

Announcement of Brain Pool Program for inviting outstanding scientists from overseas 2021

The MSIT (Ministry of Science and ICT) and NRF (National Research Foundation of Korea) welcome applications from host researchers in South Korea who wish to invite outstanding scientists to join the Brain Pool(BP) Program. This program is designed to invite overseas outstanding scientists to domestic research institutions in Korea, required by domestic industry, academia and research sites, for the enhancement of research competence through joint research in R&D fields in Korea, in which he or she produces high level of R&D performance and to contribute to the internationalization of the domestic research environment, securing new growth engines, nurturing new researchers, and establishing a global network. Interested applicants are requested to file 2021 BP application in accordance with the relevant procedures.

January 25th, 2021

Choi Kiyoung
Minister, Ministry of Science and ICT

Roe, Jung-Hye
President, National Research Foundation of Korea

1. Goals

- To enhance the R&D level of Korea by attracting outstanding overseas scientists through various joint research activities in R&D fields in Korea, and to establish long term international cooperation networks.
- * Possible to apply for this program in the case that the host institute is planning to hire the invited scientist (brain pool candidate) as a "full-time (permanent) employee" (When invited as a full time employee, the host researcher of the BP program will be switched to the invited scientist as a principal investigator by the agreement amendment after program selection)

2. Outline

A. **Fields of Research:** All fields in science and technology

<Preference fields: high correlation fields related to 8 leading industry technology fields, 3 strategic investment fields and 13 Key innovation growth engines>

- * (3 Key Strategic Investment Industries) ① Data Economy (Big Date/Block Chain/Sharing Economy), ② Artificial Intelligence (AI), ③ Hydrogen Economy
- * (8 Key Lead Industries) ① Smart Factory, ② Smart Farm, ③ Smart City, ④ Fin-tech, ⑤ New Energy Industry, ⑥ Drone, ⑦ Future Automobile, ⑧ Bio-health
- *(13 Key innovation growth engines) ① Big Data, ② Next Generation Communications, ③ Artificial Intelligence, ④ Autonomous (Driving)Vehicles, ⑤ Drone, ⑥ Customized Healthcare, ⑦ Smart City, ⑧ Virtual and Augmented Reality, ⑨ Intelligent Robot, ⑩ Intelligent Semiconductor, ⑪ Advanced Materials, ⑫ Innovative New Drugs, ⑬ New and Renewable Energy

B. **Eligibility of Brain Pool Candidates (Invited Scientists):** ① Ph.D. conferred scientist who is living overseas (outside of South Korea); or ② in the case of corporate research institutes being the host organization, scientist with five-year or more of on-site R&D experience in the industry overseas (outside of South Korea) regardless of his/her possession of a doctoral degree.

- C. **Program Period:** (Type 1) 6-12 months*, (Type 2) Max. 3 years ※ Re-application available
 * (Type 1) 3-12 months for industrial bodies.
 ※ (Type 1) 6~12 months within three-year duration for “Flexible Research Duration tailored to researchers”

<Fields available for “Flexible Research Duration tailored to researchers” Application>

- Machinery/Manufacturing sector:
 - ① Eco-friendly and smart plant-based technology, ② High-efficiency and ultra-precision production system technology, ③ 3D printing equipment and material technology;
- Agriculture, forestry, fishery and food sector:
 - ① resistant and highly functional variety development technology, ② eco-friendly customized new cultivation technology, ③ animal disease control technology;
- ICT·SW sector:
 - ① ultra-high integration semiconductor process, equipment and material technology, ② ultra-high-speed, ultra-low power semiconductor device and SoC design and manufacturing technology, ③ intelligent big data analysis and utilization technology, ④ ultra-high speed and large-capacity data platform technology, ⑤ system SW operation and base technology, and ⑥ knowledge information security technology

※ Fields above are highly demanded for manpower development and attraction based on the result of the 2018 technology level assessment.

D. **Details of Support:**

- **Personnel costs of the BP Fellow:** Min. KRW 5 Mil./month ~ Max. KRW 25 Mil./month
 ※ Based on the level of the **annual salary (including severance pay)** to his/her original affiliate of the BP Fellow.
- **Invitation Expenses:** Airfare, insurance premiums, moving expenses, business travel expenses (domestic/overseas), Conference attendance fees / Paper publication fees, child education subsidies (Nuri course) etc.

| Type | Program Duration | Personnel Costs | Invitation Expenses | Indirect costs |
|---------------------------------------|---|--|---|---|
| 【Type 1】 Short Term Support | 6~12 months ※ for industrial bodies: possible for 3-12 months ※ 6-12 months within three-year duration for “Flexible Research Duration tailored to researchers” | Based on the level of annual salary to his/her original affiliate of the Brain Pool fellow (Min. 5~Max. 25 Mil. KRW per month) | Airfare, insurance premiums, moving expenses, business travel expenses (domestic/overseas), Conference attendance fees / Paper publication fees, child education subsidies (Nuri course) etc. | Max. 5 Mil. KRW per year |
| 【Type 2】 Long Term Support | Max. 3 years ※ Re-application available | ※ For corporate research institutes, only 70% of personnel costs to his/her original affiliate will be supported | ※For type 2, housing allowances can be supported based on the actual expenses (Max. 12 Mil. KRW per year) | (including subsidies for assistant staff) |

3. **Quota and Eligibility**

A. **Quota (Scheduled):** Approx. 55 projects

B. **Eligibility**

- **Host Institution:** Government-funded research institutes, national/public research institutes, universities, research institutes affiliated with universities, corporate research institutes, and nonprofit research institutes.
- **Host Researcher (BP Applicant):** Full-time employees of the respective host institutions who have the rank of at least assistant professor, senior researcher, or chair of a research institute (corporate research institute).
 ※ Host researcher should apply to cannot apply for Type 1 and Type 2 simultaneously with the same BP candidate.

- **Invited Scientist (BP Candidate):**

① Ph.D. conferred scientist who is living overseas (outside of South Korea); or ② in the case of corporate research institutes being the host organization, scientist with five-year or more of on-site R&D experience in the industry overseas (outside of South Korea) regardless of his/her possession of a doctoral degree.

※ Provisional degree holders or temporary overseas residents throughout the application period are not eligible for BP application.

4. Application Period and Submission

A. Recruitment Announcement Period: January 25th (Mon.) 2021 ~ August 31st (Tue.) 2021

B. Application Submission Period

- 1st Call : Feb. 15th (Mon.) 2021 ~ Feb. 26th (Fri.) 2021 by 18:00

(Application submission and confirmation of **host institution**)

- 2nd Call (Scheduled) : Feb. 27th (Sat.) 2021 ~ Apr. 30th (Fri.) 2021 by 18:00

(Application submission and confirmation of **host institution**)

- 3rd Call (Scheduled): May 1st (Sat.) 2021 ~ Jun. 30th (Wed.) 2021 by 18:00

(Application submission and confirmation of **host institution**)

- 4th Call (Scheduled): July 1st (Thu.) 2021 ~ Aug. 31st (Tue.) 2021 by 18:00

(Application submission and confirmation of **host institution**)

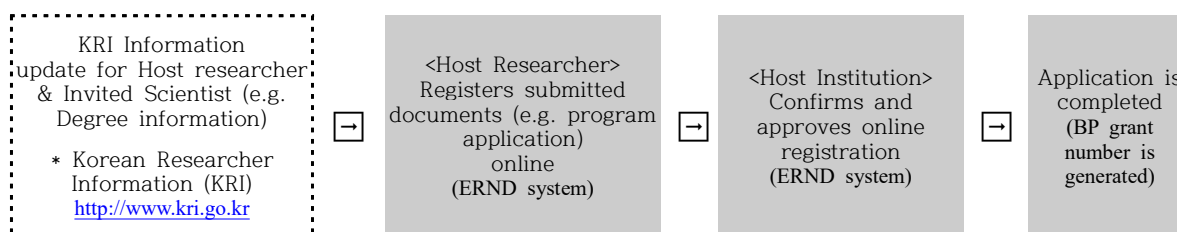
※ Approval from their host institutions on ERND by **6 p.m. (Unconfirmed applications will be unapproved.)** Applications will only be accepted for projects that obtain approval from their host institutions within the application period, and will be **closed at 6 p.m. of the deadline automatically.**

(You may encounter with systematical error on e-R&D system on the deadline due to increased access, therefore please submit before the deadline)

※ **Date/Time is based on Korea Local Time (UTC/GMT +9 hours)**

※ The application call may be closed earlier depending on the selection results (possibility of not opening the 2nd to 4th call if maximum selection quota is reached in the previous call(s)).

C. How to apply: Online (e-R&D system)



- Host research institutes seek out Brain Pool candidates and apply through the Integrated Research Support System of the National Research Foundation of Korea (NRF) (<https://ernd.nrf.re.kr>)

※ KRI Information of Host Researcher & Invited Scientist (mandatory) must be updated three to four days in advance as when and how the updates are reflected to the KRI system differs according to the applicant's affiliate.

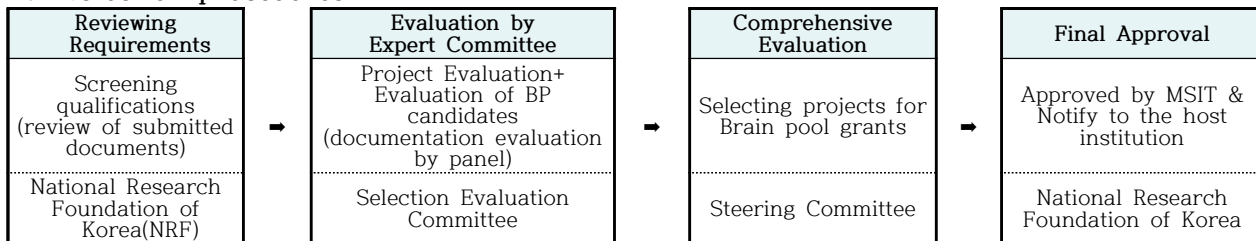
※ Application should be uploaded on the ERND system by the host researcher (BP applicant)'s ERND account not by the BP candidate's. The application shall be prepared within the deadline and made certain the BP application and necessary documentation required is uploaded in time.

D. Documents To Be Submitted

| Necessary Documents When Applying |
|---|
| <ul style="list-style-type: none"> - Brain Pool application Form(form) - Scanned Copy of Latest degree certificate/proof of work of Brain Pool Fellow* *Mandatory for project invited by corporate research institutes - Agreement to personal information utilization(form) - Pledge agreement of executing contract of integrity(form) - Invitation Acceptance letter by BP Candidate |
| Necessary Documents After Final Selection (Only for Selected BP Projects) |
| <ul style="list-style-type: none"> - Salary stubs of Brain Pool Candidate for the past one year (For reapplication, please submit a paystub of the BP fellow's current affiliate in Korea) - Pledge agreement for Security(form) |
| Note for Submission |
| <ul style="list-style-type: none"> ※ The R&D plan should be written and submitted in about 30 pages excluding the cover, summary, attached documents, and information. ※ Invitation acceptance letter by BP Candidate is in a free form, and exchanged e-mail is also possible. ※ The salary stubs for the past one year of BP Candidate are required documents for calculating personnel costs at the time of final selection, and selection can be canceled if not submitted. ※ Documents can be written in Korean or English; in the case of other languages, a notarized translation in Korean or English is required and attached. * In principle, the research and development plan should be written in Korean by Host Researcher(In terms of Research contents, can be written in English to share the research plan with BP Candidate). 'General Information of BP Candidate' section can be written by BP candidate him/herself in Korean or English. ※ If there is false information in the submitted documents, the selection may be canceled even after the final selection. |

5. Evaluation Methods

A. Evaluation procedures



- Reviewing Requirements: Screening qualifications of host institutions, host researchers, and invited scientists
- Evaluation by Expert Committee: Selecting the recommended projects for comprehensive review with an average score of 80 or higher through discussion/evaluation by a panel of experts in each field.
- Comprehensive Evaluation: Selecting the final projects supported with consideration to policies through comprehensive review by the steering committee of global researcher invitation programs.
- Final Approval: Final Approval by MSIT and confirming notification to the host institution

B. Basic Direction of Selection

- In order to diversify the nationality of attracting scientists, it is possible to limit more than 20% of the total number of candidates for each selection period in one country (excluding Korea).
- Minimum selection quota (30%) for ethnic Koreans or Korean nationals residing overseas in order to strengthen the invitation and build a better global Korean research network

C. (Type 1·2) Evaluation Criteria and Score

| Evaluation Criteria | | Note | Score |
|------------------------------------|--|--|------------|
| Evaluation on BP Project (30) | Excellence and creativity of research project | <ul style="list-style-type: none"> ■ Excellence and creativity of research projects and plans ■ The need for government support and utilization of BP Candidate for BP project and in relevant field | 10 |
| | Competence of Host Researcher | <ul style="list-style-type: none"> ■ Host Researcher's ability to utilize BP Candidate (research capacity, etc.) | 10 |
| | Degree of project utilization and the expected outcome | <ul style="list-style-type: none"> ■ Domestic-International linkage and cooperation of R&D projects | 10 |
| Research Plan of BP Candidate (30) | Research Plan by BP Candidate | <ul style="list-style-type: none"> ■ Research Plan of BP Candidate ■ Continuous network planning after research period | 15 |
| | Volition for support by Host Institution | <ul style="list-style-type: none"> ■ Fidelity of the research support plan of the Host Researcher/Institution (funding, research space, research environment, administrative support, etc.) ■ Plan for residential support for BP Candidate (housing, etc.) | 15 |
| BP Candidate Competency(40) | Responsibility of BP Candidate | <ul style="list-style-type: none"> ■ Responsibility of BP Candidate and Specific Plan for Utilization of BP Candidate by the Host Institution ■ BP Candidate's possession of skills and knowledge for bottleneck techniques in R&D field etc. ■ Validity and achievability of joint research goals and indicators | 15 |
| | Competency of BP Candidate | <ul style="list-style-type: none"> ■ BP Candidate's Degree and research experience ■ Achievements in SCI Papers, patents, and academic activities for the past 5 years ※ For proposal hosted by industry, personal data can be replaced with technology and commercialization performance such as patents, technology transfer, and technology commercialization. | 15 |
| | Expected Results and BP Candidate's volition | <ul style="list-style-type: none"> ■ Possible Effect of joint research results and BP Candidate's volition for job fulfillment through BP program | 10 |
| Total | | | 100 |

※ Extra scores will be added up to the following year for the applicants and candidates (host researchers/ Brain Pool fellows) who have received excellent grades on evaluation results (applied to BP projects only)

6. Schedule for the Brain Pool (2021) Recruitment

| Schedule | Contents |
|-----------------------|---|
| Jan. 25th(Mon.) 2021 | Recruitment Announcement of 2020 (from January ~ August, 2021) |
| Feb. 26th(Fri.) 2021 | 1st Call Application deadline for program plans (18:00) |
| March~April 2021 | Selection evaluation of the 1st call (requirements evaluation, evaluation by experts, comprehensive evaluation) and Final selection |
| Apr. 30th (Fri.) 2021 | 2nd Call Application deadline for program plans (18:00) |
| May~June 2021 | Selection evaluation of the 2nd call (requirements evaluation, evaluation by experts, comprehensive evaluation) and Final selection |
| Jun. 30th (Wed.) 2021 | 3rd Call Application deadline for program plans (18:00) |
| Jul.~Aug. 2021 | Selection evaluation of the 3rd call (requirements evaluation, evaluation by experts, comprehensive evaluation) and Final selection |
| Aug. 31st (Tue.) 2021 | 4th Call Application deadline for program plans (18:00) |
| Sept.~Oct. 2021 | Selection evaluation of the 4th call (requirements evaluation, evaluation by experts, comprehensive evaluation) and Final selection |

7. Application and participation restrictions

- A. Brain Pool Fellows are required to enter the Republic of Korea and commence research within four months from the date of final selection.
 ※ However, it may be determined separately in case of global disasters or natural disasters etc.
- B. Researchers under sanctions to participate in National R&D programs can neither apply for nor participate in the program.
- C. This program is excluded from the projects subject to the restrictions (The number of R&D projects that can be simultaneously conducted by a host researcher shall not exceed five, among which the number of R&D projects that can be simultaneously conducted as a principal investigator (PI) shall not exceed three) referred to in Article 32 of the Regulations on Management, etc. of National Research and Development Projects.
- D. In case of project withdrawal by Host Researcher and/or BP Fellow for non-entry to Republic of Korea without justifiable reason(legitimate proof must be submitted) after the notification of selection, a penalty of 3-year restriction for future BP application is imposed on both(Host Researcher & BP Fellow).
 ※ Close consultation with foreign scientists is required before applying for a project.
- E. In case of Project abandoned by BP Host Researcher and/or BP Fellow without justifiable reason(legitimate proof must be submitted) after the notification of selection, a penalty of 3-year restriction for future BP application is imposed on both(Host Researcher & BP Fellow).
 ※ Close consultation with invited scientists (Brain Pool candidates) on personnel costs and timing of the invitation is required before applying for the BP project.
- F. For the initiated projects after Project selection, if the minimum execution period (12 months) is not reached, the housing allowances and moving expenses must be returned (※ for Type 2)
- G. For type 1, in principle, the residence of Brain Pool Fellows is provided by host institutions (institution that host the BP Fellow), while for Type 2, housing allowances can be supported based on the actual expenses (Max. 12 Mil. KRW/year).
- H. For more information, please visit the website of National Research Foundation of Korea* or refer to the Brain Pool Guidelines
 * (Visit www.nrf.re.kr (in Korean)- by selecting Program Information on Menu - Program Classification - Training and Human Resources Development - Global Researcher Invitation Programs -> Brain Pool Program -> Notice)

| [Contact] | |
|--|--|
| Program Inquiry | International R&D Collaboration Team National Research Foundation of Korea(NRF) (For Korean) ☎ +82-2-3460-5624, 5647 / E-mail: yokang@nrf.re.kr, salee@nrf.re.kr (For English) E-mail: bpkrf@nrf.re.kr * If the line is continuously busy, please send us your inquiries via email |
| Inquiries for Online Application (KRI, e-R&D system) | Research Advisory Center (Call Center) National Research Foundation of Korea ☎ +82-42-869-7744 |

- ※ This guideline has been translated from original Korean documents with regards to Korean research. Therefore, this translation has focused on providing the main contents and points to brain pool overseas candidates for better understanding and subject to change without prior notice. The actual details will follow the “Guidelines for the Management of the Brain Pool (BP) Program” and “BP agreement”.
- ※ In the event of any discrepancy between the Korean original and this English translation, the Korean original shall prevail.