Fiscal 2020

Application Guidelines for

Moonshot Research and Development Program

Project Manager (PM)

September 2020

Division of Moonshot Research and Development Program,
Office of Project Management

Japan Agency for Medical Research and Development (AMED)

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I. INTRODUCTION

These Application Guidelines specify provisions for the solicitation of applications for the post of project manager (“PM”) for a major groundbreaking research and development program to be undertaken by the Japan Agency for Medical Research and Development (“AMED”).

1. Program Overview

(1) Program Background and Purpose

In January 2020, the Council for Science, Technology and Innovation (“CSTI”) made the decision to promote ambitious, moonshot R&D projects (so-called “moonshots”) to be founded on innovations beyond the reach of conventional technologies, with a view to creating disruptive innovations of Japanese origin. Initiatives are underway by the Cabinet Office and corresponding ministries and agencies with six goals in mind.
Recently, the Health and Medical Care Strategies Promotion Headquarters identified Moonshot Goal #7 for the health and medical care sectors (“MS Goal”).

Pursuant to this MS Goal and based on R&D concepts specifying sectors and domains in which challenging R&D activities are to be promoted by the Cabinet Office (CAO), the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Ministry of Health, Labour and Welfare (MHLW), and the Ministry of Economy, Trade and Industry (METI), AMED will promote R&D activities to achieve the ambitious groundbreaking goals for future society, identifying social issues that present significant challenges and seeking to find solutions that would have epochal impact. To implement this moonshot R&D program (“Program” hereinafter), we will solicit applications for the post of Project Manager (“PM”) to propose and manage R&D projects to achieve the MS Goal and realize the concepts.
For references purposes, “The basic approach for the Moonshot Research and Development Program” is attached as Appendix 1.

(2) Program Details

The MS Goal and R&D concepts to be addressed by applications solicited under this Program:

① MS Goal
The Goal of this Program is “Realization of sustainable care systems to overcome major diseases by 2040, for enjoying one’s life with relief and release from health concerns until 100 years old.” For more information, refer to “Moonshot goal of health & medical field” attached hereto as Appendix 3 and “Moonshot Goal #7” attached hereto as Appendix 4.

② R&D concept
The R&D concepts set forth examples of R&D activities and the direction of such R&D activities to achieve the MS Goal. For more information, refer to “R&D Concept for Moonshot Goal #7” in Appendix 5.

(3) Program Timeframe

The timeframe of the R&D project under this Program is initially projected to be five years from the time of the PM selection. Depending on the results of the Year 3 evaluation, the project timetable may be revised (accelerated or extended) or the project terminated.
Evaluations will take place not just in Year 3, but in Year 5 and whenever the PD deems evaluations appropriate. The evaluation results at these timepoints may lead to schedule revisions or to project

termination. If the decision is made to extend the project beyond five years, the project timeframe will be capped at 10 years.

(4) Scope of Program Funds

The most optimal amount of funds required per the PM at the time of its proposal shall be indicated depending on the proposed R&D project. Initial R&D project funds required will be determined by the PD with the cooperation of outside experts during the post-selection project elaboration phase.

* For more information, refer to III.1.

2. Program Implementation Systems

(1) Program Implementation Systems

(a) Overall system

AMED will supervise overall Program operations. The program director ("PD") appointed by AMED will be responsible for overall program management to achieve the MS Goal and realize the concepts. AMED has appointed Dr. Toshio Hirano, President of the National Institutes for Quantum and Radiological Science and Technology (QST), as the PD for MS Goal #7. For the PD's commitment to this Goal, refer to "Supplementary Information from the PD" attached hereto as Appendix 6.

Under the PD's direction, the selected PM will implement R&D projects to achieve the MS Goal and related concepts.

(b) The roles of the PD

The major responsibilities of the PD appointed to achieve the MS Goal and realize the R&D concepts are as follows:

① Build a strategic portfolio (a management plan summarizing policies regarding project structures (mixes) and resource allocation) and promote R&D activities in a challenging and systematic way, with the goal of the MS Goal and realization of the R&D concepts in mind.

② To build a strategic portfolio, adopt several projects using different research methods selected in light of the innovative and ambitious nature of the R&D activities envisioned and the scope of future socioeconomic consequences.

③ Continually monitor R&D activities under the portfolio, reappraise the portfolio according to the status of research activities, and exercise unified direction and supervision over the PM, who in turn is responsible for administering each project.

④ Take the lead in portfolio reappraisals based on evaluations by outside experts and advice from the strategies promotion council.

(c) PM's roles

To achieve the MS Goal and realize the R&D concepts, the PM will, on his or her own authority and responsibility under the PD's direction, promote the redirection of individual R&D themes within the projects based on the status of R&D activities, including accelerating or extending the project timeframe and spinning off results, demonstrating both agility and flexibility. The PM's duties include the following:

① Under the direction of the PD, refine a proposed project during an open call to improve it, draw up a project plan (target setting of project, preparation of R&D details and implementation schedule, establishment of an R&D system to implement the project, and formulation of a plan to allocate research funding to participating R&D institutions in the project), and strategically implement the project. Moreover, flexibly and nimbly implement

project modifications and changes in direction, including practical use of some research results in society.

② Properly manage intellectual property and information, and actively and strategically promote international cooperation.

③ Objectively evaluate the research content, seek sponsors from private enterprises if R&D is at the phase at which private funding can be used, and also try to draw on private funding. In addition, conduct bi-directional communication activities (public dialogue on science and technology) to explain the research activities to society.

④ Develop a data management plan (DMP) that defines the data to be managed, and also aggregate metadata about the data to be managed from researchers based on DMP, and submit that to AMED. In addition, with system such as the Research Data Infrastructure System, store and share the data to be managed, and publish the data to the extent necessary. *2

*1 Metadata is not the data itself. The term refers to descriptive information concerning data characteristics, including data title, description, manager and location, contact details, and policies on data storage, sharing and public release.

*2 For the data management plan, refer to V.8.(4) Submission of Data Management Plans on page 27.

(d) Roles of contributing participants

Contributing participants will implement their respective R&D assignments in the R&D projects as instructed by the PM to achieve the MS Goal and realize the concepts.

* With regard to (a) through (c) above, refer to “Guidelines for Operation and Evaluation of the Moonshot R&D Program (Goal #7)” attached hereto as Appendix 2.

(2) Roles of the Principal Institution and Subsidiary Institutions

R&D projects in this Program will be implemented by the principal institution and subsidiary institutions.

(a) *Principal institution* refers to the institution with which the PM is affiliated, serving as the principal role of project management. The principal institution will conclude a contracted R&D agreement directly with AMED and seek to ensure the effective and efficient undertaking of PM activities. Its primary obligation will be to support PM activities.

(b) *Subsidiary institution* refers to the institution(s) with which contributing participants are affiliated. The subsidiary institution(s) will implement R&D assignments as instructed by the PM. In principle, subsidiary institutions will pursue R&D activities based on agreements concluded with the principal institution.

II. APPLICATION REQUIREMENTS

Pursuant to “Guidelines for Operation and Evaluation of the Moonshot R&D Program (Goal #7)” (attached hereto as Appendix 2), the nationality of the PM applicant is not a consideration. However, PM is principally based in Japan after being appointed. The detailed conditions are as set forth below.

1. Requirements for the Principal Institution and Subsidiary Institutions

The principal and subsidiary institutions with which the PM and contributing participants are affiliated must be domestic institutions meeting requirements (1) through (5) below. If a researcher unaffiliated with a particular research institution or affiliated with a research institution outside Japan is selected as PM, he or she will be required to establish an affiliation with an institution meeting the requirements below by the date on which the agreement is concluded or a date designated by AMED. If no such affiliation is established, the selection will be canceled.
The institutions with which contributing participants are affiliated may be either domestic institutions meeting requirements (1) through (5) below or overseas institutions meeting requirements (2) through (5) below.

(1) “Research Institute” refers to institution with the characteristics shown in (a)–(h) below.
- (a) National facility or other organization[*2] (limited to institutions/facilities where the PI is employed in an educational position, research position, medical care position[*3], welfare service position[*3], or designated position[*3], or as a fixed-term contract researcher).
- (b) Research institute, etc., affiliated with a local public body.
- (c) University as prescribed under the School Education Act (Law No. 26 of 1947) or university affiliated research institute, etc. (including inter-university research institute corporations).
- (d) R&D division or research laboratory, etc. of a private enterprise
- (e) A special private corporation, general incorporated association, general incorporated foundation, public interest incorporated association, or public interest incorporated foundation (hereinafter referred to as a “special private corporation, etc.”) whose main activity purpose is research.
- (f) An independent administrative corporation as prescribed under Article 2 of the Act on General Rules for Incorporated Administrative Agencies (Act No. 103 of 1999, partially amended on June 13, 2014) or local incorporated administrative agency as prescribed under Article 2 of the Act on Local Incorporated Administrative Agencies (Act No. 118 of 2003) whose main activity purpose is research.
- (g) Non-profit, charitable technology research associations[*4]
- (h) Other institution deemed appropriate by the President of AMED.

*1 If the affiliate institution and the main place of research differ, please contact us.
*2 Refers to a research institute, inspection and certification institute, educational and training facility, medical and rehabilitation facility, reformatory and internment facility, or work facility affiliated with a government organization as prescribed by the Cabinet Office and under Article 3 Paragraph 2 of the National Government Organization Act
*3 Limited to persons affiliated with a hospital or institution that conducts research.
*4 With regard to technologies used in industrial activities, mutual associations providing finance, human resources, and facilities in which the association members autonomously conduct joint research.

(2) In the case that the project is selected, the research institute’s facilities and equipment can be used for carrying out the project.
(3) In the case that the project is selected, the research institute is able to carry out administrative procedures such as contract procedures.
(4) In the case that the project is selected, the research institute is capable of responsibly handling any

intellectual property (IP) rights (including patents and copyright, etc.) generated through implementation of this program.

(5) The research institute is capable of continuing to promote R&D even after this program has concluded and can support researchers in relation to this program.

To confirm the capacity and competence of the principal institution and subsidiary institutions to fulfill the contracted R&D agreement, the institutions may be required to submit reference materials describing major activities, assets, liabilities, and other financial data during the review process.

2. Research Implementation System

An applicant should assume that the research institution with which the applicant is or will be affiliated is the principal institution and that projects will be implemented under a research implementation system involving the principal institution and other multiple research institutions, including prospective subsidiary institutions.
Nevertheless, the portfolio created by the PD before the conclusion of the contracted R&D agreement following PM selection may result in changes in the research implementation system.

Note 1: With regard to the present MS Goal, the same individual may propose one project as the PM and participate in another proposed project as contributing participant. However, if both proposals are considered for selection, AMED may make certain adjustments, such as reducing the R&D funds or rejecting that individual's participation as contributing participant.

Note 2: With regard to the present MS Goal, the same researcher may be named as contributing participant in two or more proposed projects. However, if two or more proposals in which the same researcher is named as contributing participant are selected, AMED may make certain adjustments, such as reducing R&D funds or rejecting the researcher's participation in one or more R&D project themes for which his/her participation is proposed.

3. Important Items Regarding Applications

(1) Contracted R&D Agreements

With regard to the selected R&D themes, a contracted R&D agreement must be concluded between the principal institution with which the selected PM is affiliated and AMED. *

* See Chapter V for more information.

(2) Cross-ministerial Research and Development Management System (e-Rad)

The Cross-ministerial Research and Development Management System (hereinafter referred to as "e-Rad"*) is a system that makes available online the series of processes relating to management of solicitation-based research funding systems at individual ministries and agencies (receipt of application => selection => management of selected projects => application to register research achievements and accounting reports). In submitting an application, please be sure to carefully read the program outline, the outline of R&D projects for which applications are being solicited, and other information provided and thoroughly consider the kinds of results your proposed R&D project can produce before completing the proposal documents. For details, please refer to Chapter IV.

* "e-Rad" is the acronym for the Cross-ministerial Research and Development Management System, composed of the first letters of Research and Development, preceded by the "e" of electronic.

(3) Registration with Japan Registry of Clinical Trials (jRCT)

Due to the promulgation of the Clinical Research Act (on April 1, 2018), registration with the Japan Registry of Clinical Trials (jRCT) database maintained by the Ministry of Health, Labour and Welfare

and disease reporting, etc. are required when conducting clinical researches. Be sure to take the appropriate steps in compliance with the Act.

Clinical research initiated after the Clinical Research Act goes into effect should not be redundantly registered in the databases of Japanese clinical research registration institutions other than the jRCT. If the research has already been registered in the database of another clinical research registration institution in accordance with the “Ethical Guidelines for Medical and Health Research Involving Human Subjects,” please take the appropriate action in accordance with laws and regulations, etc.

Please refer to Chapter IX. 18. for information on compliance with the Clinical Research Act.

(4) Security Trade Control (Countermeasures to Technology Leakage Overseas)

At research institutes, a large quantity of cutting-edge research is carried out. At universities in particular, with the increase in international students and foreign researchers due to internationalization, there is an increasing risk of cutting-edge research and/or research materials/equipment flowing out of Japan and being misused for the development/production of weapons of mass destruction or for other improper uses. For this reason, it is imperative that in carrying out various type of research activities—including contracted R&D under this program—research institutes implement systematic measures to ensure that research accomplishments that could be used for military purposes do not fall into the hands of persons suspected of being involved in the development of weapons of mass destruction or with terrorist organizations or other concerning activities.

In Japan, export regulations* are enforced in accordance with the Foreign Exchange and Foreign Trade Act (Law No. 228 of 1949) (hereinafter referred to as the “Foreign Exchange Act”). Accordingly, in the case that a person wishes to export (provide) goods or technology prescribed under the Foreign Exchange Act, as a general rule they are required to obtain the permission of the Minister of Economy, Trade and Industry. Please be sure to comply strictly with all laws, guidelines, and directives, etc., issued by the Japanese government, beginning with the Foreign Exchange Act. In the case that R&D is carried out in infringement of relevant laws or guidelines, in addition to the imposition of punishments and penalties according to legislation, the allocation of R&D funds may be suspended and the decision to allocate R&D funds may be cancelled.

*Currently, under Japan’s security export control system, there are two types of regulations based on international agreements: (1) a system under which the permission of the Minister of Economy, Trade and Industry must generally be obtained in the case that a person wishes to export (provide) goods (technology) with specifications or functions above a certain level—mainly carbon-fiber and numerically controlled machine tools, etc.—(“List Control”), and (2) a system under which the permission of the Minister of Economy, Trade and Industry must generally be obtained in the case that a person wishes to export (provide) goods (technology) to which List Control do not apply and which fulfill certain conditions (use, demand, inform conditions) (Catch-all Regulations).

Not only the export of goods but also the provision of information is subject to regulations under the Foreign Exchange Act. When providing List Control technology to a foreign national (non-resident of Japan) or outside of Japan, permission must be received in advance. “Provision of technology” includes not only the provision of blueprints/designs, specifications, manuals, samples, prototypes, and other technological information via paper, e-mail, CD, DVD, USB flash drive, or other storage medium but also the provision of operational knowledge through technological guidance or skills training and technological support at seminars, etc. There are cases in which large amounts of technological exchange that could be subject to regulation under the Foreign Exchange Act may be included in joint research activities or when international students are involved.

On the Ministry of Economy, Trade and Industry website, details regarding security trade control are provided. Please refer to the following for further details (in Japanese).

- Ministry of Economy, Trade and Industry: Security Trade Control (general)
  https://www.meti.go.jp/policy/anpo/
- Ministry of Economy, Trade and Industry: Handbook for Security Trade Control
  https://www.meti.go.jp/policy/anpo/seminer/shiryo/handbook.pdf
- Center for Information on Security Trade Control

http://www.cistec.or.jp/

● Guidance for Management of Sensible Nuclear Technology (SNT) in Relation to Security Trade Control (for universities/research institutes)
https://www.meti.go.jp/policy/anpo/law_document/tutatu/t07sonota/t07sonota_jishukanri03.pdf

III. APPLICATION/SELECTION IMPLEMENTATION METHODS

1. Overview of R&D themes for which applications are sought

The following provides an overview of the MS Goal included in the present Application Guidelines:

#	MoonShot Goal	R&D funds required (excluding indirect expenses)	R&D implementation period envisioned	Number of adopted themes envisioned
1	Moonshot Goal #7 Realization of sustainable care systems to overcome major diseases by 2040, for enjoying one's life with relief and release from health concerns until 100 years old.	No upper or lower limits are set per proposal.	Five years in principle but no more than 10 years	More than one (not fixed)

- Since there are no specified upper or lower limits per proposal, the applicant should calculate the estimated necessary budgets for the themes. Nevertheless, fund availability is limited as follows:
  Available funds (approximate): two billion yen per proposal per five years (excluding indirect expenses)
  As a condition attached to selection, changes may be requested with regard to implementation plans, including the R&D budget and research implementation system. The proposed R&D expenses may need to be changed accordingly.
- If the decision to continue the project beyond year 5 is made based on evaluations, the maximum R&D period will be 10 years.
- The same applicant may file applications for more than one R&D theme under public solicitation programs. However, information on the R&D themes proposed at the same time must be provided in the applicable field of the R&D proposal to indicate the absence of unreasonable overlapping or excessive concentration of research funds. For more information, refer to V.9.(5).
- More than one R&D project may not be proposed by a single proposer for the present MS Goal. However, this does not preclude an applicant from applying to be the PM for both the MS Goal related to solicitations from a funding agency other than AMED, and the present MS Goal related to AMED's solicitations.
- Japanese shall be the governing language for the purposes of this solicitation.

2. Preparing and Submitting R&D Proposals

(1) Methods for Obtaining Proposal Forms, Etc.

Please download forms for proposal documents and other materials necessary for application from the "Calls for Applications" page on the AMED website.

https://www.amed.go.jp/koubo/

(2) Timeframe of Acceptance of Proposals

From September 1, 2020 (Tuesday) to noon of October 27, 2020 (Thursday) (no late submissions accepted) (tentative)

Note 1: Procedures for registering with e-Rad can only be carried out during e-Rad system operating hours.

Note 2: For all R&D proposals, applications received after the deadline will not be accepted
Note 3: After the period of acceptance of proposal documents has ended, AMED may contact the PI by e-mail or telephone, etc., to confirm administrative details. Please respond to such requests for confirmation promptly using the methods designated by AMED (if AMED does not receive a response, the proposal in question may be ineligible for review.)
Note 4: If not completed correctly, proposal documents may not be accepted.

(3) Submitting the Proposal Documents

Please submit proposal documents via e-Rad by the deadline. Applications will not be accepted if the proposal documents are not submitted by the deadline. When completing (inputting) the R&D proposal documents, please following the guidelines provided in this item and on the R&D Proposal (Form 1) and be sure that all the information you are required to provide is correct. Please note that submitted proposal documents cannot be replaced after the application deadline.

(a) Important notes regarding e-Rad

An e-Rad operating manual is available for reference or downloading from the e-Rad portal site (https://www.e-rad.go.jp/). Please read and agree to the e-Rad usage regulations before submitting your application.

1) Operating hours

The e-Rad system is available for use between 00:00 and 24:00 on weekdays and public holidays.

Note: During the above system operating hours, the e-Rad system by be temporarily shut down for maintenance or inspection. In the event that e-Rad is to be temporarily shut down, notice will be posted in advance on the e-Rad portal site.

2) Registration of research institute

In the case that researchers are applying for the program through a research institute, the “Principal Institution” (the research institute with which the PI is affiliated) and “Subsidiary Institution” (a research institute other than the Principal Institution with which a Co-Investigator is affiliated) must be registered with e-Rad prior to the time of application as a general rule.

For information regarding how to register research institutes, please refer to the e-Rad portal site. Please appoint one person within the research institution to serve as a clerical affairs supervisor for e-Rad matters and download the research institution registration application form from the e-Rad portal site and then fill out and submit it by postal mail. Registration may require several days, so please allow leeway of two weeks or more for carrying out registration procedures. Please note that once you have registered with e-Rad, there is no need for you to register again for R&D programs or projects under the jurisdiction of other ministries or agencies. (If you have already registered with e-Rad for R&D programs or projects under the jurisdiction of other inistries or agencies, there is no need for you to register again.) In the case that you are not affiliated with a specific research institute at the time of application or are affiliated with a research institute outside of Japan, please separately contact the department or office responsible for the relevant program as early as possible before submitting your application.

3) Registration of researcher information

The PM, an applicant, and the Co-Investigator participating in the research must register their researcher information and obtain a login ID and password. The research institute should register information for researchers who are affiliated with it. Please note that researcher information registered previously for a scientific research grant is already registered in the e-Rad system. Please check your researcher number and input additional information regarding your affiliated research institution. Information for researchers who are not affiliated with a research institute shall be registered by e-Rad system operation managers at the Ministry of Education, Culture, Sports, Science and Technology (MEXT). Please refer to the e-Rad portal site for the necessary procedures

(b) Instructions about submission via e-Rad

1) File type

The data file for filled-out application forms can only be submitted in PDF format. e-Rad has a feature for converting Word and Ichitaro (Japanese document) files to PDF format. You may also download a PDF conversion software program and use it on your PC to convert the file. It is not necessary to use this feature or software for PDF conversion, but if you do use them, be sure to refer to user' manual (quick guide for researchers). If you use foreign-language letters or special characters, the text may be garbled, and so please be sure to check the content of the converted PDF file on the system.

2) File capacity

The maximum size of single files that can be uploaded is 10MB.

3) Uploading the proposal documents

Please convert proposal documents to PDF format before uploading.

4) Approval by affiliate institution

The submission of an application via e-Rad by a PM applicant to the affiliate institution does not complete the application process. The corresponding approval procedures with the affiliate institution must also be completed.

5) Status confirmation

Verifying the acceptance of proposal documents can be done by viewing the "Manage submitted proposals" screen on the e-Rad. After the researcher submits the application form, the application type (status) will change to "Processing (Research institution) /Application in progress," which indicates that the acknowledgement by the research institution is still unfinished. When the acknowledgement procedures of the research institution have been completed the application type (status) will change to "Processing (Research institution) /Application in progress". When accepted by the Funding Agency (AMED) it will be displayed as "Accepted". Application documents whose application status has not changed to "Processing (Funding Agency) /Application in progress" or "Accepted" by the end of the acceptance period will become invalid. In the event that although a researcher has submitted the application documents prior to the end of the acceptance period and acknowledgment has been given by the clerical affairs supervisor their status remains unchanged as "Awaiting approval from research institution," please contact the division or office in charge of the program. Note that in the event that there is a fault in the e-Rad system during the application period (faults sometimes arise when there is heavy access immediately prior to the end of the submissions deadline) there may be Notices from Funding Agencies or Notices from System Administrator displayed on the screen after logging in to e-Rad, or related information displayed on the top page of the AMED website, so please check these details.

6) Modification of proposal documents after submission

In order to amend proposal documents that have already been submitted, you need to carry out "Retrieval" procedures before the application deadline and then re-submit the amended documents. For details regarding retrieval procedures, please refer to the Operation Manuals for Researchers.

7) Other

Details about points to note and content other than that shown above are posted as required on the e-Rad portal site (Researchers' Page), so please check this information.

(c) Contact for e-Rad operation issues

For inquiries regarding how to operate the e-Rad, please contact the e-Rad portal site's Help Desk. (Please refer to Chapter X.) Please be sure to check the portal site and see the "Frequently

Asked Questions" page before contacting the Help Desk. Please note that the Help Desk cannot answer any inquires whatsoever regarding the content of the Call for Applications, application review status, or acceptance/rejection of applications.

(4) Schedule

As of the start of the solicitation process, the Program timetable up to the actual selection shall be as follows. Refer to III.3 for more information on the review process.

Document review From late-October 2020 to late-November 2020 (tentative)
Interview (hearing) Late November 2020 or Early December 2020 *Conducted if necessary.

Note 1: In principle, notification of a hearing will be issued by email to the PM of the relevant theme at least one week in advance. (This notification will not be sent to applicants not required to attend the hearing and will not be sent at all if no hearing takes place, in which case applicants should wait for a selection results notice.) Updated information on hearing details and timetable, if any, will be posted as part of solicitation information on the AMED website set forth in III.2.(1). AMED will not answer individual questions regarding who is required to attend the hearing.

Note 2: The PM may be notified by email of inquiries arising during the document review process. Responses to such inquiries shall be made promptly by the methods designated by AMED and by the deadlines designated by AMED at the time of the inquiries notification.

Note 3: The subject of the hearing is the PM, in principle. The hearing date may not be changed.

Note 4: Following the hearing, appropriate administrative follow-up may be undertaken with the PM. Responses to such follow-up efforts must be made promptly by the methods designated by AMED.

Notification of selection results Early February 2021 (tentative)

Note: The PMs for candidate themes selected may be required to modify objectives, implementation plans, implementation systems, and other aspects based on review results or may be subject to conditions for selection entailing revisions of R&D funds required. In these cases, the validity of the plans may be re-examined.

Start of R&D (conclusion of agreements) March 2021 (tentative)

Note: The "Tentative Date" has been set in consideration of the time period required for formulating an optimal R&D plan at the time of submitting the proposal with a view to the timing of the commencement of R&D, and to enabling researchers to make the preparations they can between the time of the decision to adopt the project and the time the contracted R&D agreement is concluded so that R&D can commence as swiftly as possible after conclusion of the agreement, and **does not guarantee conclusion of a contracted R&D agreement**, as is the case with regard to the handling of all other items stipulated in these Application Guidelines. In order to conclude the contracted R&D agreement on the "Tentative Date", the cooperation and efforts of research institutes, etc. regarding the formulation and/or revision of R&D plans (including R&D funds and R&D systems) are required. AMED will also endeavor to coordinate with the PD of a project as swiftly as possible to ensure that the contracted R&D agreement can be concluded as early as possible.

3. Method for Reviewing Proposal Documents

(1) Review Method

For the purpose of R&D theme selection, preliminary theme evaluations (reviews) will be performed by evaluation committee members chosen by the AMED President from outside experts to evaluate the needs, objectives, and validity of the plans and to determine budget allocation pursuant to Appendix 2 "Guidelines for Operation and Evaluation of the Moonshot R&D Program (Goal #7)". The theme evaluation committee will perform the evaluations on the predetermined items. AMED

will make its PM and theme selections based on the committee's evaluations and consultations with the PD and advice from the strategies promotion council.

(a) The reviews will be conducted behind closed doors by a theme evaluation committee established within AMED.

(b) The theme evaluation committee will undertake document reviews and, if necessary, interviews (hearings) with regard to the submitted proposal documents* and evaluate them through discussions.

* The PM may be required to submit additional reference or other materials during the review process.

(c) During the selection process, the PM may be required to modify the objectives, implementation plans, implementation systems, or other aspects based on the review results* or be set selection conditions involving changing the amount of expenses. In such cases, the validity of the plans may be re-examined.

* If the PM is selected, the objectives and other aspects modified will be among the metrics in interim and *ex post* evaluations. For the management and evaluation of selected themes, refer to Chapter VI.

(d) Following the reviews, AMED will notify the PM of the selection results and related decisions, if any. Note that AMED will not respond to any inquiries regarding the status of the ongoing selection process.

(e) The members of the theme evaluation committee are bound by the confidentiality obligations prohibiting them from leaking or mishandling any confidential information obtained in connection with their positions, even after they leave such positions.

(f) The names of the selected R&D theme(s) and the PM will be announced at the AMED website and elsewhere at a later date. The names of all evaluation committee members for AMED will be announced once in every fiscal year. (Refer to Chapter IV for more information of online announcements, etc.)

(g) From the standpoint of conducting fair and transparent evaluations, management of conflict of interest for Project Evaluation Panel members shall be implemented in accordance with AMED's "By-Law Regarding the Treatment of Conflict of Interest Management for Members of the Research & Development (R&D) Project Review Panel". In the case that any of the following items apply to a Project Evaluation Panel member, they are required to report to AMED that they are subject to management of conflict of interest and as a general rule shall not be involved in evaluation of the relevant project. However, in the case that the Project Evaluation Panel Chair recognizes that participation by the Project Evaluation Panel member in question is especially necessary for ensuring the scientific validity of the evaluation and that their ability to make appropriate and transparent decisions as part of the evaluation is not impaired, the Project Evaluation Panel member may participate in the evaluation of the relevant project.

1) The evaluatee is a family member/relative of the Project Evaluation Panel member.

2) The evaluatee is affiliated with the same department at a university, the National Research and Development Agency, or a national research institution or other research institute or business enterprise as the Project Evaluation Panel member.

3) The evaluatee has worked closely with the evaluator on a joint research project within the past three years including the fiscal year in which the Project Evaluation Panel evaluation is conducted.

4) The Project Evaluation Panel member and evaluatee have a close teacher-disciple relationship wherein one provided guidance and instruction regarding the other's doctoral thesis.

5) The evaluatee has received economic benefits from the Project Evaluation Panel member within the past three years, including the fiscal year in which the Project Evaluation Panel evaluation is conducted, of more than one million yen.

6) The Project Evaluation Panel member is in a direct competitive relationship with the evaluatee.

7) Other serious conflicts of interest are recognized to exist.

(h) Program applicants and persons intending to apply for the program are prohibited from lobbying AMED executive officers, Program Director (PD)or evaluators regarding evaluations or project selection.

(i) Documents etc. regarding management of R&D

From the perspective of verifying the appropriateness of R&D management, AMED may in future require submission of the materials regarding drugs,1 regenerative medicine, etc.2 and medical devices.3 In addition, inquiries may be made regarding the content of these materials as necessary. Please refer to the following web pages for more details.

1 https://www.amed.go.jp/koubo/iyakuhin_check.html
2 https://www.amed.go.jp/koubo/saisei_check.html
3 https://www.amed.go.jp/koubo/medical_device_check.html

(j) Use of the results of previous AMED Mid-term Reviews and Ex-Post Evaluations about related projects

In the course of the program there may be cases in which, from among research expenses received in the past by applicants, reviews are conducted of the submitted proposal documents based on the Mid-term Reviews and Ex-Post Evaluations of R&D projects put to use to create the current project proposal the current proposed project.

(2) Review Items and Viewpoints

Proposal documents in this Program will be reviewed mainly from the following viewpoints for the purpose of selecting the theme(s):

(a) The PM has expert knowledge and a wide human network such as relevant researchers inside and outside Japan, to promote cutting-edge research.

(b) The PM has management and leadership skills such as the ability to establish an optimal R&D system, and nimbly review the system according to the status of progress.

(c) The project targets and contents proposed by the PM (hereinafter referred to as proposal details) are challenging and based more on bold ideas than existing proposals, and comprise innovative proposals from which a substantial impact on future industry and society is expected.

(d) From the perspective of technical feasibility and practical use of its R&D results in society, there are appropriate scenarios (hypothesis for success) for achieving the MS Goal(s) by 2040 which can be clearly explained.

(e) The proposals contain top-level R&D capabilities, knowledge, and ideas, regardless of whether they come from inside or outside Japan.

4. Promoting the Engagement of Young Researchers

Pursuant to “Guidelines for Operation and Evaluation of the Moonshot R&D Program (Goal #7)” (attached hereto as Appendix 2), it is expected that young researchers with adventurous ideas and a flexible outlook on the future will take active roles in moonshot R&D projects. AMED has encouraged the cultivation of a wide range of researchers who will be driving forces for Japan as well as plowing back of research results into society through the personnel so developed – a

significant aspect of all publicly funded research programs.*1 AMED expects to see more young researchers engaged in this Program.

*1 Refer to IX.15 through 17 for measures taken to date.

5. Elaboration of the R&D projects

Under the PD's direction, the selected PM will reappraise and determine the specifics of the project proposed at the time of the application, including scenarios leading up to the achievement of the MS Objective, project plans, contributing participants and subsidiary institutions (added or dropped), and research expenses. Once the project elaboration is completed, the portfolio will be established and the agreement concluded, at which point the contracted R&D work may begin.

IV. PREPARING PROPOSAL DOCUMENTS AND CAUTIONS

1. Handling of Information Contained in Proposal Documents

(1) Purpose of Use of Information

Information found in the proposal documents, including documents related to themes that were not selected, will be used in analyses of research trends and macroscopic analyses useful for AMED program operations, including the creation of new businesses, contracted work on R&D funds, and research support set forth in Chapter IX, in addition to the review for selection. The purpose of use of such information will be limited to the work set forth above; access will be granted only to AMED officers and employees directly involved in such work, thereby minimizing the risk of infringement of the proposers' rights and interests.

Information found in the proposal documents, including information related to themes that were not selected, will be managed in accordance with AMED document management rules. Information found in the proposal documents will be maintained in the strictest confidence, thereby minimizing the risk of infringement of the proposers' rights and interests, pursuant to the Act on Access to Information Held by Incorporated Administrative Agencies, etc. and the Act on the Protection of Personal Information Held by Incorporated Administrative Agencies, etc. For more information, refer to the website of the Ministry of Internal Affairs and Communications. *

* Information disclosure system > Introducing the information disclosure system (Ministry of Internal Affairs and Communications)
https://www.soumu.go.jp/main_sosiki/gyoukan/kanri/jyohokokai/shoukai.html
Protecting personal information at administrative agencies, independent administrative corporations, etc. > Introducing legal systems (Ministry of Internal Affairs and Communications)
https://www.soumu.go.jp/main_sosiki/gyoukan/kanri/horei_kihon.html

(2) Necessary Disclosure/Provision of Information

(a) Information on individual themes selected (program name, R&D theme name, PM's affiliate research institution, title and name, e-Rad theme/researcher/research institution ID number, budgetary amount, period of implementation, research overview or summary, and report on the results of contracted R&D work (public information)) *1 will be organized, classified, and publicly released from the AMED website, the AMED R&D theme database (AMEDfind), and public databases operated by funding agencies, etc., providing cooperation under an agreement, etc., with AMED (e.g., World RePORT *2). In addition, for all themes for which applications are submitted, information required for macro analysis will be analyzed by AMED and the results provided to and publicly released by the corresponding ministries and agencies and funding agencies. This information may also be made available in funding information databases.*3

Information registered in e-Rad will be used to evaluate government-funded R&D and in planning effective comprehensive strategies, resource allocation policies, and similar efforts. Consequently, the CSTI and corresponding ministries and agencies will ensure that information on papers, patents, and other research results and financial results are registered in e-Rad to establish links between the input from the invitational research funding system and the outputs and outcome information. Even after theme selection, information on research results for each year (e.g., papers and patents), financial results information, and information on the use of indirect expenses related to competitive research funds should be entered into e-Rad.

Information required for macro analysis, including research and financial results, will be provided to the Cabinet Office.

1Information shall be treated as “information expected to be made public” as per the stipulations of Article 5, Item (i) (a) of the Act on Access to Information Held by Independent Administrative Agencies (Act No. 140 of 2001). Furthermore, the same shall apply to items designated for public disclosure in the R&D Proposal and the above-mentioned items shown on the Contracted Items Sheet that is to be completed if the relevant R&D project is adopted.

2What is “World RePORT”?

“World RePORT” is a database for international collaborative research supported by research funding agencies in major countries. Its purpose is the visualization of international research collaboration carried out by various countries, which was previously difficult to verify. Managed and operated by the United States’ National Institutes of Health (NIH), the database currently records information for twelve research funding agencies around the world, including the NIH, the UK’s Medical Research Council (MRC), the Bill & Melinda Gates Foundation (BMGF), European Commission (EC), Canadian Institutes of Health Research (CIHR), and the Wellcome Trust. https://worldreport.nih.gov/app/#!/about

3“Databases, etc.” includes World RePORT, ERP and other databases.

(b) Within the scope necessary for eliminating unreasonable duplication/excessive concentration, some information included in proposal documents, etc., may be provided via e-Rad to divisions in charge of other competitive research funding programs, including other government ministries or agencies (including the provision of personal information used when computerized data processing and management is contracted out to an external private enterprise). Similarly, information may also be provided in the event that it is necessary to check for duplicate applications to other competitive research funding systems, etc.

2. Proposal Document Format and Notes for Preparation

(1) Proposal Document Format

The proposal document form shall be the “R&D Proposal”. Please complete each item simply and clearly. With regard to the acceptance period for proposal documents and submissions, please refer to Chapter III.

(2) Preparation of Proposal Documents

Applications are to be submitted via e-Rad. In preparing proposal documents, please also refer to the Points to Note shown in (3). If not completed correctly, proposal documents may not be accepted.

Please be careful with regard to the following items when inputting information into the Proposal Form.

(a) As a general rule, the Research Proposal (Form 1) is to be prepared in Japanese and English, but the abstract must be prepared in both Japanese and English. In the case that information required on the Research Proposal is missing, the application may be ineligible for review.

(b) With regard to formats prescribing word limits or page limits, please be sure to comply with the set limits.

(c) With regard to letter/character size when inputting information, please use 10.5 point as a general rule.

(d) As a general rule, please use half-width letters when inputting alphanumeric characters. (E.g. post codes, telephone numbers, and numbers of people.)

(e) Please number the pages of proposal documents with numbers placed centrally at the bottom of each page.

(f) Proposal documents may be prepared in color, but please ensure that the documents’ content can be understood even when the documents are photocopied in black-and-white.

(3) Notes on Preparing Proposals

(a) Compliance with laws/ordinances and ethical guidelines
R&D plans must comply with laws, ministerial ordinances, and ethical guidelines. Refer to V.3.(4) for more information.

(b) Institutional approval for R&D theme proposals
Before submitting proposal documents, the PM must obtain approval from the principal institution (i.e., the research institution with which the PM is affiliated—presumably the institution that would conclude a R&D agreement with AMED). The principal institution's approval must be obtained for all subsidiary institutions named as candidates for undertaking the R&D work.

(c) Revision of Proposal Content

In selecting R&D projects for adoption, due to budget restrictions and other reasons, it may be necessary to request applicants to revise their submitted research proposal plans. Furthermore, in implementing awarded R&D projects, please note that the expenditure/implementation period allocated to the project may need to be changed due to budget restrictions in the future.

(d) Ineligible Project Proposals
The following R&D projects are ineligible for funding under this program.
1) Proposals that aim simply to purchase ready-made facilities and equipment.
2) Proposals that envision covering the costs necessary for procuring equipment with funding from this program when covering these procurement costs with funding from another source would be appropriate.

(4) Required Documents Apart from R&D Proposals

(a) Records of ex-ante interviews/face-to-face advice with Pharmaceuticals and Medical Devices Agency (PMDA)

In the case that the applicant has already undergone ex-ante interviews with PMDA under their "regulatory science consultation" program or other consultation services, a summary of the interview must be submitted with the R&D proposal (free format; summary may be provided by the academic institution), and if the applicant has already undergone face-to-face advice, a record of the face-to-face advice or separate sheet (consultation content) such be submitted with the R&D proposal. For details, please refer to the Points to Note provided for projects being solicited under Chapter XI.

Note: R&D projects that progress to the practical application stage (R&D projects within the scope of the "Regulatory science strategy consultation" program or other consultation services) must as a general rule undergo face-to-face advice within one to two years of the project being adopted as a condition of the contracted R&D agreement (please refer to Chapter IV. 1. for details regarding the period in which the consultation should be undertaken). Although is it not compulsory for the applicant to have undergone face-to-face advice at the time of application, it is desirable that face-to face consultation is undertaken and the consultation results are reflected in the R&D plan.

(b) Materials related to clinical study, etc

For research undertaking investigator-initiated trials or clinical studies with a view to creating innovative drugs or medical devices, or nonclinical studies aimed at conducting such trials/studies,1 applicants are required to submit a trial plan and protocol2 (including information such as aims, subjects, selection criteria, exclusion criteria, number of cases, observation content, intervention content, statistical methods, and research system) and other materials related to the clinical study (free format; a draft may be submitted if the trials have not been implemented at the time of application). For details, please refer to the Points to Note provided for R&D projects being solicited under Chapter XI.

1 Does not include clinical research that is not aimed at creating new drugs or medical devices or that differ from normal processes for evaluating/approving new medical technology.

*2 In the course of protocol creation please refer to the following as necessary. (As they are for illustrative purposes they do not provide all-encompassing coverage of clinical trials.)

・Center for Clinical Trials, Japan Medical Association (procedural manuals on the creation of protocols and clinical report forms (CRF)

http://www.jmacct.med.or.jp/clinical-trial/enforcement.html

・ Japan Medical Association Ethical Review Board (sample retrospective observational study protocols)

http://rinri.med.or.jp/kaisaibi_shinsashinseisho/files/youshiki_rei2.docx

・Translational Research Center for Medical Innovation, Foundation for Biomedical Research and Innovation at Kobe (guidelines on the creation of investigator-initiated clinical trial protocols “randomized controlled trials”)

(c) Self-monitoring/self-evaluation results related to animal experiments

With regard to research institutes conducting animal experiments using animal species specified under the Fundamental Guidelines for Proper Conduct of Animal Experiments and Related Activities in Academic Research Institutions (Public Notice of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) No. 71 of 2006) and Fundamental Guidelines for Proper Conduct of Animal Experiments and Related Activities in Implementing Agencies under the Ministry of Health, Labour and Welfare (Notification by Director, Health Science Division, Minister's Secretariat, Ministry of Health, Labour and Welfare on June 1, 2006), based on these fundamental guidelines, research institutes may be required to submit a copy of the results of their most recently implemented self-monitoring/self-evaluation related to the research institute’s conformance with these fundamental guidelines.

(d) Reference and other materials related to R&D management

Such materials may be requested with regard to pharmaceuticals to confirm the propriety of research management. Other related inquiries may be made, where deemed necessary.

V. CONCLUDING CONTRACTED R&D AGREEMENTS

1. Conclusion of Contracted R&D Agreements

(1) Agreement Conditions

With regard to the selected R&D themes, contracted R&D agreements will be concluded between the principal institution and AMED. AMED will notify of the specifics following the selection.
The conclusion of a contracted R&D agreement will be based on the opinions of the theme evaluation committee and the PD. If a condition for selection is not met or if both parties fail to agree on terms (including estimated expenses) or methods, a contracted R&D agreement may not be concluded, even for selected R&D themes.
Even after the conclusion of the agreement, the R&D plan may be reconsidered or canceled (including early termination because of plan fulfillment) if compelling circumstances arise, such as budget limitations.
The PD may check on the progress of research work during the agreement period and choose to amend the agreement or cancel the theme as a result of R&D plan reconsideration.

(2) Preparations for Concluding Agreement

Following the adoption of an R&D project, the research institution implementing the R&D project shall be required to carry out the following to enable procedures for concluding the contracted R&D agreement to proceed quickly and smoothly.

(a) Preparation of an Overall R&D Plan, R&D Plan and other documents required for the agreement

(b) Obtain an estimate for the expenditure needed under the administrative plan

(c) Organize accounting regulations, contracted research regulations, and rules for employee inventions, etc.

*One Overall R&D Plan is to be prepared for each R&D project based on the R&D proposal at the time of adoption of the project. Centered on the proposed R&D concept for the entire project implementation period, please include the basic plan, R&D content, R&D system, and budget plan. This plan shall be used as a base material for considering budget allocation each fiscal year, conducting a Mid-term Review and an Ex-Post Evaluation, and managing project progress.

One R&D Plan is to be prepared for each agreement when contracted R&D agreements for each fiscal year are concluded.

Other documents required for the agreement (plan forms etc.) shall be provided separately after projects have been adopted.

(3) Administrative Procedures Regarding Conclusion of Agreements

Required administrative procedures must be completed in accordance with the “Guide to Administrative Procedures for Moonshot Contracted R&D Agreements” (tentative title) to be released at a later date.

(4) Ensuring the R&D Timeframe through the End of the Fiscal Year

To enable R&D to be conducted through the end of the fiscal year, the Contracted R&D Accomplishments Report should be submitted to AMED no later than the 61st day as calculated from the last day the Contracted R&D execution period. Each research institute should work to put in place the necessary mechanism in-house to ensure a research period up through the end of the fiscal year is secured.

(5) Determination of Contracted R&D Funding Amount

Contracted R&D funding amounts are determined based on examination of the Contracted R&D Accomplishments Report which is required to be submitted in accordance with the Contracted R&D Agreement following the conclusion of the Contracted R&D Agreement period for the relevant fiscal year. During this examination, in the case that expenditure for research purposes is found to have been used fraudulently or for purposes not recognized as contracted R&D activities under the Contracted R&D Agreement, all or part of the expenditure may be required to be returned. Furthermore, the person(s) conducting the research who used the funds fraudulently may be excluded from any agreements with AMED for a certain period of time, depending on the extent of the fraud. (Please refer to Ⅴ. 8. (2).)

2. Scope and Payment of Contracted R&D Funds

(1) Scope of Contracted R&D Funds

In accordance with the governmental ministries' and agencies' expenditure table used in common for the competitive funds, items of expenditure have been set as follows for the program. For details, please refer to the AMED's "Administration Manual for Contracted R&D Agreement"※1

The principal institution's expenses related to project management by the PM qualify as direct expenses. (Such expenses may include expenses related to the development of the environment needed by the PM to carry out activities effectively and efficiently; expenses related to systems development, such as expenses incurred for the PM's assistants; expenses related to the progress management of R&D activities by contributing participants in the principal or other institutions; and expenses related to cooperation between research institutions.)

	Main item	Definition
Direct costs	Costs of goods (equipment/supplies)	Research facilities/equipment/prototypes, software (ready-made goods), book purchasing costs, purchasing costs for reagents/materials/consumables for use in research
	Travel costs	Travel costs of R&D participants, travel costs for invited participants such as external experts
	Personnel costs/ services costs	Personnel costs: personnel costs for researchers, etc., employed to conduct the relevant contracted R&D Service costs: expenditure for services such as lecture requests, guidance/advice, test subjects, interpretation/translation, and unskilled labor.
	Other	Costs for implementing the relevant contracted R&D other than the above. Examples: R&D results publication costs (academic paper contribution costs, academic paper offprint costs, website production costs, etc.), conference costs, equipment leasing costs, Equipment repair costs, printing costs, subcontract costs, licensing fee, amount equivalent to consumption tax related to untaxed transactions, etc.
Indirect costs2	Expenditure used by research institutes as necessary costs for managing the research institutes during implementation of the relevant R&D, paid at a fixed percentage of direct costs (with a 30% rule of thumb) as an allowance.	

*1 https://www.amed.go.jp/keiri/index.html

*2 The ratio of indirect expenses in this Program is set at 30% for universities and 10% for private sector entities (for SMEs, 20%). Excluded are researchers affiliated with national facilities or institutions (except

for National Institute for Education Policy Research). Indirect expenses will also be allocated to subsidiary institutions (except for national facilities and institutions) based on allocated direct expenses.

(2) Appropriation of Contracted R&D Funds

Please calculate costs required for conducting the R&D and record the total amount. As a general rule, calculation and recording of costs should be performed in accordance with the AMED "Administration Manual for Contracted R&D Agreement."*

Please note that payment by note, netting, and factoring are not accepted.

※ https://www.amed.go.jp/keiri/index.html

Note 1: Contracted R&D agreements for researcher-initiated trials or clinical studies under AMED shall employ "Contract management method using value per procedure (VPP) charts in researcher-initiated trials or clinical studies".* In the case that an awarded R&D project is recognized as being subject to this management method, if the research institute has created a system for registering cases for trials/clinical research in accordance with newly prescribed internal consignment regulations ("Regulations for Handling Contracted R&D in Researcher-initiated Trials and Clinical Studies" (tentative title), the head of the research institute can request case registration from other medical institutions in a kind of outsourcing method. For details, please refer to AMED "Operation of Research Funds: Management of Medical Institution Expenditure for Researcher-initiated Trials and Clinical Studies" (https://www.amed.go.jp/program/kenkyu_unyo.html). Facilities where there is a sufficient administrative support system for trials/clinical research may continue using their current management method for the foreseeable future.

Note 2: In order to mitigate the expenses involved in the use of computers and aim for effective cost management to accelerate research, AMED provides all R&D projects with a joint service for using the Tohoku University Tohoku Medical Megabank Organization's supercomputer at a special rate. Those planning to use this service should calculate the costs by referring to the Tohoku University Tohoku Medical Megabank Organization Supercomputer Usage Fee Rules (https://sc.megabank.tohoku.ac.jp/wp-content/uploads/2019/04/uses_fee_20190401.pdf).

(3) Payment of Contracted R&D Funds

Payment will cover the sum total for direct and indirect expenses in a certain fiscal period. However, if expense settlement for the preceding period indicates a positive or negative balance, the amount of payment may be increased or reduced accordingly.

(4) Diversion of Costs Between Items

When the diverted amount for each cost item (main item) does not exceed fifty percent (50%) of direct costs (or five million yen (JPY 5,000,000), if the amount equal to fifty percent (50%) of direct costs is less than five million yen (JPY 5,000,000)) for that fiscal year, the amount may be diverted without approval from AMED on the assumption that the diversion is appropriate and consistent with the R&D plan. For details, please refer to the AMED "Administration Manual for Contracted R&D Agreement."*

※ https://www.amed.go.jp/keiri/index.html

(5) Provision of Documentary Evidence (Receipts, etc.) for Indirect Costs

You should prepare documentary evidence of appropriate expenditure, from the standpoint of ensuring transparency of use as noted in the "Common guidelines relating to the expenditure of indirect costs for competitive fund" (revised on May 29, 2014 at the liaison meeting of relevant Ministries on competitive fund) and retain it for a period of five years following the year of the completion of the R&D project. A Report on Indirect Cost Expenditures must be prepared for the expenditure of indirect costs for each fiscal year and submitted by June 30 of the following year. For details, please refer to the AMED "Administration Manual for Contracted R&D Agreement."*

*https://www.amed.go.jp/keiri/index.html

3. Obligations of Research Institutes in Implementing this Program

(1) Compliance with Laws and Ordinances

In implementing this program, research institutes must be observant of the fact that their research is being funded with public funds and strictly comply with related national government laws and ordinances, endeavoring to ensure that the program is implemented fairly and efficiently. In particular, research institutes shall be required to take measures to prevent misconduct,[1] fraudulent use,[2] and fraudulent receipt[3] (hereinafter referred to collectively as "Misconduct, etc.").

[1]"Misconduct" refers to the fabrication, falsification, or plagiarism of data or survey results, etc. included in research accomplishments published through submission to a journal, etc. (hereinafter referred to as an "Academic paper, etc.") by a researcher, either willfully or through gross negligence of the fundamental duty of diligence that researchers bear in carrying out their research activities. The definitions of each of the above terms is as follows.
(i) Fabrication: creation of data or research accomplishments that do not exist.
(ii) Falsification: manipulation of research materials, equipment, or processes and changing results obtained from data or research activities to results that are untrue.
(iii) Plagiarism: appropriation of the ideas, analysis methods, data, research accomplishments, academic papers, or terminology of another researcher without the approval of the relevant researcher or appropriate acknowledgement.

[2]"Fraudulent use" refers to the use of public R&D funds, either willfully or through gross negligence, for a purpose other than that for which it was intended, or in a manner that infringes the content of the grant decision or conditions for use of the public R&D funds (including, but not limited to, purposes or uses other than those stated in the R&D plan, or use of R&D funds that infringes laws, ordinances, regulations, notifications, or guidelines, etc.)
[3]"Fraudulent receipt" refers to a researcher receiving public R&D funds through falsehoods or other unfair means.

*Under the above definitions, "researcher" refers to a researcher, technician, research assistant, or other person conducting research activities using public R&D funds, or a person engaged in work subsidiary to these research activities.

(2) Participation in/Completion of Research Ethics Education Program

As part of measures to prevent misconduct from occurring, AMED requires all researchers participating in this program to take and complete a research ethics education program. Research institutes shall implement research ethics education for researchers and report to AMED on the status of participation. (For details, please refer to Chapter V. 6. and the AMED website.)

Furthermore, in the case that a researcher does not fulfill their obligation to undergo the research ethics education despite AMED's urging, the research institute may be directed by AMED to suspend all or part of the contracted R&D funding. In this case, research institutes must suspend contracted R&D funding as directed by AMED and not recommence funding until directed to do so.

(3) Managing Conflict of Interest

In order to ensure the fairness and reliability of research, in accordance with AMED's "Regulations for Managing COI in Research Activities" and Article 21 of the Ordinance for Enforcement of the Clinical Research Act, the situation regarding conflict of interest for researchers involved in R&D projects shall be managed appropriately and reported.

In the case of research institutes conducting R&D under the AMED program, in the case that AMED determines that the conflict of interest of the PI or Co-Investigator of a project is not being managed appropriately, AMED may instruct the research institute to improve the situation or suspend provision of R&D funds, as well as require the research institute to return all or part of the R&D funds already paid. For details, please refer to Chapter V. 6. and the AMED website.

(4) Compliance with Laws/Ordinances and Ethical Guidelines

In the case that implementation of the proposed R&D concept involves research requiring procedures based on laws/ordinances and/or ethical guidelines (such as R&D requiring the consent/cooperation of another party; R&D requiring care in handling personal information; and R&D

requiring measures regarding bioethics/safety measures), research institutions must undertake the necessary procedures for obtaining the approval of both internal and external ethics committees.

Please note that, in the case that R&D is carried out in infringement of related laws, ordinances and guidelines that must be complied with, in addition to the imposition of punishments and penalties according to legislation, the R&D may be suspended, the contracted R&D agreement cancelled, and/or the decision to adopt the R&D project cancelled.

Furthermore, in the case that the R&D plan includes R&D or surveys requiring the consent/cooperation of another party or social consensus, research institutes must take appropriate measures with regard to the handling of the guarantee of human rights and interests.

Within 61 days after the end of each fiscal year or the conclusion of the contracted R&D project, research institutions shall report to AMED regarding the status of ethical reviews by research institutes concerning related laws/ordinances and policies as an item shown in the Contracted R&D Accomplishments Report.

With regard to R&D related to life sciences in particular, the main laws and ordinances prescribed by government ministries and agencies are as follows. In addition, there are also laws and ordinances that pertain to certain R&D content, so please check the latest revision of laws/ordinances, etc.

- Act on Regulation of Human Cloning Techniques (Act No. 146 of 2000)
- Act on Prevention of Infectious Diseases and Medical Care for Patients Suffering from Infectious Diseases (Act No. 106 of 2006)
- Law Concerning the Conservation and Sustainable Use of Biological Diversity through Regulations on the Use of Living Modified Organisms (Law No. 97 of 2003)
- Act on the Safety of Regenerative Medicine (Act No. 85 of 2013)
- Clinical Research Act (Act No. 16 of 2017)
- Guidelines on the Handling of Specified Embryos (Public Notice of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) No. 31 of 2019)
- Guidelines on the Derivation of Human Embryonic Stem Cells (Public Notice of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Ministry of Health, Labour and Welfare (MHLW) No. 2 of 2014)
- Guidelines on the Distribution and Utilization of Human Embryonic Stem Cells (Public Notice of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) No. 174 of 2014)
- Guidelines on the Research on Producing Germ Cells from Human iPS Cells or Human Tissue Stem Cells (Public Notice of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) No. 88 of 2010)
- Ethical Guidelines for Human Genome/Gene Analysis Research (Public Notice of the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Ministry of Health, Labour and Welfare (MHLW) and the Ministry of Economy, Trade and Industry (METI) No. 1 of 2013)
- Ministerial Ordinance on Good Clinical Practice for Drugs (Ordinance of the Ministry of Health and Welfare No. 28 of March 27, 1997)
- Ministerial Ordinance on Good Clinical Practice for Medical Devices (Ordinance of the Ministry of Health, Labour and Welfare (MHLW) No. 36 of 2005)
- Ministerial Ordinance on Good Clinical Practice for Regenerative Medical Products (Ordinance of the Ministry of Health, Labour and Welfare (MHLW) No. 89 of 2014)
- Ministerial Ordinance on Good Laboratory Practice for Nonclinical Safety Studies of Drugs (Ordinance of the Ministry of Health, Labour and Welfare (MHLW) No.21 of 1997)
- Ministerial Ordinance on Good Laboratory Practice for Nonclinical Safety Studies of Medical Devices (Ordinance of the Ministry of Health, Labour and Welfare (MHLW) No.37 of 2005)
- Ministerial Ordinance on Good Laboratory Practice for Nonclinical Safety Studies of Regenerative Medical Products (Ordinance of the Ministry of Health, Labour and Welfare (MHLW) No.88 of 2014)
- Ordinance for Enforcement of the Clinical Research Act (Ordinance of the Ministry of Health, Labour and Welfare (MHLW) No. 17 of 2018)
- On the Approach of Research and Development Using Human Tissues Obtained from Surgery (Report of the Health Science Council, the Ministry of Health and Welfare, 1998)

- Ethical Guidelines for Medical and Health Research Involving Human Subjects (Public Notice of the Ministry of Education, Culture, Sports, Science and Technology (MEXT), and Ministry of Health, Labour and Welfare (MHLW) No. 1 of 2017)
- Policies on Clinical Research Involving Gene Therapy (Public Notice of the Ministry of Health, Labour and Welfare (MHLW) No. 344 of 2015)
- Ethical Guidelines for Assisted Reproductive Technology Studies Involving Production of Human Fertilized Embryos (Public Notice of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Ministry of Health, Labour and Welfare (MHLW) No. 2 of 2010)
- Fundamental Guidelines for Proper Conduct of Animal Experiments and Related Activities in Academic Research Institutions (Public Notice of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) No. 71 of 2006); Fundamental Guidelines for Proper Conduct of Animal Experiments and Related

  Activities in Implementing Agencies under the Ministry of Health, Labour and Welfare (Notification by Director, Health Science Division, Minister's Secretariat, Ministry of Health, Labour and Welfare (MHLW) on June 1, 2006; partially revised on February 20, 2015); and Fundamental Guidelines for Proper Conduct of Animal Experiments and Related Activities in Implementing Agencies under the Ministry of Agriculture, Forestry and Fisheries (Notification by the Director-General of the Secretariat, Agriculture, Forestry and Fisheries Research Council, Ministry of Agriculture, Forestry and Fisheries (MAFF) on June 1, 2006)
- Guidelines on Opportunities for Acquisition of Genetic Resources and on Fair and Equitable Distribution of the Profits Generated through their Use (Public Notice of the Ministry of Finance (MOF), the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Ministry of Health, Labour and Welfare (MHLW), the Ministry of Agriculture, Forestry and Fisheries (MAFF), the Ministry of Economy, Trade and Industry (METI), and the Ministry of Environment (MOE) No. 1 of 2017)

*Please refer to the following websites for details regarding bioethics and ensuring safety.
・MEXT's Life Sciences Forum "Initiative on Bioethics and Biosafety"
https://www.lifescience.mext.go.jp/bioethics/index.html
・Regarding Guidelines on Research (Ministry of Health, Labour and Welfare (MHLW))
https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/hokabunya/kenkyujigyou/i-kenkyu/index.html

(5) Management Responsibility for Executing Contracted R&D Funds

The contracted R&D funds shall be executed by the research institute in accordance with the contracted R&D agreement. For this reason, research institutes shall abide by the principles stipulated under "Competitive research funding should be managed at the responsibility of the research institution", and research funds shall be managed under the responsibility of research institutes.

(6) Response Obligations Regarding System Maintenance, etc.

Each research institution is required to comply with all requirements specified in the Guidelines on the Handling of Improprieties in Research Activities in Programs Funded by Cabinet Office Budgets at the Japan Agency for Medical Research and Development (established March 1, 2017; AMED office within the Cabinet Office), Guidelines on the Handling of Inappropriate Use of Research Expenses for Programs Funded by Cabinet Office Budgets at the Japan Agency for Medical Research and Development (established March 1, 2017; AMED office within Cabinet Office), etc.

4. Obligations of Researchers Participating in Research Activities under this Program

(1) Fair and Appropriate Executing of Contracted R&D Funds

Researchers participating in this program should be fully aware of the fact that AMED contracted R&D funds are provided by precious tax paid by the general public, and are obligated to execute funds fairly, appropriately, and efficiently.

(2) Application Procedures

When lodging an application for this program, the researcher who is to participate in this program must make the appropriate arrangements, such as explaining the research to and receiving approval for the research from the research institute that is to conduct the R&D project in advance.

(3) Participation in Research Ethics Program

In order to prevent fraudulent use, fraudulent receipt, and misconduct, researchers participating in this program are required to complete a research ethics education program. (Please refer to Chapter V. 6. for details.) Please note that in the case that a researcher does not complete a research ethics education program, execution of contracted R&D funds may be suspended until completion of the research ethics education program is confirmed.

5. Participation in Research Ethics Program

(1) Persons Required to Undergo Ethics Training/Program(s) to be Undertaked/Educational Materials

Research institutions, etc., should ensure that researchers who are deemed to be substantially participating in research activities that are being conducted using research funding provided by AMED undergo training using one of following programs/materials.

- A Casebook for Responsible Research Conduct(AMED) (only in Japanese)
- APRIN e-Learning Program (eAPRIN)
- "For the Sound Development of Science: The Attitude of a Conscientious Scientist" (Japan Society for the Promotion of Science Editing Committee "For the Sound Development of Science")
- Programs implemented by research institutes whose content is deemed to be equivalent to the that of the above programs

Furthermore, the Clinical Research Act stipulates that the "Kenkyusekinin Ishi" (Principal Investigator) and "Buntankenkyu Ishi" (Co-Investigator) must undergo sufficient education and training regarding research-related ethics and the knowledge and skills of the research methods required for implementation of the research in order to carry out the relevant clinical research appropriately in accordance with their required responsibilities. Researchers required to undergo training must undertake one of the following training programs.

(a) Training conducted by a Clinical Research Core Hospital for persons working in the clinical research field.
(b) Training that is recognized by the research institution as being equivalent to the above (including training conducted by facilities other than a Clinical Research Core Hospital)

Note 1: Simply participating in academic meetings does not qualify as education/training.
Note 2: Certain quality-assured e-learning programs such as APRIN e-learning program (eAPRIN), Clinical Research e-Training Center (Center for Clinical Trials, Japan Medical Association), Introduction to Clinical Research (ICRweb) may also be acceptable for (b), but it is essential that the Principal Research Physician undergoes thorough training and understands the training content.。

(2) Research Ethics Training Period

As a general rule, persons required to undergo research ethics training shall undertake this training within the first fiscal year of the R&D period and should continue to undertake ethics training as appropriate thereafter. (Training undertaken previously may also be valid.)

(3) Role of Research Institutes

Research institutes shall ensure that persons required to undergo research ethics training as listed in (1) above who are affiliated with their institution (included a subcontracted institution) undergo the

R&D ethics education using one of the programs/materials listed in (1) above, and shall report on their training status to AMED.

(4) Reporting Research Ethics Training Status

Research institutes shall compile information on researchers' R&D ethics education status and submit a report on the status of training on the form prescribed by AMED by e-mail to AMED (Department of Research Integrity and Legal Affairs). (Seal need not be affixed.)

Subject of report: Persons required to undergo research ethics training in programs commencing in/after FY2020
Deadline for submission: May 31, 2021
Documents to be submitted: "Report on the Status of Participation in R&D Ethics Education Programs" (Please download the form from the AMED website)
URL: https://www.amed.go.jp/kenkyu_kousei/kyoiku_program.html
Information regarding where and how to submit reports is to be posted on the "The Responsible Conduct of Research (RCR) Education Program" page under "Research Integrity" on the AMED website (refer to URL shown above) around March 2020.

(5) Inquiries

For inquiries related to R&D ethics education programs, please send an e-mail to [kenkyuukousei"AT"amed.go.jp] (Change "AT" to @ when inputting the address.)

6. COI Management

(1) Managing Conflict of Interest in Accordance with AMED's Regulations Regarding Conflict of Interest (COI) Management in Research Activities

（a）Target Persons
PM or Co-Investigator of R&D projects
Projects on the List of Non-R&D Projects on the AMED websites Research Integrity page's "COI Management in R&D" are excluded as targets.

（b）Requests for COI Reviews
Prior to the conclusion of a contracted R&D agreement for the relevant R&D project each fiscal year, target persons shall report to the COI Committee regarding matters related to economic interests and then comment regarding reviews concerning conflict of interest in the R&D project.

(2) Conflict of Interest Management in Accordance with Article 21 of the Ordinance for Enforcement of the Clinical Reserch ACT

Please carry out conflict of interest management in accordance with relevant laws and ordinances.

(3) Submission of Reports on the State of COI Management

Each research institution, etc. should prepare a Report on the State of COI Management, and submit it to AMED within 61 days after the end of each fiscal year or the conclusion of the contracted R&D project.
Information including the forms of the Report on the State of COI Management, where and how to submit reports is to be posted on the "Conflict of Interest (COI) Management in R&D" page under "Research Integrity" on the AMED website (refer to URL shown above) around March 2020.

https://www.amed.go.jp/kenkyu_kousei/riekisohan_kanri.html

(4) Inquiries

For inquiries related to conflict of interest management, please send an e-mail to [kenkyuukousei"AT"amed.go.jp] (Change "AT" to @ when inputting the address.)

*For details, please refer to the following websites
・Regulations for Managing COI in Research Activities
・Regulations Q&A
・Reports on the State of COI Management
https://www.amed.go.jp/kenkyu_kousei/riekisohan_kanri.html

7. Countermeasures to Misconduct, Fraudulent Use, and Fraudulent Receipt

(1) Reporting of and Cooperation in Investigations of Misconduct, Fraudulent Use, and Fraudulent Receipt

Allegations of misconduct, fraudulent use, or fraudulent receipt (collectively “Misconduct” hereinafter) by any research institutions associated with this Program must be investigated immediately and reported to AMED (including by outside organizations, such as news organizations and the Board of Audit) in accordance with the Guidelines on the Handling of Improprieties in Research Activities in Programs Funded by Cabinet Office Budgets at the Japan Agency for Medical Research and Development (established March 1, 2017; AMED office within Cabinet Office), Guidelines on the Handling of Inappropriate Use of Research Expenses for Programs Funded by Cabinet Office Budgets at the Japan Agency for Medical Research and Development (established March 1, 2017; AMED office within Cabinet Office, and the AMED Regulations for Responding to Misconduct in Research Activities.
If full-scale investigations of the research institution are deemed necessary, the institution must establish an investigative committee and consult with AMED concerning investigation policies, scope, and methods.
Note that AMED may, if necessary, enjoin the individuals and research institution in question to stop using research funds under this Program as a temporary measure during the investigations.
The research institution must provide AMED with a final report of the investigation results, the causes of the Misconduct, the status of management and auditing systems for other competitive research funds in which individuals involved in the misconduct are involved, and measures to prevent recurrence. This report must be submitted by the deadline specified in the AMED Regulations for Responding to Misconduct in Research Activities. For reportable matters and other specifics, refer to the Guidelines on the Handling of Improprieties in Research Activities in Programs Funded by Cabinet Office Budgets at the Japan Agency for Medical Research and Development (established March 1, 2017; AMED office within Cabinet Office), Guidelines on the Handling of Inappropriate Use of Research Expenses for Programs Funded by Cabinet Office Budgets at the Japan Agency for Medical Research and Development (established March 1, 2017; AMED office within Cabinet Office), and the AMED Regulations for Responding to Misconduct in Research Activities.
Even during the investigations, any facts pointing to any element of the alleged misconduct must be promptly recognized and reported to AMED. Even before the closure of the investigations, investigation progress reports and interim reports must be submitted to AMED if so requested.
Note that the research institution is required to submit materials regarding the case to AMED or to provide AMED with access to such materials and opportunities to make on-the-spot investigations, unless valid grounds to withhold such access exist, such as possible interference with the investigations.
If the research institution fails to submit the final report by the deadline, AMED may reduce indirect expenses for the research institution by a certain percentage or withhold the contracted R&D funds.

(2) Discovery of Misconduct, Fraudulent Use, or Fraudulent Receipt

In response to any misconduct identified in the Program, the following measures will be taken against the research institution and researchers pursuant to the Guidelines on the Handling of Improprieties in Research Activities in Programs Funded by Cabinet Office Budgets at the Japan Agency for Medical Research and Development (established March 1, 2017; AMED office within Cabinet Office), Guidelines on the Handling of Inappropriate Use of Research Expenses for Programs Funded by Cabinet Office Budgets at the Japan Agency for Medical Research and Development (established March 1, 2017; AMED office within Cabinet Office), and the AMED Regulations for Responding to Misconduct in Research Activities.

(a) Cancellation of contracted R&D agreement

In the case that AMED recognizes that misconduct has taken place under this program, AMED shall cancel the contracted R&D agreement with the relevant research institute and demand the return of all or part of the contracted R&D funds from the research institute. In the event that contracted R&D funds are returned, the relevant research institute will be required to pay interest calculated in accordance with the number of days from the date of the receipt of contracted R&D funds until the date of return. The interest will be determined by AMED within the scope of 10.95% per annum for the contracted R&D funds (if a portion of the amount has been returned already, the already returned amount will be subtracted from the balance for the remaining time). Furthermore, AMED may not provide contracted R&D funds to the relevant research institute for the next fiscal year or thereafter.

(b) Restrictions on applications and eligibility for participation

Based on the magnitude of the misconduct and as specified in the table below, researchers and others found culpable of misconduct within the Program and others found to have been involved or responsible will be subjected to restrictions on applications and eligibility for participation in AMED programs.

If any misconduct in this Program is recognized and restrictions on applications and eligibility for participation imposed, an overview of such misconduct (including the names of the researchers culpable of such misconduct, program names, the institutions affiliated with the researchers, research themes, research years, specifics of the misconduct and the actions taken) will be provided to the corresponding ministries and agencies. This may result in similar restrictions on applications and eligibility for participation in competitive research fund programs overseen by those ministries and agencies.

[In the case of misconduct]

The period of restriction deemed appropriate in consideration of the misconduct and its nature, on or after the day that the misconduct is recognized, and between one year and ten years from the fiscal year in which the day on which the misconduct is recognized or the next fiscal year.

<table>
<tr><th colspan="3">Category of misconduct according to involvement</th><th>Degree of misconduct</th><th>Period deemed appropriate</th></tr>
<tr><td rowspan="2">Person Involved in the Misconduct</td><td colspan="2">1.Especially malicious individual who intentionally engages in misconduct
from the outset of the research</td><td></td><td>10 years</td></tr>
<tr><td>2. Author of academic paper, etc. related to</td><td>The author responsible for the academic paper in question (supervisor, first</td><td>The impact on the advancement of research in the relevant field or society is large, and the maliciousness of the misconduct is deemed to be high.</td><td>5-7 years</td></tr>
</table>

	research in which there has been misconduct	author, or other position of responsibility deemed equivalent)	The impact on the advancement of research in the relevant field or society is small, and the maliciousness of the misconduct is deemed to be low.	3-5 years
		Author other than that listed above		2-3 years
	3. An individual involved in misconduct other than that stipulated in 1 or 2			2-3 years
An author responsible for academic papers, etc. related to research in which there has been misconduct but who was not involved in the misconduct (supervisor, first author, or other position of responsibility deemed equivalent)			The impact on the advancement of research in the relevant field or society is large, and the maliciousness of the misconduct is deemed to be high.	2-3 years
			The impact on the advancement of research in the relevant field or society is small, and the maliciousness of the misconduct is deemed to be low.	1-2years

[In the case of fraudulent use/fraudulent receipt]

After making its decision, AMED will also impose a timeframe for eligibility restrictions in light of the specifics of the case of fraud fraudulent use. Including the fiscal year in which the date of the decision falls, this timeframe will range from a minimum of one year to a maximum of 10 years.

Individual subject to eligibility restrictions due to fraudulent use/receipt	Magnitude of fraudulent use		Timeframe of restricted eligibility
1. Researcher involved in fraudulent use and conspiring researcher(s)	(1) Misappropriation for personal gains		10 years
	(2) Other than (1)	① Fraudulent use having significant social repercussions and reflecting clearly fraudulent intent	5 years
		② Other than ① and ③	2 to 4 years
		③ Fraudulent use having limited social repercussions and not reflecting clear fraudulent intent	1 year
2. Researcher who received a competitive research fund by a fraudulent or other dishonest means, and conspiring researcher			5 years
3. Researcher not directly involved in case of fraudulent use but used funds in violation of the duty of diligence			From one year to two years, based on the magnitude of the violation of duty of diligence

*1 A formal reprimand (but no eligibility restrictions) will be issued in the following cases:

・ In Case 1, the social repercussions are limited, the misconduct does not indicate clear fraudulent intent, and the amount involved is small.
・ In Case 3, the social repercussions are limited and the misconduct does not indicate clear fraudulent intent.

*2 With regard to Case 3, the period will be determined in the light of the magnitude of the violation of the duty of diligence.

(c) Restrictions on researchers subject to restrictions on applications and eligibility for participation in other competitive research fund programs

Researchers found culpable for misconduct in relation to and therefore subject to restrictions on applications and eligibility for participation in competitive research fund programs other than this Program under the jurisdiction of the national government or independent administrative corporations and wholly or partially funded by the national government (including programs under which new public solicitations will begin in fiscal 2020 and thereafter and any such programs ended before fiscal 2019) will be subject to restrictions on applications and eligibility with respect to participation in this Program for as long as the first-mentioned restrictions remain in force. If such background factors are discovered after program selection, the selection of such program may be rescinded. If such background factors are discovered after the conclusion of a contracted R&D agreement, such agreement may be revoked.

(d) Suspected misconduct within any other competitive research fund program

In the case that there is a complaint, etc., that a researcher participating in this program is suspected of perpetrating misconduct under another R&D funding program, the research institute with which the relevant researcher is affiliated is obligated to report to AMED that an investigation of the relevant misconduct allegations has been implemented.

Please note that, on receipt of this report, AMED may order the temporary suspension of usage of contracted R&D funds if deemed necessary.

Furthermore, in the case that the research institute to which the relevant researcher is affiliated fails to make the above report, the contracted R&D agreement may be cancelled

(e) Public announcement of misconduct

If the measures and restrictions in (a) and (b) above are implemented in this Program, an overview of the relevant misconduct (program name, affiliate institution, research years, details of the misconduct, details of the measures taken) will be announced to the public in accordance with the Guidelines on the Handling of Improprieties in Research Activities in Programs Funded by Cabinet Office Budgets at the Japan Agency for Medical Research and Development (established March 1, 2017; AMED office within the Cabinet Office), Guidelines on the Handling of Inappropriate Use of Research Expenses for Programs Funded by Cabinet Office Budgets at the Japan Agency for Medical Research and Development (established March 1, 2017; AMED office within Cabinet Office), etc. The same information may also be announced by the relevant ministries and agencies.

(3) Registration with AMED RIO Network

To promote research integrity activities in an efficient manner, it is essential for AMED and the research institution or research institutions among themselves to exchange information and work together. Accordingly, to promote efficient research integrity activities nationwide, the RIO Network was established in FY 2017 to provide a venue where the Research Integrity Officers (RIO) of research institutions which are allocated research funds from AMED can easily exchange information. Detailed information on the RIO Network is provided on the following website:

※ https://www.amed.go.jp/kenkyu_kousei/rionetwork.html

The officers in charge of R&D ethics education and the officers in charge of promoting compliance (collectively referred to as “Research Integrity Officers” or RIO) who are participating in AMED programs should become members of the RIO Network.

There is a space on the “Breakdown of Expenses, etc. and Contracted Items Sheet,” which is submitted when the contract is concluded, for entering information about the officers in charge of R&D ethics education and the officers in charge of promoting compliance, so be sure to fill in this information. AMED will register Research Integrity Officers with the RIO Network. When registering personnel other than the above who are engaged in research integrity related tasks with the RIO Network, please do so in accordance with the instructions on the AMED RIO Network website.

8. Points to Note Between Selection and Conclusion of the Agreement

(1) Cancellation of Decision to Adopt R&D Projec

Following adoption of the R&D project, the decision to adopt the R&D project may be cancelled in the following cases.

- Documents required by AMED to be submitted are not submitted by the submission deadline.
- A researcher/researchers involved in the relevant R&D project have had their application to/eligibility for participation in AMED R&D programs restricted for a certain period of time.
- An investigation has been opened into allegations of misconduct.
- Conditions that were set for adoption of the R&D project ultimately have not been fulfilled.
- It is discovered that the R&D project does not fulfill the conditions for solicitation, etc.

(2) Representation and Warranties regarding Researchers Investigated/Found to Have Engaged in Misconduct

Please note that in concluding contracted R&D agreements, AMED requires Principal Institutions to provide representation and warranty with regard to items (a) through (c) below.

(a) The research institution ensures that the Program R&D project manager (PM) and the contributing participants undertaking research items under the instruction of the PM have not engaged in misconduct, as defined in the national government’s misconduct response guidelines* or the AMED Regulations on Response to Misconduct in Research Activities (excluding individuals not subject to restrictions on applications and eligibility for participation in competitive research funds, as determined by the national government or independent administrative corporations, based on findings by research institution; also excluding individuals for whom the period of restrictions on applications and eligibility for participation in competitive research funds has expired).

(b) If the R&D plan includes individuals subject to full-scale investigations under the national government’s misconduct response guidelines or AMED Regulations on Responding to Misconduct in Research Activities (“Full-scale Investigations”) as PM or contributing participants, the research institution shall duly notify AMED thereof and obtain AMED’s approval with regard to the treatment of such individuals before the date of conclusion of a contracted R&D agreement.

(c) The research institute is strictly complying with and implementing each of the items that research institutes are required to implement as research institute system improvements as prescribed under Japanese Government guidelines for responding to misconduct.

*With regard to (a) above, in the case that a research institute with which AMED has concluded a contracted R&D agreement also concludes a contracted agreement with a third-party institute (from AMED’s perspective, a subcontracted agreement. Hereinafter, the third-party institute shall be referred to as the “subcontracted institute”), please note that of the researchers affiliated with the Subcontractor, the relevant research institute is also required to provide representation and warranty for the “Co-Investigator” (or person in an equivalent position).

* The “Japanese Government guidelines for responding to misconduct” referred to in this section is a blanket term for all of the various policies and guidelines concerning response to misconduct formulated by the Japanese Government.

(3) Submitting R&D Plans and Reports

With regard to awarded projects, please note that some parts of the R&D Plan and reports may be required to be submitted in English.

(4) Submitting Data Management Plans

The PM shall provide AMED with data management plans for the selected themes when concluding a contracted R&D agreement following selection.*

* Data derived from R&D activities conducted with public funds are regarded as national intellectual assets. AMED must identify the data not currently explored to ensure appropriateness and fairness in data collection, quality assurance, assignment of meanings, storage, and utilization.
* Data management plans must be submitted for government-funded R&D themes whose data must be systematically organized (ordered in a database) to assist AMED in grasping the research data needed to strengthen management or catalytic capabilities and to promote joint efforts between different R&D themes and to minimize overlaps in R&D efforts.
* A data management plan must describe what data is expected to be produced from what R&D theme, the party responsible for retaining such data, and where such data is retained.
* Data management plans must be prepared in accordance with guidelines on the use of AMED research data and guidelines on creating data management plans.
* Data management plans must contain all required matters, such as fiscal year, program name, R&D theme name, generic names for data and data groups generated by the research, explanations of R&D data, the names and affiliations of the data scientists, and data retention sites. The form will be provided separately after selection.
* Among other pertinent matters, the names and affiliations of the data scientists will be announced together with other theme information, unless such announcement is deemed undesirable.
* AMED website: https://www.amed.go.jp/koubo/datamanagement.html

To ensure advanced data management, the PM is required to define research data classifications for the storage, sharing, publication, and other handling of data pursuant to specific open or closed strategies; use a research data infrastructure system (NII Research Data Cloud) or other appropriate system to promote exchange between researchers; and conduct the optimal method of storage, sharing, and publication of research data.

(5) Eliminating Unreasonable Redundancy or Excessive Concentration of Research Funds

(a) Measures to prevent unreasonable duplication

If two or more competitive research funds from the national government or independent administrative corporations (including national research and development agencies; the same hereinafter) are allocated to redundant effect to the same R&D theme (i.e., the title and nature of research to which a competitive research fund is allocated) by the same researcher and any of the following descriptions applies, the theme may be excluded from reviews, the selection decision revoked, or expenses within this Program reduced (“Selection Cancellation” hereinafter).

- Applications are submitted simultaneously for multiple competitive research funding programs, etc. that are essentially the same (including if the projects overlap to a considerable degree; the same shall apply hereinafter) and multiple R&D projects are adopted on an overlapping basis.
- Applications are repeatedly submitted for R&D projects that are essentially the same as an R&D project that has already been adopted and been allocated competitive research funds, etc.
- There is duplication regarding the use of research funds amongst multiple R&D projects
- Other equivalent cases

Although there are no restrictions on submitting applications for other competitive research funds at the stage of applying for this program, please notify AMED staff in charge of this program promptly in the case that your R&D project is adopted by another competitive research funding program. If this is not reported, there is the possibility that the decision to adopt the R&D project under this program will be cancelled.

(b) Measures to prevent excessive concentration

Even if the content of the R&D proposal submitted for this program differs from the content of R&D being implemented under another competitive research funding program, in the case that the overall research funds allocated to the relevant researcher or research group (hereinafter referred in this item as “Researchers, etc.”) in the relevant fiscal year exceeds the limit that can be used effectively and efficiently and cannot be used completely within the research period, and any of the following apply, the decision to adopt the R&D project under this program may be cancelled.

- Excessive research funds are allocated in comparison to the researcher’s abilities or research methods
- Excessive research funds are allocated in comparison to the effort allocated to the relevant R&D project (percentage of the researcher’s overall work time* that is needed for implementing the relevant research)
- Unnecessarily expensive research equipment is purchased
- Other equivalent cases

*Based on the Council for Science, Technology and Innovation’s definition of “effort”: the percentage of researchers’ time exclusively spent for the R&D activities concerned against the researcher’s annual working hours. Researchers’ total working hours refer to not only the time spent in research activities but also total substantive working hours, including educational/clinical activities and administrative duties.

Accordingly, in the case that a proposal document for an R&D project is submitted to and adopted by another competitive research funding program after an application documents for the R&D project has been submitted to this program, or if changes are made to the information provided on the application documents, please report this promptly to the AMED staff in charge of this program. If this is not reported, there is the possibility that the decision to adopt the R&D project under this program will be cancelled.

(c) Provision of information related to application content to eliminate unreasonable duplication/excessive concentration

In order to eliminate unreasonable duplication/excessive concentration, information related to parts of the application content (or awarded project/program content) may be provided within the necessary extent, to the persons in charge of other competitive research funding programs, including other government ministry/agency programs, via e-Rad. Furthermore, in the case that information is requested for checks being conducted under other competitive research funding programs, information may be provided in this way.

(d) Status of application for and acceptance of other competitive research funds, including those from other ministries and agencies

Applicants may be required to provide information in proposal documents regarding the status of application and/or acceptance under other competitive research funding programs, including other government ministry/agency programs (name of program, name of R&D project, project implementation period, budget amount, effort, etc.) In the case that the information provided is

factually inaccurate, the R&D project application may be rejected, the decision to adopt the R&D project may be cancelled, or the amount of funds allocated to the R&D project may be reduced.

VI. MANAGEMENT AND EVALUATION OF SELECTED THEMES

1. Theme Management

A Contracted R&D Accomplishments Report is required to be submitted each fiscal year for all awarded projects according to the contracted R&D agreement. Furthermore, the PS and PO shall manage progress of the project. In doing so, important research data (including experiments) on which the R&D project proposal is based may be verified from the perspective of progress management, even if the relevant research was conducted prior to conclusion of the contracted R&D agreement.

In implementing progress management, exit strategies shall be realized through the implementation of project progress meetings, questionnaires (documents to be completed with details on R&D progress status), hearings (interviews for individual projects), and site visits (confirming the actual status of R&D at the facility carrying out the research). Please note that, upon referral to the R&D plan and depending on the progress status, review of the project plan or cancelation (early conclusion) of the project may be carried out.

In addition, R&D projects moving into the practical application stage (R&D projects that are within the target scope of the "regulatory science strategy consultation" program etc. conducted by the Pharmaceuticals and Medical Devices Agency (PMDA)), as required to undergo face-to-face advice as a general rule in the first or second year1, 2 after adoption of the R&D project under this program as a condition of adoption. Furthermore, based on appropriate information management, the research institute shall consent to AMED attending various kinds of consultation interviews under the "regulatory science strategy consultation" program etc. during the R&D period and share face-to-face advice records and related information with AMED.

1Regarding R&D projects involving clinical studies (trials), face-to-face advice must be undergone prior to the commencement of the clinical trials. R&D that have already undergone face-to-face advice prior to adoption of the R&D project may undergo face-to-face advice again during the R&D period as necessary.

2Although it is not compulsory for the R&D project to have undergone face-to-face advice at the time of application to this program, it is desirable that face-to-face advice be undergone and the results of the consultation reflected in the R&D plan.

For research undertaking investigator-initiated trials or clinical studies with a view to creating innovative drugs or medical devices, or nonclinical studies aimed at conducting such trials/studies3 during the R&D period, research institutes are required to submit materials related to clinical studies such as a protocol (including information such as aims, subjects, selection criteria, exclusion criteria, number of cases, observation content, intervention content, statistical methods, and research system).

3 Does not include clinical research that is not aimed at developing new drugs or medical devices or that differs from normal processes for evaluating/approving new medical technology.

2. Evaluation

In this Program, outside evaluations will be conducted by a theme evaluation committee composed of outside experts in Years 3 and 5 after the start of R&D. If the decision is made to continue the program beyond Year 5, outside evaluations will be performed in Years 8 and 10. Outside evaluations may be sought and implemented for any themes whenever deemed necessary.
AMED itself will perform self-evaluations in the fiscal years during which no outside evaluations are performed.
Depending on the results of these evaluations, AMED may revise (accelerate or extend) or cancel the themes (terminate the themes at an early date), based on the comprehensive judgment by the PD and/or other parties.

3. Presentations at Achievement Report Meetings

As part of the Program achievement reporting process, the PM for the selected theme may be required to give public presentations or internal achievement report meetings organized by AMED. In addition, follow-up and achievement deployment investigations may include, where necessary, requests for presentations after the fiscal year in which the theme is completed. Cooperation in this respect is requested.

VII. HANDLING OF R&D ACHIEVEMENTS

With regard to the handling of R&D accomplishments, research institutes are obligated under contracted R&D agreements to strictly comply with items regarding R&D accomplishment reportings, intellectual property (IP) and usage of R&D accomplishments.

1. Submitting and Publishing R&D Achievement Reports

Research institutions shall submit a R&D accomplishments report summarizing the research accomplishments of the R&D project. Please note that the deadline for submission of reports is within 61 days from the end of the term of the contracted R&D agreement or from the conclusion/cancellation/discontinuance of the contracted R&D, whichever comes first. In the case that the R&D accomplishments report is not submitted by the deadline, it shall be deemed that the contracted R&D agreement has not been fulfilled, so please be sure to strictly comply with the submission deadline.

A part of the items in the R&D accomplishment reports and outline of accomplishments will be treated as publicly open information. As it will be published at appropriate times on the AMED website please be careful to indicate parts that are not to be made public in the section “Non-Disclosure Items” in the reporting form with regard to information prior to patent applications, unpublished information about the details of patents being applied for, knowhow and other confidential sales information and any other undisclosed information. Moreover, with regard to final accomplishment reports produced at the end of R&D projects that have lasted for several years, the content under the section of “Items for Disclosure” in the reporting form compiled by the PI upon Ex-Post Evaluation will be published at appropriate times on the AMED website.

2. Ownership of R&D Achievements

With regard to patent rights, copyrights and other intellectual property (IP) relating to R&D accomplishments, these can revert to the research institutes under the condition that the requirements provided for in Article 17 of the Industrial Technology Enhancement Act (Act No.44 of 2000, the Bayh-Dole Act. The Japanese version of the Bayh-Dole Act) are satisfied. The purpose of the Bayh-Dole Act is to invigorate R&D activities through the reversion of IP rights to research institutes so that the results of these R&D activities can be used efficiently in business activities. Under this program, it is expected that research institutes themselves will make the maximum effort to achieve practical application of their research accomplishments, and for this reason the Bayh–Dole Act has been applied. For details regarding conditions, please refer to contracted items prescribed under the contracted R&D agreement at the time the agreement is concluded. Furthermore, please consult with AMED in advance in the event that R&D accomplishments or intellectual property rights relating to R&D accomplishments are succeeded from a domestic subsidiary to an overseas parent company.

3. Measures to Advance the Practical Applications of R&D Achievements

Research institutes are requested to maintain a strong sense of awareness that they are in a position in which they must try their best to use the accomplishments of the R&D entrusted to them by AMED in order to make a contribution to society, implement them and put them to practical use, and take the requisite measures towards this goal. In particular, they are requested to make the maximum use of inventions, knowhow, data and other IP, while in accordance with AMED's IP policy* ensuring that appropriate measures have been implemented within the research institute’s funding sources such as appropriating indirect costs, and costs for obtaining IP rights in order to ensure appropriate protection and utilization of patent rights and other IP rights on a global scale.

AMED’s Department of Intellectual Property provides consistent support for maximizing and achieving the practical application of R&D accomplishments that have reverted to the research institutes, so do not hesitate to contact the Medical IP Desk (For details, please refer to Chapter IX. 6.).

* https://www.amed.go.jp/chitekizaisan/chizai_policy.html

4. IP Educational Materials for Medical Researchers

IP educational materials for medical researchers are provided on the AMED website* as a reference for considering strategies for submitting applications for, obtaining patent/IP rights for, and utilizing R&D accomplishments that have reverted to research institutes. Researchers are strongly recommended to peruse these IP educational materials prior to carrying out research.

※ https://www.amed.go.jp/chitekizaisan/chizai_kyouzai.html

5. Securing Open Access to R&D Achievements

Having secured the necessary IP rights, research institutes are requested to cooperate in ensuring open access to research accomplishments (including data etc. acquired) as far as possible.

6. Data Handling

Data created, acquired, or collected under contracted R&D agreements signed by AMED as the entrustor and data generated by processing of such data (R&D data) shall be handled in accordance with contracted R&D agreements in force from fiscal 2020 and AMED guidelines on the use of research data.

VIII. HANDLING OF ACQUIRED GOODS

1. Ownership of Acquired Goods

Ownership of goods, etc. acquired by Universities and Research Institutions,[1] through direct costs (hereinafter referred to as “Acquired Goods”) shall revert to the university, etc.[2]

Ownership of acquired goods by Companies, etc.,[3] shall revert to AMED in the case of goods with an acquisition cost of 500,000 yen or more (consumption tax included) and has a service life of one year or more, but the relevant acquired goods may be used free-of-charge for the purpose of contracted R&D by the contractor until the conclusion of the contracted R&D period. Companies, etc. shall, throughout the contracted R&D period, manage the relevant acquired goods properly with the due diligence of a prudent manager.

1 “Universities and research institutions” include:
(i) Incorporated educational institutions such as national university corporations, public university corporations, and private universities
(ii) Public research institutions such as national research institutes, public research institutes, and independent administrative corporations
(iii) Organizations with a public nature, such as public-service corporations, that are recognized by AMED.

2 The submission of contracted research regulations etc. will be necessary in the event that goods acquired using contracting expenses are made the property of a university.

3 “Companies, etc.” is a general term for research institutes other than “universities, etc.”

2. Handling of Acquired Goods after the Completion of the R&D Period

For the purpose of continued application of the relevant R&D, as a general rule Companies etc., may continue to borrow free-of-charge tangible property and whose ownership has reverted to AMED for the duration of its service life and the tangible property may be transferred to the Companies etc., for a fee upon the evaluation of AMED after its service life has passed, provided that this shall not apply in either case in the event that AMED uses or disposes of the relevant acquired goods.

With regard to acquired goods that are treated as consumables, no specific leasing agreement or other procedures will be implemented, but the contractor shall manage the relevant acquired goods properly with the due diligence of a prudent manager until their use is finished (resale of acquired goods for profit is not permitted).

3. Disposal of Radioactive Waste

It is the responsibility of the research institute to dispose of contaminated property and/or radioactive waste generated through implementation of the R&D project.

IX. OTHER

While these items do not impact evaluations under each program unless noted as a special condition, AMED requires grant program participants to proactively endeavor to adhere to comply with each of these items due to their importance. Research institutions and researchers are asked to gain a thorough understanding of the purposes of these items and comply with these in carrying out their R&D. Moreover, to ensure that the results of these efforts contribute to the improved implementation of AMED programs in the future, not only may they be used in analysis of research trends, but also the analysis results may be publicized in a form that does not identify the R&D project (E.g.: published by program rather than individual project). Accordingly, it is required that this information is included in Contracted R&D Accomplishments Reports.

1. Promoting Dialogue and Cooperation with Citizens and Society

In accordance with the “Promotion of the 'Dialogue on Science and Technology with Citizens' (A Basic Course of Action)” (decided by the Minister of State for Science and Technology Policy and the Executive Members of the Council for Science and Technology Policy on June 19, 2010), requires not only that science and technology results are returned to the general public, but also that the content and results of R&D activities be explained to society and the general public in an easy-to-understand manner from the standpoint that it is imperative to take the stance of obtaining the general public’s understanding and support as well as promoting science and technology in order to generate outstanding science and technology results without pause, further advancing Japan’s science and technology. The 5th Science and Technology Basic Plan (decided by a Cabinet Decision on January 22, 2016) demands that science and technology and society, which have traditionally worked at cross purposes, need to have a deeper relationship in order to facilitate dialogue and cooperation, or “co-creation,” between a diverse range of stakeholders, including researchers, citizens, media, industry, and policymakers. From this perspective, there is a need for initiatives to explain research activity contents and their results and accomplishments in a comprehensible manner to society and the general public, and to promote dialogue and cooperation with many stakeholders. In response to this, research institutions are requested to hold public meetings and symposia, about their R&D accomplishments and continuously post their R&D accomplishments on the Internet, and eagerly involve themselves in round table meetings etc. that include the participation of a wide spectrum of stakeholders.

Reference: Regarding the Promotion of Dialog with Citizens on Science and Technology (basic initiative guidelines)
https://www8.cao.go.jp/cstp/output/20100619taiwa.pdf

2. Promoting the Patient and Public Involvement (PPI) in Medical Research/Clinical Studies

AMED’s mission is to approach each patient individually, staying close and providing support for LIFE (being alive, living each day, living life) while ensuring the practical application of research results in the medical field as quickly as possible and delivering these results to patients and their families. In view of this mission, AMED is promoting initiatives that promote Patient and Public Involvement (PPI)[1] in medical research and clinical studies. These efforts are expected to generate research results that are even more beneficial to patients, etc., as well as lead to smoother implementation of research and improved protection of clinical trial subjects. For these reasons, AMED requests that program participants proactively incorporate PPI into medical research and clinical studies. Moreover, for the time being it is envisages that among the areas of medical research and clinical studies the PPI initiative will mainly focus on investigator-initiated trials, intervention studies, observational studies (non-intervention studies) with human subjects.

1 AMED’s definition of “Patient and Public Involvement (PPI) in Medical Research/Clinical Studies”
As part of the medical research/clinical study process, researchers are endeavoring to incorporate the knowledge and opinions of patients and members of the general public. Here, “Patient and Public” includes patients, patients’ families, former patients (survivors), and future patients.

(Reference) AMED’s “Patient/Public Involvement (PPI) in Medical Research/Clinical Studies”
https://www.amed.go.jp/ppi/index.html

3. Health Risk Information

In accordance with requests from the Ministry of Health, Labour and Welfare, AMED requires researchers to report information obtained in the process of conducting research that could seriously threaten the lives and/health of members of the general public (hereinafter referred to as “Health risk Information”) to the Ministry of Health,
Labour and Welfare using the prescribed form. For details such as contact information, please refer to the AMED Administration Manual for Contracted R&D Agreement in Japan Agency for Medical Research and Development.[2]

The health risk information provided is evaluated together with other information by the Ministry of Health, Labour and Welfare and used in considering necessary responses to the relevant health risk. Providing this information does not place responsibility on the researcher, so please provide a broad range of information.

1 https://www.mhlw.go.jp/file/06-Seisakujouhou-10600000-Daijinkanboukouseikagakuka/kenkoukiken.doc
2 https://www.amed.go.jp/keiri/index.html

4. Registering Researcher Information on researchmap

Researchmap* is the largest database in Japan serving as a list of researchers in the nation. It enables researchers to publicize their registered accomplishments over the Internet. In addition, researchmap links in with e-Rad and many university databases of researchers, and since the information registered on it can be used on other systems it makes it unnecessary for researchers to repeatedly input information in multiple application forms about accomplishments and applications on various databases. The information registered on researchmap is effectively used in governmental and other science and technology policy making research and for statistical purposes, and those carrying out projects under this program are therefore requested to cooperate by registering with researchmap. Note that there is a link from researcher names on the AMED funding for innovation database (AMEDfind) website to researchmap.

* https://researchmap.jp/

5. Facilitating the Application of Research Tool Patents

With regard to research tool patents, please endeavor to handle research tool patents appropriately in accordance with the Guidelines for Facilitating the Use of Research Tool Patents in the Field of Life Sciences (Council for Science and Technology Policy (now the Council for Science, Technology and Innovation), March 1, 2007.

6. Measures Related to the IP Strategic Program

The “IP Strategic Program” is a program formulated every year by Intellectual Property Strategy Headquarters in accordance with the Intellectual Property Basic Act (Act No. 122 of 2002) with the aim of promoting strengthening of IP strategies. As the Intellectual Property Strategic Program 2014 (Intellectual Property Strategy Headquarters on July 4, 2014),[1] sets forth the strategic utilization of certification in order to further invigorate international standardization activities, AMED is also to promote R&D with a view to international standardization/certification.
Accordingly, in the case that a public research institute under this program carries out R&D with the potential to lead to international standardization/certification, the research institute is requested to undertake R&D with a view to international standardization, such as considering support when instigating certification activities for incorporating formulation of standards for certification into individual R&D plans and including the participation of certification organizations in R&D activities.

1 Excerpted from the Intellectual Property Strategic Program 2014
https://www.kantei.go.jp/jp/singi/titeki2/kettei/chizaikeikaku20140704.pdf
First pillar: Building up a global IP system for enhancing industrial competitiveness
4. Efforts for international standardization and certification
(2) Measures to be taken in the future

(Promoting international standardization strategies in specific strategic fields2)

・With regard to international standardization strategies in specific strategic fields (with the fields selected based on market scale and growth potential, expandability of the field, Japan's superiority in the field, and the significance of international standardization), the Government of Japan will take the lead in international discussions and facilitate voluntary efforts made by interested parties (short term and medium term) (Cabinet Secretariat, Cabinet Office, MIC, MEXT, Ministry of Health, Labour and Welfare [MHLW], MAFF, METI, Ministry of Land, Infrastructure, Transport and Tourism [MLIT], Ministry of the Environment [MOE]).

2"Specific strategic fields": (1) Advanced medical technology, (2) Water, (3) Next generation vehicles, (4) Railways, (5) Energy management, (6) Digital content, (7) Robots

7. IP Consultation Support through AMED IP Consultants and AMED IP Liaisons

In order to encourage the practical application of R&D accomplishments obtained from AMED projects implemented, AMED provides a free-of-charge IP consultation service run by AMED IP Consultants and AMED IP Liaisons covering IP strategy and licensing strategies. Furthermore, as one facet of this IP consultation service, when requested we also provide a free service to formulate precise IP strategies for R&D accomplishments through investigating the available literature, etc.

In addition, the AMED IP Liaison visits research institutions throughout the nation and in conjunction with the AMED IP Consultants help to create a system enabling consultation at an early stage regarding appropriate out-licensing of R&D accomplishments obtained. Specifically, the AMED Liaison provides 1) IP strategy advice aimed at appropriate out-licensing at the early stages of R&D, 2) investigations of the available literature, markets research and support for technical seeds evaluation, and 3) guidance for the creation of appropriate PR sheets on R&D accomplishments for exhibitions and business negotiations. If you wish to receive the support mentioned above, please contact AMED's Medical IP Desk. Please refer to the website2 below for information regarding the Medical IP Desk.

1 AMED IP Liaisons: https://www.amed.go.jp/chitekizaisan/chizai_riezon.html
2 Medical IP Desk: https://www.amed.go.jp/chitekizaisan/medical_ip_desk.html

8. Seeds/Needs Matching Support System

In April 2018, AMED launched the "AMEDぷらっと®/AMEDplat " private information network system, the purpose of which is to match at the earliest possible stage the R&D seeds information of universities and other academia with corporate needs information, providing support aimed at achieving early practical application and commercialization of R&D results in the medical field. This enables research seeds to be showcased to staff in charge of in-licensing at multiple companies, facilitating university-company collaboration at an early stage. In order to achieve this it is requested that you proactively register research seeds in the medical field in the AMED ぷらっと® /AMEDplat system. Note that you should refer to the AMED ぷらっと® /AMEDplat website* regarding details about the launch of use of the AMED ぷらっと® /AMEDplat.

※ AMEDぷらっとWEB SITE　https://www.amed.go.jp/chitekizaisan/amed_plat.html

9. Support from the AMED Drug Discovery Support Network/Department of Innovative Drug Discovery and Development

In order to link the results of outstanding basic research by universities to the practical application of drugs, AMED's Department of Innovative Drug Discovery and Development (hereinafter referred to as the "Drug Development Department") functions as headquarters for constructing a nationwide "Drug Discovery Support Network" comprising the Institute of Physical and Chemical Research (RIKEN), National Institutes of Biomedical Innovation, Health and Nutrition (NIBIOHN), National Institute of Advanced Industrial Science and Technology (AIST), and other institutions. Network activities include providing continuous support for practical application related to drug discovery research, mainly from the applied study stage through to the preclinical development stage, as well as business derivation.

The Drug Development Department provides a wide range of consultation services for researchers undertaking drug discovery research as part of programs implemented by the Department, as well as gathers, examines, and evaluates information regarding promising R&D seeds; formulates R&D plans (including exit strategies) aimed at IP strategies for individual R&D seeds and collaboration with drug

companies; provides technological support for applied research (exploratory study, optimization study, etc.) and nonclinical studies (conforming to GLP (Good Laboratory Practice)); introduction and contracted support of CROs (Contract Research Organizations) and CMOs (Contract Manufacturing Organizations), etc.; and procedures for collaboration with drug companies.

In this way, the Drug Development Department is a department that specializes in providing advice on technological projects related to practical application to researchers at universities, etc., engaged in drug discovery research, as well as support for formulating R&D strategies aimed at collaboration with drug companies. For this reason, R&D projects that are related to drug development may receive active support from the Drug Development Department in coordination with the relevant departments/offices.

Accordingly, information regarding applications for R&D projects related to drug development shall be provided to the Drug Development Department, regardless of whether or not the project is adopted under this program (please refer to Chapter IV. 1.). Furthermore, the Drug Development Department provides the above-mentioned support based on requests by researchers on the premise of maintaining confidentiality and protecting IP rights that have reverted to the researcher.

In the same way, with regards to the applied R&D projects related to drug development that is or was supported by the Drug Development Department, AMED provides the information on the support content to the department in charge of the program.

Please refer to Chapter X. for references related to support provided by the AMED Drug Discovery Support Network and the Drug Development Department.

10. Enhancing AMED Theme Evaluations

With the aim of enhancing the Project Evaluation Panel and conducting even more appropriate evaluations, AMED is endeavoring to secure panel members with a high degree of knowledge in specialized fields and pace careful attention to membership diversity from the perspectives of age, gender, and affiliated institution.

For this reason, in the case that a R&D project is adopted under this program, AMED may request that researchers provide their cooperation as AMED Project Evaluation Panel members.

11. Deposit of Resources to the National Bioresource Project (NBRP) and Use of Resources Developed by NBRP

As a general rule, after using bioresources developed under this program and publishing the research accomplishments obtained via academic papers, etc., the persons implementing this program are to deposit[3] the relevant bioresources (limited to bioresources targeted by the NBRP[1]) to the NBPR Centers,[2] making these resources broadly available for researchers' use in order to contribute to research in the life science field. Use of bioresources that have already been prepared at NBRP is recommended from the standpoint of efficient project execution, etc.

1 NBRP: https://www.amed.go.jp/program/list/04/01/002.html

2 List of the NBRP Centers: http://nbrp.jp/center/center.jsp

3 "Deposit": Procedure for permitting the use (storage/provision) of resources in the NBRP without transferring various rights related to the relevant resources. By prescribing conditions for provision within the deposit consent form, it is possible to add conditions regarding restrictions on use of resources and citation in academic papers, etc., for users receiving the relevant resources.

12. Joint Efforts Concerning Databases

(1) Publishing Data from the National Bioscience Database Center

The National Bioscience Database Center (NBDC) (https://biosciencedbc.jp/) was established within the Japan Science and Technology Agency in April 2011 to promote the use of life science databases created by various research institutions. According to the document entitled "The progress and future course of the life science databases integration project" (January 17, 2013), the Center is charged with taking the lead in expanding the range of commercial enterprises for which data and databases are to be provided.

The following data and databases arising from this Program are to be provided to the Center for public release:

No.	Type of data	Publication platform	Publication platform URL
1	Outline of the database created for publication	Integbio Database Catalog	https://integbio.jp/dbcatalog/
2	Copies of data concerning results published in academic papers, or other means, or copies of the database created for publication.	Life Science Database Archive	https://dbarchive.biosciencedbc.jp/
3	Data or databases concerning humans from 2above	NBDC Human Database	https://humandbs.biosciencedbc.jp/

(2) Registering with the Patient Registry Database Search System

By using a disease registry system (patient registry) in clinical development the Clinical Innovation Network (CIN) aims to vitalize clinical development of drugs and medical devices in Japan, and is a project led by the Ministry of Health, Labour and Welfare in which the environmental preparations are made by an industry-government-academia alliance. Through the promotion of the use of a disease registry system (patient registry) the National Center for Global Health and Medicine creates an information search system regarding the patient registries in existence in Japan as a part of support for efficient clinical development of drugs and medical devices, and makes this available to the general public (https://cinc.ncgm.go.jp/). Those working on R&D projects related to patient registries and cohort studies (not including clinical trials and intervention studies) who have yet to register with the system are requested to do so.

(3) Other

With regard to specimen storage and genome analysis, R&D projects are required to actively use existing research bases, and AMED may in some cases provide guidance regarding/matching with the most suitable research bases. Accordingly, please cooperate in the event that AMED requests that the R&D project provides data to various databases designated by AMED, including in response to the above.

13. Promoting Shared Use of Research Equipment

From the perspective of the efficient use of contracted R&D funds and the effective use of research equipment, joint use of research equipment and combining research funds for multiple projects based on certain requirements are permitted. Details should be confirmed with the AMED “Administration Manual for Contracted R&D Agreement.”*

※ https://www.amed.go.jp/keiri/index.html

14. Indicating Reference Numbers in Paper Acknowledgments

If R&D achievements derived from this Program are released into the public domain, acknowledgments or other such appropriate section must include a statement indicating that they are the results of AMED support, as well as the corresponding theme reference number. For more information, refer to the AMED Guide to Administrative Procedures for Contracted R&D Agreements. *

* https://www.amed.go.jp/keiri/index.html

15. Better Treatments for Students in their Doctoral Courses (Later Period)

The 5th Science and Technology Basic Plan provides for financial support to graduate school students, especially those in their doctoral courses (later stages), for the purpose of attracting talented students and researchers from around the world. The plan sets forth a numerical target, specifically an effort to ensure that around 20% of students in their doctoral courses (later stages) receive sufficient income to pay their personal living expenses. Universities and R&D corporations are required to hire more students falling into this category as TAs (teaching assistants) and RAs (research assistants) and to improve the overall treatment of such students. In addition, the "Comprehensive package for research capabilities enhancement and young researchers support" (released by the Council for Science, Technology and Innovation on January 23, 2020) sets the goal of ensuring that future students in their doctoral courses (later stages) will be granted sufficient income to pay their personal living expenses, if sought. One specific measure mentioned in the package is to promote the efforts to grant RAs appropriate remuneration from competitive research funds and joint research funds.

Other papers highlight the need to provide support drawing on diverse financial resources, including competitive research funds and joint research projects with private sector entities. Examples include "Ideals for graduate school education for the year 2040: structural reforms to develop public leaders" (summary of deliberations released by the Working Group on Universities of the Central Council for Education on January 22, 2019) and "Developing science and technology innovation policies to strengthen knowledge-intensive value creation: becoming a world-leading nation by realizing Society 5.0" (interim report released by the Science and Technology Academic Council's Comprehensive Policy Special Committee on October 24, 2019). These papers also call for the proactive employment of students in the latter stages of doctoral programs as RAs, better overall treatment, engagement of more TAs, and efforts to provide more time for research, including the proactive engagement of TAs to reduce teaching burdens.

Doctoral students (later stages) working as RAs or in other assistant capacities must be granted reasonable remuneration for such work.

This Program will require research institutions to proactively hire doctoral students (later stages) as RAs and TAs to the extent needed for research purposes. The goal is to grant adequate remuneration for personal living expenses; to set appropriate unit rates in the light of the nature of their work; to ensure appropriate work attendance management; and to pay remuneration commensurate with the time spent at work. Applications for this Program shall be based on funding plans that consider the above-mentioned remuneration for students in the latter stages of their doctoral work.

(Points to note)

- Ideally, sufficient remuneration to cover personal living expenses would be somewhere between 1.8 and 2.4 million yen per year* or between 150,000 yen and 200,000 yen per month. This recommended amount should be included in research expenses. Payment options may include hourly, monthly, and annual payments, depending on the nature of the work.

  * Sufficient remuneration to cover personal living expenses (somewhere between 1.8 and 2.4 million yen per year)
    Sufficient remuneration to cover personal living expenses is determined to be somewhere between 1.8 and 2.4 million yen per year, in light of the assumption in the 5th Science and Technology Basic Plan that 1.8 million yen per year is needed to cover personal living expenses and also based on the amount of special researcher (DC) incentives paid to the most promising doctoral students in the latter stages of their graduate work, thereby allowing them to focus on research free of financial anxiety.

- The specific amount and period of payment is to be determined by the research institution. These provisions do not preclude the research institution from paying more or less than the amounts stated above.

- If students are hired as RAs or in other assistant roles, the research institute must ensure that students are not overworked. The institute must take all due measures to ensure a balance between their paid work and research and study for their doctoral work.

16. Securing Autonomous Stable Research Environments for Young Researchers

"Research Capabilities Innovations 2019" (released by the Ministry of Education, Culture, Sports, Science and Technology on April 23, 2019) and "Developing science and technology innovation policies to strengthen knowledge-intensive value creation: becoming a world-leading nation by realizing Society 5.0 (interim report released by the Comprehensive Policy Special Committee of the Council for Science and Technology on October 24, 2019) highlight the importance of making the term of specially appointed teachers, postdoctoral researchers, and other defined term posts a minimum of five years, since shorter timeframes may impede career development.

With regard to national university corporations and inter-university research institute corporations, "The guidelines on personnel and remuneration management reforms at national university corporations: establishing attractive personnel and remuneration management to contribute to education and research capabilities" (released by the Ministry of Education, Culture, Sports, Science and Technology on February 25, 2019) states that in order to realize the two viewpoints of development of young teachers and stabilization of their employment, a desirable course of action is to promote system designs that consider the viewpoint of researcher development while maintaining flexibility—for example, providing a definite term of five to 10 years or so for a defined-term job, using expenses with less limitations on their uses, such as indirect expenses and donations.

Thus, if young researchers, such as specially appointed teachers and postdoctoral researchers, are hired under this Program, the research institute should endeavor to ensure, after consulting its personnel and accounting representatives, that their terms will concur with the R&D period and seek to provide a definite term (not less than five years or so), where feasible by making use of indirect and basic expenses available from external funds, donations, and other sources.

17. Support for Securing Diverse Career Path Options for Young Researchers

"The basic policy regarding diverse career path support for young postdoctoral fellows hired with public research funds from the Ministry of Education, Culture, Sports, Science and Technology" (released by the MEXT's Science and Technology Academic Council's Personnel Committee on December 20, 2011) call for public research organizations and representative researchers hiring young postdoctoral fellows with public research funds to commit themselves to provide proactive support in securing diverse career path options in Japan and abroad for young postdoctoral fellows. If the PM selected in this public solicitation hires young researchers, such as specially appointed professors and postdoctoral researchers, using public research funds (competitive research funds and other project research funds, public-solicitation education and research funds for universities), the PM is requested to provide proactive support in securing diverse career path options for such researchers. Using indirect expenses in such efforts should also be considered.

18. Response to the Clinical Research Act

The enactment of the Clinical Research Act on April 1, 2018, will require changes in various actions, including registration in jRCT (Japan Registry of Clinical Trials), a clinical protocol and overview publication system database operated by the Ministry of Health, Labour and Welfare for the implementation of clinical research, and disease reporting. Appropriate action must be taken in compliance with the laws and regulations.

Clinical research projects launched after the enactment of the Clinical Research Act are not to be redundantly registered in the databases of domestic clinical research registration agencies other than jRCT. If any such project is already registered in the databases of any other clinical research registration agencies pursuant to the Ethical Guidelines on Medical Research on Human Subjects, appropriate action must be taken in accordance with laws and regulations.

For more information on the response to the enactment of the Clinical Research Act, refer to the website of the Ministry of Health, Labour and Welfare. *

* Clinical Research Act (website of the Ministry of Health, Labour and Welfare)
https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000163417.html

X. REFERENCES

If you have any questions regarding these application guidelines, inquire via the contact addresses provided in the table below.[1,2] Any changes in the information provided here are to be posted on the AMED website under “Collaborative Calls Information.”[3] Check the website for updates.

Do not contact the PD directly about the details of public solicitations or reviews.

*1 Make inquiries by email, wherever possible (Change the “AT” in the following addresses to @).

*2 Be careful to dial the correct telephone number. Unless otherwise noted, telephone inquiry services are available from 10:00 to 12:00 and from 13:00 to 17:00 on weekdays.

*3 https://www.amed.go.jp/koubo/

Content of inquiry	Contact address
R&D projects being solicited; review; how to fill in proposal documents	AMED Division of Moonshot Reserch and Development, Office of Project Management E-mail: moonshot"AT"amed.go.jp
Misconduct/fraudulent use/fraudulent receipt	AMED Department of Research Integrity and Legal Affairs E-mail: kouseisoudan"AT"amed.go.jp
Management of conflict of interest/research ethics education programs	AMED Department of Research Integrity and Legal Affairs E-mail: kenkyuukousei"AT"amed.go.jp
RIO Network	AMED Department of Research Integ rity and Legal Affairs E-mail: rionetwork"AT"amed.go.jp
Medical IP Desk (Contact point for medical IP consultation)	AMED Division of Intellectual Property E-mail: medicalip"AT"amed.go.jp
Support provided by the AMED Drug Discovery Support Network/Department of Innovative Drug Discovery and Development	AMED Department of Innovative Drug Discovery and Development East Japan Office 8F Muromachi Chibagin Mitsui Bldg, 1-5-5 Nihonbashi-Muromachi, Chuo-ku, Tokyo 103-0022, Japan Tel: +81-3-3516-6181 E-mail: id3navi"AT"amed.go.jp
How to use the e-Rad system	e-Rad Portal Site Help Desk Before telephoning, please check the “Frequently Asked Questions (FAQ)” page. → After checking the FAQ page, log in to e-Rad (https://www.e-rad.go.jp/contact.html) so that you can check the operation manual, then dial: Tel: 0570-066-877 (NAVI-DIAL) or +81-3-6631-0622 (direct line) if the NAVI-DIAL service is unavailable. Operating hours: 9:00‐18:00 (weekdays) *Excludes Saturdays, Sundays, public holidays, or Year-end/New Year holidays (December 29 ‐ January 3)
Bioscience Database	Japan Science and Technology Agency (JST) National Bioscience Database Center (NBDC) Tel: 03-5214-8491 E-mail: nbdc-kikaku"AT"jst.go.jp

XI. Supplementary Matters

1. Conditions for Submitting R&D Proposals for Investigator-initiated Trials and/or Clinical Studies (Including Certain Nonclinical Studies)

AMED promotes research with a view to practical application. In particular, for research undertaking medical investigator-initiated trials or clinical studies with a view to creating innovative drugs or medical devices, or nonclinical studies aimed at conducting such trials/studies,* researchers are required to prepare and submit appropriate materials to AMED at the time of submitting the R&D proposal as well as on the commencement and at each development stage of the investigator-initiated trial or clinical study. The materials that are required to be submitted, centered on the main materials that need to be submitted at the time the research proposal is submitted, are summarized as follows (please refer to the table provided separately). However, the table provided separately may not apply to some research. In this regard, AMED shall consult with PD, PS, and PO of the R&D projects with regard to the respective research content and request the preparation and submission of appropriate materials at an appropriate time.

*"Nonclinical studies" refer mainly to pharmacological tests conducted in or after the final stage of candidate drug selection, toxicity tests, and pharmacokinetic studies.

（１）Schedule (road map)

Please prepare a schedule (road map) enabling understanding of the entire R&D process, from formulation of the R&D proposal to approval of products such as new drugs, medical devices, and regenerative medicine (out-licensing to a company) and/or exits such as the addition of new indications, clearly showing where the proposed research is positioned within this schedule.

（２）Investigator-initiated Trial/Clinical Study Implementation Plan

For development/practical application research aimed at receiving approval for products such as new drugs, medical devices, and regenerative medicine (licensing to businesses) and/or exits such as the addition of new indications (including some nonclinical studies), is most desirable that the Investigator-initiated Trial/Clinical Study Implementation Plan has been formulated at the time the R&D proposal is submitted, and it is required that the relevant plan clearly shows the overall study schedule as well as achievable milestones. Furthermore, a Protocol Concept[1] is required at the time the R&D proposal is submitted, regardless of whether the Investigator-initiated Trial/Clinical Study Implementation Plan has been completed.

1 There are cases in which it may be difficult to submit a completed Investigator-initiated Trial/Clinical Study Implementation Plan when the plan for implementing the investigator-initiated trial or clinical study is at the concept stage amongst researchers or within the research institution. In such cases, researchers must submit a Protocol Concept that includes the following items. For Protocol Concepts, please provide information regarding the purpose of the R&D (including important evaluation items); background to or basis for the study plan (basis for subjects, standard treatments for subjects, and treatment plan formulation); patient selection criteria; measurement of effects and measurement criteria; statistical items (mainly analysis and judgement criteria, computation/basic for setting of target number of cases, registration period, follow-up period); and research implementation system.

（３）Regulatory Science Strategy Consultation etc.

Clinical studies (trials) aimed at applying for approval for creating new drugs must be conducted in accordance with ordinances on Good Clinical Practice (GCP). Even if the research is at the nonclinical study stage, safety testing with a view to the creation of new drugs needs to be implemented after reliability has been assured in accordance with Good Laboratory Practice (GLP). Furthermore, with regard to materials required for applying for approval—including for regenerative medicine products and medical devices—testing must be carried out based on sufficient understanding.

R&D projects moving into the practical application stage (R&D projects that are within the target scope of the "regulatory science strategy consultation" or other PMDA consultation services[2]), are required to undergo "regulatory science strategy consultation" or other consultation services (face-to-face advice) provided by the Pharmaceuticals and Medical Devices Agency (PMDA) as a general rule

in the first or second year[3] after adoption of the R&D project under this program as a condition of adoption. R&D projects that have already undergone face- to-face advice etc. prior to adoption of the R&D project may undergo regulatory science strategy consultation etc. again during the R&D period as necessary. Although it is not compulsory for the R&D project to have undergone face-to-face advice etc. at the time of application to this program, it is desirable that regulatory science strategy consultation be undertaken, and the results of the consultation reflected in the R&D plan.

[2]Please refer to “2. Consultation Categories and Target Scope” in the Implementation Guidelines Regarding Regulatory Science Strategy Consultation (dated March 16, 2017)
[3]R&D projects targeting clinical studies (trials) are required to undergo consultation “prior to the commencement of the clinical trial”.

（４）Involvement of biostatistics specialists/clinical study statisticians/biostatisticians

When conducting an investigator-initiated trial/clinical study, the basis for setting the number of cases to be studied plays an extremely important role in the success of the trial/study. The involvement of biostatisticians is essential for the overall planning of studies and analysis (especially desirable of the biostatistician has experience participating in clinical studies or trials), and it is desirable that the involvement of biostatistics specialists/clinical study statisticians/biostatisticians in the research is stated clearly at the time the application is submitted. Even if the R&D proposal is at the concept stage, information about the involvement of biostatisticians needs to be provided.

（５）Intellectual property officer and strategies leading to intellectual property/achievements

For investigator-initiated trials/clinical studies aimed at receiving approval for products such as new drugs, medical devices, and regenerative medicine (licensing to businesses), information must be provided at the time of R&D proposal submission with regard to the involvement in the R&D of an intellectual property officer (persons responsible for matter related to intellectual property) and strategies leading to intellectual property/achievements
as follows. (In the case that intellectual property is owned by a company, please provide information to the extent possible.)

(a) Status of own technology

・ Has a patent application been submitted? (In the case that a patent application has been submitted, please provide information about the technology content and patent application number, including for joint patents)
・ Is submission of a patent application planned? (What kind of technology/achievements? When is the application to be submitted?)

(b) Status of related technology developed by others (please provide information to the extent possible at the time of R&D proposal submission)

・ Results of surveys of patents acquired by others (please provide survey key words and patent database information)
・ Relationship to the seeds for which the application has been submitted (restricted to cases in which self-generated technology is used)

(c) Policies related to licensing of research achievements to businesses (practical application)

・ Is the research institute already collaborating with a company/business? (If so, please provide information on the intellectual property content and policies regarding future intellectual property utilization)
・ Is the research institute planning to collaborate with a company/business? (What technology/achievements?
When is intellectual propertization to be carried out? How are the technology/achievements to be utilized?)

（６）Status of collaboration with companies/businesses

In obtaining approval for products such as new drugs, medical devices, and regenerative medicine (licensing to businesses), collaboration with companies/businesses is important. In the case that the research institute has licensed trial results to a company/business as at the time of R&D proposal submission, or in the case of business seeds, please provide information regarding the status of collaboration with the company/business, including methods for procuring investigational drugs and obtaining safety information.

（７）Ascertaining and reporting adverse events

Please ensure that when an investigator-initiated trial or clinical study is implemented it obeys all laws/ordinances, ethical guidelines and notifications, try to ascertain any information about adverse events etc. related to the clinical trial or research, and appropriately report any adverse events in line with laws/ordinances etc.

（８）The number of clinical trial plan in jRCT

In order to carry out clinical research, it is necessary to register the clinical research with Japan Registry of Clinical Trials (jRCT) in accordance with the standards for clinical research prescribed under the Clinical Research Act. With regard to R&D proposals that incorporate clinical research, please include the “number of clinical trial plan” issued when registering clinical research plan information with jRCT in the R&D Proposal.

Please note that in the case that the jRCT registration for the proposed project’s clinical research plan has not been completed by the time the R&D proposal is submitted, after the project has been adopted, please report the “number of clinical trial plan” to AMED before the commencement of the relevant clinical research.

Appended Table

Summary of Submission Timing and Content of All Types of Information Material Required at AMED (Drugs)

	New drugs, etc.			New indications		Clinical study under ethical guidelines Clinical research under the Clinical Research Act
		Investigator-initiated clinical trial		Investigator-initiated clinical trial		
	Nonclinical study	Phase I (Safety)	From Phase II on	Phase I (Safety)	From Phase II on	
Schedule	When making R&D proposal, submit a schedule indicating the process steps and milestones up to approval.	Same as on the left	Same as on the left	Same as on the left	Same as on the left	When making R&D proposal, submit a schedule indicating the process steps and milestones up to attaining objectives.
Clinical Trial Implementation Plan	When making R&D proposal, submit a protocol concept statement or clearly state submission timing in Milestones.	When making R&D proposal, submit a Clinical Trial Implementation Plan or a a Clinical Trial Implementation Plan Outline, and submit a Clinical Trial Implementation Plan before implementing the trial.	Same as on the left	When making R&D proposal, submit a Clinical Trial Implementation Plan or a a Clinical Trial Implementation Plan Outline, and submit a Clinical Trial Implementation Plan before implementing the trial.	Same as on the left	When making R&D proposal, submit a Clinical Study Implementation Plan or an Implementation Plan Outline, and submit a Clinical Study Implementation Plan before implementing the study.
Regulatory Science Strategy Consultation (Face-to-face advice)	Consultation geared to research phase and content (face-to-face advice) is to be sought as a rule in the first or second year after adoption. It is not essential at the time of application, but it is desirable to have had a consultation. If you have a record of already implemented consultation (in the case of an advance interview, a summary prepared by the academia side is acceptable), then submit it.	Consultation geared to research phase and content (face-to-face advice) is to be sought as a rule after adoption and before clinical trial initiation. It is not essential at the time of application, but it is desirable to have had a consultation. If you have a record of already implemented consultation (in the case of an advance interview, a summary prepared by the academia side is acceptable), then submit it.	Same as on the left	Same as on the left	Same as on the left	-
Main substance of consultation	● Nonclinical study sufficiency ● Quality and standards, specifications of trial drug, etc.	Clinical trial design	● Clinical data package ● Clinical trial design	● Clinical trial design	● Clinical data package ● Clinical trial design	—
Record of involvement of biostatistician recorded in the R&D Proposal	-	Necessary to make note of whether or not there is involvement. If there is involvement, make note of it in a comment regarding clinical trial design. If there is no involvement, make note of the reason there is not.	Same as on the left	Same as on the left	Same as on the left	Same as on the left
Necessity for biostatistician involvement	Not necessarily needed.	Should have involvement in some cases.	Should have involvement.	Should have involvement in some cases.	Should have involvement.	Should have involvement in some cases.
Intellectual property	Make note of status and strategy regarding intellectual property, etc.					Not needed
Items regarding status of intellectual property, etc., recorded in the R&D Proposal	Status of own technology, status of relevant technology belonging to others, policy on corporate out-licensing (practical application) of research results					
Collaboration with corporations	Make note regarding status of collaboration.					
Status of trial drug procurement	Make note regarding status of trial drug (including comparison drugs) procurement.	Same as on the left	Same as on the left	Same as on the left	Same as on the left	—

Summary of Submission Timing and Content of All Types of Information Material Required at AMED (Medical Devices)

	Unapproved medical device (including expanded purpose of use)				Approved medical device (use within scope of approval)
	Nonclinical study	Investigator-initiated clinical trial		Clinical study under ethical guidelines Specified clinical research	Clinical study under ethical guidelines Specified clinical research
		Exploratory clinical trial	Clinical trial (pivotal test)		
Research objectives	● Acquisition of production and marketing approval (including expanded purpose of use)				● Build up new evidence (Establish standard treatment, establish procedure, etc.)
Schedule	When making R&D proposal, submit a schedule indicating the process steps and milestones up to acquisition of approval. (Also make concise note of listing for reimbursement under insurance and establishment as standard treatment.)	Same as on the left	Same as on the left	When making R&D proposal, clearly state how test is positioned and submit a schedule indicating exit strategy (future clinical trial implementation scheduling, corporate collaboration, production and marketing approval, listing for insurance).	When making R&D proposal, submit a schedule indicating how the evidence obtained is to be used together with steps and milestones leading to that use.
Implementation Plan	When making R&D proposal, submit a protocol concept statement or clearly state submission timing in Milestones.	When making R&D proposal, submit a Clinical Trial Implementation Plan or a Clinical Trial Implementation Plan Outline, and submit a Clinical Trial Implementation Plan before implementing the trial.	Same as on the left	When making R&D proposal, submit a Clinical Study Implementation Plan or a Clinical Study Implementation Plan Outline, and submit a Clinical Study Implementation Plan before implementing the study. When making R&D proposal, also submit information materials relating to nonclinical study.	When making R&D proposal, submit a Clinical Study Implementation Plan or a Clinical Study Implementation Plan Outline, and submit a Clinical Study Implementation Plan before implementing the study.
Consultation with regulatory authorities, etc.	Seek PMDA consultation geared to research phase and content in a timely manner. If you have a record of already implemented consultation at the time of application (in the case of an advance interview, a summary prepared by the academia side is acceptable), then submit it.	Same as on the left	Same as on the left	In addition to the left, when consultation with regulatory authorities is underway regarding the following, make a note of the status of consultations. ● Device procurement ● Utilization of advanced medical care system When consultations are underway with committees, etc., within the facility, make a note of the status of those consultations.	When consultation with regulatory authorities is underway regarding the following, make a note of the status of consultations. ● Utilization of advanced medical care system
Main substance of consultation	● Whether clinical trial is needed or not needed ● Nonclinical study sufficiency	● Clinical trial design	● Clinical trial design ● Clinical data package		
Record of involvement of biostatistician recorded in the R&D Proposal	—	Make note as to whether or not there is involvement. If there is involvement, make note of it in a comment regarding clinical trial design. If there is no involvement, make note of the reason there is not.	Same as on the left	Same as on the left	Same as on the left
Necessity for involvement of biostatistician	Not necessarily needed.	Should have involvement in some cases.	Should have involvement.	Should have involvement in some cases.	Should have involvement in some cases.
Intellectual property	Make note of status and strategy regarding intellectual property, etc.				Make note of status of intellectual property, etc., as necessary.
Items relating to status of intellectual property, etc. recorded in the R&D Proposal	Status of own technology, status of relevant technology belonging to others, policy on corporate out-licensing (practical application) of research results				-
Collaboration with corporations	Make note regarding status of collaboration where applicable	Make note regarding the following in the event that collaboration has taken place: ● Whether or not there is a joint research agreement or memorandum ● System for managing safety information ● Response and responsibility in event of malfunction			If there is collaboration, make note of its status.
Status of procurement or provision of trial device	Make note regarding procurement status of trial medical device (including comparison devices).				-

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