

CSL 2023 Research Acceleration Initiative

February 2023

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AGENDA







CSL's core Therapeutic Areas Areas of interest for collaboration



Benefits of collaborating with CSL



Questions



Overview of CSL







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* CSL will follow the required legal processes of formally changing the names for Vifor Pharma and Seqirus entities in due course.

CSL at a Glance



Countries of operations around the world



Billion in annual revenue



Billion in R&D investments in the last 5 years to advance product pipeline





R&D employees



Plasma collection centres across China, Europe and North America

Our Locations



Top 25 Biotech Companies of 2022



Rank	Company	Ticker Symbol	Market Cap (US\$ Billion)
1	Novo Nordisk	NOVO-B (CPH)	236.0
2	Thermo Fisher Scientific	TMO (NASD)	213.4
3	Amgen	AMGN (NASD)	130.8
4	CSL Ltd	CSL (ASX)	92.2 B
5	Gilead Sciences Inc	GILD (NASD)	77.6
6	Regeneron Pharmaceuticals Inc	REGN (NASD)	67.4
7	Vertex Pharmaceuticals	VRTX (NASD)	61.5
8	Moderna	MRNA (NASD)	58.7
9	Chugai Pharmaceutical	4519 (JPX)	52.6
10	Illumina	ILMN (NASD)	50.9
11	Lonza	LONN (SWX)	49.2
12	WuXi AppTec	603259 (SHSE)	47.9
13	Samsung Biologics	207940 (KRX)	42.2
14	Agilent Technologies	A (NYSE)	40.3
15	Jiangsu Hengrui Medicine Co Ltd	600276 (SHSE)	40.1
16	BioNTech SE	BNTX (NASD)	33.4
17	WuXi Biologics	2269 (HKG)	33.3
18	Biogen	BIIB (NASD)	30.8
19	Sun Pharmaceutical Industries	SUNPHARMA (NSE)	26.1
20	Seagan	SGEN (NASD)	23.9

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https://www.genengnews.com/a-lists/top-25-biotech-companies-of-2022



Research Acceleration Initiative



CSL's Research Acceleration Initiative

Objective: to build relationships with entrepreneurial researchers and fastrack discovery of innovative medicines that address unmet needs

Focus on early stage projects in specific areas aligned with CSL's Therapeutic Areas

Why? Early collaborations with high quality academic partners are key to building a sustainable pipeline

CSL has a strong interest in supporting local medical research efforts and strengthening POC capability in the regions in which we work

- Successful applicants receive up to AUD 250k p.a. for up to 2 years (maximum AUD 500,000 for 2 year project)
- CSL scientific champions assigned to each project to provide expert, industry guidance



CSL Research Acceleration Initiative

Seeking Expressions of Interest from Research Organisations

WHY COLLABORATE WITH CSL?



CSL's **Research Acceleration Initiative** aims to fast-track discovery of innovative biotherapies through partnerships between CSL and global research organisations. These

partnerships provide funding and access to industry experts for scientists working on novel biotherapeutic

Expressions of interest are sought from Business

the 2023 CSL Research Acceleration Initiative

Development / Commercialisation representatives across

global research organisations that wish to participate in

strategies in CSL's therapeutic areas.



Clobal capabilities on your doorstep.



Work with one of the world's leading biotech companies.



Funding for successful proposals.



The 2023 Research Acceleration Initiative will focus on innovative research projects that address unmet medical needs and are aligned with CSL's **Therapeutic Areas** and scientific **Platforms**:

Access to commercial R&D, clinical, intellectual property, marketing and manufacturing expertise.





Accelerate translation of your research to deliver new therapies to patients.

To register your research organisation please email RAI@csl.com.au by 11th December, 2022

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CSL 2023 Research Acceleration Initiative Process

	Early Feb information sessions for interested researche	o – CSL on or d ers	24th Mar – selected applicants invited to submit fu applicatio	- 5 II n	End May – shortlisted applicants CDAs put ir	notified, n place	July/Aug – confidential o evaluated & successful applicants selected	data	Will involve C Global Licens Global IP, CSI Research. Agreement to include detai research plan budget.	:SL sing, L o iled n &	
3rd J scier oper	an 2023 – ntific call ns	23rd Feb – online abs submission Application reviewed b	300 word tract n deadline ns by CSL	21st Apr – fu application submission deadline Application reviewed b	ull n ns y CSL	26th – 29tl confidentia presentatio shortlisted applicants	n June – al ons by	Sept – notif of intention fund succes applicants	ication to ssful	Funding awarded & collaborative projects commence	

No limitation on number of abstracts each registered organisation or individual researcher can submit

Contracts negotiated

Agreement Guidance



Separate collaboration agreements will be negotiated for each project which reflect the nature of the project, nature of funding and support, and the contributions of both parties



Under these negotiated agreements, CSL will be granted certain rights of interest to the program results for further R&D and/or commercialisation



Collaboration agreements will typically include the following terms (although CSL may propose other conditions depending on the nature of the project):

- Research organisation will own results arising under the project
 - CSL would typically own any results which relate to proprietary CSL products or materials if they are contributed to the project
 - The RAI is designed to accelerate the translation of novel discoveries made by research scientists for proposals outside this scope, we may propose that projects be progressed outside the RAI
- CSL will be granted an exclusive option to negotiate an exclusive, worldwide licence
- CSL supports publication of research outcomes

Further details on agreement terms can be provided on request

Eligibility

To be eligible to apply, researchers/clinicians must satisfy the following 2 conditions:

- 1. Be employed by a research organisation registered to participate in the 2023 Research Acceleration Initiative
- 2. Submit a 300 word online abstract that is aligned with CSL's Therapeutic Areas and scientific Platforms:



Specific indications of focus for each TA are provided on slides 22-28

Step 2/2 - Describe your opportunity and confirm submission

BACK SUBMIT

У.

Transplant

Please describe and categorize your opportunity. Fields with * are mandatory

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Proposal Title

Primary Therapoutic Area *

Secondary Therapeutic Area

Abstract submission via online portal

Step 1/2 - Lead Investigator Information

Applications for the 2023 CSL Research Acceleration Initiative open 3rd January 2023 and close 23rd February 2023. Applications received outside these

dates (before or after) will not be reviewed.	ну zuzo алы ukose zoru reurusiy zuzo, лурякалкить текличен ukokue шезе	(a) 📣 📑		Not specific to a Therapeutic Area			
Fields with * are mandatory			¥ UU //	A gran a gr			
First Name *	Salutation	and Metabolic Hernatology	mmunology Respiratory Transpi				
	\$	Indications *					
Last Name *	Job Title *						
		Modality*					
Organization *	Phone	Cell therapy	Edracellular vesicles	Gene therapy			
		Oligonucleotide (sIRNA, asFINA, ncRNA)	Poptide	Plasma			
Email *	Confirm Email *	Recombinant (ncl. antibodies)	Small molecule	Other modality			
		Opportunity Type *					
Address	Biomarker	Bomarker New use for CSL product or pipeline candidate Novel targe					
		Research Tool	Target Discovery]			
City	Zp/Postcode	Vaccines - mRNA/lipid nanoparticle platform imp	rovements Vaccines - influenza virus antigen pu	ty/yield enhancements			
		Vaccines - utilizing MF5000 adjuvant	Other]			
Country *	Geographical region *	Project Description (max. 300 words) *					
Are you an existing collaborator, or have you previously collaborated with CSL (including CSL Behring, CSL Segirus or CSL Vifor)?	φ	Example of what to include in Project Description: "We have discovered a movel larged supressed on X calls. We have gammented data in X assay[s] and/or X model[s]. We have shown the machanism of action is madeled via X pathwey[s], Inhibition of this larged could be used to tread X indication[s]. This movel strategy could address an important unnet need for patients and be superior to standard of case and other thempaulics in development for measure X, X and X.*					
○ Yes ○ No				11			
CONT	These read the privacy policy and agree with it. Read more*						
		Ihereby confirm that my submission does not o	contain any confidential information. *				
15 Submission T&Cs on lo	ast slide	I'm not a robot					

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Not specific to a Therapeutic Area

(e.g. platform technology)

What makes for a competitive proposal?

- ✓ Aligned with our focus areas and modalities
- Project is clearly defined (as opposed to a general overview of the applicant's research interests)
- ✓ Focused on a novel target or therapeutic candidate
- Clear differentiation of approach from competitors and current standard of care
- Research team has capacity and expertise to complete the bulk of the experimental work over the course of the program (with CSL guidance and support)
- ✓ If third party IP is required, ensure your research organisation has secured all necessary rights to grant CSL an exclusive option to negotiate an exclusive, worldwide licence



CSL's core Therapeutic Areas



CSL's Core Therapeutic Areas & Platforms





Vadadustat licensed from Akebia Therapeutics, Inc.; Status pending - Complete Response Letter (CRL) received from FDA due to safety concerns.

Formal integration of Vifor's R&D programs into CSL's R&D portfolio will be subject to CSL's standard R&D portfolio review, management and integration processes.

Product and pipeline highlights



Privigen[®] (10% intravenous Ig) Primary immunodeficiencies (PID), Secondary Immune Deficiency (SID)*, Chronic inflammatory demyelinating polyneuropathy (CIDP)

Hizentra® (20% subcutaneous Ig) PID, CIDP, SID* Dermatomyositis (DM), Ph III Systemic sclerosis (SSc), Ph II

Haegarda® (Cl Esterase Inhibitor) Hereditary angioedema

Garadacimab (Anti-FXIIa mAb) Hereditary angioedema, Ph III

CSL324 (Anti-G-CSFR mAb) Hidradenitis suppurativa (HS), Ph I

CSL730 (Recombinant Trivalent Human IgG1 Fc Multimer), Ph I

Gene Therapy Treatments

PID, Research



Idelvion[®] (Recombinant FIX-FP) Hemophilia B

Afstyla[®] (Recombinant FVIII) Hemophilia A

Kcentra® (Prothrombin complex concentrate) Urgent warfarin reversal

HEMGENIX®

*ex-USA

(etranacogene dezaparvovec) (AAV FIX gene therapy) Hemophilia B, FDA approved

CSL889 (Hemopexin) Sickle cell disease, Ph I

CSL888 (Haptoglobin) Sub-arachnoid hemorrhage, preclinical development



ZEMAIRA®/RESPREEZA® (Alpha 1 Antitrypsin)

Garadacimab (Anti-FXIIa mAb) Idiopathic Pulmonary Fibrosis, Ph IIa

CSL311 (Anti-β-common mAb) Airways inflammation, Ph I

CSL787 (Nebulised Ig) Respiratory infections, Ph I



CSL112 (ApoA-1) Acute coronary syndrome, Ph III

CSL346 (Anti-VEGFB mAb) Diabetic kidney disease, Ph II



FLUAD Quadrivalent Adjuvanted Influenza Vaccine

FLUCELVAX Quadrivalent Cell-based Influenza Vaccine

Adjuvanted Cell Culture Influenza Vaccine (aQIVc), phase II

sa-mRNA Influenza Vaccine, PC



CSL964 (Alpha 1 Antitrypsin) Graft versus host disease, Ph III

Clazakizumab (Anti-IL-6 mAb) Antibody mediated rejection, Ph III

CSL040 (Novel Complement Inhibitor), PC

Our full pipeline can be viewed <u>here</u>

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Areas of interest for collaboration





Immunology



Autoimmune diseases (AID)

Novel targets or biologic therapies for the treatment of AIDs including primary Sjögren's syndrome, systemic sclerosis, inflammatory idiopathic myopathies (including dermatomyositis) and autoimmune skin blistering diseases

- 1. Novel immunomodulatory strategies targeting cytokines, chemokines, modulatory proteins and TNF-family members
- 2. Novel targets or biologic therapies involved in B cell depletion or B cell regulation
- 3. Novel targets or biologic therapies involved in T cell regulation, T cell tolerance and T regulatory cell modulation

Alternatives to plasma-derived intravenous immunoglobulin (IVIG)

Synthetic or recombinant solutions to IVIG that are independent of plasma



Hematology



Hemorrhagic stroke

- 1. Novel biologic targets and therapies for the treatment of subarachnoid hemorrhage and intracerebral hemorrhage
- 2. Biomarker or omics approaches for patient stratification and drug discovery

Acute ischemic stroke

- Novel biologic targets and therapies for the treatment of acute ischemic stroke, in particular anti-(thrombo-)inflammatory approaches as an adjunct to endovascular thrombectomy and pharmacological thrombolysis (tPA)
- 2. Biomarker or omics approaches for patient stratification and drug discovery

Acute thrombosis (venous and arterial thrombosis)

Novel biologic therapies for targeted fibrinolysis / thrombolysis with increased safety and/or efficacy vs. standard of care in acute thrombotic conditions, in particular acute ischemic stroke and pulmonary embolism



Respiratory



Idiopathic pulmonary fibrosis (IPF) and progressive pulmonary fibrosis (PPF)

- Novel biologic therapies or targets to treat idiopathic pulmonary fibrosis (IPF) and progressive pulmonary fibrosis (PPF)
- 2. Omics approaches for patient stratification and drug discovery

Community acquired pneumonia (CAP)-associated complications

- Novel biologic therapies or targets to treat community acquired pneumonia (CAP)-associated complications including acute respiratory distress syndrome (ARDS), sepsis, and acute kidney injury (AKI)
- 2. Omics approaches for patient stratification and drug discovery



Cardiovascular and Metabolic



Myocarditis

Novel targets or biologic therapies for myocarditis

Dilated cardiomyopathy

Novel targets or biologic therapies for inflammatory dilated cardiomyopathy

Rare lipid disorders

Novel targets or biologic therapies (including gene therapies) for rare lipid disorders e.g. homozygous familial hypercholesterolemia

Severe forms of atherosclerosis

Novel targets or biologic therapies for severe atherosclerosis



Transplant



Chronic lung allograft dysfunction (CLAD)

- Novel biologic therapies or targets to prevent or treat CLAD, including approaches to establish tolerance / novel immunomodulation strategies
- 2. Novel biomarkers for CLAD

Hematopoietic stem cell transplant (HSCT)

- 1. Novel biologic therapies for the treatment and prevention of acute and chronic GvHD, including approaches to establish tolerance / novel immunomodulation strategies
- 2. Novel biologic therapies that improve efficacy / safety of HSCT

Cardiovascular allograft vasculopathy (CAV)

- 1. Novel biologic therapies for the treatment of CAV
- 2. Animal models of CAV



Vaccines



mRNA and lipid nanoparticle platform

Innovative research addressing improved delivery, formulation, stabilisation (5°C / room temperature), shelf-life extension and manufacturing technologies

Influenza virus antigen purity and yield enhancement

Innovative research with potential to impact yield and purity of influenza virus HA antigen produced in MDCK cell culture

Proven adjuvant technology

Partnerships with our proprietary adjuvant MF59®

CSL's Areas of Interest for Platform Technologies

- In vivo kill switch or suicide switch
- Modulation of transgene expression *in vivo*
- Novel methods to select gene modified HSCs
- Novel therapeutic gene therapy targets aligned with CSL's Therapeutic Areas
- Non-viral *in vivo* delivery of RNPs

- Oral delivery of biologics
- MDCK cell culture yield improvements

Areas <u>not</u> of interest

- Oncology (including hematological malignancies)
- Medical devices or diagnostics
- Small molecule approaches



- Antibodies
- Protein therapeutics
- LV gene therapies
- Cell therapies
- Structural vaccinology



Benefits of collaborating with CSL



Capabilities from Discovery to Patients



Benefits of collaborating with CSL



Global capabilities on your doorstep



Work with one of the world's leading biotech companies



Funding for successful proposals



Access to commercial, R&D, clinical, intellectual property, marketing and manufacturing expertise



Accelerate translation of your research to deliver new therapies



35 new partnerships established via the Research Acceleration Initiative since 2019





170+ scientific papers published with our collaborators since 2020

SEVEN NEW CSL RESEARCH ACCELERATION INITIATIVE AWARDEES

ANNOUNCED

Professor Allison Pettit The University of Queensland, AUS

Dr Kirsten Coupland University of Newcastle, AUS

Associate Professor Georgina Clark ANZAC Research Institute, AUS

Professor Daniel Rader University of Pennsylvania, USA

Professor Elie El Agha Justus Liebig University Giessen, DE

Professor Arthur Liesz, University Hospital of Ludwig Maximilian University of Munich, DE

Professor Daniel Ricklin University of Basel, CH





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Checklist for 2023 Research Acceleration Initiative





Questions



THANK YOU

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Terms and Conditions for Research Acceleration Initiative Portal ("RAI Portal")

1. This RAI Portal is an online portal operated by CSL Innovation Pty Ltd ("CSL") for the purpose of allowing individuals to submit scientific proposals for consideration by CSL for its Research Acceleration Initiative program. By using this website and the RAI Portal, and by providing your submission and personal information to CSL, you are agreeing to abide by these terms and conditions.

2. You acknowledge and agree that CSL has no obligations of confidentiality or non-use in relation to the submission provided. You warrant that your submission does not contain confidential information of any kind. Further, you acknowledge that notwithstanding the existence of any confidentiality agreements previously entered into between you and CSL, the terms of such agreements will not apply with respect to any information submitted by you through the RAI Portal.

3. You further represent and warrant that:

- a. you have the right and authorisation (including where relevant after consultation with all relevant commercialisation or technology transfer offices) to submit an application to the RAI Portal and to accept the terms and conditions set out herein;
- b. you are an employee or are otherwise affiliated with a registered organisation authorised by CSL to submit an application to the RAI Portal; and
- c. to the best of your knowledge and without making any further enquiries, the information provided in your submission (and CSL's use of that information in connection with the Research Acceleration Initiative program) shall not infringe on the intellectual property rights of any third party, including your current or former employer, university, public research institute or other registered organisation.

4. CSL may disclose personal information collected in connection with your use of this website or the RAI Portal to your employer, university, public research institute or other registered organisation (if applicable) as at the time your application was submitted, solely for the purpose of reviewing and determining your application. CSL will ensure that any personal information collected, used or disclosed in connection with your use of this website or the RAI Portal is handled in accordance with all relevant privacy legislation and with CSL's privacy policy, a copy of which is available at https://www.csl.com/privacy-policy.

5. CSL is under no obligation to respond to any individual application submitted to the RAI Portal, and may in its sole discretion choose not to progress an application further for any reason without any further communication with you.