National Science and Technology Council Grant Proposal Team of Excellence Research Program

(This form is for main project and all sub-projects)

| 1. General I | nform | ation | | Ap | plication Numbe | r: |
|---|-----------------------------------|---------------------------------------|---|---------------|--|--|
| Title of Main-project | Englis and Chines | | | | | |
| Title of Sub-project | Englis and Chines | | | | | |
| Name of | English | | | | | |
| Principle(Chief) Investigator* | Chinese | | | | Position | |
| Institution/Depar | rtment | | | | | |
| Project Period | | Fro | m 8/1/2024 | to 7/31/202 | 29 | |
| ☐ Human Studi ☐ Gene Recom ☐ Animal Studi | bination ies(Must | also attac Name: Mailing A | GMO Field Tri th a description ddress in Chin | ial | erobes in Risk Gr ical principles of se) | animal experiments)(English) |
| | | • | : (Office) | F. | | ile) |
| I am aware that a | posed in any withl the dism | this gran holding, f issal of a | alsification, or | misrepresenta | tion of information | d by any funding agency. on could result in administrative ination of an award, as well as |
| Signatures P | rinciple(| Chief)Inv | estigator: | | | Date: |
| P | I of the S | Sub-projec | ets: : | | | |
| С | o-PI of t | he Project | ts, if any | | | |

*Chief investigator is defined as the principal investigator of the main project.

2. Check List

| | check/page |
|---|------------|
| (1) General Information (Form E01) | -1 |
| (2) Check List (Form E02) | -2 |
| (3) List of Main and Sub-Projects (Form E03) | -3 |
| (4) Requested Budget for Main Project and Sub-projects (Form E04) | |
| (5) Requested Budget for Entire Term of Project Period (Form E05) | |
| (6) Key Professional Personnel (Form E06) | - |
| (7) Personnel Expenses (Form E07) | |
| (8) Consumable Expenses (Form E08) | |
| (9) Equipment Expenses (Form E09) | |
| (9-1) Grant Proposal of Large Instrument (Form E09-1) | |
| (10)Travel Expenses for International Destinations-Overseas Studies (Form E10) | |
| (11) Travel Expenses for International Destinations-International Conferences (Form | 1 |
| E11) | 🗌- |
| (12) Previous and Current Research Projects and Submitted Proposals (Form E12) | • 🔲- |
| (13) Keywords and Abstract in Chinese (maximum 500 characters) (Form E13) | • 🔲- |
| (14) Keywords and Abstract in English (maximum 500 words) (Form E14) | . 🗌- |
| (15) Contents of Grant Proposal (Form E15) | |
| (16) 國科會個人資料表 (Form E16) | . 🗌- |
| (17) Curriculum Vitae (Form E17) | 🗌- |
| | |

Remarks:

- (1) Use Times New Roman font, 12-point type, and single-spacing.
- (2) Proposal does not meet these format requirements mentioned and page limit will automatically be rejected.

3. List of Main and Sub-Projects: (This form is for main project only)

| Categor | ries | Principal Investigator | Institution/ Department | Position | Research Project Title |
|---------------|---------|---------------------------|----------------------------|----------|------------------------|
| Main Project | English | | | | |
| Main 1 Toject | Chinese | | | | |
| Sub-project 1 | English | | | | |
| Sub-project 1 | Chinese | | | | |
| Sub-project 2 | English | | | | |
| Sub-project 2 | Chinese | | | | |
| Sub-project 3 | English | | | | |
| Sub-project 3 | Chinese | | | | |
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4. Requested Budget for Main Project and Sub-projects:

(This form is for main project only)

| | | | | | | Cur | rency Unit: | NTD |
|----------------------|------|-----------|-------------|-----------|---|--|-------------|-------|
| Budget Categories | Year | Personnel | Consumables | Equipment | Travel Expenses for International Destinations- Overseas Studies | Travel Expenses for International Destinations- International Conferences | Overhead | Total |
| | 1 | | | | | | | |
| | 2 | | | | | | | |
| Main Project | 3 | | | | | | | |
| | 4 | | | | | | | |
| | 5 | | | | | | | |
| | 1 | | | | | | | |
| | 2 | | | | | | | |
| Sub-project 1 | 3 | | | | | | | |
| | 4 | | | | | | | |
| | 5 | | | | | | | |
| | 1 | | | | | | | |
| | 2 | | | | | | | |
| Sub-project 2 | 3 | | | | | | | |
| | 4 | | | | | | | |
| | 5 | | | | | | | |
| | 1 | | | | | | | |
| | 2 | | | | | | | |
| Sub-project 3 | 3 | | | | | | | |
| | 4 | | | | | | | |
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| Total | 3 | | | | |
| | 4 | | | | |
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5. Requested Budget for Entire Term of Project Period:

(This form is for main project and all sub-projects)

| | | | | | Currence | cy Unit: NTD |
|---|------------------------|--------------------------------------|----------------------|-------------------|------------------|---------------------|
| | Project Year | First year from/ | Second year from/to/ | | | Fifth year from/to/ |
| Budget Categories | | | (MM/YY) | (M M / Y Y) | (MM/YY) | |
| General Expenses | | | | | | |
| Personnel | | | | | | |
| Consumables | | | | | | |
| Hosting Expenses for Fo Researchers | oreign | | | | | |
| Equipment | | | | | | |
| Travel Expenses for Inte Destinations | ernational | | | | | |
| Joint Research & Overse | | | | | | |
| International Conferences | | | | | | |
| Overhead | | | | | | |
| Total for Each Year | | | | | | |
| | | | | | | |
| Postdoctoral Research | Domestic or Foreign | persons | persons | persons | persons | persons |
| Fellows | Mainland China | persons | persons | persons | persons | persons |
| Indicate support from the space blank if not applica | | institutions or | other organizat | tions (including | g industrial sup | port). Leave |
| Supporting Institution | | ns Funded el, Equipment, etc.) | Amount of Funding | Funding Period | | lence ipport |
| | | | | | | |
| | | | | | | |
| Signature of the adminis (or attach other evidence | | department: | | | - | |

6. Key Professional Personnel: (This form is for the main project and all sub-projects)

(1) Indicate "staff type" in the following order: principal investigator (PI), collaborating principal investigator (co-PI), assistant investigator, and postdoctoral research fellow.

| Staff Type | Name (In Chinese and English) | Institution/ Department | Position | Role in Project | Percent of Effort* |
|------------|-------------------------------------|----------------------------|----------|-----------------|-----------------------|
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*Percent of effort is defined as the percentage of the hours devoted to this project to the total working hours per week. For instance, 50% means this individual will devote a half of his/her working hours to this research project each week.

- (2) If requesting funds for postdoctoral research fellows, indicate the followings for each year of the project:
 - (1) Field(s) of specialization
 - (2) Role and research work
 - (3) Contribution or impact on this research project
 - (4) Standards of performance evaluation
 - (5) If a candidate of postdoctoral research fellow has already been selected, provide candidate's name and attach personal information and curriculum vitae (Form E17 & Form E18).

7. Personnel Expenses: (This form is for main project and all sub-projects)

For "type/rank," indicate full-time research assistant (already holding master's, bachelor's, technical college, or high school degrees), part-time research assistant (including Ph.D. students, master's students, undergraduate students, lecturers, and teaching assistants) or temporary staff.

| | | | | | Curr | ency unit: NTD |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|--|
| Project Year Salary Type/Rank | 1 st Year | 2 nd Year | 3 rd Year | 4 th Year | 5 th Year | Total amount for Entire term of Project Period |
| Full-time Assistants Rank, Number and Amount of NTD: | | | | | | |
| Part-time Research Assistants Rank, Number and Amount of NTD: | | | | | | |
| Subtotal for Each Year & Total of 5 years: | | | | | | |

8. Consumable Expenses: (This form is for main project and all sub-projects)

- (1) Complete this form for all consumables (excluding research equipment), books and miscellaneous expenses needed for executing this research project.
- (2) For "description," indicate product specifications, functions, and relevant information.
- (3) If proposing institution provides support or funding, indicate in "remarks" column.
- (4) Complete the table with separate pages for each year.

| | | | | | Currency c | |
|------|-------------|---|----------|---------------|------------|---------|
| Item | Description | Unit ("Piece," Batch", "Box," etc.) | Quantity | Unit Price | Amount | Remarks |
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Currency unit: NTD

9. Equipment Expense: (This form is for main project and all sub-projects)

- (1) Complete this form for necessary equipment directly related to this research project costing over NT\$10,000 with service life over two years. Indicate subtotals for each piece of equipment in the "Amount" column.
- (2) Attach price appraisal form for equipments above NT\$200,000.
- (3) If proposing institution or another organization provides funding for equipment, indicate supporting institution and amount funded.
- (4) For each piece of instrument or equipment costing NT\$600,000 provide detailed information of specifications and functions (including sensitivity, accuracy, etc.), important features, and significance for this project. If funding for this equipment is granted, the PI should maintain it and allow other researchers outside this research project to make full use of it, provided that such use does not interrupt the research work described in this proposal.
- (5) Please also fill out Form E09-1 for any instrument which unit price is equal or over 10 million NTD on this proposal's purchase list. The approved item will be granted separately from this proposal as an instrument-grant project.
- (6) Complete the table with separate pages for each year.

| Currency unit: N | TD |
|------------------|----|
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|------|--------------------------------|-------------|----------|---------------|--------|------------|---------------|
| т | D | | | T T •/ | | Funding re | equested from |
| Туре | Equipment (English/Chinese) | Description | Quantity | Unit | Amount | NSTC | Other |
| | (English/Chinese) | | | Price | | 1.010 | Institutions |
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9-1. Grant Proposal of Large Instrument:

National Science and Technology Council Grant Proposal of Large Instrument

I. General Information

| Project Term | | From | to | | (MM/DD/YY) |
|------------------------------------|--------------|----------------------|----------|------------|------------|
| Institution/D | epartment | | | | |
| Principal Investigator(PI) | | | Position | | |
| Research | Chinese | | | | |
| Project Title | English | | | | |
| Instrument Name English | | | | | |
| | | | | | |
| Person in charge Instrument | e of | | Position | | |
| Research Proje Discipline which | | Discipline Code | | Discipline | |
| affiliated with "Discipline Co | | | | | |
| Applicant, PI (Signature): | | <u>.</u> | · | Date: | _ |
| Dean of Resea | rch and Deve | lopment (Signature): | | Date: | |

| President (Signature): | Date: |
|------------------------|-------|
|------------------------|-------|

II. Budget Request:

- Any budget request for an instrument, which unit price is equal or over 10 million NTD, must be directly affiliated with the PI's research project. Please fill out the corresponding "subtotal" with the sum for peripheral apparatuses listed.
- ii. A quotation is required for each intended purchase.
- iii. Please provide the name of institute, the amounts of matching fund, and the documentary proofs for each matching fund item.

| - | | | | | | C | urrency unit: NTD | | |
|------------------------|---|-------------|----------|---------------|----------------|-------------------|--|--|--|
| | Instrument/ | | | | | | Budget Request | | |
| Category | Device (in Chinese/English) | Description | Quantity | Unit Price | subtotal | Fund from NSTC | Matching funds from others (please include institute name and the amount) | | |
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| Matching discretion | Matching funds from others(go to the next page if none): matching funds should be listed with discretion (the matching funds listed below shall have first priority in use) | | | | | | | | |
| Inst | Institute Matching Item | | Matching | Amount | Executive year | | Documentary proof | | |
| | | | | | | | | | |
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- III. Instrument Introduction (please describe specifications, funtions, and applications of instruments, auxiliary parts, and peripheral apparatus)
- IV. The association between the instrument and research project (Please state the need, necessity and urgency of this purchase in detail)
- V. Survey of domestic instruments (Please provide the current number of divices with

identical functions and their operation status)

- VI. Project PI's expertise in relation with the instrument (research achievement and experiences with the same or similar instruments)
- VII. Instrument operation planning within the project term

VIII. Planning of instrument maintenance and management

- IX. Space Arrangement (Please describe the location, space, and vicinity, etc.)
- X. Post-project maintenance and operation strategy (Please state any plans for research and/or service purposes)
- XI. Training program for instrument operation and maintenance (Please list student trainees, full-time and part-time technicians, operation schedules, and training courses)
- XII. Other applications and potential users of the instrument
- XIII. Experiences on NSTC instrument operation and management

10. Travel Expenses for International Destinations-Overseas Studies:

(This form is for the main project and all sub-projects)

- (1) Principal Investigators and relevant personnel involved in project may apply funding for carrying out international joint research, field study, experiment, survey, samples collection, and use of research facilities overseas.
- (2) Describe the itinerary, proposed budget, duration, and destination for each person traveling abroad. In case that receiving parties should bear the living expenses of visitors from abroad as agreed through bilateral arrangement, please do not include the spending.
- (3) Amount of funding provided for subsistence, airfare and other expenses for international travel can be found at the following website: http://law.dgbas.gov.tw/LawContent.aspx?id=FL020312
- (4) Convert all currencies into NT dollars and specify exchange rate.
- (5) Fill in separate pages for each year.

11. Travel Expenses for International Destinations-International Conferences:

(This form is for main project and all sub-projects)

- (1) Principal Investigators and relevant personnel involved in project may apply international travelling expenses for attending international academic conference held overseas.
- (2) Describe the nature of conference, proposed budget, venue and duration.
- (3) Please refer to the following website for information about amount of funding regarding international airtickets, daily allowance and others. https://law.dgbas.gov.tw/LawContent.aspx?id=FL017584
- (4) Briefly describe any participation in international conferences in the past three years. Indicate conference title, dates, venue, sponsoring organization, and title of conference paper presented therein. For any publications resulting from the conference, provide name of journal or publication, volume, page number, and date of publication.
- (5) Fill in separate pages for each year.

12. Previous and Current Research Projects and Submitted Proposals

(All PIs and co-PIs of the main and sub-projects should complete this table on separate pages.)

List current and previous research projects within the past **5 years** and the proposals that have been submitted to any funding organization for grant application.

| | | | | | | 5 |
|---|-----------------------|----------------------|---|-------------------------|-------------------------------|---|
| Title of Research Project (grant number) | Role / Position | Percent of Effort | Funding or Supporting Institution | Amount of Funding | Duration (M/D/Y~ M/D/Y) | Percentage of overlapping with this proposal |
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Currency unit: NTD

13. Keywords and Abstract in Chinese (within 1 page)

(This form is for the main project and all sub-projects)

14. Keywords and Abstract in English (within 1 page)

(This form is for the main project and all sub-projects)

15. Contents of Grant Proposal: (This form is for the main project and all sub-projects)

Page limit for the content of the Main-project & Sub-projects: 40 pages

- (1) Summarize achievements and/or progress of the past five years directly related to this research proposal.(Provide the results of the previous one of granted frontier science project, if any.)
- (2) Describe the significance of this research proposal including prospects for academic excellence, innovations in scientific research or technological development, and impact on research field and international competitiveness.
- (3) For each year of the project, specify the objectives as well as material and methods.
- (4) Specify the anticipated results and accomplishments for each project year.
- (5) Describe the research infrastructure in PIs' institutions including possibility of matching funds, working space, facilities, etc.
- (6) Provide references.

16. 國科會個人資料表: (This form is required for all PIs and co-PIs of the main and sub-projects.)

國科會個人資料表

以下各項資料均將收錄於本會研究人才資料庫,作為學術補助獎勵等申請案之審查參考。依據政府 資訊公開法第七條第五款,本會核定通過之學術補助獎勵案之主持人姓名及執行機關,均公開於本 會對外網站,提供外界查詢。為促進學術交流,您的 E-mail、學歷、經歷等資料是否亦可同步公開 提供外界查詢,請您圈選(同意、不同意)。

一、其木咨料:

| 一、基本資料 | 料: | | | | | | | 簽名:_ | | | | |
|--------|---------|--|-----|----|------|-------|-------|-----------|------|------|------|-------|
| 身分證號碼 | | | | | | | | 填表日 | 期: | 20 | / | _/ |
| 中文姓名 | 性名 英文姓名 | | | | | | | | | | | |
| | | | - , | | _ /L | (Last | Name) | (First Na | ame) | (Mic | ldle | Name) |
| 國 籍 | | | 性 | | 別 | □男 | □女 | 出生日期 | 19 | 年 | 月_ | 日 |
| 聯絡地址 | | | | | | | | | | | | |
| 聯絡電話 | 公) | | (宅 | /手 | 機) | | | | | | | |
| 傳真號碼 | | | | | | | E-ma | il | | | | |
| | | | | | | | | | | | | |

二、 主要學歷 由最高學歷依次填寫,若仍在學者,請在學位欄填「肄業」。

| 學校名稱 | 國別 | 主修學門系所 | 學位 | 起訖年月(西元年/月) |
|------|----|--------|----|-------------|
| | | | | 自至/ |

三、現職及與專長相關之經歷 指與研究相關之專任職務,請依任職之時間先後順序由最近者往前追溯。

| 服務機構 | 服務部門/系所 | 職稱 | 起訖年月(<u>西元年/月</u>) |
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| 現職: | | | 自至/ |
| 經歷: | | | 自至/ |
| | | | 自至/ |

四、專長 請填寫與研究方向有關之學術專長名稱。

1. 2. 3. 4

17. Curriculum Vitae: (CV is required for all PIs and co-PIs of the main and sub-projects.)

Please provide the following information within **3 pages** for each CV:

- (1) Name, Gender, Birth date.
- (2) Education.
- (3) Current position and relevant experience.
- (4) Fields of specialty (limit to fields related to research)
- (5) Major awards and honors.
- (6) Significant project-related publications in the past 5 years, including technical reports, patents, periodical articles.