



## **BEST PRACTICE**

### **For obtaining the PhD degree in Experimental Medicine**

#### **Guidelines for PhD candidates and supervisors**

Dear PhD candidates,

These guidelines contain important information about the process of obtaining a PhD degree in Experimental Medicine at our faculty. They are meant to elucidate the regulations for the program, which are also a part of this logbook.

The latest versions of the Regulations, Guidelines and relevant forms can be found on the website of the PhD program.

#### **Coordination office:**

**Geissweg 5, Ground floor, Room 2**

**Tel.: 07071/29-77929**

**Fax: 07071/29-5188**

According to Article 3, paragraph 2 of the German Constitution, men and women are equal before the law; all masculine titles and descriptions of function named in these guidelines apply equally to men and women.

October, 2012

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# 1. The process of obtaining a PhD

## 1.1 Before getting started with your research activities

### Logbook:

Each PhD candidate receives a logbook for personal record keeping of various important information and documents ranging from the PhD project proposal, to the supervision agreement, individual training program, annual progress reports, documentation of attendance of courses, as well as participation at conferences and submission of publications. If necessary, these logbooks can be inspected by the PhD board for the purpose of assessing the progress of the candidates' PhD.

### Supervision agreement:

The collaboration between the PhD candidate and the primary supervisor should be settled in form of a supervision agreement. Therefore, the Faculty of Medicine provides a supervision agreement form template, which can if necessary, be adjusted to the corresponding individual case. The form can be found in this logbook, but can also be obtained in electronic format from the PhD Experimental Medicine website (Form 2: Doctoral Candidate-Advisor Agreement). The agreement must be completed and signed by both, the primary supervisor and PhD candidate. The original is to be kept in the logbook, while a copy should be sent as a single PDF to the coordination office ([phd@med.uni-tuebingen.de](mailto:phd@med.uni-tuebingen.de)) **within the first month after semester start**. Since the signatures are of importance, the completed and signed form has to be scanned, in order to create the PDF file.

It is the supervisor's duty to regularly advise the PhD candidate on the research and the creation of the dissertation. He/she shall make him/herself available for regular meetings to discuss results and work progress.

### Doctoral committee:

The PhD board appoints a doctoral committee for each PhD candidate consisting of the primary supervisor and two additional members with expertise in the area of the dissertation, to guide the PhD candidate in working toward a doctoral degree. This committee oversees the PhD candidate's academic work throughout the program and gives advice to ensure an adequate quality of the doctoral degree. The PhD candidate may make suggestions on possible members of the doctoral committee. The appropriate form can be found in this logbook, but is also available in electronic format on the website (Form 4: Suggestions Members of the Doctoral Committee). The signed original is to be sent to the coordination office ([phd@med.uni-tuebingen.de](mailto:phd@med.uni-tuebingen.de)) **within the first month after semester start**. You will be informed about the appointment on the doctoral committee by the coordination office.

### Consultation of the ethics committee:

PhD candidates whose research involves experiments on human subjects have to take into account the WMA (World Medical Association) Declaration of Helsinki, a statement of ethical principles for medical research involving human subjects.

Before you start with your research you have to establish together with your supervisor, whether according to the rules of professional conduct the ethics committee has to be consulted, or whether such a consultation has already taken place. A consultation of the ethics committee is mandatory in case of biomedical research including experiments on human subjects (including obtained body fluids and -tissue, research to test drugs and medical products – also already approved ones -, experiments on vital tissue) as well as epidemiological research involving personal patient data. Generally, the responsible ethics committee is the one of the Faculty of Medicine and the University Hospital. The latter also decides upon the recognition of the vote from an ethics committee beyond the scope of the chamber legislation of Baden-Württemberg. The vote of the ethics committee has to be obtained prior to begin of research, and start of

scientific research is not permitted before the consultation of the ethics committee has taken place. The ethics committee does not comment on already conducted scientific research.

### **Experiments on laboratory animals:**

Experiments using laboratory animals have to be approved by the regional council prior to the start of research. Please ask your supervisor whether such an approval has already been obtained. Information on the necessary procedures can be obtained from the department for animal protection, veterinary service and laboratory animal science of the University of Tübingen (<http://www.medizin.uni-tuebingen.de/tierschutz/>).

### **Statistical consulting:**

The Department for Medical Biometry supports members of the Medical Faculty at the planning and evaluation of laboratory- and animal experiments as well as of clinical and epidemiological studies. The consultation is free of charge. The application is to be made via <http://www.uni-tuebingen.de/biometry/>. This consult should take place already in the planning stage of the research project, so that the necessary number of subjects, laboratory animals or repetition of experiments can be determined in due time.

### **Good scientific practice:**

During their PhD all PhD candidates are obliged to acknowledge and take into account the principles of good scientific practice (see Appendix regulations and [http://www.dfg.de/download/pdf/dfg\\_im\\_profil/redden\\_stellungnahmen/download/empfehlung\\_wiss\\_praxis\\_0198.pdf](http://www.dfg.de/download/pdf/dfg_im_profil/redden_stellungnahmen/download/empfehlung_wiss_praxis_0198.pdf))

**It is important to record all experiments and calculations in a bound lab-book (with pre-printed page numbers), so that the results are comprehensible. All lab-books, protocols and original data must be stored at the institution where the data was generated (in general for a minimum of 10 years).**

### **Confidentiality:**

Data from the clinic or research institutes that the PhD candidate has at one's disposal for the purpose of pursuing his PhD or has gained access to via meetings and seminars have to be treated confidentially. This is applicable for patient data as well as for research concepts and results from other members of the working group.

### **Active participation at scientific events:**

The scientific discussion and exchange of scientific knowledge represents an essential part of good scientific practice and is very important for the education of young scientists. The supervisor and the head of the research group have to make sure that PhD candidates can participate at scientific events within and beyond the own research group.

## **1.2 Training program**

In consultation with their doctoral committees, PhD candidates shall develop an individual study program in the framework of the curriculum (see module handbook). The minimum number of ECTS points for all coursework (lectures, seminars and laboratory courses or practicals) during the PhD program is 30, six of which should be completed in the form of laboratory courses or practicals. PhD candidates are encouraged to acquire additional interdisciplinary and professional qualifications during their PhD studies, for example by taking advantage of activities offered by the Graduate Academy.

The individual training plan is to be submitted to the PhD board at the latest **12 months after admission to the PhD program**. The appropriate form can be found in this logbook, but is also available in electronic format on the website (Form 6: Individual Training Plan). The signed original is to be sent to the coordination office ([phd@med.uni-tuebingen.de](mailto:phd@med.uni-tuebingen.de)), and a copy to be kept in the logbook.

Although the training program form can be submitted to the coordination office as late as 12 months after admission, the PhD candidate can participate in the compulsory and elective modules right away. Only for the participation in courses that are not offered by the PhD program itself, permission should be obtained via the coordination office. Updates of the training plan are possible on request of the PhD candidate and must be submitted to the coordination office.

Before the beginning of each semester the PhD candidate should provide an overview of courses that he intends to take in the current semester (Form 7: Semester training plan)

The documentation on participation at various courses should be kept in the logbook. After completion of a module or module element, please request the signature from the module coordinator and inform the coordination office about the earned credits.

### 1.3 Progress review process and annual progress reports

All candidates in the PhD Program Experimental Medicine are evaluated annually. The purpose of this review is to provide an opportunity for PhD candidates to reflect on, discuss and document the work that has been undertaken in the period under review and to set objectives for the next period.

The four main aims of the progress review are:

- to encourage discussion between the PhD candidate and the doctoral committee
- to monitor progress, highlight achievements, identify problems and set goals
- to promote self-reflection in the PhD candidate around their personal and career development as a researcher
- to enable timely completion of the thesis

#### Prior to the progress review meeting

The PhD candidate must meet with his primary supervisor(s) and additional doctoral committee members at least once per year in a joint meeting to discuss the **annual progress report**. The first meeting should take place at the latest **12 months after admission to the PhD program**. PhD candidates should contact members of their committee at least 4 weeks in advance of the report deadline and arrange for a meeting time. At least two weeks prior to the scheduled progress review meeting the PhD candidate should submit to his doctoral committee an extensive written progress report (5 - 10 pages in form of a pdf), summarizing progress to date. The annual progress report shall include:

- a) **title of the thesis and name of the PhD candidate**
- b) updated **introduction** describing the scientific background of the research project
- c) **results** gathered so far
- d) **deviations from original research plan** (if applicable, please briefly explain why deviations became necessary and what are your alternative strategies)
- e) an updated **plan for future work and timeline**, including completion of the thesis
- f) **training program** (overview plan of courses taken and planned; including credits)

This document will then form the basis for discussion at the meeting. If results have already been prepared for publication, *chapter c* of the written report can of course refer to a manuscript or publication if the individual contribution of the PhD candidate is made obvious.

#### At progress review meeting

During the meeting itself, the PhD candidate should present a summary of his written report to the doctoral committee in form of a short, (max. 30 min) informative presentation including research progress to date, work remaining to complete the degree, and plans for completing the research degree. After the presentation, the PhD candidate and the doctoral committee members fill in jointly the annual progress evaluation form, which can be found in this logbook, but is also available in electronic format on the website (Form 8: Annual progress evaluation). The signed original is to be kept in the logbook, while a copy (in pdf) should be sent together with the PhD candidate's written proposal (in pdf) to the coordination office (phd@med.uni-tuebingen.de). During the first review meeting also the PhD candidate's training program is to be discussed (see Chapter 1.2).

## 1.4 Submission of doctoral dissertation and registration for the PhD examination / defense

The application for admission to and registration for the PhD examination may be submitted to the PhD board (via the coordination office) as soon as the doctoral committee establishes that the practical scientific work has been completed.

### The following documents have to be handed in to the coordination office:

- application form for admission to the PhD examination including the declarations listed in Section 8 of the PhD regulations (form available from download area website PhD coordination office)
- evidence of the regular and successful participation in the agreed-upon compulsory and elective courses (at least 30 credit points)
- for students of medicine or dentistry registered as pursuing a double degree, proof of passing the *Ärztliche Prüfung* or the *Zahnärztliche Prüfung*
- three printed copies of the dissertation, unpunched and in a sturdy clip folder
- a curriculum vitae in tabular form (CV), duly signed, with details of the professional and scientific career of the applicant (i.e. academic education, examinations and academic degree)
- Proof of good conduct (Führungszeugnis Belegart 0; not older than 6 months); alternatively the license to practice medicine can be handed in (Approbationsurkunde; not older than 3 months, notarized copy)
- Two copies of a page-long thesis summary (1 copy signed by the supervisor and 1 unsigned copy)
- Declaration of contribution of others (if applicable)

### Specified format of the dissertation to be evaluated:

A detailed recommendation on the structure of the dissertation is given in Chapter 2.

The title page and Page 2 of the dissertation must follow the template provided by the PhD board (see Appendix 2 and 3).

The copies of the dissertation to be evaluated, i.e. evaluation copies have to be printed according to the following instructions:

- Format: DIN A4
- Single page print layout
- Line spacing: 1 ½ - lines; References single line spacing
- Font: Arial or Times New Roman 12
- Legends may be printed using single line spacing and small font
- Margins: 3 cm (on all sides of the page)
- The dissertation must be written in English

The final copies which at the end will be handed over to the University library (see 1.7), have to be identical to the evaluation copies handed in at the coordination office; the only thing that differs is the print format. Also the color design has to be the same. Please keep this in mind when creating figures and tables, as the number of color pages can substantially increase the printing costs.

## 1.5 Review and evaluation of the dissertation

Once the coordination office receives all the required documents, the Chairperson of the PhD board appoints two reviewers for the evaluation of the dissertation, who should submit their reports to the coordination office within two months of receiving the dissertation. If the reviewers give the dissertation different grades and are unable to reach a compromise, the PhD board shall

appoint another reviewer. An additional review is also necessary in case the grade “summa cum laude” is awarded.

## 1.6 Oral examination / defense

The defense takes the form of an oral examination, which consists of a 30-minutes oral presentation of the dissertation by the PhD candidate in front of the examination committee followed by a discussion of topics and methods in connection with the PhD candidate’s dissertation and covering fundamental problems of the subject area. The discussion shall not last longer than 60 minutes. The defense shall take place within three months of receipt of the last review.

The examination committee is appointed by the PhD board and consists of five examiners, generally including the primary supervisor, the other two members of the doctoral committee and two additional examiners.

After the PhD candidate has successfully passed the oral examination the Chairperson of the PhD board determines the overall grade. The latter is calculated as the average grade of the grade for the dissertation and the grade for the oral examination; the grade for the dissertation counts double.

## 1.7 Publication of the dissertation

After successfully defending the thesis, the coordination office issues a “print approval”. Since minor changes might be requested, the PhD candidate should only print the mandatory copies of the dissertation after such an approval has been granted. Except for the minor changes, the printed version must not deviate from the version of the evaluation copies handed in at the coordination office.

As a rule 30 mandatory copies have to be handed in at the Tuebingen University Library (Dissertationsstelle: Raum H 236, Wilhelmstr. 32, 72074 Tübingen).

The **mandatory copies** have to be printed in **DIN A5 format with two-sided print**. The structure of the single pages (margins, font, line spacing etc.) corresponds to the layout of the evaluation copies (see 1.4). Hence, the thesis does not to be reformatted before the final printing.

The title page will be printed on the outer cardboard cover, as well as on the first page of the dissertation. Compulsory templates for the title page and Page 2 can be found in the Appendices 1 and 2.

Upon receipt of your mandatory copies, the University Library will issue a written confirmation of receipt, which should be handed in at the coordination office.

If the PhD thesis is published by a commercial publisher, only four mandatory copies have to be handed in at the library. Four copies are also sufficient if all the scientific results have been published in form of scientific articles. However, in that case a request for reducing the number of mandatory copies has to be filed at the coordination office, containing a list and copies of publications, as well as a confirmation from the primary supervisor that all the results of the thesis have been published in the listed articles. The approval of the coordination office has to be handed in at the library together with the mandatory copies.

The publication and distribution of the thesis can also be fulfilled by submitting an electronic version of the dissertation, which format and electronic data media have to correspond to the guidelines of the Tübingen University Library (TOBIAS-lib). The thesis will then be saved on the publication-server of the University Library and is freely accessible via internet. In this case, only two mandatory printed copies have to be handed in at the library, since the German national

library does no longer require printed copies if electronic versions have been submitted. The PhD candidate has to declare that the electronic and the printed copies of the thesis are identical (Übereinstimmungserklärung der UB Tübingen: [http://tobias-lib.uni-tuebingen.de/doku/lizenzen/ubt\\_uebereinst.pdf](http://tobias-lib.uni-tuebingen.de/doku/lizenzen/ubt_uebereinst.pdf)).

The PhD candidate should make the decision whether to publish the thesis on the publication-server together with his/her supervisor, since the “online” publication could have relevant copyright consequences in case of a later publication of the data in a scientific journal. If the results or a part of them have already been published in a scientific journal, the issue of making the thesis available on the server has to be resolved with the publisher of the journal.

Further information, especially regarding online-publication of the thesis on the server of the University of Tübingen (TOBIAS-lib) can be found on the internet pages of the University library (<http://www.ub.uni-tuebingen.de/lernen-lehren-forschen/abgabe-von-dissertationen.html>). Additional information regarding printed and electronic versions of the dissertation can also be obtained from staff members of the University library.

Please be prepared to leave the two copies used for the evaluation with the reviewers, if they express the wish to keep them.

## 1.8 Conferral of the academic degree

After the PhD program has been successfully completed and the mandatory copies of the dissertation have been submitted, the Faculty of Medicine of the Eberhard Karls Universität Tübingen confers the academic degree “Doctor of Philosophy” (PhD) on the PhD candidate. A diploma in English will be issued confirming the conferral of the degree. The diploma can be collected in person at the coordination office. Alternatively, it can be sent to the PhD candidate by registered letter. Also, the three copies of your dissertation that you handed in at the coordination office for evaluation can be collected either by the PhD candidate him/herself or by an authorized representative of the PhD candidate.

The conferral carries with it the right to use the academic title PhD.

## 2. Layout of the dissertation

With the scientific work submitted in manuscript form (dissertation) the PhD candidate must demonstrate his ability to perform scientific work independently. The PhD candidate must present his own research results in the appropriate form and breadth. Scientific progress must be recognizable, and the most important results of the work should be published or accepted for publication in the form of one or more original articles in high-ranking, English-language scientific journals.

As a rule, a thesis should range in length from a minimum of 50 to 90 pages, although depending on the area of research, the maximum number of pages can be exceeded. This section provides insight in the composition and structure of a dissertation. According to the doctoral regulations, a dissertation can have either of the following forms:

- Monography (2.1): a classical dissertation comprised of a single, coherent description of research work and results.
- Cumulative dissertation (2.2): a dissertation comprised of individual papers which are collectively equivalent to a monography.

The formal guidelines for the submission and print of the thesis can be found in section 1.



## 2.1 The structure of a classical dissertation

### Title page

#### Reverse side of the title page / Page 2

Dean: Professor Dr. I. B. Autenrieth

First reviewer:

Second reviewer: (names will be filled in after the evaluation)

**Page 3: Dedication** (optional, however it is possible to insert a dedication only on page 3)

### Table of contents

Table of contents including appropriate page numbers.

### List of abbreviations

In this section all abbreviations used in the dissertation are listed in alphabetical order.

### 1. Introduction

A concise review of the research topic (with reference to the relevant literature) placing the goals of the project in context. At the end of the Introduction a precise formulation of the research question is to be found.

### 2. Materials and Methods

Depending on the area of research: Material used (patient samples, laboratory animals, cell lines, chemicals), structure and protocol of the study, experimental procedures, calculations, statistical analysis, etc.. The methods should be described conclusively for the information of the reviewer and the reader.

### 3. Results

This section represents the main part of the dissertation, which should encompass 30 to 50% of the thesis. Presentation of own scientific results in text and supported by figures and tables. At the end of the results section a summary of the main findings can be included. The results should be explained in a discussion- and reference-free manner.

### 4. Discussion

discussion/interpretation of own results in the light of current knowledge and literature. The discussion should be subdivided in single discussion points. At the end of the Discussion: clear conclusions that can be made based on the scientific work performed.

### 5. Summary (1 - 2 pages)

A summary of the complete work should consist of a concise recapitulation of the objectives, i.e. research questions, methods used, results obtained and main points of discussion, conclusions and possible future research objectives.

### 6. German summary

All dissertations written in English have to include an additional German summary.

### 7. Bibliography / List of references

See Section 2.3.2

### 8. Publications (if applicable)

Here all the publications that emerged from the dissertation should be listed. Please list only articles that have already been published or have been accepted for publication, including their complete citation (see section: Organization of bibliography). Additional articles from the PhD candidate that are not directly related to the thesis should not be listed here. They, however, may be mentioned in the CV.

Example: Parts of this thesis have been published in form of the following scientific articles:  
 Authors – Title – Journal – Year – Volume – Pages  
 Authors – Title – Journal – Year – Volume – Pages

Articles in preparation or already submitted manuscripts related to the thesis can be mentioned in an accompanying letter when submitting the thesis – but should not be mentioned in the dissertation itself.

### **Declaration of PhD candidate's own contribution (if applicable)**

In case the data described in the thesis has been gathered in joint effort with other researchers, it is advisable to include also a declaration of the PhD candidate's own contribution (compare to section 2.4).

**Acknowledgments** (optional; last but one page)

## **2.2 The structure of a cumulative dissertation**

### **2.2.1 Prerequisites and Format**

A cumulative dissertation consisting of several publications written and authored by the PhD candidate and which have been accepted for publication in refereed academic journals may be submitted in place of a classical dissertation (see section 7(6) of the Regulations of the PhD Program in Experimental Medicine). However, they have to be approved by the PhD board. Therefore, beforehand the PhD candidate has to submit a formal request for a cumulative dissertations including:

- cover letter to the PhD board, stating how the papers contribute to your research project and the signed by the primary supervisor and PhD candidate
- list of papers which are planned to include in the thesis with the corresponding impact factors
- print outs of publications
- CV (including all the degrees obtained by the PhD candidate)
- full list of publications of the candidate
- statement of contribution of all authors
- consent of all authors with the statement of contributions (signed on the statement letter or okay send by e-mail)

In case a publication with several authors is to be included, the PhD candidate's own contributions have to be clearly specified. The latter have to be substantial enough to meet the requirements of a dissertation.

### **Publications to be included have to fulfil the following:**

- are published or accepted for publication (otherwise a classical dissertation has to be submitted)
- contribute to complete and conclusive concept (publications related to specific research question)
- are independently written by the candidate, who usually should be the first author (the PhD candidate's own contribution must be clearly recognizable)

### **Format:**

- Submission as a dissertation in which the publications are included as chapters, in accordance with paragraphs 7(6) and 12 of the regulations.
- The thesis must include, in addition to the publications, an Introduction, precise description of the PhD candidate's individual research objectives, and a general discussion and summary. In case of several authors contributing to a publication, the

thesis must include a statement of contribution of others, based on which the contribution of each author, especially of the PhD candidate, is evident.

## 2.2.2 Structure of a cumulative dissertation

### Title page

#### Reverse side of the title page / Page 2

Dean: Professor Dr. I. B. Autenrieth

First reviewer:

Second reviewer: (names will be filled in after the evaluation)

**Page 3: Dedications** (optional, however it is possible to insert a dedication only on page 3)

### Table of contents with appropriate page numbers

#### 1. Introduction, Aims and objectives of the thesis (in general 8 - 15 pages)

A concise review of the research topic (with reference to the relevant literature) placing the goals of the project in context. At the end of the Introduction a precise formulation of the research question is to be found.

- if the thesis includes several publications with different topics, a complete and conclusive concept and research question of the thesis must be evident.

- if a publication with several co-authors is to be included, the research question of the PhD candidate, which might represent only a part of the publication, has to be described in detail.

#### 2. Results and discussion

##### 2.1 [Title of publication (authors, published in...)]

At the beginning of a chapter all the authors, as well as all the details concerning the publication have to be stated (Journal, volume, pages, year). The publications can be included as reprints or other print format. If manuscripts are to be used, special care should be taken when assigning figures and tables to appropriate chapters.

##### 2.2 [Title of publication (authors, published in...)]

Further publications as further chapters.

##### 2.3 [Title of publication (authors, published in...)]

Further publications as further chapters.

##### 2.4 [Title]

If necessary, also unpublished data related to the research question can be included in form of a chapter. If several people were engaged in generating the data, they have to be listed as co-authors at the beginning of the chapter, which again must include a statement of contribution of others.

#### 3. Discussion (in general 8-15 pages)

Discussion/interpretation of own results in the light of current knowledge and literature. The discussion should be subdivided in single discussion points. At the end, the discussion should include clear conclusions that can be made based on the scientific work performed.

#### 4. Summary (1 - 2 pages)

A summary of the complete work should consist of a concise recapitulation of the objectives, i.e. research questions, methods used, results obtained and main points of discussion, conclusions and possible future research objectives.

#### 6. German summary

All dissertations written in English have to include an additional German summary.

#### 5. Bibliography / List of References

List of all references used (in included publications + Introduction + Discussion) in alphabetical order (see section 2.3.2).

### **7. Declaration of contribution of others**

If the publications/manuscripts are the result of a joint effort of several authors, the names of all the co-authors and their contributions to the joint work have to be clearly stated in this section. In addition, the nature and extent of the PhD candidate's intellectual input has to be clearly identified – per publication / chapter, short content-related description of the tasks performed by the PhD candidate. The individual performance of the doctoral candidate has to be evident (compare with section 2.4)

### **Acknowledgments (optional)**

#### **Important:**

**The pages of the dissertation have to be numbered consecutively (even if reprints from Journals have been used).**

## **2.3 Additional information regarding the dissertation**

### **2.3.1 Title page**

A mandatory sample page for the title page and for Page 2 can be found in **Appendices 1 and 2**. Please adhere strictly to the given template when creating these two pages.

We will inform you about the names of the second (and if necessary the third reviewer) once permission for the thesis to be printed is granted.

### **2.3.2 How to cite correctly**

Quotations and citations within the dissertation have to be clearly marked.

Adopting whole text passages from other publications should be avoided. By writing the thesis the PhD candidate proves that he is able to formulate relevant research questions in an independent manner. Furthermore, he is capable of contributing to the scientific field by generating his own ideas.

An exception is the adoption of already published texts, which were written by the PhD candidate himself. Incorporation of such text passages is of course allowed. Nevertheless, due to copyright, these passages have to be clearly labeled (as citations referring to the original publication). In addition, in the declaration of contribution of others the nature and extent of the intellectual input by the PhD candidate and any co-authors has to be clearly stated. Also, own figures pertaining to an already published article have to contain a note stating where the figure was originally published.

### **2.3.3 Figures and tables**

The figures and tables with appropriate labels and legends have to be comprehensive self-explanatory, so that even a reader that is not familiar with the specific chapters of the thesis can understand them.

#### **Figures:**

All figures should be numbered consecutively. The number, label and legend of the figure have to be placed below the figure. The figure legend should contain a short description of the data collection, e.g. information on the experimental setup and reagents; subjects/cell lines/laboratory animals; the type of measured values (means with standard deviation, sample size etc.). Furthermore, all abbreviations and signs of the figure have to be explained. Axes should be clearly labeled and units stated. Figures containing microscopic images have to contain scale bars, which length should be given in the legend.

#### **Tables:**

All tables should be numbered consecutively. The number, label and if necessary the legend of the table should be placed above the table. The legend should contain all information necessary for understanding the table.

### 2.3.4 Organization of the bibliography / List of references

It is recommended to use standard software tools for managing bibliographies. It is important, that the bibliography / list of references is structured uniformly. All citations have to be complete, i.e. declaring the author(s) and all the co-authors, year of publication, title, journal, volume, page numbers (first and last page number).

The name of the journals can be abbreviated only according to the official abbreviations as listed in the Pubmed database (<http://www.ncbi.nlm.nih.gov/pubmed>).

The bibliography should be organized numerically or alphabetically. In case of alphabetical organization, the reference list should be ordered alphabetically by author family name, where the initials follow the family name. References containing multiple identical last names are arranged by the initials. Entries by the same single or multiple authors are arranged by year of publication, the earliest first. References by the same author (or by the same two or more authors in the same order) with the same publication date are arranged alphabetically by the first significant word of the title. Lower case letters - a, b, c, etc are placed immediately after the year. References with the same first author and different second or third author are arranged alphabetically by the surname of the second author, or if the same, third, and so on.

In text citations should be presented in a consistent style throughout a document. They should include the author's family name (no initials) and the year of publication. When citing a publication with more than two authors, the abbreviation et al. should be used [e.g. (Meier 2005), (Meier and Müller 2006), (Meier et al. 2007)].

In case of especially extensive literature it is recommended to use the numerical organization of the bibliography. In the latter, the citations are numbered consecutively as they appear in the text. In text citations in this case include numbers in brackets, e.g. (4), (3,7).

#### Bibliography examples:

##### Journals:

Burns DL (2003) Type IV transporters of pathogenic bacteria. *Curr Opin Microbiol* 6: 29-34.

El Tahir Y and Skurnik M (2001) YadA, the multifaceted *Yersinia* adhesin. *Int J Med Microbiol* 291: 209-218.

Odenbreit S, Puls J, Sedlmeier B, Gerland E, Fischer W and Haas R (2000) Translocation of *Helicobacter pylori* CagA into gastric epithelial cells by type IV secretion. *Science* 287: 1497-1500.

##### Books:

Information about the book appears in the following order: Author(s), year of publication, title of book or chapter, page number(s) if applicable, editor(s), publisher, place of publication.

##### Thesis:

e.g. Mustermann A (1988) Title. Master Thesis, Universität Tübingen

e.g. Mustermann B (1988) Titel. Medizinische Dissertationsschrift, Universität Tübingen

##### Unpublished material or personal communications:

Someone else's unpublished material or personal communications can be mentioned in the thesis, if the relevant persons have given consent. They will be mentioned in the text, but not in the list of references. They can be cited as follows:

e.g. (M. Meier, personal communication)

(M. Meier, A. Müller, personal communication)

**Unpublished data generated by the PhD candidate:**

Own results, which have already been accepted for publication should be cited as follows:

e.g. Schmitt A, Müller A, Meier M (2009) Title. Journal (accepted for publication)

The statement "in print" without additional information about the journal or publisher is not acceptable.

Articles "in preparation" and information from the PhD candidate's manuscripts can be cited in text as unpublished results (see above, with consent of co-authors), but should not be listed in the bibliography.

**2.4 Declaration of contribution of others**

According to section 7 of the Regulations a declaration of contribution of others has to be handed in, if parts of the dissertation represent a part of one or more joint studies/publications. A prerequisite for including publications (that have either already been published or accepted for publication) with several authors in the thesis, is a clearly specification of the PhD candidate's own contributions. The latter have to be substantial enough to meet the requirements of a dissertation. By writing a dissertation, the PhD candidate must demonstrate his ability to perform scientific work independently. The PhD candidate must present his own research results in the appropriate form and breadth.

The purpose of the declaration of contribution of others is a precise description of the PhD candidate's contribution to a joint research project, clearly identifying his individual performance.

**How to write a declaration of contribution of others**

In the declaration of contribution of others the names of the PhD candidate and all the co-authors have to be stated and the nature and extent of the intellectual input by the PhD candidate and any co-authors has to be clearly identified. Depending on the topic of the dissertation the following points should be elucidated:

- who designed the study?
- Who performed which experiment and/or evaluated the results?
- Who performed the data-search?
- Who provided or gave access to the data?
- Who supervised the study?
- Who wrote the publication?

If more publications are included in the thesis, the points mentioned above have to be elucidated for each publication separately.

Examples of a declaration of contribution of others:

**a) Itemization by figures:**

Ms Maier has performed the experiments shown in Figure 1, 2a, 3, 4a, 4b and 5. She contributed to the design of the study and wrote the manuscript.

Mr Müller provided the data for Figure 2b.

Dr. Schmidt performed the experiments shown in Figure 4c and 4d.

Professor Schneider contributed to the design of the study, supervised the study and edited the manuscript.

**b) Itemization by type of experiment:**

Ms Maier isolated the cells and performed experiments involving cell-culture (ELISA, immunocytochemistry etc.) and histology. Dr. Müller gave access to patient data. Dr. Schmidt performed the immunization of mice. Professor Schneider contributed to the design of the study, supervised the study and edited the manuscript.

**Where to submit the declaration of contribution of others?**

The declaration of contribution of others is part of the dissertation. Therefore it has to be included in the thesis as a separate chapter. In general, it can be found at the end of the dissertation between the Summary and the Acknowledgments. Additionally, it can be also be printed once more separately and signed by all the co-authors submitted to the coordination office.

Furthermore, the PhD candidate will have to hand in at the coordination office the co-authors' consent that they agree with using the publication for the dissertation and with the declaration of their contribution to the publication. Additionally, the authors' consent can also be printed once more separately and can, signed by all the co-authors (if possible), be handed in at the coordination office. The co-authors' consent is not part of the dissertation.

**3. Recommended literature**

Gosling, P., Noordam, B. (2010). *Mastering your PhD: Survival and Success in the Doctoral Years and Beyond*. Heidelberg: Springer.

Appendix 1

Sample Title Page of a Dissertation

**Title of the thesis**

Arial 16, single-line

**Thesis submitted as requirement to fulfill the degree**

**„Doctor of Philosophy“ (Ph.D.)**

Arial 14, single-line

**at the  
Faculty of Medicine  
Eberhard Karls University  
Tübingen**

**by**

**First name, Surname**

Please list all first names and  
maiden name

**from**

**Place of birth**

If not German, please also  
indicate country of birth

**Year of graduation**



**Appendix 2**

**Sample Page 2 of a Dissertation**

Dean:

Professor Dr. F. Surname

1. Reviewer:

Privatdozent Dr. F. Surname

2. Reviewer:

Professor Dr. F. Surname