



**SARAWAK RESEARCH AND DEVELOPMENT COUNCIL
RESEARCH AND DEVELOPMENT GRANT SCHEMES 2020**

GRANTS DESCRIPTIONS AND QUICK GUIDELINES

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Preamble

The Sarawak Research and Development Council (Sarawak RDC) research funds are grants provided by the Government of Sarawak through the Council to carry out Research and Development (R&D) projects that can contribute to the discovery of new ideas and the advancement of knowledge in applied sciences and technology, focusing on high impact and innovative research with potential prospect of commercialization.

The Sarawak Research and Development Council (Sarawak RDC) research funds will cover disciplines in science and technology (excluding digital technology). The Council does not support social sciences, economics, and the arts and humanities, but these may be incorporated into submissions as collaboration and synergistic research activities.

Research Clusters under the funding schemes:

Bioindustry and Biomedical Sciences

Food and Agriculture

Biodiversity and Environment (Including Forestry)

Engineering Science and Technology (excluding digital and ICT)

Please visit our website: <https://www.sarawakrdc.org.my/research/research-clusters>, for descriptions on these clusters.

Prior to making application, applicants are to review the Sarawak RDC's Funding Priorities in Table 1.

Applicants are also advised to read the section "Non-qualifying Project Activities".

How to apply

Applications are to be completed in English and submitted through the grant management system, RPMON, which is available on our website.

Before you begin, take note of these key points:

1. Existing recipients of Sarawak RDC grants are ineligible to apply as main applicant
2. Proposals which are currently being funded by other grants or similarly themed will not be considered.
3. No two or more research teams from same entity should be submitting separate proposals on similarly themed projects. They should instead collaborate and submit one proposal only.
4. Sarawak RDC funds are not to be used for capital expenditures (CAPEX), such as purchase of equipment, or construction of buildings.
5. The funds must not be used as a means to fund student stipends or hire research assistants in its entirety.
6. Proposals need to show a clear research element. Sarawak RDC will not fund data collection, inventory type proposals.

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(A) TYPES OF RESEARCH AND DEVELOPMENT GRANTS

Sarawak RDC will support excellent proposals which are new research or innovation with a clear impact pathway that has the potential to be commercialised.

(A.1) RESEARCH INITIATION FUND

Sarawak has promising researchers and scientists whose desire to contribute to the state's development through research and knowledge dissemination initiatives is hindered by lack of funds. This situation serves as a barrier to translating promising research and training into scientific outputs that could be applied to promote development. To address this concern and in line with the Council's thrust of promoting, undertaking and coordinating research programs relevant to the development of the state, Sarawak RDC will dedicate funds to be known as the Research Initiation Fund (RIF). The RIF is envisaged to provide chosen research project proposals with start-up funds intended to enhance chances of securing long-term support from federal or state agencies.

FUNDING AMOUNT AND DURATION:

Applicants are advised that grant amount is capped at RM55,000 for a research duration of up to 3 years.

ELIGIBILITY CRITERIA

1. The principal applicant must be early-career researcher (ECR)* who will be the Principal investigator (PI) for the project.
2. The principal applicant must reside in Sarawak and be full-time employed researchers at a public sector research organization in Sarawak (hospitals, universities, polytechnics, and research institutions), and the proposed project must be carried out at this institution.
3. The principal applicant must have a co-applicant who is at least an Associate Professor level, or show established seniority and research credentials in the subject area, to act as mentor. The co-applicant need not be based in Sarawak.
4. Researchers must be able to bear responsibility for the project throughout the entire project period.
5. For the avoidance of doubt, researchers from industry are eligible to receive funding, but should participate via a joint collaboration with a co-applicant from the agencies or established research entities. The Sarawak RDC reserves right to exercise discretion on this.

* Early-career researcher (ECR)* – completed a post-graduate research education or post-graduate clinical training, within the past 3 years, and not more than 5 years.

(A.2) CATALYST FUND

CATALYST grants enable an organization/research team to carry out mission orientated, focus, and output driven innovative research. Funding awards are intended to foster close collaboration and synergy between research agencies within Sarawak, and with counterparts globally and in Malaysia. CATALYST grants support projects carried out by a group of two to four individual researchers, of which one will be designated as the corresponding Principal Investigator (PI). Proposals will be evaluated on the **sole criteria of scientific excellence and innovation** as well as **outstanding intrinsic synergistic effect**. Proposals with clear commercialisable outcome have an added advantage.

FUNDING AMOUNT AND DURATION:

Applicants are advised that grant amount is capped at RM250,000 for a research duration of up to 3 years.

ELIGIBILITY CRITERIA

1. The Principal investigator (PI) for the project must reside in Sarawak and be full-time employed researchers at a public sector research organization in Sarawak (hospitals, universities, polytechnics, and research institutions), and the proposed project must be carried out at this institution.
2. PI must present an **early achievement track-record** or a **five-year track-record**, whichever is most appropriate. The principal applicant must be at least an Associate Professor level, or show established seniority and research credentials in the subject area, to act as mentor. The co-applicants need not be based in Sarawak, but is ideal.
3. Co-applicants are encouraged to be comprising ECR, and students pursuing postgraduate degree, or clinicians.
4. Researchers must be able to bear responsibility for the project throughout the entire project period.
5. For the avoidance of doubt, researchers from industry are eligible to receive funding, but should participate via a joint collaboration with a co-applicant from the agencies or established research entities. The Sarawak RDC reserves right to exercise discretion on this.

(A.3) SPECIAL VENTURES FUND (SVF)

Special Ventures Fund provides funding that enables an organization/research team to carry out specific projects, programs and campaigns. Priority for SVF will be given to projects that align with Sarawak RDC's priorities and advance the state of Sarawak's strategic visions and development goals.

One of the main roles of Sarawak RDC is to drive technological advancement through small medium enterprise (SME) in Sarawak. The SVF will provide early phase funds to Sarawak-based SMEs including technology start-ups to conduct research and development activities geared towards commercialization of the research outcomes, and attract venture capitals to invest in Sarawak. This grant is applicable to all Sarawak-based SMEs conducting research and development activities. The SVF operates on a 1:1 match funding scheme on projects that are identified to be aligned with state vision, economic and development goals.

Sarawak RDC will negotiate profit sharing with the institutions/organizations as appropriate.

FUNDING AMOUNT AND DURATION:

Applicants are advised that grant amount is capped at RM200,000 from Sarawak RDC. The duration of research will be up to 3 years with heavy emphasis on outcome deliverables i.e. product and/or technology.

ELIGIBILITY CRITERIA

1. Main applicant must be a legitimate start-up company or an established company incorporated in Sarawak.
2. Company must provide a 1:1 challenge match. A company that is offered the SVF will be required to raise or have already secured an equal amount of funding from other sources in order to claim this award. This must be a cash match. "in-kind" services will not qualify as meeting the match.
3. Sarawak RDC reserves right to withdraw the grant offer should the company not be able to contribute the matching portion of the grant.

(A.4) COMMERCIALISATION FUND

Commercialisation Fund (PCF) is aimed at assisting local researchers, agencies, and companies to commercialise their proven and market driven product/solutions/services. Funding is available on a competitive basis and is intended to support focused, performance-based projects whereby applicant must show realistic and achievable technical and commercial targets. Products/services/solutions with high commercial potential are sought for our support.

Sarawak RDC will negotiate profit sharing with the institutions/organizations as appropriate.

FUNDING AMOUNT:

Applicants are advised that grant amount is capped at RM130,000 from Sarawak RDC. Applicants may only access this fund once per project.

(A.5) THEMATIC PROGRAMMES 2020 - 2022

Theme 1: 'Waging War Against Anti-microbial Resistance'

Funding allocation: RM5,000,000

Ceiling: varies per project proposal

Duration: 3-5 years

Aim: To develop and advance research programme in anti-microbial resistant and discovery of new anti-microbials against clinically relevant pathogens

Objectives

1. To elucidate the molecular mechanisms and cellular biology of anti-microbial resistance using systems biology approaches
2. To identify and validate new druggable targets for existing and novel anti-microbials
3. To establish in depth understanding on the complex dynamic interactions between host, pathogens and environment on anti-microbial resistance status, evolution and transmission
4. To accelerate therapeutic discovery and establish pipeline for next generation anti-microbial development

Theme 2: 'Engkabang, the Wonders of Sarawak'

Funding allocation: RM5,000,000

Ceiling: varies per project proposal

Duration: 3-5 years

Aim: To develop comprehensive research programme into phenotypic characterization and establishing the medicinal properties of *Shorea macrophylla* (Engkabang)

Objectives

1. To elucidate the medicinal properties of aqueous and organic extracts of *Shorea macrophylla*
2. To isolate, purify and chemically characterize compounds derived from *Shorea macrophylla* extracts that showed medicinal properties
3. To establish in depth understanding on the molecular mechanism of action of, and accelerate therapeutic discovery from, compounds derived from *Shorea macrophylla*
4. To characterize the phenotype and understand the growth biology, disease resistance and ancestry of *Shorea macrophylla*

APPLICATION CRITERIA AND GUIDELINES

1. Proposals must be submitted by a Research Consortium of at least 2 partners from the following sectors: health care, public sector, academia, business and civil society.
2. Lead partner must be based in Sarawak.
3. Funding is available for multi-agency, multi-disciplinary projects addressing either one or more of the objectives, or all of the objectives of the themes above.
4. The spirit of these programmes are to encourage collaboration and sharing of resources among research institutions and agencies in Sarawak, thus submission by a single entity will not be considered.
5. In line with point 5 on page 3, similarly themed proposals from different entities will be encouraged to collaborate.
6. Details of these thematic programmes are available on our website.

(B) Table 1. Sarawak RDC Research Priority Areas 2020

1	Bioindustry and Biomedical Sciences
	<p>Healthcare and biomedical sciences sector including life science is a rapidly growing and evolving global market. It is an important contributor to the health outcomes of the people of Sarawak and holds huge potential in contributing towards Sarawak's economy. The biomedical sciences research direction will be geared towards drug discoveries, translational science from laboratories to communities, hospitals and industries, and innovative medicines or medical devices, with the aim of improving health outcomes, accessibility and affordability particularly in rural Sarawak. Drug discovery programme tapping into the vast natural product resources of the Sarawak rainforest will be developed further incorporating state research institutes, local start-ups and enterprises, and multinationals in collaborations with international research institutions. Such synergy will enable outcome-based programmed that will drive research and development, and state economic growth.</p>
	Priority areas
	<ul style="list-style-type: none"> - New drug/chemical entity discovery from Sarawak biodiversity, activity testing against diseases identified above incorporating high throughput screening and product development - Applied research on sustainable use of Sarawak biodiversity for industries such as nutraceuticals and food. - Point of care diagnostic/prognostic kit development. - Vaccine and therapeutics developments - Cutting edge precision medicine and theranostic capability utilizing phenome science.
2	Biodiversity and Environment (including forestry)
	<p>Traditional usage of Bornean flora and faunas for medicinal, culinary and various other purposes have not been thoroughly documented, investigated and commercialised. Such knowledge may hold potential key to discovery of new drugs and other products useful to the global community. With increasing demand for food, agriculture and forest-based products, intensified agriculture and forest production are expected to impact on our ecosystem and biodiversity. One of the key challenges will be to identify solutions for a greener more sustainable economy that balance and utilise potential synergies between biodiversity, conservation and various classes of ecosystem services, including agricultural and forest yields. Biodiversity research domain encompasses various sectors from biodiversity, forestry, conservation science and commercialisation of products through sustainable and greener processes. The goal is to foster closer cooperation and synergy among the sectors identified above through research on conservation science, sustainable forestry, green production processes, climate-ecosystem adaption and cultural traditional knowledge and practice with community enabling policy i.e. Access and Benefit Sharing scheme and approaches embedded.</p>
	Priority areas
	<ul style="list-style-type: none"> - Assessment of current and emerging threats to Sarawak biodiversity - Conservation science on novel approaches to sustainable forestry and protection of biodiversity and ecosystem. - Advanced forestry research in area of genetics, adaptive responses, growth, disease resistance and sustainable forestry

Outstanding proposals in the non-priority areas of Agriculture and Food, and Engineering Science and Technology, may be considered in these areas of interests:

Agriculture and Food

- Utility of new or underutilised crops as new cash crop
- New technology and approach in sustainable agriculture and food security including plant genetics, adaptive responses and disease resistance
- Soil and bio-enrichment research to find the right crop for the right soil-nutrient condition.

Engineering Science and Technology

- Medical device manufacturing and technology development
- Industrial waste management, recycling and repurposing
- Construction on peat

(C) GUIDELINES FOR BUDGET PREPARATION

1. SCOPE OF FUNDING

Funding provided may be used for:

- Pre-clinical testing/ clinical testing/ field trials/ stress test/ user acceptance test;
- IP preparation and registration/copyright in Malaysia only (excluding maintenance);
- Regulatory and standards compliance;
- Accessories needed include items that are necessary to upgrade the capability of existing equipment directly related to the project;
- The costs, minor modifications and repairs of existing equipment used during the duration of project period;
- Raw materials/consumables directly related to the project, and
- Market testing and evaluation
- Small equipment, provided these are not available at host agencies/institutions and is related to the project.

The funding can be utilized for the following categories:

(1) Wages and Allowances for Temporary and Contract Personnel

- Include wages and allowances for temporary and contract personnel are up to **RM2,500 per month (Ph.D); RM1900 per month (M.Sc)/ per head inclusive of deductions for SOCSO/EPF.**
- Institutions/Agencies are encouraged to engage postgraduate students.
- Priority for Postgraduate students/Research assistants must be given to Sarawakian, in the first instance, and other Malaysians thereafter.
- Foreign students/workers are not eligible under this funding.

Notes: 1). RIF grant applicants, please note that wages must not exceed 10% of total grant ceiling. 2). Sarawak RDC grants are not fellowships.

(2) Travel and Transportation

- Includes travel and transportation expenses for domestic and overseas trip directly related to the project. Overseas trip must meet the following criteria :
- Only oral presentation at conferences or seminars on the findings of the project;
- When domestic facilities and expertise are inadequate to conduct a portion of the research. However, the venue must be suitable in terms of facilities, expertise and technology transfer.
- The **project leader or collaborator or team member** is only allowed to go **once** for the duration of the project; Travel is limited to economy class using the shortest direct routes be either MAS or AirAsia except under extenuating circumstances;
- The project leader or collaborator needs to send an application for approval to Sarawak RDC before attending the conference together with a copy of the abstract/paper that is going to be presented.
- The allocation for travelling overseas trips will be funded up to a **maximum of 15% of the total expenses of the project or RM15,000.00 whichever is less.**

(3) Rentals

- Only rental for special equipment not available in the institutions involved in the project and any other items directly related to the project can be included.

(4) Special Services

Funding will be approved for only services directly related to the project such as :

- Consultancy - agreement/letter of intent must be submitted together with the project proposal;
- Payment for enumerators;
- Sample testing and analysis;
- Data processing;
- Paper publications related to the project;
- Registration fees for conference; and
- Engagement of foreign expert(s) will be considered on a case-by-case basis.

The funding cannot be used for:

- Capital purchases (equipment, facilities, etc.). However, if specialised equipment is required for the success of the project, justification for its purchase must be given. Project leader will need to provide information on the availability of such equipment and why it cannot be used or shared;
- Purchase of capital assets such as building, vehicles and furniture;
- Purchase of personal computer, laptop, printer, scanners, small gadgets such as smartphones or tablets;
- Utilities;
- Purchase of books, stationeries, and subscriptions to journals etc.
- Salary and allowances of any personnel (except as stated for Research Assistants (RAs) and Graduate Research Assistants (GRAs);
- Implementation of projects overseas;
- Payment of student tuition fees (this is not a scholarship).

Note: Sarawak RDC reserves the right to demand for refund of any expenditures deemed to be unapproved use of the grant.

(D) NON-QUALIFYING PROJECT ACTIVITIES

Scientific and technical information services such as collecting, coding, recording, classifying, disseminating, translating, analyzing, evaluating, bibliographic services, scientific and technical information extension advisory services and compilation of data, are excluded from the main activities of the project except when they form an integral part of the project. In such a case, applicants must provide a statement indicating the research objectives to which the data would contribute.

(E) PROJECT MONITORING

- Projects awarded under this grant scheme will be monitored and evaluated every 6 months by a competent Project Monitoring Team appointed by Sarawak RDC. If the project shows non-compliance of agreement and non-adherence to timeline, Sarawak RDC reserves the right to suspend or withdraw the support;
- **Project Progress Report (PPR)** must be submitted every 3 months each year, upon project commencement.
- **Audited Financial Report (AFR)** must be submitted together with the PPR be certified by an accountant from the institution or agency. These reports will be used to monitor the progress of the project and will take into account milestones achieved; and must be accompanied by detailed breakdowns of expenditures, payment vouchers, receipts and related documents.

Note: Sarawak RDC reserves the right to call for periodic information on progress or to invite for seminar presentation and exhibition or to conduct site visits.

(F) HOW TO SUBMIT

Please visit our website at www.sarawakrdc.org.my. Application is done through our RPMON system, at <https://rpmon.sarawak.edc.org.my/>