

2022

HEALTH+MEDICAL RESEARCH

—
PhD Scholarships Round 5
Biotechnology Industry
Partnerships

Guidelines v2



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SHPN (OHMR) 221054

1. Call for Applications

NSW Health invites eligible host universities, in partnership with industry, to apply for Biotechnology Industry Partnership PhD Scholarships.

Funding will be awarded to successful host universities for PhD candidates to undertake research projects in biotechnology in conjunction with an industry partner.

2. Program outline

In 2022, NSW Health's PhD Program will support opportunities for PhD candidates to conduct research in biotechnology under the joint supervision of academic and industry-based supervisors. Funding and in-kind support will be drawn from three sources:

1. **NSW Health** provides \$20,000 per annum for four years as a contribution to a stipend for a PhD candidate
2. **Host universities** provide a financial contribution of \$20,000 per annum to match NSW Health's contribution, bringing the PhD candidate's total stipend to \$40,000 per annum for four years. Host universities may also provide in-kind support and fund the candidature beyond four years at their discretion and according to local arrangements
3. **Industry partners** are also required to match NSW Health's contribution, either by providing financial support or in-kind support, or a combination of both, to the value of at least \$20,000 per annum for four years. More information about the requirements of industry partners is provided on pages 6-7.

Program objectives

The objectives of the Program are to:

- fund research excellence among PhD students in NSW
- fund PhD Scholarships that will improve health and wellbeing outcomes
- encourage collaboration, leadership and capacity building in the NSW research environment, including collaboration between industry and university researchers
- grow the pipeline of NSW researchers in the area of advanced therapeutics
- build commercialisation capacity in the biotechnology sector

- ensure graduates leave university with the skills necessary to succeed in industry
- improve graduate understanding of the diversity of employment opportunities in the NSW biotechnology sector.

Priority areas of research

The Program supports the recruitment of PhD candidates to undertake innovative research projects in biotechnology in conjunction with an industry partner.

Eligible areas of research include diagnostics, therapeutics and other interventions, research tools, production or bioprocessing that specifically use living organisms or parts of organisms (natural or modified).

Only research projects that aim to improve wellbeing and health outcomes for patients will be considered eligible.

Commercialisation Training Program

NSW Health has developed a training program in commercialisation, which grant recipients are required to complete during the funding period. The training will provide students with a high-level understanding of the biotechnology industry, its structure, corporate roles and the process of taking a product from a concept through to market. Specifically, students will understand the essential steps required to create successful therapeutics from a formulation, manufacturing, regulatory and reimbursement strategy point of view. At the completion of the course students will understand how to construct a target product profile and associated business case for a new therapeutic product.

Research collaboration

In addition to the formal partnership with Industry required for these PhD Scholarships, applicants are encouraged to identify and engage relevant stakeholders who will provide a meaningful contribution to delivery of the research project and implementation of outcomes. These may include:

- NSW Health system partners including NSW Ministry of Health, Pillars, and statewide health services
- local health districts and specialty health networks
- Advanced Health Research Translation Centres and Centres for Innovation in Regional Health
- universities and medical research institutes

- Aboriginal Community Controlled Health Services
- Primary Healthcare Networks
- Clinical Networks
- non-government organisations
- consumers and patients.

3. Application process

Stage one: Host university submits PhD Scholarship application(s) to NSW Health

The 2022 Biotechnology Industry Partnership PhD Scholarship Application Form is available at www.medicalresearch.nsw.gov.au/phd-scholarships/. Please refer to this link for relevant program dates and updates as well.

PhD Scholarship applications are submitted by universities and medical research institutes on behalf of Academic and Industry supervisors and are **not to be completed by prospective PhD candidates**.

Applications must be approved by authorised delegates of research and industry partner organisations and submitted by the Research Grant Office of the host university. All applications must use NSW Health’s Biotechnology Industry Partnership PhD Scholarship Application Form and attach supporting evidence as required.

All applications, attachments and queries should be submitted by email to MOH-OHMRGrants@health.nsw.gov.au by **12PM (AEDT) Wednesday 15 February 2023**. Applications submitted by any other means will not be considered.

Host universities are invited to submit a maximum of five applications only.

Stage two: NSW Health notifies host universities of successful applications

Following the review of applications by a panel of independent experts, NSW Health will notify host universities of successful and unsuccessful applications.

Stage three: Host universities select a suitable PhD candidate to undertake the research project

PhD candidates should be recruited to funded project opportunities according to host university procedures for merit-based recruitment. This process is to be administered by the host university in consultation with the industry partner for each project. Aboriginal and

Torres Strait Islander researchers, people from culturally and linguistically diverse backgrounds, and primary carers who have experienced career disruptions, should be encouraged to apply.

Following recruitment, required documentation must be submitted to NSW Health. Further guidance on the format for this will be provided to successful host organisations.

NSW Health will enter into a funding agreement with the host university. Following this process, an announcement of successful applications will be made.

Indicative application timeline

2022 PhD Scholarships - Biotechnology Industry Partnerships	Date
Applications open	December 2022
Applications close	12PM (AEDT) 15 February 2023
Outcomes notified	May 2023
Funding agreements executed	May – June 2023
Payments made	June 2023
Student recruited and studies commence	By June 2024

4. Eligibility Criteria

ALL criteria must be met for applications to be eligible.

Academic supervisor

Note that the number of academic supervisors per PhD student will vary depending on the host university's policy. Details and track records of all academic supervisors should be included in the application.

1. Australian citizen, permanent resident or appropriate visa

The nominated academic supervisor must be an Australian citizen or permanent resident or hold an appropriate visa. Evidence of this should be provided with the application.

2. Contract with eligible host

The academic supervisor must be employed by the host university on an ongoing basis or have an employment contract and/or affiliation agreement for at least the projected duration of the PhD candidate's studies.

3. Commits to releasing their candidate for the Commercialisation Training Program

The academic supervisor must commit to releasing their PhD candidate for the Commercialisation Training Program.

Host university

Note: Medical research institutes that are affiliated with a university and other formally affiliated organisations such as local health districts are also invited to apply and must adhere to the eligibility criteria below. For the purpose of the Guidelines and Application Form such organisations will be referred to as host university.

The host university is the enrolling university and holds an employment contract and/or affiliation agreement with the academic supervisor AND is the university at which the PhD candidate will undertake the research project. The PhD candidate will also be based at the Industry Partner's site at least 20% of the time.

An authorised representative of the host university is required to sign the application form to certify that the organisation complies with the requirements of the Scholarship.

Host universities may partner with a Medical Research Institute(s), NSW Health Local Health District(s), NSW Health Specialty Health Networks or other affiliated NSW research organisation(s). The application must include details of the partnering organisation(s) and the role and contribution that the partnering

organisation(s) have in the project. Appropriate executive sign-off from the partnering organisations must be included in the application.

Host universities are invited to submit a maximum of five applications.

1. Located in NSW

The host university must be located in NSW and research funded by the PhD Scholarship must be conducted in NSW.

2. Guarantee of financial support by providing matching funding to NSW Health

The host university must provide a financial contribution of \$20,000 per annum to match NSW Health's contribution, bringing the PhD candidate's total stipend to \$40,000 per annum for four years. Host universities may fund additional candidature beyond four years at their discretion and according to local arrangements.

The academic supervisor's host organisation must provide appropriate infrastructure support for the research project, such as wet/dry lab space, computer equipment, and desk space.

3. Legally compliant and committed to providing appropriate support

The host university must meet all standard employer responsibilities required by law and accommodate and support the academic supervisor and PhD candidate for the duration of the PhD.

4. Compliant and committed to policies and practices that ensure recruitment is fair, responsive and inclusive

The host university must apply policies and practices concerning under-represented groups in the selection of prospective PhD candidates.

5. Clinician Scientists

Clinician Scientists may undertake clinical work separately from where research is undertaken. If the funds are to be used to quarantine research time and backfill a clinical position, the application must also be endorsed by the Chief Executive/Executive Director of the organisation where clinical duties are undertaken.

Administering Organisation Requirements

An administering organisation is only required where the funds are held by a separate organisation to the host organisation.

In such cases, the administering organisation will enter into the funding agreement with NSW Health, manage

the funds, submit financial reports and coordinate other reporting requirements as outlined in the funding agreement.

The administering organisation must be:

- a university
- a medical research institute, or
- a not-for-profit organisation that conducts health and medical research in NSW.

Ethics and Regulation

The Host University (and where appropriate the administering organisation) must certify that the project has received all appropriate research ethics and regulatory approvals and must ensure these are maintained as required for the duration of the grant. All organisations and personnel contributing to the project must:

- have familiarised themselves with the *Australian Code for the Responsible Conduct of Research*, the *National Statement of the Ethical Conduct of Human Research*, the *Australian Code for the Care and Use of Animals for Scientific Purposes* (including but not limited to the application of the 3Rs 'replacement', 'reduction' and 'refinement' at all stages of animal care and use) or their replacements and other relevant National Health and Medical Research Council policies concerning the conduct of research and agree to conduct themselves in accordance with those policies;
- comply with any requirements of relevant Commonwealth or State or Territory laws; and
- comply with any requirements of regulatory bodies that have jurisdiction over the project. This includes, but is not limited to, the Therapeutic Goods Administration and the Office of the Gene Technology Regulator.

Industry supervisor

Contract with eligible organisation

The nominated industry supervisor must be employed by an eligible industry organisation on an ongoing basis or hold an employment contract for at least the projected duration of the PhD candidate's studies.

Commits to releasing their candidate for the Commercialisation Training Program

The industry supervisor must commit to releasing their PhD candidate for the Commercialisation Training Program.

Industry Organisation

Registered in Australia or overseas

The industry organisation must be registered and conduct its business activities in Australia or overseas. If the industry organisation is located outside of NSW, consideration should be given to any travel or living expenses to be granted to the PhD candidate, as well as justification of the benefits of external industry exposure for the student and NSW.

Update from Version 1.0:

Please note that government and not-for-profit organisations are not eligible to apply as Industry Partners. These organisations may be included as team members or collaborators on the application.

The Host Organisation must ensure that the Industry Organisation complies with the following conditions:

- The PhD candidate must spend at least 20% of their time at the industry organisation's site. If the industry organisation is unable to host the PhD candidate at their site, they must provide strong justification in their application as to how the student would get meaningful industry experience and exposure to an appropriate level of seniority within their organisation.
- accommodate and support the PhD student and ensure that the student has the support of the Industry Organisation's Chief Executive or Executive Director
- meet all standard employer responsibilities and obligations in accordance with relevant regulations and value gender equity in practice; and
- provide cash and/or in-kind contributions to support the project.

Guarantee of support by providing matching funding to NSW Health or in-kind support of equivalent value over four years

The Host Organisation must ensure that the industry organisation provides a minimum financial contribution of \$20,000 per annum to match NSW Health's contribution, or in-kind support of equivalent value, to cover project and skill development costs over four years. A combination of financial and in-kind support of equivalent value is also acceptable. In-kind support includes but is not limited to training, supervision, networking opportunities, project equipment, provision of compounds or assays, travel or accommodation to support the PhD candidate attain onsite industry experience. Smaller companies including start-ups

may provide a justification for why this matched contribution would not be possible, and instead propose in-kind or other support to be clearly outlined in the application.

The Host University administers the recruitment process to select the PhD candidate (see page 4) in consultation with the Industry Partner.

NSW Health is open to different partnership arrangements providing program objectives and eligibility criteria are met, and the partnership is clearly outlined in the application. For example, start-ups may partner with larger industry organisations in addition to their academic partner.

PhD Candidate

Should the application be successful, the prospective PhD candidate must also meet **ALL** applicable eligibility criteria. Candidate selection process reports will be reviewed by NSW Health, as outlined in Stage 3 of the application process, to ensure these criteria are met.

Australian citizen or permanent resident

The candidate must be an Australian citizen or permanent resident. Candidates on any form of temporary visa will not be eligible.

Nomination by the host university

The candidate must be nominated by the host university for support under the program.

Academic track record and research experience

The candidate must hold an undergraduate degree with at least a credit average (or equivalent). Candidates must also have research experience through an Honours program (first class or second class, division one) or Masters degree by research in a relevant subject. Candidates with a Masters degree by coursework will not be deemed eligible.

Commits to completing Commercialisation Training Program

The candidate must commit to completing the Commercialisation Training Program.

Priority populations

It is important that all research projects consider and respond to the distribution of the burden of disease within the population and the needs of higher risk and priority populations where appropriate. These may include women, Aboriginal and Torres Strait Islander people, individuals from a non-English speaking

background, socioeconomically disadvantaged groups and people living in regional and remote areas.

Relevant partners should be engaged early to ensure that the research design and conduct will be effective and appropriate for these population groups.

Research projects with a primary focus on Aboriginal health or involving Aboriginal people as participants should attach a completed Aboriginal Health Impact Statement to their application, available [here](#).

Relative to opportunity policy

Applicants may present a declaration and/or evidence of circumstances that have affected the applicant's research productivity for consideration by the review panel. These circumstances might include career disruption due to pregnancy, illness/ injury and/ or carer responsibilities, as well as other relative to opportunity considerations. Please refer to the NHMRC relative to opportunity policy [here](#).

Intellectual Property

To maximise benefits arising from the public funding of research, all recipients of NSW Health PhD Scholarships must comply with all elements of NHMRC's Open Access Policy and the *National Principles of Intellectual Property Management for Publicly Funded Research* as a condition of funding.

In addition, intellectual property (IP) arrangements should be agreed between all research partners and organisations. IP arrangements must cover both background IP and IP that is developed during the project. IP arrangements should consider the contributions of all parties. The arrangements should be detailed in the application.

Program Logic and Research Impact Assessment

The PhD student is required to draft a Program Logic within the first year of their studies. This will include the project aim, inputs, activities, outputs, and expected outcomes and impacts.

OHMR uses the Program Logic to optimise the probability of research impact. The PhD student will be required to submit a Program Logic with their first progress report to guide measurement of impact throughout the project and its conclusion.

Research impact will be considered across five domains:

Domain 1: Advancing Knowledge

- New interventions, treatments, diagnostics or drug targets
- New clinical or medical prototypes
- Peer-reviewed publications and presentations at conferences
- Media coverage and other non-peer-reviewed publications.

Domain 2: Capacity and Capability Building

- New partnerships leveraged
- Training and professional development
- Research students supported.

Domain 3: Policy and Practice

- Instances where research findings are considered in policy development
- Instances of change in clinical practice
- Instances of new health technology or new treatments used in clinical care.

Domain 4: Health and Community

Improved health outcomes, including:

- change in time to develop an outcome
- likelihood of an outcome occurring.

Domain 5: Economic

- Research jobs created and sustained
- Patents and commercialisation
- Value of leveraged research funding (external grants awarded due to NSW Health funding)
- Reduction in cost of delivering care
- Potential for return on investment.

Research Translation

All research projects should have potential to lead to changes in clinical practice or policy in the short and/or long term, even if not during the funded period.

Applications must clearly describe:

- the long-term goal and clinical significance of the research
- the expected pathway for this to occur (note this may not be linear).

How the researchers will engage with ‘next users’, i.e. research partners and other stakeholders who will take the research to the next step on the translation pathway.

An example translation pathway is at **Appendix A**. Applicants may use their preferred framework.

5. Selection Criteria

All applications for funding that meet the eligibility criteria will be assessed against the selection criteria. The academic supervisor, host university, industry supervisor and industry organisation must complete relevant sections of the application form to be eligible for review by a panel of independent experts. All technical terms must be explicitly defined, methods clearly explained, and thorough background for the research proposal should be provided.

Selection Criteria Weighting

Selection Criteria	Section of Application Form	Weighting
Research proposal	D	30%
Partnership Benefits	E	20%
Track record of academic and industry supervisor(s)	F	20%
Student Development Plans	G	30%

Research Proposal (30%)

Applications should describe the proposed research project by including:

- a clearly defined research question or problem
- commercial opportunity for the host and industry partner arising from this research
- a detailed study methodology and outcomes, which are appropriate to research objectives
- a relevant evidence gap that the project aims to fill
- the patient need and potential impact of research on human health
- an approximate timeline and key milestones mapped across the PhD project
- an indicative budget that is realistic and appropriate
- financial and in-kind contributions from the host university and industry organisation, which will be provided for the duration of the PhD candidate’s studies
- roles of researchers who will work on the project
- clear and appropriate intellectual property arrangements are in place between the host

university and the industry partner with consideration given to student contributions.

Partnership Benefits (20%)

Student development and research benefits of proposed partnership (10%)

Applications should describe how the proposed partnership will:

- support the student's development beyond the standard academic PhD
- support the research program and generate translational outcomes beyond what each partner would be able to achieve in isolation.

Host Organisation will be assessed on the following criteria:

- value of financial and in-kind contributions to the research project and student's skill development plans
- explanation of value-add of collaboration.

Industry partner benefits (10%)

Applications should describe how the industry partner will:

- incorporate the student into the commercial environment
- provide commercialisation benefits to the project.

The industry partner will be assessed on the following criteria:

- involvement of the PhD candidate in its research ecosystem and decision-making processes
- exposure of the PhD candidate to wider business operations, including business development and commercial strategy
- alignment with the industry's commercial strategy
- flow on benefits to NSW and beyond including filling a skills gap, the development of new intellectual property and potential commercial returns.

Track record of Academic Supervisor(s) (10%) and Industry Supervisor (10%)

The track record of the academic and industry supervisors will be assessed on the following criteria:

- the PhD research area and commercialisation
- developing the Biotechnology sector in NSW
- successful outcomes for students.

Student Development Plan (30%)

Applications should include a well-articulated skill development plan for the student comprising three parts:

1. research skill development plan (10%)
2. commercialisation skill development plan (10%)
3. generic skill development plan (10%)

Each part of the plan should include:

- the specific skills to be developed during the PhD, and why the development of these skills is a priority for building the Biotechnology workforce in NSW
- the strategies that will be used to support the student attain the skills through the collaboration of academic and industry partners
- the evaluation measures that will be undertaken to demonstrate the successful attainment of the skills by the student.

6. Selection Process

STEP ONE: initial eligibility appraisal

Following the closing date for applications, NSW Health will determine whether each application has satisfied ALL the eligibility criteria.

STEP TWO: Review by panel of experts

NSW Health will convene a selection panel, comprising experts in relevant fields. The panel will assess applications against the selection criteria and make recommendations for funding to NSW Health who will make the final decision about which applications will be funded.

STEP THREE: Notification of successful PhD Projects

NSW Health will notify applicants of the outcome. This decision is final and may not be appealed. NSW Health will contact successful applicants' host universities to enter into funding agreements.

STEP FOUR: identification of PhD candidate

The host university, in consultation with the industry organisation is responsible for identifying a suitable PhD candidate to undertake the research project. NSW Health can assist with advertising the available position if desired. The successful candidate should commence studies within 12 months of the outcome letter, otherwise the scholarship will be rescinded and all funds recovered.

7. Prospective PhD candidates

Duration of candidature

NSW Health will support the PhD candidate for four years full time, or part time equivalent. PhDs longer than four years are permitted depending on the host university's policy, however, the host university and partnering industry organisation must negotiate funding and other arrangements. These arrangements should be clearly outlined in the application.

Details of funding

The table below outlines funding details for the PhD Biotechnology Industry Partnership Scholarship:

Funding Source	Amount	Duration	Purpose of funding
NSW Health	\$80,000 (\$20,000 per annum)	Four years full time or part time equivalent	Salary costs of PhD candidate
Host university	\$80,000 (\$20,000 per annum)	Four years full time or part time equivalent	Salary costs of PhD candidate
Industry organisation	\$80,000 (\$20,000 per annum) or in-kind support of equivalent value. A combination of financial and in-kind support of equivalent value is acceptable. If full matched support is not possible, justification should be provided in the application.	Four years full time or part time equivalent	Project and skill development costs

Part time students

NSW Health recognises that full-time study may not be possible for all prospective candidates. The university and industry organisation will be required to assess applications for part-time study on equal terms with applications for full-time study.

Funding will be pro-rata for part time candidates based on the student load approved by the host university (e.g. a 50 per cent student load will be awarded \$20,000 per annum over eight years). Confirmation that the host university has accepted the part time enrolment and the terms of that enrolment will be required.

Conditions applying to the scholarship

The standard scholarship conditions and administrative requirements of the host university will apply to these scholarships (e.g. recreation leave, sick leave, leave of absence).

Funding conditions and exclusions

The NSW Health scholarship is allocated to the PhD candidate's stipend and cannot be expended on capital works, general maintenance costs, organisational infrastructure or overheads, telephone/communication systems, basic office equipment, rent, or the cost of utilities.

Funding is conditional on the host university, Industry organisation, both supervisors and the PhD candidate remaining compliant with all eligibility criteria for the duration of the research program. Recipients must meet all reporting and program evaluation requirements set out in the Funding Agreement. The Agreement emphasises the host university and industry organisations' role in supporting the candidate's career development.

Once successful applicants are notified and the funding agreement is finalised, a revised copy of the application submitted incorporating any amendments required by NSW Health, will act as a record of the planned activities.

PhD candidates are advised to obtain independent tax advice regarding the PhD Scholarships.

No funding may be drawn down until the PhD candidate has been selected and commenced studies. The PhD candidate must not receive an additional government-funded scholarship which duplicates NSW Health's PhD scholarship. Top-up Scholarships with separate and specific purposes may be acceptable and should be checked with NSW Health.

NSW Health will not provide additional funding for PhDs greater than four years duration, or part-time equivalent, whether this extended candidature is due to pre-arrangement with the host university, delays with the project, or leave of any type taken by the candidate.

8. Reporting Requirements

The host university will enter into a Funding Agreement with NSW Health that sets out its obligations. A schedule for reporting will be outlined in the agreement and will include a requirement to provide:

- Annual Progress Report, with input from both supervisors and the PhD candidate
- Annual Financial Report
- A Program Logic submitted by the student within 1 year of commencing studies
- A Final Report upon the conclusion of the project.

9. Program Evaluation

NSW Health PhD Scholarships will be evaluated against the Program's purpose and objectives. NSW Health will perform this evaluation in collaboration with the host university, industry partner organisation, both supervisors, and the PhD candidate. This may include face-to-face meetings for which all parties will be required to make themselves available. Feedback received will be used to inform the future directions of NSW Health PhD programs.