

Participant information sheet and consent form



NZ Warriors NRL point-of-care blood biomarker study

Study short title	NZ Warriors NRL point-of-care biomarkers
Formal title	Baseline and longitudinal point-of-care blood biomarker screening for mTBI in NZ Warriors rugby league players
Sponsor	Auckland University of Technology (AUT)
Coordinating investigator	Professor Patria Hume
Status	HDEC #2026 EXP 26785

Participant information sheet

Study title: Baseline and longitudinal point-of-care blood biomarker screening for mTBI in NZ Warriors rugby league players.

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Lead researcher: Professor Patria Hume, Auckland University of Technology. Contact: patria.hume@aut.ac.nz | 021 805 591.

Co-Principle Investigators: Patria Hume, Scott Crawford

Co-Investigators: Mackenzie Kiernan, Danastri Ramadhani, Julia Parry, Ed Maunder, Chris Puliueva, Alice Theadom, Doug King

Study site: NZ Warriors' training and playing venues.

Invitation

You are invited to take part in a research study looking at whether a "side-line" point-of-care blood test can help researchers understand biological changes after head impacts in rugby league players. This information sheet explains why the study is being done, what taking part would involve, and what the possible benefits and risks are. You do not have to decide immediately. You may discuss the study with whānau, family, friends, your doctor or another support person before deciding.

If you agree to take part in this study, you will be asked to sign the Consent Form on the last page of this document. You will be given a copy of both the Participant Information Sheet and the Consent Form to keep.

This document is 7 pages long, including the Consent Form. Please ensure you have read and understood all the pages.

Do I have to take part?

No. Taking part is voluntary. If you choose not to take part, or choose to withdraw later, this will not affect team selection, contract status, training opportunities, medical care, or return-to-play decisions. You do not have to answer any questions or take part in any part of the study you do not wish to.

What is the purpose of the study?

The purpose is to determine whether a sideline blood test can be practically and safely integrated into NZ Warriors' rugby league screening and Head Injury Assessment (HIA) workflows. The study measures two brain proteins called GFAP and

UCH-L1. These two blood proteins may be higher in the blood after a head impact. This study is looking at pre-season levels and how they change over time and is for research purposes and does not replace medical assessment.

Who can take part?

- NZ Warriors age-group players 16 years and over invited to baseline screening.
- Contracted NRL players and available train-and-trial or part-time players invited to professional baseline testing.
- Players who enter the 2027 HIA pathway and have consented to HIA-linked research sampling.
- Players who can provide informed consent.

Who cannot take part?

- Players who do not wish to take part.
- Players for whom blood collection is considered unsafe or inappropriate by medical staff.
- Players unable to provide informed consent.
- Players with a bleeding risk, medication or medical condition that makes venous blood draw inappropriate unless cleared by clinical staff.

What will taking part involve?



Part of study	What happens
Player baseline	A station-based screening appointment between 1–5 th November 2026. The research blood station takes about 15 minutes.
Professional player baseline	End-of-season testing during exit medicals and repeat testing after the mandatory 7-week break, if available.
HIA-linked follow-up	If you enter the HIA pathway during the 2027 season, a sports physician or trained clinical staff member may collect blood acutely and at follow-up points where feasible.
Data collected	Relevant injury/HIA history, current symptoms, HIA documentation, SCAT6/SCOT6 or equivalent clinical assessment where available, cognitive screening where used, playing position, match exposure and return-to-play duration.
Blood test	A venous blood sample will be used on a point-of-care cartridge to measure GFAP and UCH-L1. The test result is recorded against a study ID.

Will the blood test affect my return-to-play?

No. The blood test is for research purposes only to see how levels of the two proteins change over time. It will not diagnose concussion, decide whether you can train or play, or replace the judgement of the NZ Warriors medical team. Return-to-play decisions remain with the appropriate clinical staff and existing rugby league medical policies.

What are the possible risks?

- Blood collection may cause brief pain, bruising, bleeding, faintness or, rarely, infection.
- There is a privacy risk because health and sport-related information is being collected. The research team will code your data, store identifiers separately, and report only de-identified summary findings.
- If a test or observation raises a clinical concern, you will be advised to discuss it with the NZ Warriors' medical team or your nominated health practitioner. Emergency concerns will be managed through usual medical processes.

Are there benefits?

There is no direct benefit to you in taking part. The research will help to improve future understanding of biological responses to head impacts and the practical use of a side-line blood test in rugby league medical settings.

What happens to my information?

Your study information will be recorded using a unique study ID. Your name and contact details will be stored separately from research data. Only authorised study staff will have access to identifiable information. Results that do not include information that could identify you (de-identified results) may be shared with AUT researchers, NZ Warriors and Abbott in aggregate form. Reports, publications and presentations will not identify you.

The following groups may also have access to your identifiable information:

- Your usual health care practitioner (e.g., GP, family doctor) will be notified of your participation in this study with your consent.
- Your usual doctor (GP or specialist) will be notified if a test gives an unexpected result that could be important for your health or well-being. This allows appropriate follow-up care to be arranged.
- Research staff will have access to your blood sample to process the blood.
- The sponsor, ethics committees, or government agencies from New Zealand or overseas, if the study or site is audited. Audits are done to make sure that participants are protected, the study is run properly, and the data collected is correct.
- Rarely, it may be necessary for the lead investigator to share your information with other people – for example, if there is a serious threat to public health or safety, or to the life or health of you or another person OR if the information is required in certain legal situations.

Your identifiable information will be held on secure servers hosted by AUT with access restricted to the study team. If you agree to your information being shared, your de-identified information will be sent through a secure server. Coded study information will be kept by AUT in secure, cloud-based storage indefinitely. All storage will comply with local data security guidelines.

Although every effort will be made to protect your privacy, absolute confidentiality of your information cannot be guaranteed. Even with coded and de-identified information, there is no guarantee that you cannot be identified. The risk of people accessing and misusing your information (e.g. making it harder for you to get or keep a job or health insurance) is currently very small but may increase in the future as people find new ways of tracing information.

If you agree to your de-identified information being sent overseas to Abbott in the USA there may be lower levels of data protection than in New Zealand. There may be no New Zealand representation on overseas organisations which make decisions about the use of your information. There is a risk that overseas researchers may work with information in a way that is not culturally appropriate for New Zealanders.

You have the right to request access to your information held by the research team. You also have the right to request that any information you disagree with is corrected.

You will be given a summary of your study test results.

If you have any questions about the collection and use of information about you, you should ask a member of the research team.

Māori data sovereignty is about protecting information or knowledge that is about (or comes from) Māori people. We recognise the taonga of the data collected for this study. To help protect this taonga:

- We have consulted with Adjunct Professor Doug King (Ngāi Tūhaitara, Ngāi Tūhu) about the collection, ownership, and use of study data.
- We will allow Māori organisations to access de-identified study data, for uses that may benefit Māori if you agree.

What happens to my blood sample?

Your blood sample will be used to test for the levels of GFAP and UCH-L1 in your blood. Any residual blood will be disposed of through approved clinical waste procedures. You can request that your blood is disposed of with a specific culturally appropriate disposal process e.g., karakia. Please tell the research team before blood collection if you wish to discuss karakia or return/disposal options. This project does not require long-term storage of your blood and your sample will not be used for any other purpose.

Will any costs be reimbursed?

We will provide you with a gift of a \$20 fuel voucher after each session assessment (i.e., when you provide a blood sample for the study) to recognize your time and contribution to the study. As this is a small gift it should not have any tax implications for you.

What if something goes wrong?

If you were injured in this study, you would be eligible to apply for compensation from ACC just as you would be if you were injured in an accident at work or at home. This does not mean that your claim will automatically be accepted. You will have to lodge a claim with ACC, which may take some time to assess. If your claim is accepted, you will receive funding to assist in your recovery.

If you have private health or life insurance, you may wish to check with your insurer that taking part in this study won't affect your cover.

Can I withdraw?

You may withdraw from future study procedures at any time without giving a reason. No further research data or blood will be collected after withdrawal. De-identified data already included in analysis may continue to be used to preserve scientific integrity unless you request removal and removal is practicable.

Who is funding the study?

Abbott Laboratories (USA), a medical device and research company, provided the portable devices and cartridges that enable your blood to be analysed in community settings. The research is being conducted and analysed by researchers at Auckland University of Technology (AUT). Abbott will not have access to your identifiable information. We will only share summary (de-identified) findings with them.

Who has approved the study?

This study has been approved by an independent group of people called the Health and Disability Ethics Committee (HDEC), who check that studies meet established ethical standards. The Northern B Health and Disability Ethics Committee has approved this study.

Who can I contact?

If you have any questions, you can contact: brain@aut.ac.nz. 021 968 731

If you have any concerns or complaints about the study at any stage, you can contact:

Professor Patria Hume

Phone: 021 805 591

Email: patria.hume@aut.ac.nz

If you want to talk to someone who isn't involved with the study, you can contact an independent health and disability advocate on:

Phone: 0800 555 050

Fax: 0800 2 SUPPORT (0800 2787 7678)

Email: advocacy@advocacy.org.nz

Website: <https://www.advocacy.org.nz/>

For independent Māori cultural support please contact Whakarongorau Aotearoa, who offer free health and mental health advice, support and information

Phone: 09 354 7774

Email: communications@whakarongorau.nz

You can also contact the health and disability ethics committee (HDEC) that approved this study on:

Email: hdec@health.govt.nz

Phone: 0800 400 569 (Ministry of Health general enquiries)

