

Principles of use

The principles of use are intended to promote the harmonious research and educational activities of an extensive and diverse group of users, collaborators and partners.

Principles

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A1. The Henry Wellcome Building for Biomolecular NMR Spectroscopy (HWB•NMR) operates to facilitate state of the art research and educational activities for its users, collaborators and partners (hereafter referred to collectively as “Users”).

A2. Use of HWB•NMR resources should comply with contractual agreements between the University of Birmingham, The Wellcome Trust and the Higher Education Funding Council of England, as well as with conditions of grants awarded to Users.

A3. HWB•NMR shall protect the reasonable use by and safety of the staff and users by appropriate training, oversight, and enforcement of regulation.

A4. HWB•NMR will develop target charges and justifications for insertion into proposals for grants and contracts for recovery of approved costs from the Users.

A5. Established Users: The authorization to allocate resources (e.g. NMR time) to a User is given by senior HWB•NMR staff in consultation with the User Representation Committee(s), taking into account the merits and suitability of the proposed work. The User and his/her Principal Investigator take responsibility for ensuring compliance with HWB•NMR regulations and payment of any charges.

A6. New Users: Opportunity to access HWB•NMR resources by new users (e.g. other NMR groups in the UK, international applicants, or commercial interests) is possible following discussion with senior HWB•NMR staff.

Committees

B1. The Health and Safety Committee is responsible for the prevention and investigation of accidents and incidents, and includes Sue Rhodes and Sue Rookes.

B2. The NMR Management Committee includes all the NMR staff and is responsible for the operations and services of the facility, and meets monthly.

B3. The Financial Management Committee is responsible for the business administration of the facility, includes Michael Overduin, Ulrich Günther, Sara Whittaker, Sue Rookes, Seamus Foley, and Andy Allen, and meets quarterly.

B4. The Local and National User Representation Committees provides the staff with recommendations on policies and usage of the facility.

B5. The External Advisory Board provides the staff with advice on strategic planning and oversight of the facility.

The [membership of these committees are described \(/facilities/nmr/about/advisors.aspx\)](/facilities/nmr/about/advisors.aspx).

Access

C1. **Hours of Operation.** The regular hours of operation HWB•NMR are 9:00 am - 5:00 pm, Monday-Friday, with the exception of Bank Holidays and University Holidays. HWB•NMR may reduce hours of operation because of weather or other emergencies, staff limitations, or other factors.

C2. **Priority Users.** Members of the UK Biomolecular NMR Community who contributed to the JIF bid for the purchase of the 900 MHz NMR spectrometer are automatically eligible to apply for use of any of HWB•NMR's services. They and their research groups will be given priority for the 70% of the available time on the 900 MHz spectrometer.

C3. **All Users:** Individuals involved biomolecular NMR spectroscopy research are encouraged to apply for NMR time by submitting an [Application for Access](#) form or by inquiring with the staff.

All users must:

1. be at least 18 years old,
2. should possessing a relevant Bachelor degree, and
3. have appropriate training and understanding of the operation of the NMR spectrometer, as described in the “NMR guide” which is available on the NMR server and from the Operations Manager, and have ‘hands-on experience with NMR spectrometers.

Users are responsible for damage that results from samples that are explosive, pressurized, chemically corrosive, radioactive, biologically dangerous, or that otherwise pose unusual hazards to instrumentation or personnel. In all such cases, prior permission and advice should be sought with regard to these special samples, but permission does not absolve any user from responsibility for whatever harm their samples may cause HWB•NMR's spectrometers or probes. Researchers use HWB•NMR resources with the understanding that users may be charged for damages incurred as a direct result of unsafe or negligent use of the instrumentation. This obligation does not extend to responsibility for damage that occurs accidentally and unavoidably during normal use.

C4. **All-hours Users.** Those users with a research need to conduct operations outside normal hours of operation may be permitted all-hours status subject to induction and their signed agreement to abide by rules for all-hours operation, including the the HWB•NMR Security Management Policy and Out-of-hours Procedures which have been designed to protect personal safety and the general security of the building. Occupants of the building outside of regular hours of operation need to log their presence and departure at the entry lobby in case of fire or other emergency. Should unsafe after hours use occur, an HWB•NMR Director may suspend all-hours operations for all users, an Institution, research group, or individual.

C5. **Building admission.** Contractors, University Personnel and Visitors shall enter the building via the front door and sign in during normal hours of operation. The complexity of the building and its low population density makes it desirable to maintain a count of the people present in case of fire.

C6. **Secure areas.** Because of human safety and instrument security concerns, HWB•NMR Staff will identify secure areas including the NMR chambers and adjacent rooms. Users will be able to access these areas only after appropriate induction. Any User or Staff member admitting an unauthorized visitor to the secure areas is subject to expulsion or dismissal, respectively. A visitor must become authorized for access to secure zones by a member of staff, and must be accompanied by a Staff Member or regular User. For one-time visitors, Staff and Users are asked to guide the visitor(s) around the safe front of house areas.

C7. **Fire safety:** A safe gathering point in front of the NMR Building is indicated by a green sign.

C8. **Special events.** For events including demonstrations, lectures, meetings and tours modified security arrangements will be made to permit access to the safe zone in the front of house. Secure zone restrictions will always be in place. There will be no general access to the remainder of the building.

C9. **Restricted activities :**

- Smoking is not allowed on the premises.
- Food: No eating or drinking in any laboratory or secure zones. The kitchen area and front of house are available, and the nearby School of Cancer Sciences and the College of Medical and Dental Sciences have food and drinks available for purchase.
- Clothing: No use of steel-containing clothing, headgear (e.g. helmets), or footwear, especially high-heeled shoes and steel toed shoes or boots in the secure areas.
- Medical Implants: Anyone with a pacemaker or similar device or with any magnetizable implant should obtain their doctor's advice before entering the building since some areas are in the 5-10 Gauss field. They should not enter secure zones; neither should people requiring the use of wheel chairs, walkers, crutches or canes.
- Regulations: All Users and Staff are subject to government regulations including those relating to non-discrimination, scientific misconduct, substance abuse. Downloading or sharing of pornographic or copyrighted material are grounds for expulsion.

C10. **Restricted items.** Anyone entering the secure zone must use the personal lockers and the small drop boxes for Keys, Beepers, Wallets & change, PDA's, Pocket knives, Bags or backpacks, Cell phones

C11. **Expulsion.** HWB•NMR staff and University Security Personnel revoke membership of and expel anyone who is:

- apparently under the influence of drugs or alcohol,
- threatening, violent or disruptive,
- whose conduct leads to suspicion of interference with the research operations of others,
- who is not appropriately affiliated with HWB•NMR

Code of Conduct

D1. **University regulations:** Any User continues to be subject to all the regulations and requirements of his/her member Institution, institution or employer.

D2. **Safety:** All Users agree to use the instruments in a safe fashion and to be subject to continuing education and testing in this area.

D3. Any instrument or laboratory is subject to visual and electronic **monitoring** for the purposes of safety and security.

D4. The HWB•NMR staff has the final determination of the fitness of any user to operate in the building.

Dispute Resolution

E1. **Collegial conduct.** Users and Staff are obligated to attempt to resolve disputes directly with each other. Only in the most extreme circumstances will any dispute resolution process be started unless direct discussions have taken place.

E2. **Scientific misconduct** (including issues involving research data, confidentiality, publications, and conflict of interests) is handled by the Joint Ethics and Research Governance Committee of the Council and Senate of the University of Birmingham.

E3. **NMR time and services.** Disputes should be discussed with the Operations Manager. If the issue concerns a breach of a defined policy, then the Scientific Director should rule on whether the policy was reasonably adhered to, and if not how to remedy the breach. Otherwise the NMR Management Committee should consider whether to formally recommend to the Executive Director and, if appropriate, to the User Representation Committee, a change in policy or the introduction of a new policy.

E4. **Accidents and incidents** will be handled by the Health and Safety Committee.

E5. **Liability and damage** to the equipment will be handled by the Financial Management Committee.

E6. Other: The External Advisory Board of HWB•NMR is available to discuss disputes, and will normally resolve all disputes other than those referred to above or those governed by the University or Funding Bodies (Wellcome Trust and HEFCE).

Laboratory use

F1. **Use.** Users will have access to laboratory space for sample preparation and analysis procedures. All users must leave laboratory space in a clean and tidy state at all times. All samples must be labelled with the date and owner's initials. All regular users will be entered into a rota that is responsible for weekly cleaning of the NMR chambers and sample preparation lab.

F2. **Safety.** All Users are required to adhere to general safety rules and security regulations and to all specific laboratory safety requirements at HWB•NMR.

F3. **Materials.** All purchased materials brought into and subsequently removed from the laboratory must be identified. Any stored materials must be re-identified on a yearly or more frequent basis, or removed. HWB•NMR may require removal of chemical or biological wastes and sharps by users rather than local disposal. No radioactive materials are allowed on the premises.

F4. **Computers and data access.** Users requiring the highest level of confidentiality for their data should make arrangements for physical transport of their data from HWB•NMR, and request removal of the intranet connection from the instrument being used. While reasonable efforts for confidentiality and data integrity will be made,

HWB•NMR and raw data after four weeks. All data must be transferred to accounts on the server where they will be backed up daily on to tapes. Storage of NMR data on DVD and CD is advised. Regular users may purchase personal workstations and have them installed in HWB•NMR only after consultation with Christian Ludwig, Computer Systems Architect. See also [Data Management. \(http://www.nmr.bham.ac.uk/access/data.shtml\)](http://www.nmr.bham.ac.uk/access/data.shtml)

NMR operations

NMR operations: 900 MHz NMR system

G1. Allocation of access: A total of 70% of the available time on the 900 MHz NMR system is allocated equally to external UK academic users, with priority being given to the JIF-bid consortium member institutions (that is, Birkbeck, Cambridge, East Anglia, Edinburgh, Imperial College London, Leeds, Leicester, Manchester, NIMR Mill Hill, University College London, and Sheffield).

Members of these external institutions are expected to manage allocation of their share of prioritized 900 time (approximately 3 weeks per year per institution).

Other Wellcome Trust and HEFCE-funded research groups are given the next highest level of priority for available time on this system on a competitive basis, subject to approval of their "Application for Access" form. All external groups can also apply for access to the other NMR systems in the facility.

Local users at the University of Birmingham are allocated 20% of the time on the 900 MHz system. The remaining 10% is for other users that do not fall within the previous categories.

Requests for a particular time are made on an online scheduling calendar, for which access is given following acceptance of the user policies.

Requests for access will be accommodated in the order in which such requests are received with only one pending request per institution permitted.

A request for priority of allocation of an instrument whose allocation was lost due to down time in the last cycle will be honoured first.

Online booking of spectrometer time and meeting rooms is available.

G2. Review of access. The NMR Staff and Management Committees will review the applications and schedules to ensure that fairness and equal opportunity for peer review and internationally competitive research are in place. The committees will resolve disputes as to scheduled availability, downtime, and other operational issues. Reserved but unused NMR spectrometer time will be charged as this prevents access by other Users.

G3. Trading slots. The exchange of slots during a quarterly schedule is entirely appropriate and only requires that the two parties agree, and that they inform the HWB•NMR staff. Exchange, or other trading of slots outside a current cycle, however, raises issues about the accounting of the slot, and about availability. Out-of-schedule swaps are then solely between the two parties, and the party designated in the current schedule has the full responsibility for use, for the accounted debit, and for any damage resulting from accidents or incidents. The exchanging parties are free to contract between themselves as to these responsibilities.

G4. Downtime issues. The offer of the opportunity to use the instrument obviously requires that the instrument be operational. For addressing the issue of whether the instrument is operational, the instrument is required to pass the Standard Acceptance Tests for three channels of operation, and one probe must be operational for at least three channel performance. Demonstrating failure to perform these tests is the responsibility of the designated Users and credit for downtime will accrue only on receipt of this information. Staff will attempt to remedy downtime conditions as far as possible. The following conditions clearly result in downtime, and require no testing.

- Magnet failure
- Failure of computer controller to boot

The following conditions, on their own, will not be considered to result in downtime:

- Failure of one probe when another is functional
- Lack of disk space on a computer when data transfer would permit adequate space
- Any sample related problem.

Redress of downtime. The member institution's request for earliest priority of use for the previously down instrument in the next schedule will be met, to the greatest practical degree. In the case of multiple member institutions with downtime requests, they will be prioritized first by length of total downtime, and then by lottery.

G5. Appeals and disputes. Users should discuss any difficulties with the staff as soon as practical. In cases where the allocations of time, of staff resources, or other questions arise, when discussion with the staff has taken place, and when users are still in dispute, users may address the Scientific Director who may invite a written appeal. The Scientific Director will, within the next 10 working days, make a recommendation to the Executive Director for any redress or change of procedures. In the case of accidents or incidents, a separate procedure will involve the Health and Safety Committee.

G6. Accounting. Accounts of actual use time will be maintained by recording login sessions.

G7. User and staff responsibilities.

a) On Tuesdays, the 500-800 MHz spectrometers will not be available between 9am and 2pm to allow for cryogen filling and routine service. The 900 MHz spectrometer will not be available on Wednesdays between 9am and 2pm to allow for cryogen filling and routine service. This period may be changed in the future. In addition, users must permit staff to operate the cycling of the cryoprobes for their continuing operation.

b) Users will generally operate with standard operating protocols and methods, and are not permitted to modify the NMR hardware or implement new pulse sequences without explicit permission from the NMR staff. Users are required to consult with NMR staff for

- any unusual use of high power amplifiers including extreme power levels or pulse lengths
- any adjustment of tuning or matching rods of standard probes beyond ½ turn,
- any other expected condition which may imperil the instrumentation including extreme temperatures

Users must leave the operating programs in the standard condition, and remove any modified programs that would otherwise conflict with the standard conditions.

c) Users will submit 'application for access' and 'user agreement' forms as required to gain access to the NMR systems.

d) Users will assist the staff in the cleaning rota and with magnet filling, and will endeavour to keep the facility including kitchen, sample preparation lab, and NMR chambers cleaner than when they entered.

e) Staff will prioritize the removal of previous users' data so as to permit maximum use to the current users

f) Staff priorities will be human safety, instrument safety, attempted resolution of downtime issues, attempted resolution of other performance issues, and training and

other operations.

g) Users should finish their experiments by 12noon on the 800 and 900 MHz spectrometers and autosampler-equipped 500 and 600 MHz systems unless they are also using the instrument overnight. Users of the other NMR systems should finish their experiments by 3pm to accommodate users who may be taking the overnight slot. This arrangement may be varied by mutual agreement of the relevant parties.

h) Users who prevent other users from using overnight slots by over-running experiments beyond 12 or 3pm (see point g) will be charged for overnight and overweekend usage.

i) Users who book time online but don't use it will be charged for the time since they are preventing use by other users.

NMR operations: 500, 600 and 800 MHz NMR systems

Same as above except that:

1. the Member Institutions refers to the University of Birmingham and other Universities, Hospitals or Institutes in the neighbouring region
2. the Users are then typically Students and Employees of these West Midlands Institutions, although other groups inside or outside the UK are welcome to apply for access to any available time.
3. Research groups who have helped to fund a particular NMR system, autosampler or probe are given priority access to that system.
4. the User Representation Committee is then the Local User Representation Committee
5. the user fees are unique to each system configuration including magnet, probe and autosampler.
6. Subsidies may be made available to new or underfunded users upon request to collect preliminary NMR data for grant applications, for example.

Access to the spectrometers for internationally competitive scientific research is intended to be fair and equitable. Access fees will be charged on the basis of login time to a given NMR system, or on a per sample basis. Users will be billed monthly. Rates will be based on full economic costs and market rates, with subsidized access for academic users at the discretion of the subsidizing body (i.e. Wellcome Trust, HEFCE, or the School of Cancer Sciences).

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