



VALD APPLIED
RESEARCH
INITIATIVE

I N T R O D U C I N G T H E

VALD Applied Research Initiative

Applications are now open for up to \$200,000 in VARI grants towards funding research into one of three key focus areas of musculoskeletal healthcare.

Who are we targeting?

Researchers interested in partnering with VALD on research projects that align with our core research priorities.

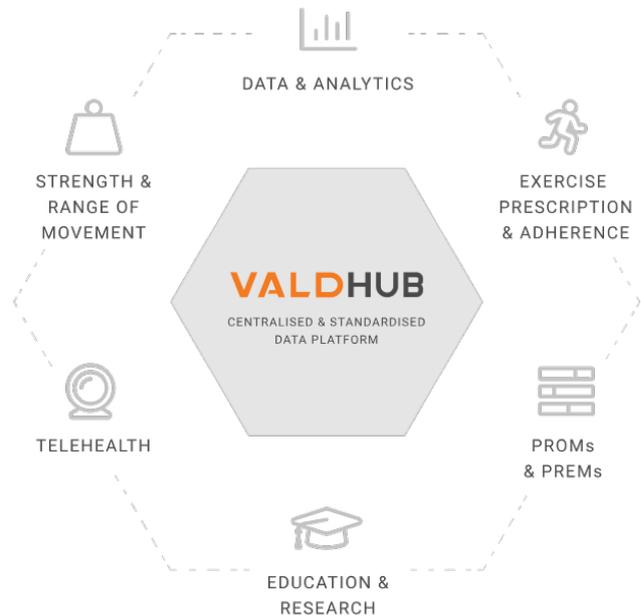
Project goals

To enable research organisations to help VALD tackle major health challenges.

To help fund programs of work with ambitious objectives that are only possible through collaboration.

Research aims and focus areas

VALD aspires to lead the change in musculoskeletal healthcare through technology. Currently, we provide



human-measurement technology to more than 1,400 of the world's most elite sporting teams, clinics, universities, hospitals, and defence departments. Our ambition is to drive the global digital evolution of precision healthcare to help address the chronic burden of musculoskeletal diseases.

Driven by a multidisciplinary global team of more than 100 researchers, clinicians, sports scientists, designers, developers, and engineers, VALD systems offer unparalleled insight into human movement, performance, injury risk and rehabilitation. The VALD suite includes ForceDecks Dual Force Plate System, NordBord Hamstring Testing System, ForceFrame Strength Testing System, AirBands BFR Cuffs, HumanTrak Movement Analysis System, TeleHab Exercise Prescription App, and SmartSpeed Timing Gate System.

Objectives

VALD aims to pioneer industry support of research and development that improves the health and wellbeing of not only elite athletes, but all members of the community. Through supporting the development of the next generation of researchers, we want to demonstrate the efficacy of VALD products in augmenting rehabilitation and driving performance improvements.

Applicants should clearly define how their project aligns with VALD's key focus areas, the scope of activities proposed, major milestones to be achieved, and major risks and mitigation strategies. The scope of work should be achievable within 12 months of receiving the award. Given the relatively short timeframe, applicants should provide a clear timeline for executing the proposed work along with a description of how funds will be allocated. Applications are limited to 500 words to encourage clear and concise communication.

Core Research Priorities

To use VALD's range of human measurement technologies to:

- Profile strength and movement competency across different populations.
- Quantify the effectiveness of operative and nonoperative interventions for common musculoskeletal injuries.



The VALD Applied Research Initiative also seeks to:

- Understand the effectiveness of remote monitoring for rehabilitation.
- Use data from VALD's human measurement technologies to drive decision-making through predictive analytics.
- Combine insights from data with human reasoning to improve the effectiveness of rehabilitation.
- Identify and implement novel ways to use technology to improve exercise adherence.

Application of research priorities to specific populations

The populations of most interest to VALD are outlined below. These have been identified as key populations because of increased demand from Governments for innovative healthcare solutions, notoriously low funding in the past, and/or their anticipated burden on healthcare systems.

Young people with old joints

Acute knee and hip injuries have a large global burden. Many people who sustain acute injuries develop arthritis in their 30s, which means a less active lifestyle and potentially even joint replacement in middle-age. VALD is committed to supporting researchers to identify novel rehabilitation solutions for these types of injuries and/or methods to predict who may be at higher-than-normal risk of injury.

VALD aims to better understand the effectiveness of surgical and conservative interventions in the management of the following conditions:

- Knee and hip Osteoarthritis
- Anterior Cruciate Ligament rupture
- Meniscus tears
- Hip replacement

We also seek to understand strength and movement metrics that characterise patients with the conditions above from healthy counterparts.

Female athletes – from professional to grassroots levels

VALD is driven to promote sport participation and athlete development pathways for females, as previous funding has been demonstrably scarce. VALD strongly believes that the same technology used by male athletes should be available to female counterparts to provide the same benefits. VALD also recognises the lack of high-quality research using female participants and wants to help



establish a strong evidence base that demonstrates the usefulness of VALD technology in this population.

VALD seeks to:

- Profile the strength and movement characteristics of female athletes across different age groups.
- Understand the modifiable risk factors predisposing female athletes to musculoskeletal injury, with an emphasis on movement quality and muscular strength.
- Aid the development of technology-driven interventions targeted at reducing injury risk in female athletes.

Aged care

Older people are at particular risk of acute and chronic musculoskeletal injuries. Physiological changes with age, such as sarcopenia, osteoporosis, postural instability, gait disturbances, and reduced muscle strength are all known physical risk factors.

VALD is committed to supporting researchers in understanding how to identify at-risk individuals and stop or slow the development of risk factors through the promotion of physical exercise interventions.

- Interventions that support older populations to maintain their quality of life as they age and live independently for longer.
- Determine and implement interventions that prevent or delay the onset of age-related reductions in muscle strength and function.
- Implement data-driven solutions that can predict functional decline in older patients.

Funding requirements

VALD has allocated a total of \$200,000 for round one of this initiative and each applicant can apply for a maximum of \$100,000. The quality of application must scale with the requested funding amount. We intend to approve applications across a range of budgets and timelines so do not feel obliged to request the maximum funding amount. In fact, requesting less will improve your chances of success. VALD is committed to supporting excellent applied research by early career researchers (ECR) and will favourably review applications with an ECR listed as the principal investigator.

All successful applicants will receive in-kind equipment support and software licensing for their research endeavours. The equipment support will vary depending on the project requirements and

applicants should limit their in-kind equipment request to what would be considered reasonable.

Applicants from across the world are encouraged to apply and those with multi-institutional and multi-disciplinary collaborations will be assessed favourably. Applicants seeking to leverage VALD's funding with other co-funding (e.g., staff in-kind, scholarships) should include the co-funding type and amount in their application. Please use the assessment rubric to guide your proposal content and include a Gantt chart so your project timeline is clearly articulated.

How to submit

Please complete and submit the [application form](#). The project proposal should be attached as a PDF file and include the following:

- Project title.
- Funding requested.
- Principal investigator name, institution, and email address.
- CV of Principal investigator attached as a PDF.
- Additional investigators, including names of their Institutions.
- Project proposal.

For more information and questions related to your proposal, please email info.grants@vald.com with your name and institution in the subject line

Assessment Rubric

	Excellent (3)	Adequate (2)	Poor (1)
Rationale for proposed project	Rationale clearly stated and project aims strongly align with VALD core research priorities and target populations.	Rationale stated and project aims somewhat align with VALD core research priorities and target populations.	Rationale vaguely stated and project aims do not align with VALD core research priorities and target populations.
Impact and Innovation	The project plan is ambitious and proposes many ways of doing things better and/or doing better things in its field.	The project plan is moderately ambitious and proposes a few ways of doing things better or doing better things in its field.	The project plan is conservative and does not propose ways of doing things better or doing better things in its field.
Personnel and Collaboration	The researcher or research team has an excellent track record and draws upon expertise across different fields and institutions.	The researcher or research team has a moderate track record and draws upon expertise across different fields.	The researcher or research team has a poor track record and does not include researchers from diverse fields.
Project plan and timeline	The project plan is feasible and well-articulated. All of the milestones are realistic, clearly identified, and address the lifecycle of the work, including planning, ethics, data collection, analysis, and reporting.	The project plan is well articulated and somewhat feasible. Most of the milestones are realistic, including planning, ethics, data collection, analysis, and reporting.	The project plan is not well articulated nor feasible. The milestones and timelines may be unrealistic and unclear, including planning, ethics, data collection, analysis, and reporting.
Justification of proposed budget	The project costs are clearly articulated and defensible. Each budget item is well justified and necessary to complete the project plan.	The project costs are relatively well articulated and defensible. Some budget items are not justified and do not relate to the project plan.	The project costs are not well articulated and there is some question as to the need for the funds based on the information provided.

Terms and Conditions

VALD provides funding for the Project that is to be used in accordance with the proposed budget.

VALD provides in-kind equipment support.

How will the project be managed?

- VALD will request quarterly updates during the project to review its status and progress against planned deliverables.
- Deliverables will be defined up front along with due dates in the Project Plan.
- VALD will provide a point of contact to ensure the research remains on track and delivers business value.
- A final report at the end of the project will be delivered to VALD.

Who owns the intellectual property of Developed Material?

- Ownership of, and all Intellectual Property Rights in the Developed Material will vest in VALD.
- VALD grants the Research Recipients a license to use the Developed Material for the duration of the Project Term.
- The recipient must explicitly define any background IP they bring to the project. The recipient will retain their background IP at the conclusion of the project.

Before funding and equipment are distributed and before any award pursuant to an application becomes binding on either, VALD, the principal investigator and their institution will be required to

enter into a contract with VALD that covers the terms and conditions of the Project, including ownership of intellectual property. The successful Applicant will be required to comply with the Contract including the Legal Terms and Conditions, the Applicant's proposal, and the Contract, which shall form the legal agreement with VALD after acceptance by VALD. Any subsequent changes to the legal agreement will be made only in writing.

Applicants will provide a brief rationale for how funds will be used. The optimal allocation of funds to achieve the grant objectives will be the responsibility of the Research Recipient.

The funds are for the proposed Project only and are non-renewable. Any in-kind equipment provided by VALD for the Project may remain at the institution following completion of the Project at VALD's discretion. Future relationships between Research Recipients and VALD are possible but not guaranteed and will be considered on a case-by-case basis.

Institutional Review Board approval is required for all Projects involving human participants. It is the responsibility of the principal investigator to ensure that approval has been obtained and proper protocols are followed at all times.

Lay summaries of completed work will be requested quarterly. A final report, detailing the research achievements and outcomes against the Project plan, will be required at completion of the Project.

All publications and conference proceedings, and/or presentations arising from research funded in whole or in part by VALD, must acknowledge support from VALD consistent with the contract executed for the Project.



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