PhD degree programme in Molecular Medicine with associated Master’s degree with honours

The graduate schools at Science and Technology (ST) and Health (HE) have agreed on a joint PhD degree programme in Molecular Medicine, where PhD students are enrolled at either ST or HE, and follow the same course and assessment procedure, leading to the award of a PhD degree in Molecular Medicine.

Admission to the PhD programme in Molecular Medicine

The PhD student must have an educational background in health science or natural science.

The PhD student must also have a Master’s degree or equivalent (5+3 model/ordinary three-year PhD degree programme), Bachelor’s degree (3+5 model/integrated PhD programme) or Bachelor’s degree and the first year of a two-year Master’s degree or equivalent (4+4 model/integrated PhD programme). Reference is also made to the formal level of education.

The project must be linked to Molecular Biology and Health Science. The steering committee or one of its representatives must assess the project and thereby ensure that it has a real Molecular Biology and Health Science connection, and that the demands are complied with regarding the composition of supervisors. This recommendation regarding the project can be made on the basis of a one-page project summary in connection with the application process at ST and HE. In order to be assessed by the steering committee, the application must be marked ‘Molecular Medicine PhD project’.

Supervision

The PhD student’s main supervisor must be employed at the faculty where the student is enrolled. In addition, at least one co-supervisor must be employed at the other faculty.

Great emphasis is placed on the existence of real collaboration between the PhD student, the main supervisor and the co-supervisor. Requirements in this regard can be:

- The project description/PhD plan must be thoroughly prepared and relevant in a Molecular Medicine context, and there must be real involvement of the supervisors.
- The application must describe the division of responsibilities between the supervisors, i.e. different subject areas.

Content of the PhD degree programme

Courses must be taken amounting to 30 ECTS credits. Courses both in Denmark and abroad must be at PhD level and be relevant for the PhD project. The steering committee suggests the following framework for the offer of courses:

Course:
- HE introductory course: The introductory course consists of three days altogether – one day of general introduction and two days of subject-specific categories. Students get 1.6 ECTS credits for the academic part alone (the programme for both parts is attached).
- Courses in transferable skills, possibly 10 ECTS credits.
• Optional series of seminars/courses at ST and HE, including external courses. PhD students taking Molecular Medicine are given priority at internal courses and seminars, including students from another faculty.
• Option of taking part in the PhD Day arranged by HE (1 ECTS credit).
• Possible offer of participation in the Biostatistics course at HE.
• Possibility of approval of relevant Master’s degree courses, possibly BA courses where relevant in the actual PhD programme.

An optional series of seminars amounts to 5 ECTS credits at ST and 2 ECTS credits at HE. The annual meeting in GP10 amounts to 1 ECTS credit. These activities are recommended, with the option of subsequently making them compulsory if the steering committee considers it necessary.

It should be noted that the graduate school holding the course allocates ECTS credits in accordance with current guidelines and that an agreement has been made between Aarhus University (AU), the University of Copenhagen (KU) and the University of Southern Denmark (SDU) regarding approval of each other’s ECTS credits without conversion (as well as internally at AU).

In addition, PhD students must comply with the PhD Executive Order regarding teaching/communication and mobility.

**Joint transition between part A and part B (4+4, 3+5) – Master’s degree with honours**
A joint framework is important for the transition between part A and part B for students enrolled in the 4+4 model.

The part A examination for 3+5 and 4+4 takes place after the sixth year, which provides PhD students with a Master’s degree if they do not go further with a PhD. The part A examination also acts as a halfway evaluation, and is graded passed/failed. If the student does not pass the part A examination, it is possible to rephrase it as a thesis and sit a Master’s examination with marks.

**Practical details in connection with part A examination**

- Six weeks prior to the examination, registration is submitted with details about participation in courses and what course activities are planned.
- A report of max. 30 pages regarding progress in the project is submitted three weeks prior to the oral examination. The report must include:
  - Brief introduction to the field of research
  - Aim of the project
  - Detailed account of the methodologies, results and conclusions reached at the time of the halfway examination.
  - Plan for the remainder of the programme.
  - The report can include excerpts from published/approved articles/manuscripts, but can only fill max. 30 pages.
- A max. two-hour oral examination is held, and must include:
  - A 30–45-minute presentation by the PhD student about the most important elements in the report.
  - A discussion of the report and presentation including the future thematic structure.
A discussion about plans for completing the project and PhD degree programme (course, teaching/communication, mobility, career plan).

The report must serve to document the future of the project at the time of examination. The report does not therefore aim to appear as a small dissertation, mini-thesis or similar.

It should not take more than two to four weeks to prepare for the examination and write the report. If the PhD student has published or submitted a draft of an article, parts of this material can be used in connection with the report. If the PhD student has not published or submitted a draft of an article, the report must be regarded as an opportunity to make a start on the work involved in writing an article and/or parts of the PhD dissertation. It should be noted that research material included in connection with the part A examination can subsequently be used in the dissertation, including published articles.

The assessment committee consists of:

- The main supervisor.
- One internal assessor (at least one of these comes from the programme/Graduate Programme [GP] – steering committee).
- One external assessor (member of the body of external examiners and expert in relevant academic area).

The assessment committee’s task is:

- To assess whether the student has passed or failed the examination. To write a brief statement (one page) in which:
  - The report is described and assessed
  - The oral presentation is assessed, including the discussion and plan for completion of the project.
  - A general assessment is made.
- If the PhD student fails the examination, the following takes place:
  - The PhD student is offered re-examination, which must take place no later than three months after the first halfway examination.
  - If the PhD student does not wish to make use of the offer of re-examination, the enrolment will be terminated at the end of the month in which the halfway examination was held.
  - If the PhD student does not pass the second attempt, the enrolment will be terminated at the end of the month in which the halfway examination was held.  
  - Re-examination does not extend the PhD programme.

Output – what can a PhD in Molecular Medicine be used for, and what distinguishes the degree from other PhD programmes?
Focus on molecular mechanisms in relation to human physiology, disease pathogenesis, and treatment and diagnosis of diseases.

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*if a PhD student fails a qualifying examination for the second time, it is possible to convert this to a Master’s degree examination on the conditions that apply for the degree programme. One examination attempt has subsequently been made.
**Finances and human resources (HR)**

Finances and HR regarding PhD students are located at the graduate school where the student is enrolled. This includes salaries, fellowships, maternity or parental leave, illness and annual grants. The PhD student has rights and obligations in relation to enrolment.

There is no special pool of fellowship grants for students taking a PhD in Molecular Medicine. They must apply to the respective graduate schools during the general rounds of application on an equal footing with other PhD students, and there is therefore no question of a strategic priority. Only the most qualified PhD students will be enrolled.

Information about intakes is gathered on an ongoing basis, including the allocation of fellowships, initially after a period of two years, for example. Efforts are made to achieve a balance in the total expenditure between ST and HE. It is proposed that the vice-deans for talent development at ST and HE assess the financial balance in consultation with the steering committee.

**GP and programme affiliation**

Students taking a PhD in Molecular Medicine are enrolled in the Molecular Biology and Genetics programme at ST. PhD students are enrolled in GP10, Translational Molecular Medicine at HE.

**Other**

Submission of a dissertation, composition of assessment committees, preparation for public oral defences, and awarding a PhD degree comply with the University Act and the PhD Executive Order, as well as the guidelines in force at ST and HE at the time in question.

**Return to a Master’s degree programme**

If students in part A does not wish to continue to part B, they have the option of completing a Master’s degree and writing a Master’s thesis with marks. The students must actively make up their minds about whether they no longer want to be part of the PhD programme, and continue as Master’s degree students instead. The Master’s thesis is written, submitted and defended in accordance with the current guidelines in the academic regulations for the Master’s degree programme in Molecular Medicine 2010.

If students would like to withdraw from the PhD programme following the transition to part B, the report can be converted to a Master’s thesis with marks in accordance with the general conditions in the academic regulations for the Master’s degree programme in Molecular Medicine 2010. In this case, the students must also actively make up their minds about whether they no longer want to be part of the PhD programme, and continue as Master’s degree students instead.