# Postgraduate Top-Up Scholarships

Role summary for potential applicants

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| Advertised Job Title**:** | Synthetic Biology Future Science Platform Postgraduate Top-Up Scholarships |
| Reference Number**:** | 59037 |
| Scholarship: | AU$7,000 per year as a top up scholarship (stipend), plus a generous operating budget of up to $10,000 per annum  |
| Location**:** | Various locations across Australia |
| Length of Engagement: | (Up to) 3 year term (concordant with existing RTP or scholarship)  |
| Applications are open to: | [ ]  Australian Citizens Only[ ]  Australian Citizens and Permanent Residents Only* [x]  All Candidates
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| Research Areas**:** | Various – please see the list at the end of this document |
| How to Apply: | *Before you apply please read the information in this document about these scholarships. There is additional information on our* [*Postgraduate scholarships*](http://www.csiro.au/en/Careers/Student-and-graduate-programs/Postgraduate-scholarships) *page at CSIRO Careers.*To apply, you must complete the **Application Form** AND the **CV Form** available at the end of this document. Please prepare **ONE** document which includes these two forms (and does not include any other components). After preparing this document please return to the advertisement and complete the following steps to apply:1. click on the ‘***Apply Now***’ button to either create a Candidate Profile or to login to your current account. Enter your personal details and then click *‘****Next***’ to move to the application form
2. complete the form and upload the **one document** you prepared as requested above in the field labelled ‘***Resume and cover letter***’
3. in the screening questions section, nominate your **1-2 preferred research areas (Application Domains)** from the list below in order of preference; and
4. upload your **academic results (including undergraduate transcripts and any available post-graduate transcripts)** in the ‘***Requested Information***‘ field.

**Please note:** When applying for this role, in the ‘Preferences’ section you may be asked to select a preference in the drop-down list next to ‘Preference 1’ and ‘Preference 2’. Please select ‘N/A’ and instead nominate your project preference/s at Question 6 (Preferred Research Area (Application Domain) – Preference 1) and Question 7 (Preferred Research Area (Application Domain) – Preference 2).If you experience difficulties applying online call 1300 984 220 and someone will be able to assist you. Outside business hours please email: csiro-careers@csiro.au. *Please do not email your application. Applications received via email may not be considered.* |
| About CSIRO**:** | At the Commonwealth Scientific and Industrial Research Organisation (CSIRO), we shape the future. We do this by using science and technology to solve real issues. Our solutions make a difference to industry, people and the planet.We’ve been pushing the edge of what’s possible for almost 90 years. Today we have thousands of talented people working across Australia and internationally. Our people work closely with industry and communities to leave a lasting legacy. Collectively, our innovation and excellence places us in the top ten applied research agencies in the world.CSIRO. We imagine. We collaborate. We innovate. |
| About CSIRO Future Science Platforms | [Future Science Platforms](http://www.csiro.au/en/About/Future-Science-Platforms) are an investment in science that underpins innovation and that has the potential to help reinvent and create new industries for Australia. FSPs will see us grow the capability of new generation of researchers and allow Australia to attract the best students and experts to work with us on future science. They are strategic investments aimed at developing capacity in areas of identified future importance for Australia. FSPs are both impact and science focused, developing innovative scientific solutions with industry, government and university partners. They support world class, coherent and creative research teams which integrate science and delivery over the long term, looking to the future science needs of CSIRO and our partners with a 5 to 10 year vision. |
| About the Synthetic Biology Future Science Platform | Synthetic Biology (SynBio) is the design and construction of nucleic acid-encoded biological parts, devices, and organisms, and their application for useful purposes. To position Australia to build a vibrant synthetic biology research and development community to support the bio-based industries and ecoengineering activities of tomorrow, CSIRO has established the [Synthetic Biology FSP](https://research.csiro.au/synthetic-biology-fsp/) (SynBioFSP). The SynBioFSP has a mission to develop capacity in synthetic biology within CSIRO and across Australia. As part of this commitment, the SynBioFSP is funding PhD Top-Ups to help recruit and train the next generation of synthetic biologists. **We support both** **biophysical science and social science applications.** |

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| **Role Overview:** |
| CSIRO’s Postgraduate Scholarship Program provides enhanced opportunities in science and engineering for outstanding graduates enrolling each year at Australian tertiary institutions as full-time postgraduates for research leading to the award of a PhD. Top-up Scholarships are available to PhD students who have gained (or expect to gain) a Research Training Program (RTP) scholarship or equivalent scholarship. At the time of submitting an application for a CSIRO PhD Scholarship, students must have gained, or expect to gain, first class honours or equivalent in a relevant research area. Students must also have received or expect to receive a Research Training Program (RTP) scholarship or equivalent scholarship awarded on a competitive basis, and be commencing their PhD program by 31st June 2019. Joint supervision of students by a university and a CSIRO supervisor is required and such joint supervisory arrangements must be consistent with the Higher Degree by Research Regulations of the host university. The primary supervisor may be either the university or CSIRO supervisor. Recipients of CSIRO Postgraduate Studentships are generally required to be Australian citizens or have permanent residency status. However, in fields in which there is a national skill shortage, studentships may be awarded to overseas candidates provided they are prepared to seek permanent residency as soon as possible within Australian Government policy guidelines. International students must be able to show evidence of admission to an Australian university, as well as evidence that either their living costs or international student tuition fees are being covered by another scholarship or from private funds. CSIRO Postgraduate Scholarships are being offered in the priority research topic areas at various locations. **Details of research areas and contact details are available in the pages below.** |
| Pre-Requisites/Eligibility: |
| ***To be eligible to apply you must have (or expect to gain):**** first class honours or equivalent in a relevant research area;
* admission to an Australian University as a PhD student;
* a Research Training Program (RTP) scholarship or equivalent awarded on a competitive basis

If you have already commenced your PhD studies, you must be less than 12 months into your PhD at 1 January 2019.Please note successful applicants can only hold one CSIRO top-up scholarship at one time. ***At the time of application you must also have:**** a project which aligns with one or more of the SynBioFSP’s [Application Domains](https://research.csiro.au/synthetic-biology-fsp/application-domains/)
* a CSIRO supervisor who is willing to co-supervise you
* a university supervisor who is willing to co-supervise you

International applicants must have the appropriate immigration approvals to allow them to take up the scholarship. |

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| **Selection Criteria:** |
| ***The criteria on which the applications will be assessed are:***1. **Academic calibre of the student:** The quality of the student is primary assessment criterion. This is judged from academic transcripts, awards, and other information provided in the CV Form. Candidates must provide undergraduate transcripts and must hold (or expect to gain) a relevant first class honours degree (or equivalent) from a recognised University.
2. **Quality and alignment of project:** The novelty and innovation of the project are assessed through the information provided in the Application Form. The research must be aligned with one or more of the SynBioFSP’s [Application Domains](https://research.csiro.au/synthetic-biology-fsp/application-domains/) (biophysical and social science)
3. **Availability of appropriate supervision and quality of collaboration:** The relevance of both the CSIRO and the University supervisors’ research backgrounds and their willingness to supervise the student on a collaborative basis should be clear. There is a section where the collaborative arrangement can be described in the Application Form. Genuine collaborative arrangements must be clear; ‘token’ supervision is not acceptable.

As Australia’s Innovation Catalyst, CSIRO has strategic actions underpinned by behaviours aligned to Excellent science, Inclusion, trust & respect, Health, safety & environment and Deliver on commitments. You will need to demonstrate alignment with these behaviours. |

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| **Research Area No.** | **Synthetic Biology Future Science Platform - Postgraduate Scholarships Research Areas:** |
| **Synthetic Biology 1** | **Application Domain:** Foundation TechnologiesThe Foundation Technologies application domain is where we develop synthetic biology parts and tools that can be widely applied. It encompasses technologies developed through integrative biological modelling, engineering novel biobricks and assembling innovative biosystems. It recognises that some technologies are so broad-reaching that they should be invested in regardless of the focus of other application domains - this is where the next CRISPR/Cas technology will emerge from. Foundation Technologues also provides the organisational framework for developing a library of component parts (biobricks). It is recognised that an Australian biobricks parts library will be an important resource for the nation, allowing us to effectively exploit our unique biological and genetic heritage.We support projects that are:* developing new and improved synbio tools to create new functions or improve existing technologies
* developing organelle control devices to provide engineering tools targeting mitochondria and chloroplasts—the energy and carbon powerhouses of the eukaryotic cells
* understanding and exploiting (endo)symbiosis to deliver fundamental science and applied outcomes in our other three application domains.

**Contact:** Claudia Vickers on (07) 3833 5684 or email Claudia.Vickers@csiro.au |
| **Synthetic Biology 2** | **Application Domain:** Chemicals & FibresThe modern world is reliant on the production of natural and synthetic chemicals and fibres. They are used in our clothes, housing, medicine, high-tech devices (e.g. touch screens), transportation (vehicles and fuel) and every other aspect of our lives. Synthetic biology has a substantial role in delivering the next generation of efficient, cost-effective and sustainable manufacturing technologies.We support projects that are:* developing the next generation of chemical-producing micro-organisms. These ‘chassis organisms’ will be engineered in future to efficiently produce everyday chemicals through fermentation, which is essentially the same process used to produce wine and beer. We are investing in technologies the will accelerate metabolic engineering, reducing the time and cost needed to re-engineer chassis organisms to produce new chemicals.
* repurposing cell components that are needed to conduct chemical reactions and support efficient chemical production, improving the production efficiency and reducing waste and energy use
* introducing subtle changes that improve natural products,such as making it possible to colour cotton with safer dyes or improving the effectiveness of natural pesticides and herbicides**.**

**Contact:** Colin Scott on (02) 6246 4090 or email Colin.Scott@csiro.au  |
| **Synthetic Biology 3** | **Application Domain:** Environment & Biocontrol Organisms and ecosystems are failing to adapt quickly enough to the current, accelerating rate of environmental change. Synthetic biology provides a suite of intervention technologies that can help protect species and ecosystems and/or make them more resilient to threats.We support projects that are:* developing technologies that protect the environment. We focus first on identifying innovative approaches and key biological components that lead to the next generation of detection and remediation technologies.
* aiming to engineer resilience in key species threatened by environmental change. This approach requires us to thoroughly understand the species under threat so that we can identify physiological and genetic interventions that could increase its resilience. Our main targets are keystone species without which entire ecosystems could collapse.
* aiming to develop novel pest control technologies. This includes innovative engineering approaches and novel targets to effectively control the target species, as well as modelling and risk assessment approaches to ensure interventions are achieved with minimal risk to non-target organisms.

Because all of the technologies developed are intended to be released into the environment, success will be highly dependent on effective collaboration with the Maximising Impactapplication domain.**Contact:** Owain Edwards on (08) 9333 6401 or email Owain.Edwards@csiro.au;  |
| **Synthetic Biology 4** | **Application Domain:** Health and MedicineMaintenance of good health, along with prevention and treatment of disease, is an enormous public and private expense in Australia. Synthetic biology has significant potential to improve human and animal health through novel preventative treatments such as vaccines; diagnostics approaches such as synthetic biology-enabled reporter systems;and therapeutics such as antivirals and genetic therapies. Uptake of advanced technologies is much higher for health and medical applications than for other areas so the potential for impact using synthetic biology is very high for the Application Domain.We support projects that are:* developing host-targeted diagnostics and therapeutics. These include advanced vaccines, therapeutics and diagnostics;and thebio-manufacturing of these reagents.
* targeted towards discovery and control of pathogens. These include sense-and response systems to target and destroy pathogens, novel antibiotics and antibiotic replacements, and foundational research to understand how pathogens interact with their hosts.

Because our technologies are applied in human and animal systems, we work closely with the Maximising Impact application domain to examine social acceptance and ensure adequate consultation for adoption of these new technologies. **Contact:** Andrew Bean on (03)5227 5792 or email andrew.bean@csiro.au |
| **Synthetic Biology 5** | **Application Domain:** Maximising ImpactIn Australia over the next five years we are likely to see a burgeoning of synbio research, destined for applications across diverse domains such as care, environmental protection, agriculture, and various platforms within industrial biotechnology. The early identification and consideration of synbio-related social, behavioural and ethical issues is key to enabling the successful uptake of any new products or processes. The need to understand community perspectives goes well beyond achieving a ‘social licence to operate’— synbio has the potential to revolutionise how societies think, and it challenges generational beliefs about ‘acceptable’ human-science interactions. Social research needs to consider a breadth of social issues at individual, group and institutional levels.We support projects addressing these issues. Our in-house researchers are exploring a multidimensional understanding of public values, acceptance and risk-related decision-making. We are also funding an external project that is exploring policy and legal frameworks and considerations.**Contact:** Aditi Mankad on (07) 3833 5721 or email Aditi.mankad@csiro.au  |

 **Application Form and CV Form are available over page. Delete the sections above before submitting the forms as directed in “How To Apply” above.**

**CSIRO Synthetic Biology Future Science Platform**

**PhD Top-Up Application Form**

**SECTION A – People/Organisations/Administrative Details**

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| **Applicant Name:** Click here to enter text. |
| **Applicant Gender**[ ]  Male [ ]  X (Indeterminate/intersex/unspecified)[ ]  Female [ ]  Prefer not to disclose |
| **Enrolling University:** Click here to enter text. |
| **University Supervisor** (add extra rows for if >1 supervisor)Name:Click here to enter text.Email:Click here to enter text.Website:Click here to enter text. | Primary Supervisor? [ ]  Y [ ]  N  |
| **CSIRO Supervisor** (add extra rows if >1 supervisor)Name:Click here to enter text.Email:Click here to enter text.Website:Click here to enter text. | Primary Supervisor? [ ]  Y [ ]  N  |
| **Have you already commenced your PhD program?** [ ]  Y [ ]  N  **If yes,** (1) PhD start date: Click here to enter text.(2) Do you hold a scholarship that was awarded on a competitive basis? [ ]  Y [ ]  N (3) Name of scholarship program Click here to enter text.  |
| **Are you currently applying for a PhD scholarship?**[ ]  Y [ ]  N **If yes,**(1) Planned PhD start date (must be by June 31st 2019): Click here to enter text.(2) Name of scholarship program Click here to enter text.  |
| **Are you a Domestic (Australian) or International applicant?**[ ]  Domestic [ ]  InternationalIf International, country of citizenship: Click here to enter text.  |

**SECTION B – Project Details**

*Select the relevant Application Domain(s) and Science/Technical Domain(s) that your project aligns with (see* [*https://research.csiro.au/synthetic-biology-fsp/*](https://research.csiro.au/synthetic-biology-fsp/)*)*

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| ***Application Domains:*** [ ]  Foundation Technologies [ ]  Chemicals & Fibres [ ]  Environment & Biocontrol[ ]  Health & Medicine[ ]  Maximising Impact |

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| **Project title:** Click here to enter text.**Summary of Project** *(600 words maximum). Enter the word count in the space provided.**Include:* * *project aim(s)*
* *importance of and need for the research*
* *novelty*
* *experimental approach*
* *outputs, outcomes, and broader impact*

Click here to enter text.*Word count:* **Role ofProponents** *(250 words maximum)**Briefly outline the relevant expertise and role of each person involved in the project. Describe the collaborative arrangements, including planned interactions between University and CSIRO proponents. There must be a clear and genuine collaboration between project participants. Enter the word count in the space provided.* Click here to enter text.*Word count:* **Research Environment** *(250 words maximum)**Describe the research environment, including facilities, resources, career support, etc. available to the Applicant both within the University and CSIRO.* Click here to enter text.*Word count:* **Use of Operating Funds** *(250 words maximum)**If you have not started your PhD, describe briefly how the operating funds will be used and what (if any) other funding is available to support the project.**If your PhD is already underway, explain what the extra funds will be used for relative to the work that is already funded for the project. Funds can be used for experimental costs, travel (including travel to present at conferences), equipment, and other expenses directly related to the student’s research.*Click here to enter text.*Word count:*  |

***SECTION C – Certifications and Endorsements***

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| ***Applicant Certification:***I certify that:1. All the details on this Proposal are true and complete, and not misleading to my knowledge;
2. Proper inquiries have been made to clarify any uncertainties and I am satisfied that I meet the eligibility criteria;
3. I have responsibility for the authorship and intellectual content of this Proposal, and have appropriately cited sources and acknowledged significant contributions where relevant;
4. I will notify the Host Organisation if there are any changes in my circumstances which may impact on my eligibility to participate in, or ability to perform, the project subsequent to the submission of this Proposal.

In participating in this Proposal, I consent to:1. Provision of this Proposal under confidentiality conditions to assessors, who will remain anonymous, for evaluation purposes; and
2. CSIRO copying, modifying, and otherwise dealing with information contained in the Proposal for the purpose of conducting the funding round; and
3. CSIRO undertaking any necessary checks to assess this Proposal; and
4. CSIRO requesting referee reports from the nominated referees
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| ***Certification by the University Supervisor(s) \****1. I support the Application as set out in Sections A and B above; and
2. I will support the execution of the project and the career development of the Applicant; and
3. Appropriate facilities and resources are available to execute the project, including sufficient lab and office space (if necessary); and
4. I will collaborate as appropriate with all named parties ; and
5. I have obtained any approvals necessary through my School/Department/Institute/University to support the project.

*\* add signature lines as required if >1 Supervisor* |
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| ***Certification by the CSIRO Supervisor(s) \****1. I support the Application as set out in Sections A and B above; and
2. I will support the execution of the project and the career development of the Applicant; and
3. Appropriate facilities and resources are available to execute the project, including sufficient lab and office space (if necessary); and
4. I will collaborate as appropriate with all named parties ; and
5. I have obtained any approvals necessary through my Program and Business Unit to support the project.
6. **I understand that the SynBioFSP will fund 50 % of the costs and my Business Unit will fund 50 % of the cost. I have obtained financial support from my BU for 50 % of the stipend+opex (up to $8,500 per annum over 3 years)**

*\* add signature lines as required if >1 Supervisor* |
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\*\*\* **SEE OVER PAGE FOR CV TEMPLATE TO BE COMPLETED \*\*\***

**CSIRO Synthetic Biology Future Science Platform**

**PhD Top-Up: Applicant CV Form**

**Name:**

**Individual Statement** *(max. 500 words)***:**

*A statement describing:*

* *the reasons why the research area(s) you have selected is of interest to you;*
* *how your previous skills/knowledge/experience meet the requirements;*
* *an outline of your longer-term career aspirations and detail how this program will help you achieve them;*
* *any related science experience that is not included in the sections below.*

Click here to enter text.

*Word count:*

**Academic Qualifications**

*Add lines as required*

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| --- | --- | --- |
| ***Qualification*** | ***Date*** | ***Conferring Institution & Country*** |
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**Research Experience**

*Insert details of previous research projects. This may include undergraduate projects, Honours/Masters projects, or other research experience. Do not include undergraduate practical classes. Use no more than 30 words to provide details.*

|  |  |  |  |
| --- | --- | --- | --- |
| ***Year(s)*** | ***Duration (months)*** | ***Department/School/Institution, and Country*** | ***Details***  |
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**Employment History**

*Insert current appointment details first, followed by previous appointments. Use no more than 30 words to provide details of the position.*

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| --- | --- | --- | --- |
| ***Dates of Appointment*** | ***Level and Title of Appointment*** | ***Organisation and Country*** | ***Details*** *(one-sentence summary of role)* |
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**Honours and Awards**

*Details should include any other relevant information, e.g. purpose of award program, number of awardees, etc.*

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| --- | --- | --- | --- |
| ***Dates***  | ***Award*** | ***Conferring Organisation*** | ***Details*** |
|  |  |  |  |
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**Publications (if any):**

*Provide publication details in the following order: Authors, Year, Title, Journal, Volume, Pages. Indicate applicant name in* ***bold*** *in the author list, underline journal titles. Note corresponding author with an asterisk (\*) and joint first authors with a # sign. Note the source of the citation data at the top of the table. Add rows if necessary.*

**Source for citation data:** [ ]  ISI WoS [ ]  Scopus [ ]  Google Scholar

|  |  |  |
| --- | --- | --- |
|  | Journal Metrics | Citations |
| Impact Factor | Rank in field |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |

**Conference Presentations (if any)**

*Include details of any conference or significant meeting presentations*

Click here to enter text.

**Output Relative to Opportunity (where relevant):**

*Include details of research performance relative to opportunity (including, for example, amount of time spent as an active researcher; clinical, administrative, or teaching workload; relocation of an applicant; research outputs and productivity commensurate with time spent employed in other sectors). Cross-reference to Career Interruptions below if appropriate.*

Click here to enter text.

**Career Interruptions**

*Eligible career interruptions include carer, maternity or parental leave, illness, international relocation, unemployment, or non-research employment. Use a new row to describe each eligible career interruption.*

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| --- | --- | --- | --- | --- |
|  | Interruption Start Date | Interruption End Date | Number of days | Type of Interruption (eg carer, maternity or parental leave, illness, international relocation, unemployment, or non-research employment) |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |

**Referees**

*List the names and contact details of two previous supervisors or academic/professional referees. Include a comment on the relationship of the person to you (e.g. supervisor for Honours project)*

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| --- | --- | --- | --- | --- | --- | --- |
|  | Name | Institute/ Organisation | Email | Phone | Website | Relationship |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |