Medical Data Scientist Program
Heidelberg Faculty of Medicine

Application Guidelines

(Please be aware, that this English translation is provided solely for your convenience and is in no way binding. The sole binding version of the Faculty's Application Guidelines is the German edition of the "*Bewerbungsrichtlinien*".)

The Medical Data Scientist Programm of the Medical Faculty Heidelberg is a component of its structured Career Development Program. The central goal of the Medical Data Scientist Program is to foster participating scientists' development into group or laboratory leaders in the field of medical research. The program is designed for post-doctoral scientists with above-average qualifications who are applying for a research position in the fields of medical informatics, medical bioinformatics, digitalization in medicine, or the medical data sciences at the Heidelberg Medical Faculty. Admission into the program will take place through a competitive and transparent selection procedure. Participants' research is accompanied by a mandatory curriculum and mentoring program. Participants are awarded a Heidelberg Medical Data Scientist Certificate confirming their completion of the program.

The Medical Faculty will allocate up to four Medical Data Scientist fellowships annually. Funding from the Medical Faculty is provided by funding the participant's position during their protected research period at a clinic or institute of the Heidelberg Faculty of Medicine or the Heidelberg University Hospital.

Program Components

Protected Research Time

The program funds full-time research activity in a research group belonging to the Heidelberg Faculty of Medicine for a duration of no more than three years. During this research activity a specific project is to be carried out. The Medical Faculty of Heidelberg shall fund two years of full-time research, while an additional year of funding must be provided by the hosting clinic or institute.

Remuneration

Program participants will be employed with one of the Heidelberg Faculty of Medicine's clinics or institutes, and will be remunerated from Medical Faculty funds in accordance with the state of Baden-Württemberg's collective bargaining agreement (TV-L). During the three-year participation in the program, the Medical Faculty of Heidelberg shall fund a full-time research position (*100%-Stelle*) for no more than two years. The third year must be funded by the host clinic or institute. Alternatively, the host institute or clinic may fund the first year of the fellowship while the Medical Faculty funds the following two years of the participation in the program.

IMPORTANT: The applicant and host clinic or institute must decide upon a binding payment schedule during the application process and prior to said application's submission. Alteration of the remuneration format subsequent to the start of funding is not permissible (exception: fulfilling of familial obligations).

Commitment from Clinic or Institute

An employment commitment from a host clinic or institute of the Medical Faculty as well as a description of a concrete research project must be submitted as part of the application process. The clinic or institute in question must agree to provide any resources or infrastructure necessary for the completion of the research project. The funding of a third year of protected research by the clinic or institute is mandatory. The term of the respective employment contract must be at least three years at the beginning of the funding.

Career Plan

The application must be submitted with a comprehensive individual career plan drawn up between the applicant and the host clinic or institute. This should contain goals for the candidate's scientific career. The clinics and institutes should be motivated to create attractive and reliable career paths for the applicants. The career plan should also indicate in which accompanying courses the applicant will participate (See Curriculum).

Similarly, ways should be outlined as to how a scientific career can be continued after the funding provided by the Medical Data Scientist Program. The career plan is to be regularly reviewed and updated (see Mentoring).

Accompanying Academic Curriculum

The program includes an accompanying academic curriculum that accommodates the participants' individual needs. Scientific knowledge and skills as well as key qualifications are to be enhanced within the framework of the curriculum. Compulsory and elective modules are offered, and over the duration of the program, at least 30 half-day modules must be completed. Participation in the modules must also be documented.

Compulsory Modules:

- Active participation in the Medical Faculty's two-day Career Development Programm Event at least once during the fellowship (preferably during the second year of the grant)
- Mandatory annual mentoring meeting with the applicant's external mentor
- Active participation in an external conference or congress
- Participation in at least three basic modules of the curriculum

Elective Modules:

Each applicant can select the elective modules most suitable for their own career development from the provided curriculum together with their mentor and, where necessary, with their host clinic or institute.

The applicant's individual selection of modules constitutes part of the personal career plan and must be submitted with their application to the program.

The head of the host clinic or institute must make a binding commitment to actively support the individually agreed upon career plan and to comply with the agreements made therein. This includes regular meetings in which the participant's career plan is discussed and updated.

Mentoring

Fellows are supervised by a faculty member from the clinic or institute in which the research project is conducted. The supervisor must have a habilitation or equivalent research qualification. Additionally, participants are accompanied by a mentor from outside their own department. A discussion with the external mentor must take place at least once a year, the results of which must be recorded in a written protocol.

Application Prerequisites

Prerequisites for applying for the Medical Data Scientist Program include:

- Doctorate or equivalent degree with a grade of at least *magna cum laude*. As a minimum, the dissertation as well as its respective first review (*Votum informativum*) must have already been submitted to the corresponding doctoral office (*Promotionsbüro*). In the event that the prospective candidate's doctorate has yet to be conferred, written confirmation of the doctoral process's current status from the corresponding doctoral office must be submitted.
- Specific research project that is supported by the management of the host clinic or institute and secured by its funding.
- Generally, at least two publications as first author in academic journals (Original publications in peer reviewed journals).

Application

Given the large number of clinics and institutes, it is not possible to maintain a central record of all possible research topics. The search for a research topic and research group is the sole responsibility of the applicant.

Ideally, applications should take place no later than three years after obtaining a doctorate or an equivalent degree.

Please adhere to the application guidelines as well instructions and templates provided at the website for the Dean's Office for Research.

Applications are to be submitted in electronic form as a single PDF file without editing restrictions to the Dean's Office for Research (*Forschungsdekanat*) of the Heidelberg Faculty of Medicine at its Career Development Programm Mailbox: career.development@med.uni-heidelberg.de.

The following documents are to be prepared in Calibri font, font size 11 with 1.15 line spacing.

1. A motivation letter (1-2 pages, DIN A4) signed by the applicant. This letter should include specific reasons for the application as well as the applicant's personal career goals;

2. A career plan (see handout) spanning the time of the participation within the program, normally three years in duration. Both the applicant and the head of the prospective research team agree to the career plan individually and sign it. The career plan must be followed and, wherever necessary, updated for the duration of the fellowship. The career plan must also be signed by the head of the applicant's prospective clinic or institute.

3. Project summary (in German or English): Description of the planned research project (maximum of five pages in length, DIN A4) according to the standard outline: current state of the art, goals, scientific problem, work plan. It should be specified which work will be carried out by the applicant themselves and which work, if any, will be carried out by cooperating partners. Existing preliminary work on the project will be evaluated positively. The proposed

project must be supported by the supervising faculty member in Heidelberg (usually the head of the research group) and cosigned by him or her.

4. Written confirmation of the host clinic or institute to fund one year (usually the third) of the fellowship within the program.

5. Letter of support (see handout) with employment commitment signed by the head of the hosting department (this means, only the person who has the responsibility for the department budget as well as the personnel responsibility is authorized to sign this letter, if applicable it could be co-signed by the research group leader). The letter must confirm that all financial resources and infrastructure necessary for the implementation of the project are available.

6. Signed letter of reference from an external and independent university faculty member

7. Nomination of an independent mentor (the mentor must not belong to the candidate's working group).

8. Curriculum Vitae (see handout)

9. List of publications:
   The listed articles must have been accepted for publication. The following publications will be considered:

   - Published articles

   - Accepted but not yet published articles. In this case a confirmation of the manuscript's acceptance must be submitted.

   In exceptional cases, manuscripts that have not yet been accepted may also be submitted, provided they have already been published on a preprint server.

10. Doctoral Certificate or *Votum Informativum.* In the event that the doctoral procedure has not yet been completed, the applicant must also submit a written disclosure from the doctoral office confirming the status of their doctoral process.

11. Bachelor and Master Certificates

12. Privacy policy (*Datenschutzerklärung*)

13. If applicable, further attachments

The required forms and handouts can be found at: Medizinische Fakultät Heidelberg: Medical Data Scientist Programm (uni-heidelberg.de).

The requested documents must be submitted in the order specified above as a single PDF file **without editing restrictions**, using the templates provided. Incomplete applications and applications which do not meet the aforementioned specifications will not be considered. Submissions received after the application deadline has lapsed will also not be considered. Please do not forget to provide all required signatures.

There is no legal entitlement to admission and funding with the program.