

MELBOURNE CYTOMETRY PLATFORM

Please read the terms and conditions and complete the relevant user agreement form at the back of this document. Agreement with these terms and conditions by return of the signed relevant user agreement form is a requirement before accessing the Melbourne Cytometry Platform, requesting cytometry services and making instrument bookings for assisted or DIY operation.

#### **Accessing Local nodes**

The Melbourne Cytometry Platform (MCP) has 28 cytometry resources including analysers, cell sorters and offline analysis workstations distributed across 4buildings (nodes) at the University of Melbourne (see Appendix A, last page). Except for the Doherty FACSAria Fusion in PC3, most instruments may be accessed before induction, training, and competency tests, but *only* if directly assisted by dedicated platform staff. These services include staff-assisted cell sorting or acquisition and analysis with our benchtop cytometers. Because assisted operation of analysers is pending of staff availability, please contact local staff to arrange an appropriate time for your session (See MCP staff table and Appendix A). You should also contact platform staff before your first cell sorting session, to discuss experimental details, cell sorter and sample requirements. Mandatory local OHS, OGTR, building and laboratory inductions will need to be completed before swipe card and 24/7 independent access is granted into any of the platform spaces.

New users wishing to gain access to MCP resources must first contact the node or platform manager, provide brief details on their research project and intended cytometry assay(s). This will allow MCP staff to identify the best instrument for the job, give you feedback on experimental design and data analysis and initiate inductions. Following initial contact, all analyser training and upskill requests must be submitted via our training request portal: <a href="https://biomedicalsciences.unimelb.edu.au/cytometry/access/new-users">https://biomedicalsciences.unimelb.edu.au/cytometry/access/new-users</a> Access to the MCP booking management system (Calpendo) will be granted after building, laboratory, hands-on instrument training and quizzes have been completed and evidence of these submitted to local OHS and MCP managers. Instrument training and demonstration of competency is required before users can place unassisted ("doit yourself" or DIY) bookings in the calendar either within or outside of facility opening hours.

#### **Instrument Training**

- Initial training and inductions (including safety) on MCP instruments must be provided by MCP staff. Experienced users may assist new users with cytometry assay-specific training but only AFTER initial official MCP induction/training provided by platform staff has been completed.
- 2) Researchers will be provided with flow cytometry training materials including theory and safety information. Researchers are required to complete theory and safety competency assessments before they undergo a face-to-face training session.
- 3) Face-to-Face training usually consists of a 2-3-hour hands-on induction (depending on previous cytometry experience) and follow-up, node-specific competency testing.
- 4) MCP staff retain the right to require researchers to undergo further training if deemed necessary. For instance, after an extended period of booking inactivity, when incorrect usage is observed, etc.
- 5) Users can request and join refresher sessions if deemed necessary to update their cytometry skills.

#### Facility Access and Equipment Usage

- MCPusers may book instruments in any location within the Platform, subject to local OHS and training requirements. Booking rights and access restrictions are handled directly by the calendar based on your main location and training profile. Contact platform staff before placing bookings in new locations to organise and assist you with access and proceed to node-specific induction if required.
- 2) Researchers must abide by local OH&S rules at all times. Refer to the relevant instrumentspecific training files and SOPs.
- 3) Access cards must never be handed on to a third party.
- All bookings must be recorded via the MCP booking system, Calpendo. New users must request/register a new account directly via our Calpendo webpage: <u>https://cytometry-um.calpendo.com/</u>
- 5) New users should review booking/ cancellation and access policies governing MCP operation of <u>analysers</u> and <u>cell sorters</u>. These policies exist to provide fair and equitable instrument access, a financially accessible service for research groups/ stakeholder departments and a financially responsible Platform service.
- 6) Calpendo accounts may be set to expire after a long periods of inactivity (>3 months). To request the re-activation of your former account, please contact one of our Calpendo administrators: Vanta or Alexis, see Table 2.
- 7) Unless specifically advised or authorized to do so by MCP staff, researchers must log into analyser PC workstations using their Calpendo username and password via the pGina login prompt and must not use another researcher's login details. Generic login details are available for logging in only if Calpendo or internet is down (users will be advised when to use this method). Users should not log into analyser workstations using their university username/ password as many user profiles fill the C: operating drive that affects computer processing power.
- 8) Problems experienced with instrument operation or laboratory housekeeping must be reported immediately for prompt resolution or engineering assistance and to inform subsequent users of potential delays. Contact laboratory managers and MCP staff via the following channels:
  - Via Microsoft Teams (**preferred way**, since issues and alerts reported this way will be immediately communicated not just to managers but to all relevant users).
  - Directly in Calpendo via the issue report field appearing in the affected booking entry (See our MCP Calpendo User guide: <u>https://cytometry-um.calpendo.com/#CytometryNodes</u>).
  - Communicated to staff personally, via emails or phone (See Appendix A)
- 9) Any physical damage to MCP instrumentation resulting from misuse, neglect or operator error will be charged back to the research group to which the researcher belongs.
- 10) Access approval for MCP instrumentation may be withdrawn for any of the following reasons:
  - a. Repeated neglect, damage or inappropriate use of equipment.
  - b. Neglect of safety procedures, including non-adherence of PPE and breaches of

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OGTR and biosafety requirements.

- c. Allowing unauthorised persons access to the facility or other behaviour deemed to be inappropriate.
- d. Unauthorised use of external USB drives for direct data collection from cytometer computers.
- e. Use of instruments without previous training and demonstration of competency;
- f. Operating instruments without booking via Calpendo.

#### **Data Management Policy**

While most MCP data is automatically synchronized, stored, and archived through a central IT server, files can be lost or corrupted. As such, data storage is ultimately the responsibility of individual researchers.

- 1) Follow MCP guidelines regarding data storage at cytometer computers and remote data access via the Cytometry Data-Mirror server as set out in our <u>MCP Data Handling Policy</u> document.
- 2) Researchers are responsible for exporting/saving their data to the local cytometer computer data mirror folder to allow for instrument-server synchronization- ensure that you allocate time for this within your booking.
- 3) *MCP recommend that data is checked for accurate export* and synchronization immediately following your session. You must report any issues with data saving and synchronization as soon as these are detected.
- 4) Whereas the MCP Data mirror server content is constantly archived and backed up to prevent data loss, data saved locally in the cytometer computers is periodically deleted as part of our housekeeping procedures, to prevent saturation of hard-drives and issues with instrument operation.
- 5) Data obtained on MCP instruments remain the property of the researcher who acquired the data.
- 6) Under no circumstances are MCP staff responsible for any lost data.

#### MCP Cost Recovery

MCP nodes are hosted, administered, funded, and subsidised by the School of Biomedical Sciences (SBMS) Departments including Anatomy and Physiology, Biochemistry and Pharmacology and Microbiology and Immunology and the Melbourne Dental School (MDS) within the Faculty of MDHS.

To recoup operational costs, the use of MCP equipment is charged at an hourly rate as set out below unless arranged and confirmed in writing by Platform managers. Billing is based on usage that is tracked via Calpendo bookings, instrument logs and pGina log tracker. Usage summaries and payment requests are sent on a monthly to quarterly basis, depending on the resource location. University of Melbourne groups should provide THEMIS account strings for GST-free internal funds transfers. Groups without THEMIS account strings will be invoiced - invoices will include GST.

Researchers from labs with **direct** administration through the above listed MCP stakeholders receive base rates for cell sorting and 'assisted' services. Other departments and external

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academic users accessing cell sorting are charged a small premium. Analysers are charged at a standard base rate for all University of Melbourne and Florey users.

Bookings that are cancelled may also attract penalty charges depending on the amount of notice given. Please see our terms and conditions for of <u>analysers</u> and <u>cell sorters</u> for more details on booking rules and penalties.

Service	SBMS, MDS	Other UoM Dept & academic users	Commercial/ Industry
Assisted instrument service (includes cell sorting and MCP staff performed analysis on analysers)	\$100/h	\$118/h	Contact us
User operated Analysers (DIY)	\$55/h*	\$55/h	Contact us
Collaboration projects - Benchtop analysers operation assisted by MCP.	DIY prices Authorship on paper	DIY prices Authorship on paper	Contact us
Assay design, consultancy, ad hoc tutorials, data analysis	\$100/h	\$118/h	Contact us
Collaboration projects – Assay design, consultancy, ad hoc tutorials, data analysis	Free of charge Authorship on paper	Free of charge Authorship on paper	Contact us
Hands-on analyser/ sorter training	\$100/h	\$118/h	Contact us
Theory training, technological seminars and workshops	Free of charge	Free of charge	Contact us

Table 1. MCP Services and prices in 2024

\* \$50/h for Doherty facility users that are affiliated with the Dept of Microbiology and Immunology

#### **Publication/Authorship Policy**

All instruments that are on the MCP Calpendo booking system fall under the direct or indirect management of the Melbourne Cytometry Platform. Even though it may seem that no assistance was directly provided to you, the cytometer that you've used has been supported by the Platform with provision of major discounts in purchases and service contracts, usage management via our booking system, data synchronization and storage management, instrument QC, maintenance and troubleshooting. Additionally, the platform supports users with advice on the most appropriate instrument and instrument settings to use, administration of site licenses for analysis software, training and induction of new users (direct hands on, provision of seminars, workshops, etc).

 The Melbourne Cytometry Platform, the specific node and (if appropriate) MCP staff must be acknowledged in all research output that has been made possible from data generated on MCP instruments. This includes papers, thesis, seminars, Terms and Conditions

conference presentations & posters

- 2) Researchers <u>MUST</u> notify the platform of any research output (e.g. publications, presentations & posters) that arise from use of MCP instruments.
- 3) Platform staff can support your research on a collaborative basis. Any publications that include data produced via mutually agreed collaborations should include the relevant MCP staff as a co-author.
- 4) Platform staff should be considered for co-authorship whenever they have contributed significant technical, scientific, or intellectual input to a study.

#### **Collaboration Agreements**

Platform staff and research groups can, upon discussion and mutual agreement, engage in collaborations to best benefit their research projects. Scenario examples for former or current collaborations undertaken by MCP and University researchers include:

- Experimental design, instrument setup, execution, and analysis of advanced or novel cytometry applications (i.e., large panel design, bacteria sorting, nanoparticle analysis, rare marker biodistribution, non-conventional tissues, rare cell detection).
- Assistance in instrument setup or custom modification leading to optimum instrument performance to best match research project challenges.
- Assistance in the acquisition of samples, post-acquisition data analysis, data clinics and troubleshooting.
- Data interpretation and generation of publication-ready Cytometry output (statistical analysis, tables, and figures).

As part of these collaborations, sessions involving staff-assisted acquisition of analysers will be charged at the user operated (DIY) rate, while staff time spent on other support activities will be provided free of charge, but only if staff are considered for authorship in all research output that will derive from this work. Failure to add staff as co-authors in these publications will result in retrospective full-cost recovery of the collaborative services (see Table 1).

Please consult the collaboration form at the end of this document for more information. Contact us if you would like to secure specialised MCP staff to support your research projects via collaboration agreements.

 Table 2. MCP Staff in 2024
 All MCP staff are affiliated with the Department of

 Microbiology and Immunology, Melbourne Cytometry Platform, The University of Melbourne

Role	Name	Locatio n	Email
Melbourne Cytometry Platform manager / Dental School node manager/Calpendo Admin	Dr. Alexis Perez Gonzalez	Doherty	alexis.gonzalez@unimelb.edu.au
Doherty node manager/Calpendo Admin	Dr. Vanta Jameson	Doherty	vanta.jameson@unimelb.edu.au
MBC and Bio21 nodes manager	Dr. Magdaline (Maggie) Sakkas	MBC	magdaline.sakkas@unimelb.edu.au
Cytometry Senior Technical Specialist	Mr. Oliver (Olly) Eltherington	Doherty	oliver.eltherington@unimelb.edu.au
Cytometry Operator	Dr. Alison Morey	Doherty	alison.morey@unimelb.edu.au

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**Cytometry Operator** 

Ms. Catherine Li

wai.li@unimelb.edu.au Doherty

### Appendix A. MCP resources in 2024

	Node/Calpendo Resources	Туре	Lasers	OHS/OGTR	Access	Manager contact
#	Doherty node					
	Platform managed					
1	DMI Fortessa 1 (HTS)	analyser	V/B/Y/R	PC2	All users	
2	DMI Fortessa 2 (HTS)	analyser	UV/V/B/Y/R	PC2	All users	
3	DMI Fortessa 3 (HTS)	analyser	UV/V/B/Y/R	PC2	All users	
4	DMI Fortessa 4 (HTS)	Analyser		PC2	All users	
5	DMI FACSCanto II a	analyser	B/R	PC2	All users	Vanta Jameson
6	DMI FACSCanto II b	analyser	V/B/R	PC2	All users	
7	DMI Aurora 1	analyser	UV/V/B/Y/R	PC2	All users	
8	DMI Aurora 2	analyser	UV/V/B/Y/R	PC2	All users	
9	DMI Aurora Frankie	Analyser	UV/V/B/Y/R	PC2	All users	
10	DMI PC2 FACS ARIA III	Sorter	UV/V/B/Y/R	PC2	All users	
11	DMI CytoFLEX SRT	Sorter	V/B/Y/R	PC2	All users	
12	DMI Aurora CS	Sorter	UV/V/B/Y/R	PC2	All users	
13	DMI PC3 Aria Fusion	Sorter	V/B/Y/R	PC3	Restricted	
	Offline analysis workstations (Spectroflo)					Alexis Perez Gonzalez
14	Analysis PC 1	analysis	NA	NA	All users	
15	Analysis PC 2	analysis	NA	NA	All users	
16	Analysis PC 3	analysis	NA	NA	All users	
	Doherty groups managed					
17	DMI Godfrey Fortessa	analyser	UV/V/B/Y/R	PC2	Restricted	Vanta Jameson
18	DMI Heath Fortessa	analyser	UV/V/B/Y/R	PC2	Restricted	
19	DMI Aurora 3 (Heath/Mackay)	analyser	UV/V/B/Y/R	PC2	Restricted	
20	DMI Kent Fortessa	analyser	UV/V/B/Y/R	PC2	Restricted	
	Melbourne Brain Centre node					Maggie
21	MBC PC2 FACS ARIA III	Sorter	V/B/Y/R	PC2	All users	Sakkas
22	MBC CytoFLEX S	analyser	V/B/Y/R	PC2	All users	
23	MBC CytoFLEX LX	analyser	UV/V/B/Y/R/IR	PC2	All users	
	Bio21 node					Maggie
24	BMB/PT Fortessa 1 (Bellatrix)	analyser	V/B/Y/R		All users	Sakkas
25	BMB/PT Fortessa 2 (Ginny)	analyser	V/B/Y/R		All users	
26	Bio21 Canto	analyser	B/R	PC2	All users	
	Melbourne Dental School node					
27	DS CytoFLEX LX	analyser	UV/V/B/Y/R/IR	PC2	All users	Aleuia Deves Coversion
28	DS Fortessa X-20 (HTS)	analyser	V/B/Y/R	PC2	All users	Alexis Perez Gonzalez

**Note:** For information on instrument access and capabilities visit our MCP <u>webpage</u> or contact us directly for additional enquiries: <u>melbourne-cytometry@unimelb.edu.au</u>