N2 strain. A potential benefit of using a cell-derived CVV rather than the more traditional egg-derived approach is that it may be a better match to the virus circulating in the community in some seasons. Preliminary data from the US suggests that FLUCELVAX QUAD was in fact more effective than egg-derived vaccines last season, with further data expected to be available in the latter part of 2018. This is an exciting development and next NH season three of the four strains in FLUCELVAX OUAD will be derived from a cell-based CVV. The promise of FLUCELVAX is reflected in our regulatory submission activity to licence it around the world and in our ongoing trials to support the age expansion of FLUCELVAX OUAD down to six months of age. Furthermore, to meet expected volume

demands, we successfully completed work on changes to the cell culture manufacturing process that will support efficiency and capacity improvements at the plant in Holly Spring, US.

Over the past year we have made good progress in further licencing AFLURIA QUAD, made in eggs at the Parkville site. It was approved in the US, Canada and Australia for children 5 to 17 years of age to add to the previous approvals for adults 18 years and older. The data underpinning these approvals demonstrated that the manufacturing changes implemented after investigation of the causes of the vaccineinduced fevers related to AFLURIA in 2010 have successfully resolved that issue. In addition, submission for approval in children six months to four years inclusive was made in the US and Australia, with approval expected later in 2018. Submissions to other countries have either been made or are under review to support our geographical expansion plans. Egg-based manufacture will continue to be important in years to come to ensure sufficient global supply of influenza vaccines is maintained while newer technologies continue to evolve.

## **ENHANCED INFLUENZA VACCINE FOR** THE ELDERLY AND CHILDREN

Demand for a more effective vaccine after the recent severe influenza seasons in both the NH and SH have resulted in strong demand for FLUAD for people at particular risk, specifically people 65 years of age and older and young children. This vaccine combines seasonal strains with MF59, our proprietary adjuvant (immune stimulant) to boost the normally weak immune response in these groups. Of note, the National Health Service in the UK recommended FLUAD as the preferred influenza vaccine for people 65 years and older next NH season, while in Australia FLUAD is one of two recommended vaccines in this age group for the 2018 season. Key clinical trials are underway to support the transition of FLUAD to a quadrivalent formulation for older adults and results from a pivotal study of FLUAD QUADRVALENT in the paediatric population were published in the prestigious journal Lancet Respiratory Medicine.

# **Board of Directors**



John Shine AC

Independent: Yes

Chairman BSc (Hons), PhD, DSc, FAA, FRCPA, FAHMS Age 72 Pharmaceutical Industry and Medicine (resident in New South Wales, Australia)

Professor John Shine AC was appointed to the CSL Board in June 2006 and became Chairman in October 2011. He is Professor of Molecular Biology and Professor of Medicine at the University of NSW, and a director of many scientific research and medical bodies throughout Australia. Professor Shine was Executive Director of the Garvan Institute of Medical Research from 1990 to 2012. He was also formerly President of the Museum of Applied Arts and Science (Powerhouse Museum and Sydney Observatory) and Chairman of the National Health and Medical Research Council and a Member of the Prime Minister's Science. Engineering and Innovation Council. Professor Shine was awarded the 2010 Prime Minister's Prize for Science and, in 2017, a Companion of the Order of Australia (AC).

Professor Shine is Chairman of the Nomination Committee and Chairman of the Innovation and Development Committee.



Paul Perreault
Chief Executive Officer

and Managing Director
BA (Psychology)
Age 61

Mr Paul Perreault was appointed to the CSL Board in February 2013 and was appointed as the Chief Executive Officer and Managing Director in July 2013. He joined a CSL predecessor company in 1997 and has held senior roles in sales. marketing and operations with his most recent prior position being President, CSL Behring, Mr Perreault has also worked in senior leadership roles with Wyeth, Centeon. Aventis Bioservices and Aventis Behring. He was previously Chairman of the Global Board for the Plasma Protein Therapeutics Association, Mr Perreault has had more than 30 years' experience in the global healthcare industry.



David Anstice AO

BEc Age 70 International Pharmaceutical Industry (resident in Pennsylvania, US) Independent: Yes

Mr David Anstice AO was appointed to the CSL Board in September 2008. He was a long-time Member of the Board of Directors and Executive Committee of the US Biotechnology Industry Organization, and has 50 years' experience in the global pharmaceutical industry. Until his retirement in August 2008. Mr Anstice was for many years a senior executive of Merck & Co., Inc., serving at various times as President of Human Health for US. Canada, Latin America, Europe and Asia. and at retirement was an Executive Vice President. He is a Director of Alkermes plc. Dublin, Ireland, and a Director of the United States Studies Centre at the University of Sydney. In 2018, Mr Anstice was made an officer of the Order of Australia (AO).

Mr Anstice is Chairman of the Innovation and Development Committee and the Nomination Committee



**Bruce Brook** 

BCom, BAcc, FCA, MAICD Age 63 Finance and Management (resident in Victoria, Australia) Independent: Yes

Mr Bruce Brook was appointed to the CSL Board in August 2011. He is currently a Director of Newmont Mining Corporation. Mr Brook has previously been Chairman of Programmed Maintenance Services Limited and Energy Developments Limited and a Director of Boart Longyear Limited, Lihir Gold Limited and Consolidated Minerals Limited. During his executive career, he was Chief Financial Officer of WMC Resources Limited and prior to that the Deputy Chief Financial Officer of the ANZ Banking Group.

Mr Brook is Chairman of the Audit and Risk Management Committee and a member of the Nomination Committee.



Megan Clark AC

BSc (Hons) PhD Age 60 Science, Engineering and Management (resident in Victoria, Australia) Independent: Yes

Dr Megan Clark AC was appointed to the CSL Board in February 2016. She is currently a Director of Rio Tinto and Care Australia and a Member of the Australian advisory board of the Bank of America Merrill Lynch. Dr Clark was Chief Executive of the Commonwealth Scientific and Industrial Research Organisation (CSIRO) from 2009 to 2014. Prior to CSIRO, she was a Director at NM Rothschild and Sons (Australia) and was Vice President Technology and subsequently Vice President Health, Safety and Environment at BHP Billiton from 2003 to 2008.

Dr Clark is a member of the Innovation and Development Committee, the Human Resources and Remuneration Committee and the Nomination Committee.



Abbas Hussain

BSc (Hons) Age 53 Pharmaceutical Industry (resident in the UK) Independent: Yes

Mr Abbas Hussain was appointed to the CSL Board in February 2018. He is currently a Director of Immunocore Limited. Mr Hussain has previously been Global President, Pharmaceutical at GlaxoSmithKline (GSK) and a Director of ViiV Healthcare Limited, as well as previously serving on the Board of Aspen Healthcare and the Duke/National University of Singapore Medical School.

Mr Hussain is a member of the Innovation and Development Committee, the Human Resources and Remuneration Committee and the Nomination Committee.



Marie McDonald

BSc (Hons), LLB (Hons) Age 62 (resident in Victoria, Australia) Independent: Yes

Ms Marie McDonald was appointed to the CSL Board in August 2013. For many vears she practised in company and commercial law and she was a partner of Ashurst (formerly Blake Dawson) until July 2014. Ms McDonald is currently a Director of Nanosonics Limited, Nufarm Limited and the Walter and Fliza Hall Institute of Medical Research. She was Chair of the Corporations Committee of the Business Law Section of the Law Council of Australia from 2012 to 2013. having previously been the Deputy Chair. and was also a Member of the Australian Takeovers Panel from 2001 to 2010.

Ms McDonald is a member of the Audit and Risk Management Committee, the Human Resources and Remuneration Committee and the Nomination Committee



**Brian McNamee AO** 

MBBS, FAICD, FTSE Aae 61 Pharmaceutical Industry and Medicine (resident in Victoria, Australia) Independent: Yes

Dr Brian McNamee was appointed to the CSL Board in February 2018. He was Chief Executive Officer and Managing Director of CSI from 1990 until his retirement in 2013. Since leaving his executive role at CSL. Dr McNamee has served as an advisor to private equity group Kohlberg Kravis Roberts (KKR). He has also pursued a number of private start-up and company-making activities, and in 2014 served on the panel of the Australian Government's Financial System Inquiry. In 2009. Dr McNamee received the Office of the Order of Australia (AO) for service to business and commerce.

Dr McNamee is a member of the Innovation and Development Committee and the Nomination Committee



**Christine O'Reilly** 

BBus Age 57 Finance and Infrastructure (resident in Victoria, Australia) Independent: Yes

Ms Christine O'Reilly was appointed to the CSL Board in February 2011. She is a Director of Transurban, Energy Australia. Medibank Private Limited and Baker Heart & Diabetes Institute. Ms O'Reilly has in excess of 30 years financial and operational business experience in domestic and off-shore organisations. During her executive career, she was Co-Head of Unlisted Infrastructure Investments at Colonial First State Global Asset Management and prior to that was the Chief Executive Officer of the GasNet Australia Group.

Ms O'Reilly is a member of the Audit and Risk Management Committee, the Human Resources and Remuneration Committee. and the Nomination Committee.



Tadataka "Tachi" Yamada KBF

MD BA Age 73 International Pharmaceutical Industry and Medicine (resident in Washington, US) Independent: Yes

Dr Tadataka Yamada was appointed to the CSL Board in September 2016. He is presently a Venture Partner at Frazier Healthcare Partners, a leading provider of growth capital to healthcare companies, a position that he has held since 2015. Prior to this, he was the Chief Medical and Scientific Officer at Takeda Pharmaceuticals as well as a Member of the Board. Prior to Takeda. Dr Yamada was President of the Bill & Melinda Gates Foundation Global Health Program and prior to that was Chairman of Research and Development at GlaxoSmithKline. He currently serves as a Director of Agilent Technologies, Inc. and as Chairman of the Clinton Health Access Initiative. Dr Yamada is also a Member of the National Academy of Medicine (US), Fellow of the Academy of Medical Sciences (UK), Member of the American Academy of Arts and Sciences. Fellow of the Imperial College of Medicine and Master of the American College of Physicians.

Dr Yamada is a member of the Innovation and Development Committee and the Nomination Committee.



Fiona Mead Company Secretary BBA/LLB, BA/BCom (resident in Victoria, Australia)

# **Global Leadership Group**



Paul Perreault

BA (Psychology)

Age 61

# Chief Executive Officer and Managing Director

Paul was appointed to the CSL Board in February 2013 and was appointed as the Chief Executive Officer and Managing Director in July 2013. He joined a CSL predecessor company in 1997 and has held senior roles in sales, marketing and operations with his most recent prior position being President, CSL Behring. Paul has also worked in senior leadership roles with Wyeth, Centeon, Aventis Bioservices and Aventis Behring. He was previously Chairman of the Global Board for the Plasma Protein Therapeutics Association Paul has had more than 30. vears' experience in the global healthcare industry.



David Lamont

BCom, ACA

Age 53

#### **Chief Financial Officer**

David was appointed as Chief Financial Officer in January 2016. As Chief Financial Officer, he is responsible for managing the financial aspects of CSL's strategy which includes financial planning and reporting. capital management, tax, treasury and investor relations. Immediately prior to joining CSL, he was the Chief Financial Officer and an Executive Director at MMG since 2010. Prior to this. David served as CFO for several leading multi-national public companies across a range of industries since 1999 - including MMG Limited, Oz Minerals Limited, PaperlinX Limited, BHP Billiton's energy and coal and carbon steel materials divisions, and Incitec Pivot Limited. He is a qualified chartered accountant and a member of the Institute of Chartered Accountants (Australia).



Gordon Naylor

BEng (Hons), DipCompSc, MBA, CPA Age 55

### President, Seqirus

Gordon joined CSL in 1987 and has held many operational and corporate roles in different parts of the CSL Group. He was appointed Chief Financial Officer in 2010. In April 2015, Gordon was appointed to a new position as President of CSL's global influenza business. Previously, Gordon was based in the US and responsible for CSL Behring's global supply chain, the supply of plasma for CSL Behring and CSL's global information systems.



**Andrew Cuthbertson AO** 

BMedSci, MBBS, PhD, FTSE, FAHMS Age 63

#### Chief Scientific Officer and R&D Director

Andrew was appointed as Chief Scientific Officer and R&D Director in 2000. He is responsible for CSL's global research and development operations. Andrew joined CSL in 1997 as Director of Research. He trained in medicine and science at the University of Melbourne, the Walter and Eliza Hall Institute, the Howard Florey Institute and the National Institutes of Health in the US. Andrew was then a Senior Scientist at Genentech, Inc. in San Francisco. In 2016, Andrew was made an Officer of the Order of Australia (AO) and appointed Enterprise Professor at the University of Melbourne.



Greg Boss

JD, BS (Hon) Age 57

# Executive Vice President, Legal and CSL Group General Counsel

Greg was appointed Group General Counsel in 2009 and is responsible for worldwide legal operations for all CSL Group companies. He joined CSL in 2001, serving as General Counsel for what became the CSL Behring business. In addition to his legal role, Greg is also responsible for overseeing risk management and compliance for the Group as well as global communications and public affairs. Prior to joining CSL, Greg was Vice President and Senior Counsel for CB Richard Ellis International after working ten years in private legal practice. In 2016, Greg received the World Recognition of Distinguished General Counsel from the Directors Roundtable.



Karen Etchberger PhD

Age 60

### **Executive Vice President, Ouality and Business Services**

Karen was appointed as Executive Vice President, Quality and Business Services in April 2013 with responsibility for quality, information, technology, logistics, sourcing, enterprise excellence and environment, health and safety. Prior to that, she was Executive Vice President, Plasma, Supply Chain and Information Technology. Karen joined CSL as a Product Manager at JRH Biosciences in 1991 and progressed through a number of positions in technical services, quality management and research and development. Prior to joining CSL, she was Director of Developmental Research at Endotech Corporation.



**Bill Campbell** BSc (Business Administration) Age 59

#### Executive Vice President, Chief Commercial Officer

Bill was appointed in September 2017 as Executive Vice President. Chief Commercial Officer. He has responsibility for a variety of global functions including sales, marketing, commercial development, medical affairs and public policy. Prior to being appointed to his current role. Bill led CSL Behring's North American commercial operations since 2014. He has more than 35 years of diverse pharmaceutical and biotechnology experience across a range of therapeutic areas, including oncology, women's health, vaccines and plasma proteins. Bill has held senior management positions at a number of pharmaceutical and biotechnology companies. He is a member of the Board of Directors for the Biotechnology Innovation Organization (BIO).

## **Bob Repella**

BSc (Pharmacy), MBA Age 59

Executive Vice President, Global Commercial Operations (until 31 August 2017)



Elizabeth Walker

BA, MS (Organizational Development and Leadership) Age 48

#### Executive Vice President. Chief Human Resources Officer

Elizabeth Walker was appointed as Chief Human Resources Officer in December 2017. She joined CSL Behring as Chief Talent Officer in 2016 and served as interim Chief Human Resources Officer from October 2017. Prior to joining CSL, Elizabeth was Vice President Global Talent Management at Campbell Soup Company. She has more than 25 years of experience in both management consulting and human resources. Elizabeth has worked across a variety of industries, including healthcare, financial services and food manufacturing.

#### Laurie Reed

BS (Finance), MS (Organizational Development) Age 54

Senior Vice President, Human Resources (until 30 November 2017)



Val Romberg

BSc (Chemistry) Age 60

### Executive Vice President, Manufacturing and Planning

Val was appointed as Executive Vice President Manufacturing and Planning in January 2015. In 1998 he joined Centeon, a predecessor company of CSL Behring, and has held a broad range of management and R&D positions in the US and Switzerland. During his R&D tenure, CSL Behring had more than 25 product or indication approvals in the US, Europe and Japan. Prior to his current position. Val was Senior Vice President. Global Plasma R&D



Alan Wills BA (Zoology), MBA Age 54

#### **Executive Vice President, Strategy** and Business Development

Alan joined the company in February 2015. He is responsible for strategy. portfolio management and business development activities at CSL. Prior to ioining CSL. Alan was Executive Vice President, Corporate Development at Auxilium Pharmaceuticals. He was previously head of corporate strategy for Bristol-Myers Squibb and Pfizer, and has worked in strategy and business development roles at United Healthcare and Stanford Medical Center. Alan began his career with the Boston Consulting Group.

# **Share Information**

#### **CSL LIMITED**

**Issued Capital Ordinary Shares:** 452,400,784 as at 30 June 2018

#### **DETAILS OF INCORPORATION**

CSI's activities were carried on within the Commonwealth Department of Health until the Commonwealth Serum Laboratories Commission was formed as a statutory corporation under the Commonwealth Serum Laboratories Act 1961 (Cth) [the CSL Act] on 2 November 1961. On 1 April 1991, the Corporation was converted to a public company limited by shares under the Corporations Law of the Australian Capital Territory and it was renamed Commonwealth

Commonwealth Serum Laboratories (Conversion into Public Company) Act 1990 (Cth). On 7 October 1991, the name was changed to CSL Limited. The Commonwealth divested all of its shares by public float on 3 June 1994.

changes were brought into effect by the

Serum Laboratories Limited These

The CSL Sale Act 1993 (Cth) amends the CSL Act to impose certain restrictions on the voting rights of persons having significant foreign shareholdings, and certain restrictions on CSL itself. CSL ordinary shares have been traded on the Australian Securities Exchange (ASX) since 30 May 1994. Melbourne is the Home Exchange.

In June 2014, CSL commenced a sponsored Level 1 American Depository Receipts (ADR) program with the Bank of New York Mellon. The sponsored ADR program replaced the unsponsored ADR programs that have previously operated with CSL's involvement.

The ADRs are tradeable via licensed US brokers in the ordinary course of trading in the Over-The-Counter (OTC) market in the US. Particulars for the sponsored ADR program are: US Exchange - OTC and DR Ticker Symbol - CSLLY.

#### SUBSTANTIAL SHAREHOLDERS

As at 30 June 2018, the Commonwealth Bank of Australia and its subsidiaries and BlackRock Inc and its subsidiaries were substantial shareholders in CSI

#### **VOTING RIGHTS**

At a general meeting, subject to restrictions imposed on significant foreign shareholdings and some other minor exceptions, on a show of hands each shareholder present has one vote. On a poll, each shareholder present has one vote for each fully paid share held in person or by proxy.

In accordance with the CSL Act, CSL's Constitution provides that the votes attaching to significant foreign shareholdings are not to be counted when they pertain to the appointment, removal or replacement of more than one-third of the directors of CSL who hold office at any particular time. A significant foreign shareholding is one where a foreign person has a relevant interest in 5% or more of CSL's voting shares

#### DISTRIBUTION OF SHAREHOLDINGS AS AT 30 JUNE 2018

Range	Total Holders	Units	% of Issued Capital
1-1,000	125,091	32,587,599	7.20
1,001 - 5,000	22,989	52,970,483	11.71
5,001 - 10,000	3,768	25,947,095	5.74
10,001 - 100,000	1,578	28,504,158	6.30
100,001 and over	57	312,391,449	69.05
Total shareholders and shares on issue	153,483	452,400,784	100.00

Unmarketable Parcels	Minimum Parcel Size	Holders	Units
Minimum A\$500.00 parcel at A\$192.62 per unit	3	422	506

# **Shareholder Information**

CSL's share registry is overseen by Computershare. Shareholders with enquiries should go to investorcentre com where most common questions can be answered by virtual agent "Penny". There is an option to contact the share registry by email if the virtual agent cannot provide the answer. Alternatively, shareholders may telephone or write to Computershare at the below address.

Separate shareholdings may be consolidated by advising the Share Registry in writing or by completing a Request to Consolidate Holdings form which can be found online at investorcentre com

Change of address should be notified to the Share Registry online via the Investor Centre at investorcentre.com. by telephone or in writing without delay. Shareholders who are broker sponsored on the CHESS sub-register must notify their sponsoring broker of a change of address

Direct payment of dividends into a nominated account is mandatory for shareholders with a registered address in Australia or New Zealand. All shareholders are encouraged to use this option by providing a payment instruction online via investorcentre.com or by obtaining a direct credit form from the share registry or by advising the share registry in writing.

CSL now offers shareholders the opportunity to receive dividend payments in US dollars by direct credit to a US bank account. Shareholders who wish to avail themselves of this payment option for the 2018 final dividend payment must provide their valid US

bank account details to Computershare by the dividend record date of 12 September 2018.

The Annual Report is produced for your information. The default option is an online Annual Report via CSL.com. If you opted to continue to receive a printed copy and you receive more than one or you wish to be removed from the mailing list for the Annual Report, please advise the Share Registry. You will continue to receive Notices of Meeting and Proxy forms.

The Annual General Meeting will be held at the Clarendon Auditorium, Melbourne Convention and Exhibition Centre (MCEC), South Wharf, Melbourne, at 1pm on Wednesday, 17 October 2018. Clarendon Auditorium is easily accessible from the Clarendon Street entrance. For transport and parking directions to the venue please visit MCEC.com.au/visit/ visit-information#getting-here.

#### **Share Registry**

COMPUTERSHARE INVESTOR SERVICES PTY LIMITED Yarra Falls, 452 Johnston Street Abbotsford VIC 3067

#### Postal Address:

GPO Box 2975 Melbourne VIC 3001

Enquiries within Australia:

1800 646 882

Enquiries outside Australia:

+61 3 9415 4178

Investor enquiries online:

investorcentre.com/contact

Website:

investorcentre.com

#### SHAREHOLDERS AS AT 30 JUNE 2018

	Shareholders	Shares
Australian Capital Territory	2,359	2,123,153
New South Wales	45,035	220,313,591
Northern Territory	337	278,406
Queensland	17,860	15,267,983
South Australia	7,538	8,854,473
Tasmania	1,613	1,397,955
Victoria	47,670	187,339,836
Western Australia	22,688	11,050,561
International Shareholders	8,383	5,774,826
Total Shareholders and Shares on Issue	153,483	452,400,784

## **Shareholder Information continued**

## CSL'S TWENTY LARGEST SHAREHOLDERS AS AT 30 JUNE 2018

Share	holder	Shares	% Total Shares		
1	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED	158,397,785	35.01		
2	JP MORGAN NOMINEES AUSTRALIA LIMITED	75,529,611	16.70		
3	CITICORP NOMINEES PTY LIMITED	24,333,586	5.38 3.11 1.53		
4	NATIONAL NOMINEES LIMITED	14,053,197			
5	BNP PARIBAS NOMINEES PTY LTD	6,926,925			
6	BNP PARIBAS NOMS PTY LTD	5,607,094	1.24		
7	CITICORP NOMINEES PTY LIMITED	5,233,200	1.16		
8	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED	2,284,510	0.50		
9	AUSTRALIAN FOUNDATION INVESTMENT COMPANY LIMITED	1,761,000	0.39		
10	AMP LIFE LIMITED	1,518,137	0.34		
11	CUSTODIAL SERVICES LIMITED	1,288,748	0.28		
12	NATIONAL NOMINEES LIMITED	1,262,499	0.28		
13	ARGO INVESTMENTS LIMITED	1,113,370	0.25		
14	NETWEALTH INVESTMENTS LIMITED	892,507	0.20		
15	DWS NOMINEES PTY LTD	793,090	0.18		
16	NAVIGATOR AUSTRALIA LTD	705,836	0.16		
17	MILTON CORPORATION LIMITED	592,198	0.13		
18	MUTUAL TRUST PTY LTD	588,146	0.13		
19	FORSYTH BARR CUSTODIANS LTD	568,561	0.13		
20	DIVERSIFIED UNITED INVESTMENT LTD	565,000	0.12		
	Top 20 holders of ordinary fully paid shares	304,015,000	67.20		
	Remaining holders balance	148,385,784	32.80		
	Total shares on issue	452,400,784	100.00		
	In addition, as at 30 June 2018, a substantial shareholder notice has been received from:				
	Commonwealth Bank of Australia and its subsidiaries and BlackRock Inc and its subsidiaries				

# Corporate Governance at CSL

CSL Limited's Board and management team maintain high standards of corporate governance as part of the Company's commitment to maximise shareholder value. This is achieved through promoting effective strategic planning, risk management, transparency and corporate responsibility.

## CSL'S CORPORATE GOVERNANCE **STATEMENT**

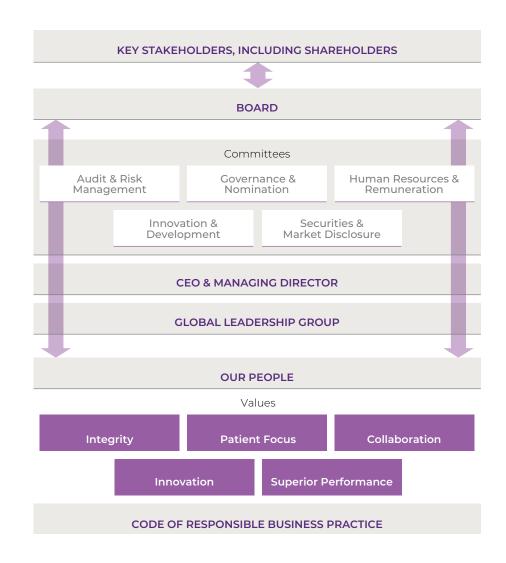
A detailed statement outlining CSL's principal corporate governance practices in place during the financial year ended 30 June 2018 can be found at CSL.com. This statement has been approved by the Board.

#### **GOVERNANCE STRUCTURE**

The Board has a formal charter documenting its membership, operating procedures and the allocation of responsibilities between the Board and management.

The Board is responsible for oversight of the management of CSL and providing strategic direction. It monitors operational and financial performance, human resources policies and practices and approves CSL's budgets and business plans. It is also responsible for overseeing CSL's risk management, financial reporting and compliance framework.

The Board has delegated the dayto-day management of CSL, and the implementation of approved business plans and strategies, to the Managing Director, who in turn may further delegate to senior management.



Robust processes are in place to ensure the delegation flows through the Board and its committees to the CEO and Managing Director, the Global Leadership Group (GLG) and into the organisation. The CEO and GLG have responsibility for the day-today management of the Group. CSL's Code of Responsible Business Practice underpins the Company's approach to corporate governance. It defines CSL's Values and purpose and fosters a culture that rewards high ethical standards, personal and corporate integrity and respect for others.

#### **CSL BOARD**

Throughout the year there were between nine and ten directors on the Board. As at the date of this report, there were ten directors on the Board, comprising nine independent, non-executive Directors and the CEO and Managing Director. Two new directors, Mr Abbas Hussain and Dr Brian McNamee AO, were appointed to the Board and one director, Mr Maurice Renshaw, retired from the Board during the financial year. Professor John Shine AC, Mr Bruce Brook and Ms Christine O'Reilly were re-elected as directors at the 2017 Annual General Meeting.

#### Governance at CSL continued

On 13 December, CSL announced that once elected following the close of the 2018 AGM, Dr Brian McNamee AO would assume the position of Chairman of the Board of Directors and Professor John Shine will retire from the CSL Board.

Details of the directors, including their qualifications and experience, together with details of their length of service, can be found on pages 36 and 37 of this report.

#### SHAREHOLDER ENGAGEMENT

CSL regards stakeholder engagement as a foundation of good corporate governance. Engagement with shareholders in a two-way dialogue ensures the Company understands expectations and can respond to various interests and concerns. CSL strives to establish appropriate channels to engage with shareholders and ensure they can voice their perspective.

The Company's more formal and structured engagement opportunities over the 2017/18 reporting period include:

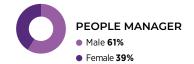
Event	Purpose	Led by	Location
Full-year (Aug 2017) and half-year (Feb 2018) results (includes webcast and teleconference with questions and answers)	Share performance against strategy, outlook, organisational activities and milestones	CEO & Managing Director	Melbourne, Australia
Investor roadshows (biannual)	Update shareholders with significant holdings on results or other key announcements  We also engage with other capital providers; for example, through meetings with debt investors	CEO & Managing Director	Sydney and Melbourne, Australia; Asia; Europe; North America
CSL Annual General Meeting (Oct 2017) (includes webcast and face-to-face questions and answers)	Share performance against strategy, outlook, organisational milestones, elect new directors and set remuneration practices and values	Chairman	Melbourne, Australia
Research and Development Briefing (Dec 2017) (includes webcast and teleconference questions and answers)	Share progress across CSL's product pipeline including clinical trial outcomes and market potential	Chief Scientific Officer/Chief Commercial Officer	Sydney, Australia
Retail investor roadshows (May 2018) (includes face-to-face questions and answers)	Share performance against strategy, outlook, organisational activities and milestones	Chief Financial Officer	Perth and Adelaide, Australia; one-on-one meetings ongoing
CSL site tours	Operations familiarisation tours at CSL Behring Australia, Broadmeadows and CSL's research facilities at Bio21, Melbourne	Site General Manager/Head of Investor Relations	Melbourne, Australia

#### **DIVERSITY AT CSL**

CSL views diversity through a broad array of difference in people across attributes of gender, nationality, ethnicity, disability, sexual orientation, gender identity, generation/age, socio-economic status, religious beliefs, professional and educational background as well as global and cultural experiences.

CSL has a global diversity policy, which is integral to its overall talent and culture strategies and guides investments in this area. CSL supports an inclusive work environment where people have equitable access to career opportunities, training and benefits.







#### **DIVERSITY OBJECTIVES**

CSL's progress against diversity objectives set in 2017, and our commitments set for the 2018/19 financial year, can be found in our Corporate Governance Statement at CSL.com.

# **Medical Glossary**

Acute myocardial infarction is a heart attack.

Adjuvant is a substance which enhances the body's immune response to an antigen.

**Albumin** is any protein that is soluble in water and moderately concentrated salt solutions and is coagulable by heat. It is found in egg whites, blood, lymph, and other tissues and fluids. In the human body, serum albumin is the major plasma protein (approximately 60% of the total).

Anti-D immunoglobulin, also called Rh (D) immunoglobulin, is an injection of Anti-Rhesus antibodies given to a woman whose blood group is Rhesus negative, if there is a chance that she has been exposed to Rhesus positive blood either during pregnancy or blood transfusion.

Antivenom (or antivenin, or antivenene) is a biological product used in the treatment of venomous bites or stings.

Autoimmune disease is when the body's immune system attacks healthy cells.

**Biopharmaceuticals** are proteins (including antibodies), nucleic acids (DNA, RNA or antisense oligonucleotides) used for prophylactic or therapeutic purposes.

Cell-based (technology) for the manufacture of influenza vaccines, is a process of growing viruses in animal cells.

C1 esterase inhibitor is a protein found in the fluid part of blood that controls C1, the first component of the complement system. The complement system is a group of proteins that move freely through the blood stream. These proteins work with the immune system and play a role in the development of inflammation.

Chronic inflammatory demyelinating polyneuropathy (CIDP) is a neurological disorder which causes gradual weakness and a loss in sensation mainly in the arms and legs.

**Coagulation** is the process of clot formation.

#### Common variable immune deficiency

is one of the most frequently diagnosed primary immunodeficiencies, especially in adults, characterised by low levels of immunoglobulins and antibodies, which causes an increased susceptibility to infection.

Fibrinogen is a coagulation factor found in human plasma that is crucial for blood clot formation.

**Fractionation** is the process of separating plasma into its component parts, such as clotting factors, albumin and immunoglobulin, and purifying them.

**G-CSF** is a glycoprotein that stimulates the bone marrow to produce granulocytes and stem cells and release them into the bloodstream.

*Haemolytic disease* is a disease that disrupts the integrity of red blood cells causing the release of haemoglobin.

*Haemophilia* is a haemorrhagic cluster of diseases occurring in two main forms:

- 1. Haemophilia A (classic haemophilia, factor VIII deficiency), an X linked disorder due to deficiency of coagulation factor VIII.
- 2. Haemophilia B (factor IX deficiency, Christmas disease), also X linked, due to deficiency of coagulation factor IX.

Haemostasis (haemostatic) is the stopping of blood flow. Hereditary angioedema (HAE) is a rare but serious genetic disorder caused by low levels or improper function of a protein called C1-esterase inhibitor. It causes swelling, particularly of the face and airways, and abdominal cramping.

## Hereditary emphysema is a

physiological condition that results in excessive amounts of white blood cells (neutrophils) entering the lungs, causing inflammation and chronic lung disease.

Human papilloma virus (HPV) is a diverse group of DNA-based viruses that infect the skin and mucous membranes of humans and a variety of animals. Some HPV types cause benign skin warts, or papillomas, for which the virus family is named. Others can lead to the development of cervical dyskaryosis. which may in turn lead to cancer of the cervix.

Immunoglobulins (IgG), also known as antibodies, are proteins produced by plasma cells. They are designed to control the body's immune response by binding to substances in the body that are recognised as foreign antigens (often proteins on the surface of bacteria or viruses).

*Influenza*, commonly known as flu, is an infectious disease of birds and mammals caused by a RNA virus of the family Orthomyxoviridae (the influenza viruses).

*Intravenous* is the administration of drugs or fluids directly into a vein.

Monoclonal antibody (mAb) is an antibody produced by a single clone of cells. Monoclonal antibodies are a cornerstone of immunology and are increasingly coming into use as therapeutic agents.

Neurology is the science of nerves and the nervous system.

Perioperative bleeding is bleeding during an operation.

*Plasma* is the yellow-coloured liquid component of blood in which blood cells are suspended.

Primary immunodeficiency (PID) is an inherited condition where there is an impaired immune response. It may be in one or more aspects of the immune system.

**Prophylaxis** is the action of a vaccine or drug that acts to defend against or prevent a disease.

Ouadrivalent influenza vaccine is a vaccine that offers protection against four different influenza virus strains.

Recombinants are proteins prepared by recombinant technology. Procedures are used to join together segments in a cell-free system (an environment outside a cell organism).

Subcutaneous is the administration of drugs or fluids into the subcutaneous tissue, which is located just below the skin.

Thrombosis is the formation of a blood clot inside a blood vessel, obstructing the flow of blood through the circulatory system.

Trivalent influenza vaccine is a vaccine that offers protection against three different influenza virus strains.

Von Willebrand disease (vWD) is a hereditary disorder caused by defective or deficient von Willebrand factor, a protein involved in normal blood clotting.

Warfarin is an anticoagulant used to to prevent heart attacks, strokes, and blood clots.

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CSL Limited ABN 99 051 588 348

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#### **FURTHER INFORMATION**

For further information about CSL and its operations, refer to Company announcements to the Australian Securities Exchange and our website:

CSL.com