Wie schreibe ich einen Forschungsantrag
How to write a protocol

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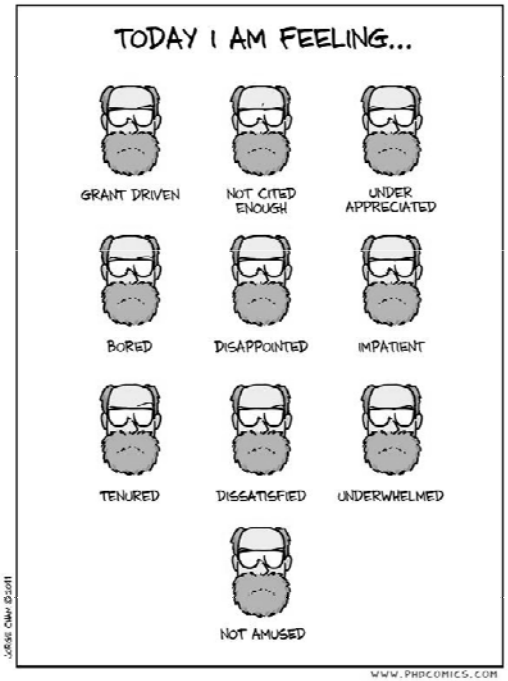
http://www.skillsandethics.org/about/

After attending this course you should …

- Have an idea why grants are written
- Know which information you should have before starting
- Know the development process of a grant
- Be able to start …



Frame of mind

Preparing a grant protocol…

allows you to focus on something beautiful: your future

gives you the chance to get feedback from collegues and reviewers

provides you with text for future publications

is an opportunity

Outline

- Developing the concept: ask the right question
- Who is going to pay? The grant agencies
- Ensure collaboration and support
- Presentation of the proposal
- Discuss your prior work/Pilot study?
- Technical questions: Preparing, submitting, responding

1. Developing the concept: ask the right question

- Is the concept strong enough?
- Does the study fill a gap in knowledge?
- Is it important? (to whom?)
  - Burden of illness
  - The research community
  - Costs of research vs. Benefits
  - Research fashion

2. Who is going to pay? Types of grant agencies

- Local, community, intramural
- Industry, pharmaceutical companies
- Foundations
- National organizations
- International organizations

2. Who is going to pay? The grant agencies

- http://www.foerderdatenbank.de/Foerder-DB/Navigation/Foerderrecherche/inhaltsverzeichnis.html
- http://www.dfg.de/foerderung/programme/index.html
- http://www.bmbf.de/de/1398.php
- http://www.stifterverband.org/stiftungen_und_stifter/stiftungen_suche/index.html
- http://cordis.europa.eu/fp7/dc/index.cfm
- http://ec.europa.eu/research/participants/portal/page/calls
- http://grants.nih.gov/grants/funding/funding_program.htm

More about funding sources

- Objectives of the funding agency?
- Instructions of the funding agency?
- Communicate with program staff:
  - Topic relevant to the agency?
  - Instructions for grant application
  - Evaluation criteria
  - Percentage of funded proposals
  - Level of funding, maximum grant sum
  - Two-level submission? Screening procedure? Letter of intent necessary?

3. Ensure collaboration and support

- Inform supervisor, chair of department, contact person of institution
- Finance?
- Secretary?
- Someone to read your proposal and give advice?
- Collaborators you want to involve?
- Do you need letters of intent? Statements from the ethics review board?

4. Presentation of the proposal: outline

- Title: a statement of your long term goals
- Abstract: simple, accurate, interesting, contains key words
- Research plan
  - Objectives (5%)
  - Background & Significance (10-15%)
  - Pilot Data
  - Methods/Approach (55-60%)
- Budget

4. Presentation of the proposal: Background

- We have a problem
- It is an important problem
- Here is what has been done to address the problem
- Here is the key issue that remains unanswered
- This is our objective

Fear of heights is considered a variant of specific phobias according to the Diagnostic and Statistical Manual of Mental Disorders [1]. A prospective study reported the prevalence of fear of heights to be 4.9% [2]. There is, however, a continuum extending from acrophobia to stimulus-dependent height intolerance (also called height vertigo), which does not fulfill the diagnostic criteria of a specific phobia [3]. The prevalence of this individual susceptibility has not yet been determined, although its disabling impact on daily life and sport activities is obviously

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4. Presentation of the proposal: Objectives

- Most important section!
- Well focused, fully conceptualized, realistic
- Not overly ambitious

"The proposed study will test the hypothesis that the **efficacy for reducing illicit drug use and improving buprenorphine adherence** of physician management (PM) plus cognitive-behavior therapy (CBT) is greater than PM alone during the initial 12 weeks of maintenance treatment, and during 12 weeks of followup."

- Write the specific aims

Inouye SK, Fiellin F. *2005*

… specific aims …

4. Presentation of the proposal: Methods

- At least 50% of page allowance
- Specific sections
  - Design and setting: Methods for randomization, representative sample enrolled? How ist bias handled if not?
  - Study sample: justify exclusion criteria
  - Availability of participants
  - Data collection procedure
  - Outcomes/measures
  - Intervention strategy – what happens to controls?
  - Data analysis, sample size calculation

5. Discuss your prior work/Pilot study

- Show why you and your group are the right persons to do this
- *„You need accomplishment to obtain grant funding, but you need grant funding to accomplish anything“* (D. Sackett)
- Small grants for feasibility studies (local, intramural, community, foundations)
- Proof of successful collaboration (e.g. ..)

6. Technical questions: Preparing

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- Outline, write, edit
- Write the entire draft before editing
- Understand the reviewers' perspective
  - They might not have in-depth experience in your field
  - They will be reviewing in a few hours
  - The proposal should be self-contained
  - Check out the review criteria (if they are available)
- Get the required approvals **in time**

6. Technical questions: Submitting

- Obtain optimal assignment (talk to program staff)
- Deadlines (postmarked or arrival date? Flexibility?)
- Online submission – cave:
  - Computer breakdown
  - Overflow
- Is supplemental material accepted?
- Ensure receipt

6. Technical questions: Reviewing

- Lack of significance to the scientific issue being addressed. Lack of original or new ideas.
- Proposal of an unrealistically large amount of work (i.e., an over ambitious research plan).
- Project too diffuse or superficial or lacks focus. Proposed project a fishing expedition lacking solid scientific basis (i.e., no basic scientific question being addressed).
- Studies based on a shaky hypothesis or on shaky data, or alternative hypotheses not considered.
- Proposed experiments simply descriptive and do not test a specific hypothesis. The proposal is technology driven rather than hypothesis driven (i.e., a method in search of a problem).
- Insufficient methodological detail to convince reviewers the investigator knows what he or she is doing (no recognition of potential problems and pitfalls).
- Most experiments depend on success of an initial proposed experiment (so all remaining experiments may be worthless if the first is not successful).
- The proposal lacks critical literature references causing reviewers to think that the applicant either does not know the literature or has purposely neglected critical published material.

http://www.ninds.nih.gov/funding/write_grant_doc.htm#problems

6. Technical questions: Respond to review

- Lower budget? Rescale objectives
- Talk to program officer at funding agency
- Supplement material?

- Revise based on review and resubmit
- Provide rationale for not making all requested changes (politely & tactfully …)
- Do NOT criticize the reviewers

Last remarks: get credit

- Written agreements on credit
- Written agreements on authorship

Ressources

- http://www.skillsandethics.org/resources/handout/
- Devine, EB. The art of obtaining grants. *Am J Health-Syst Pharm 2009;66:580-587.*
- Inouye SK and Fiellin F. An evidence-based guide to writing grant proposals for clinical research. *Ann Intern Med 2005;142:274-282*
- Guyatt, G. Preparing a research protocol to improve its chances for success. In: Haynes RB, Sackett DL, Guyatt GH, Tugwell P, (eds.) Clinical Epidemiology. Philadelphia: Lipincott³ p. 429-439
- http://www.ninds.nih.gov/funding/write_grant_doc.htm