**NATIONAL SCIENCE FOUNDATION**

**INTERNATIONAL COLLABORATIVE RESEARCH PROGRAMME APPLICATION FOR e-ASIA JOINT RESEARCH PROGRAMME**

APPLICATION – Part 1

*(Please read the guidelines and instructions carefully before filing the application).*

**SECTION A**

|  |  |  |
| --- | --- | --- |
| **1. Project Title**  *The title of the project should be brief, reflect concisely and accurately the proposed project and intelligible to a scientifically or technically literate reader. Applicants are advised to avoid titles which convey a distant or potential application of the proposed work, or a greater aspiration or goal than is to be expected from the proposed work.* | | |
|  | | |
| **2. Research disciplines**  *Please select only the most relevant research disciplines* | | |
| Animal Production  Animal Physiology/Chemistry  Animal Taxonomy  Animal Behaviour  Animal Nutrition  System Genome Science  Molecular Biology and Biotechnology | Cell Biology  Aquaculture  Evolutionary Biology    Veterinary Medicine  Experimental Zoology  Any other significant area  Please specify: ................................................... | |
| **3. Category of research** | | |
| Applied researchFundamental research | | |
| **4. Budget**  *For Principal Investigators who have received previous grants from NSF or any other funding agency, the budget per year shall not exceed LKR. 10 Million including allocations for Research Personnel. For PIs who have not received any other research funding before from NSF or any other funding agency, the budget for the first year shall not exceed LKR 05 Million including allocations for Research Personnel (Please refer guidelines).* | | |
| LKR ……………………………… USD………………………….  Exchange rate used for calculation in the application ………………………..  Date obtained………………………….  (*Please obtain the exchange rate as at the date of submission from Central bank site. Same exchange rate should be used in all calculations)* | | |
| **5. Investigators of Sri Lanka**  *Annex CVs’ and list of publications of all Investigators (local and foreign) during the last 10 years.*  *0* | | |
| **Principal Investigator**  *Principal Investigator should have a postgraduate research degree (PhD, MPhil) and publications in the relevant area. Applicants with MSc, MD or MS qualifications should have minimum of one year research component in the course and publications in the relevant area.* | | |
| Name and Designation:  Institution:  Area of expertise related to the proposed project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail :  STMIS Reg. No : |
| Planned visits abroad during the project period (This should be less than 03 months of duration): | | |
| If the PI is planning to take leave **(< 3 Months)** during the project period, state the responsible person for the project: | | |
| **Co-Investigator/s**  *Co-Investigators should have postgraduate qualifications and research experience supported with publications. Any other member of the research group who does not meet these criteria could be listed as Collaborators. Those who wish to read for postgraduate degrees under the proposed project are not eligible to be Co-Investigators* | | |
| **Co-Investigator – 1**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail :  STMIS Reg. No : |
| Planned visits abroad during the project period (This should be less than 03 months of duration): | | |
| **Co-Investigator – 2**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail :  STMIS Reg. No : |
| Planned visits abroad during the project period (This should be less than 03 months of duration): | | |
| **Co-Investigator – 3**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail :  STMIS Reg. No : |
| Planned visits abroad during the project period (This should be less than 03 months of duration): | | |
| **Collaborator/s**  *Letters of Consent should be provided – Annex III* | | |
| **Collaborator – 1**   1. Name and Designation:   Institution:    The contribution expected to be provided for the research project: | | Mailing address :  Telephone :  Fax :  E-mail :  STMIS Reg. No : |
| **Collaborator – 2**   1. Name and Designation:   Institution:  The contribution expected to be provided for the research project: | | Mailing address :  Telephone :  Fax :  E-mail :  STMIS Reg. No : |
| **6. Foreign Investigators** | | |
| **Principal Investigator 1 - ………………….. (Country)** | | |
| Name and Designation:  Institution:  Area of expertise related to the proposed project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Co-Investigator/s** | | |
| **Co-Investigator – 1**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Co-Investigator – 2**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Co-Investigator – 3**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Collaborator/s** | | |
| **Collaborator – 1**  (a) Name and Designation:  Institution:  The contribution expected to be provided for the research project: | | Mailing address :  Telephone :  Fax :  E-mail : |
| **Collaborator – 2**  (b) Name and Designation:  Institution:  The contribution expected to be provided for the research project: | | Mailing address :  Telephone :  Fax :  E-mail : |
| **Principal Investigator 2 - ………………….. (Country)** | | |
| Name and Designation:  Institution:  Area of expertise related to the proposed project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Co-Investigator/s** | | |
| **Co-Investigator – 1**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Co-Investigator – 2**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Co-Investigator – 3**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Collaborator/s** | | |
| **Collaborator – 1**  (a) Name and Designation:  Institution:  The contribution expected to be provided for the research project: | | Mailing address :  Telephone :  Fax :  E-mail : |
| **Collaborator – 2**  (b) Name and Designation:  Institution:  The contribution expected to be provided for the research project: | | Mailing address :  Telephone :  Fax :  E-mail : |
| **Principal Investigator 3 - ………………….. (Country)** | | |
| Name and Designation:  Institution:  Area of expertise related to the proposed project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Co-Investigator/s** | | |
| **Co-Investigator – 1**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Co-Investigator – 2**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Co-Investigator – 3**   1. Name and Designation:   Institution:  Area of expertise related to the proposed  project: | | Mailing address :  Telephone  Office :  Mobile :  Fax :  E-mail : |
| **Collaborator/s** | | |
| **Collaborator – 1**  (a) Name and Designation:  Institution:  The contribution expected to be provided for the research project: | | Mailing address :  Telephone :  Fax :  E-mail : |
| **Collaborator – 2**  (b) Name and Designation:  Institution:  The contribution expected to be provided for the research project: | | Mailing address :  Telephone :  Fax :  E-mail : |
| **7**. **Justification for Collaboration** (*Brief information about national and international scenario in the proposed area of research, Synergy of the Joint Research Activity (including how the* *competence, technology and other resources of the collaborating research teams complement each other, expected added value from the proposed joint project) and Description of how the project is expected to help strengthen multilateral research collaboration over the longer term –Maximum 01 page*) | | |
|  | | |
| **8. Institution/s where research is to be performed in Sri Lanka** | | |
| **Principal Institution** | | |
| **Other Institution/s** | | |
| **9. State whether the Institutions of the Principal Investigator from Sri Lanka and the collaborating Principal Investigators of other three countries are already having research collaborations with signed Memoranda of Understanding (MoUs)** | | |
| Yes No  If “Yes” attach copies of MoU signed between the institutions. | | |

**SECTION B**

*\* Names and affiliations* ***should not be mentioned*** *in section B.*

**Title of the project :**

**Duration :**

|  |
| --- |
| **1. Summary**  (a)Explain briefly the research problem, research approach and expected outputs.  *Not exceeding one A4 page, font type Times New Roman, size 11, single space.* |
|  |
| (b) Give 3 – 5 keywords for the proposed project: |
|  |

|  |  |
| --- | --- |
| 1. **Research Problem** | |
| 2.1 Research problem/s | |
|  | |
| 2.2 Analysis of the problem/s & rationale for the research question | |
|  | |
| 1. **Comprehensive literature review (local and international including recent literature) AND the complete list of references in the relevant area.**   *(Including ongoing research activities and special strengths of each research group. Attach additional sheets if necessary)* | |
| 3.1 International | |
|  | |
| 3.2 Local | |
|  | |
| 1. **Originality& innovativeness of the proposed work** | |
|  | |
| 1. **General and specific objectives of the proposed work** | |
| 5.1 General Objective | |
|  | |
| 5.2 Specific Objective/s | |
|  | |
| 1. **Methodology** | |
| 6.1 Describe the Methodology  (*Describe clearly the technical approach how the project will address the issues to be solved. This should also describe how the collaboration will be carried out, with clear statements of what roles the Sri Lankan researchers will play respectively in the project. Maximum 02 pages. Attach additional sheets if necessary)* | |
|  | |
| 6.2Experimental design where applicable  *Please complete relevant sections* | |
| 6.2.1 Data/sample collection | |
| 6.2.2 Study site | |
| 6.2.3 Describe the study group and controls | |
| 6.2.4 Validation and quality control of methods | |
| 6.2.5 Cost effectiveness of proposed methodology | |
| 6.3 Describe the method of data analysis | |
|  | |
| 1. **Feasibility** | |
| 7.1 Competence of the Research Team | |
| 7.1.1 Principal Investigator  *Name and affiliation* ***should not be mentioned.***  Describe knowledge and research experience in the area related to the project work (*Please do not include publications)* | |
|  | |
| 7.1.2 Co-Investigator - 1  *Name and affiliation* ***should not be mentioned.***  Describe knowledge and research experience in the area related to the project work (*Please do not include publications)* | |
|  | |
| 7.1.3Co-Investigator - 2  *Name and affiliation* ***should not be mentioned.***  Describe knowledge and research experience in the area related to the project work (*Please do not include publications)* : | |
|  | |
| 7.1.4Co-Investigator - 3  *Name and affiliation* ***should not be mentioned.***  Describe knowledge and research experience in the area related to the project work (*Please do not include publications)* | |
|  | |
| 7.2Work plan  *Please attach the quarterly Gantt Chart to cover the proposed study, as per the format below.* | |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Activity | Sub Activity | Time-line (Gantt Chart) | | | | | | | | | | | | Key Performance Indicators (KPIs) | | Year 1 | | | | Year 2 | | | | Year 3 | | | | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   Format Only | |
| 7.3 Indicators & milestones of progress  *Please list the milestones and indicators that will be used to measure the progress of the proposed Study* | |
| **Year 1**   |  |  |  | | --- | --- | --- | | Specific research activities(indicators) | Targets to be achieved (Milestones) | Role of the Sri Lankan team | |  |  |  | |  |  |  |   **Year 2**   |  |  |  | | --- | --- | --- | | Specific research activities(indicators) | Targets to be achieved (Milestones) | Role of the Sri Lankan team | |  |  |  | |  |  |  |   **Year 3**   |  |  |  | | --- | --- | --- | | Specific research activities(indicators) | Targets to be achieved (Milestones) | Role of the Sri Lankan team | |  |  |  | |  |  |  | | |
| 1. **Ethical consideration**   *(Ethical clearance should be submitted within one month of the deadline for submission of application)* | |
| Relevance to the project | Relevant Not relevant |
| If relevant, Ethical clearance obtained? | Yes No  *If Yes, attach copy to the application* |
| If No, applied for Ethical clearance? | Yes No |
| 1. **Indicate the human, genetic & environmental safety issues related to the project and how they are being addressed** | |
|  | |
| 1. **Budget of the Research Component** | |
| 10.1Financial support | |
| Is the proposed project currently being funded by any other source?    Yes No  *If Yes, please give details* | |
| If No, have you applied/planning to apply for funding from any other source for the proposed research?  Yes No  *If Yes, please state when a decision is expected.* | |
| If Yes to above question/s, please give details and justify the request for co-funding from the NSF. | |
| 10.2 Summary of the Budget for the Sri Lankan Research Component *(in LKR and USD. Please obtain the exchange rate as at the date of submission from Central bank site. Priority will be given to the LKR value).* | |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | **1st Year** | | **2nd Year** | | **3rd Year** | | **Total** | | | 1. **Personnel** | **LKR** | **USD** | **LKR** | **USD** | **LKR** | **USD** | **LKR** | **USD** | | * **NSF Research Scientist\*** |  |  |  |  |  |  |  |  | | * **Research Student\*\*** |  |  |  |  |  |  |  |  | | * **Technical Assistant** |  |  |  |  |  |  |  |  | | * **Labourer/Other** |  |  |  |  |  |  |  |  | | **Sub Total (Personnel)** |  |  |  |  |  |  |  |  | | 1. **Equipment** |  |  |  |  |  |  |  |  | | 1. **Consumables** |  |  |  |  |  |  |  |  | | 1. **Sample analysis (if outsourced)** |  |  |  |  |  |  |  |  | | 1. **Statistical analysis** |  |  |  |  |  |  |  |  | | 1. **Calibration of instruments** |  |  |  |  |  |  |  |  | | 1. **Postgraduate registration fees** |  |  |  |  |  |  |  |  | | 1. **Travel & Subsistence within Sri Lanka (For field visits on project work only)** |  |  |  |  |  |  |  |  | | 1. **Miscellaneous** |  |  |  |  |  |  |  |  | | **GRAND TOTAL \*\*\*\*** |  |  |  |  |  |  |  |  | | |
|  | |
| * NSF Research Scientist should have a postgraduate degree (MSc/MPhil/PhD) and work full time with the Principal Investigator. NSF Research Scientist can be allocated only for Principal Investigators with adequate research experience as determined by the NSF.   \*\* Full-time Research Students registering for a Postgraduate Degree, can be allocated only for Principal Investigators with two years of postdoctoral research experience.  \*\*\*For full time Research Students, not registering for postgraduate degree funds will be provided only up to two years    \*\*\*\* For Principal Investigators who have received previous grants from NSF or any other funding agency, the budget per year shall not exceed LKR. 10 Million including allocations for Research Personnel. For PIs who have not received any other research funding before from NSF or any other funding agency, the budget for the first year shall not exceed LKR 05 Million including allocations for Research Personnel.  Applicants from the non-state sector, please refer the NSF guidelines for the management of funds for the non-state sector (Annex B). | |
| **11. Budget justification** | |
| 11.1 Personnel  *Requests for personnel for the proposed project should not be made unless they are absolutely necessary. The Investigators should indicate and justify the type of personnel required.*  *Please refer the* ***Annexure A*** *provided along with this application for rates of payment.* | |
| 1. NSF Research Scientist\* 2. Full time for ………………….years OR ...................months 3. Description of work to be carried out by the NSF Research Scientist:- | |
| 1. Research Student\*\* 2. Full time for ……………………… years OR …..... months 3. Description of work to be carried out by the Research Student:- 4. Research Student will be registering for a postgraduate degree – Yes No   If Yes, PhD MPhil | |
| 1. Technical Assistant 2. Full time/part time for ……………………… years OR …..... months 3. Description of work to be carried out by the Technical Assistant:- | |
| 1. Labourers 2. No. of labourers required…………………………….. 3. Time period ……………………… days/months per labourer 4. Description of work to be performed:- | |
| 11.2 Laboratory Equipment  *A complete description of equipment required and a full justification must be given. Indicate the make, type, model No., supplier, quantity etc. Also attach brochures.*  *Prices should be given in rupee equivalent (calculated at current exchange rate + 20%).*  *Cost of equipment should not exceed 50% of the total budget. If the cost of an individual equipment in the Research budget (Application Part 1) exceeds LKR 750,000/- that equipment should be included under the Equipment Grants Scheme (Application Part 2).* | |
| |  |  |  |  | | --- | --- | --- | --- | | **Type/Model/Supplier** | **Qty** | **Estimated Cost (LKR)** | **Availability of the Equipment at the Department/ Faculty/Institution** | |  |  |  |  | | TOTAL |  |  |  |   **Justification for each equipment for the project:** | |
| 11.3 Consumables  *Attach the list and give a complete description of type (e.g. Chemicals, glassware etc), quantity*  *(justify the quantity and type) and estimated cost (LKR)*. *Avoid over- estimation and include*  *only the necessary consumables for this project.* | |
|  | |
| 11.4 Sample analysis (if outsourced)  *Institution/department, type of analysis, no. of samples, estimated cost (in LKR.and USD).*  *Please obtain the exchange rate as at the date of submission from Central bank site)*. | |
| 1st Year | |
| 2nd Year | |
| 3rd Year | |
| 11.5 Statistical analysis | |
| Justification for requesting funds | |
| 1st Year | |
| 2nd Year | |
| 3rd Year | |
| 11.6 Calibration of instruments *(give description of items)* | |
| 1st Year | |
| 2nd Year | |
| 3rd Year | |
| 11.7 Postgraduate registration fees during the project period *(Refundable deposits will not be reimbursed) (in USD and LKR..* *Please obtain the exchange rate as at the date of submission from Central bank site)* | |
| 1st Year | |
| 2nd Year | |
| 3rd Year | |
| 11.8 Travel & Subsistence within Sri Lanka  *Funds can be requested only for field visits related to the project. As far as possible the Investigator should combine field work under the project with his/her work in the Institution. What should be requested for is additional travelling that cannot be carried out in the course of the Investigator’s other duties.*  *Give a detailed breakdown for each year with justifications of the cost figures given in summary*  *budget. Indicate no. of field visits, places to be visited and any other relevant details. Refer rates of*  *payment. (****Annex A****).* | |
| 1st Year   |  |  |  |  | | --- | --- | --- | --- | | Travel | | | | | Places to be visited | Distance (Km) | No. of visits | Total cost for transport | |  |  |  |  | |  |  |  |  |   Subsistence for above field visits (please give calculation): | |
| 2nd Year   |  |  |  |  | | --- | --- | --- | --- | | Travel | | | | | Places to be visited | Distance (Km) | No. of visits | Total cost for transport | |  |  |  |  | |  |  |  |  |   Subsistence for above field visits (please give calculation): | |
| 3rd Year     |  |  |  |  | | --- | --- | --- | --- | | Travel | | | | | Places to be visited | Distance (Km) | No. of visits | Total cost for transport | |  |  |  |  | |  |  |  |  |     Subsistence for above field visits (please give calculation): | |
| 11.9 Miscellaneous  *Give complete breakdown with estimated cost (in USD and LKR.* *Please obtain the exchange rate as at the date of submission from Central bank site)*. *The funds for miscellaneous, should not exceed 10% of the total cost of the project. Funds for contingencies/unforeseen expenses cannot be considered.* | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Items | Estimated Cost | | | | | 1st Year | 2nd Year | 3rd Year | Total | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | | |
| 11.10 Facilities available at the Institution of the Investigator for the research project | |
| Major equipment and other facilities available at the institute | |
| **12. Research Outputs** | |
| *Expected**Research Outputs**at the end of the project in point form* | |
|  | |

|  |
| --- |
| **13. Research Outcomes** |
| Expected Outcome (impact of the research outcome scientifically as well as in terms of relevance for industry  and society - for national/socioeconomic development of Sri Lanka). *Please write in point form with*  *timelines. (Maximum 1page)* |
|  |
| **14. Does the proposed project have potential to generate Intellectual Property (IP)? If ‘Yes’, mention your plan for the protection of the IP and commercial exploitation for socioeconomic benefit of Sri Lanka.** |
|  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Research Grants Record (ongoing and completed) of the Sri Lankan Principal Investigator during the last 05 years (NSF and other funding sources)***  ***Annex I*** | | | | | | |
| Grant No | Duration of the Grant  *(Dates)* | Title of the Project | Source of support | Total allocation | Status  [Ongoing/Completed/  Terminated/Cancelled] | Postgraduate degrees/No. of Publications/ No. of Communications |
|  |  |  |  |  |  |  |

***Annex II***

|  |
| --- |
| ***For Industry/s Collaborating with this Project*** |

(To be filled by the Industry Partner)

|  |  |
| --- | --- |
| **Name of the Company/s**  Address  Contact researcher/person  (Please attach a CV) | |
| **Contribution towards the project** | |
| By kind | By cash |
|  |  |
| **Facilities that can be made available for the research project** | |
| **Office Laboratory/hrs per week**  Space:  Equipment:  (Type)  Other  (Please specify) | |
| Any other comments | |

……………………………….. …………………………………………….

Date Name and Signature of the Industry Partner

***Annex III***

|  |
| --- |
| ***Consent to be a Collaborator of a Research Project*** |

(To be signed by the Collaborator/s)

**Director General**

**National Science Foundation**

**Research Project on - ……………………………………………..**

This is to convey my/our willingness to work as a collaborator/s of the research project referred to above, supporting and contributing to the realization of the project objectives stated in the grant application.

I/we, am/are understand the support and assistance to be extended to the research team by providing necessary facilities and/or expert opinion and guidance to carry-out the project successfully.

Yours sincerely,

…………………………………….

(Signature)

Name of the Collaborator/s : ……………………………………………

|  |  |  |
| --- | --- | --- |
| **CHECK LIST** | |  |
|  | **Completed Application Form** |  |
|  |  |  |
|  | **Curriculum vitae of all Investigators (both local and foreign)** |  |
|  |  |  |
|  | **Research grants record (Annex I)** |  |
|  |  |  |
|  | **Information of Collaborator/s; if any (Annex III)** |  |
|  |  |  |
|  | **Concurrence of the institution/s which facilitates the research** |  |
|  |  |  |
|  | **Gantt chart** |  |
|  |  |  |
|  | **Evidence of** **previous research grants received from NSF or any other funding agency** |  |