

CRCHUM

Basic Science Grants

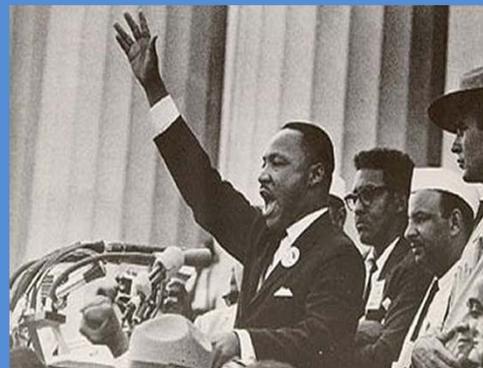
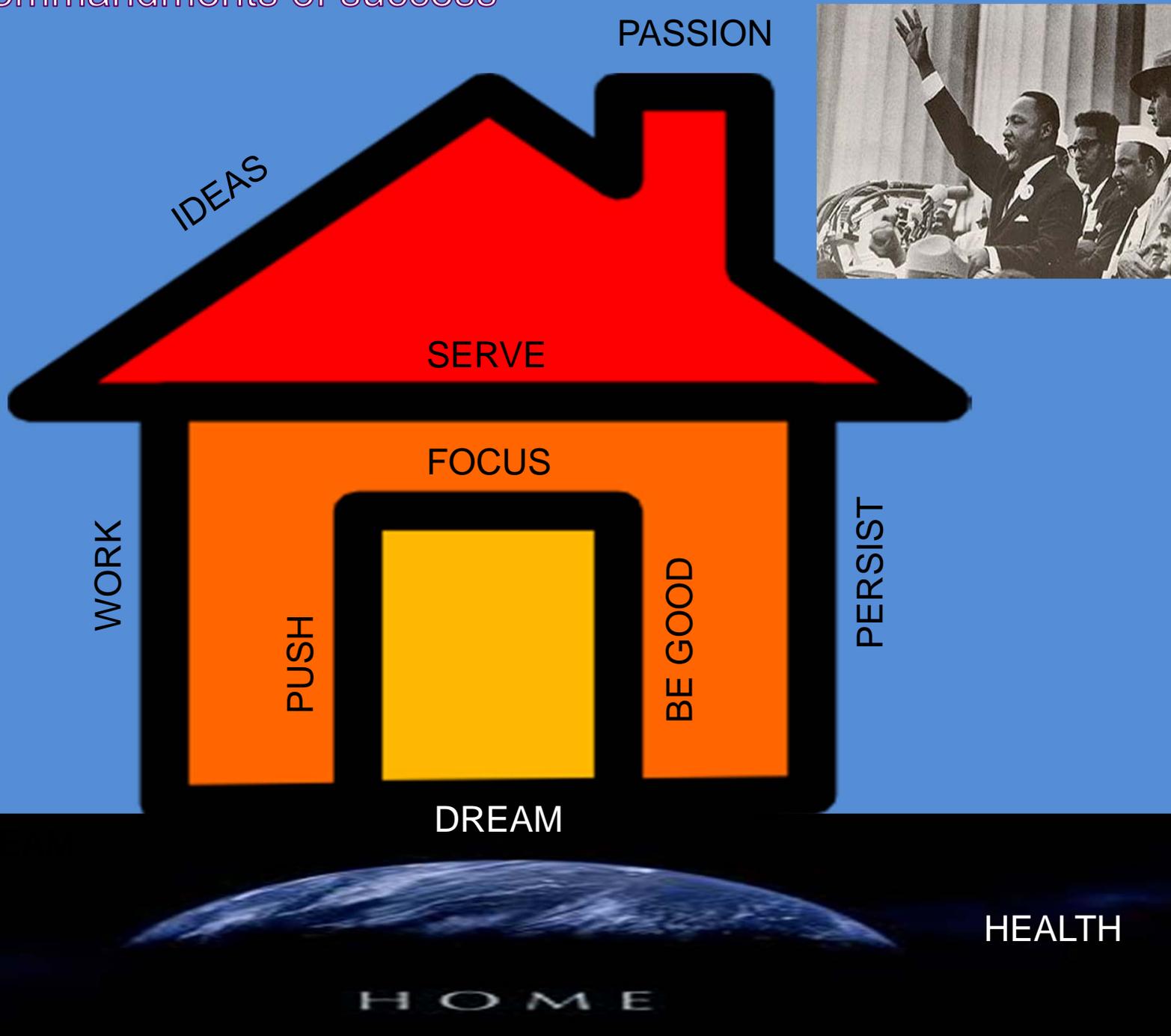
DE L'IDEE À L'ECRITURE

Vision, outline and « big picture »
of a research proposal

Grantsmanship workshop (Regular Project Grants)– May 2017

Marc Prentki

The ten commandments of success



HOME

Have a Vision of your Application

You are the architect

- “See” the house before you start the construction
- Do not start writing before you have a solid overall plan

Know the Geography

- “If you do not know precisely where you’re going you will go nowhere”
- Be very precise with defined goals; no room to be vague

You are the Doctor

- One organ does not function independently of others
- The “little” and so important project is interesting to others outside your field only within a larger context

You are the Novelist

- Tell a lively, interesting and focused “story” with only about 3 chapters
- No room to write “War and Peace”

The journey to delivering the baby

Pre-conception...a very long process indeed

1. “New stuff comes from old stuff”. Have solid preliminary data and publication in the field of your application.
2. Read, know the literature very well, think, discuss with colleagues
3. Do not remain isolated
4. Systematically lay your ideas in a note book over years

The journey to delivering the baby

Take the nice decision to do it ...and be your own shrink!

1. Start much ahead of time (4 months for a first grant)
2. Prepare yourself mentally that it will be fun to think and write
3. Take a good care of you before, during ...and after the writing
4. Prevent emotional incompetence
5. Learn to cope with failure and rejection...and success will come

“Courage is going from failure to failure without losing enthusiasm”

Winston Churchill

The journey to delivering the baby

Conception: short but good; the key information is in the egg

1. *“No clear question no clear answer”*. Precisely state and write down the few QUESTIONS that you are asking.
2. *Be an artist* and draw a couple of nice schemes that clearly explain the few hypotheses that you will test
3. *All stems from the summary*. Write and rewrite the one page ABSTRACT until it is ready. Should be very polished.
4. *Have a tag*. Write the title of your long term grant. Should be informative and not too precise such that you can keep it as years pass and the field evolves. Do not try to be sexy.
5. *The little show*. Present the title, the abstract and the few key figures and preliminary data to 2-4 *knowledgeable* colleagues within and outside your field.
6. *The constructive early critique*. Do not be afraid to get feedback, do not take it personally, discuss and troubleshoot accordingly

The journey to delivering the baby

Growing good... and run the show knowing the rules of the game

1. *You are the film director*. All figures and preliminary data ready
2. *Background section interesting*, relatively short with general schemes and understandable for the profane
3. *Make the life of the Referee as easy* as possible
4. *Each aim (about 3) should be strong*, complementary of each other and in the order of a developing story; ends with a perspective
5. *Each aim starts with a short rationale*, then experimental plan possibly with subsections, and a data interpretation and pitfall/alternative section
6. *Be an acrobat* because you should always fall back on your feet. Whatever you will observe should be interesting
7. *Be state of the art* in term of technology

The journey to delivering the baby

Ultrasound scanning

- Meet your colleague friends and the Experts again.
Show the whole complete grant at least 2-3 weeks before the deadline to 2-3 colleagues including at least one with have a track record of success with grant writing
- Administer the right vitamins and nutrients according to the diagnostics
- Deliver the baby at the due date and Enjoy!

The journey to delivering the baby

Growing good... more tips...

1. Ask important questions that are experimentally testable
“little question...little answer”
1. “overambitious; too many expts are proposed”
2. Do not write one very short or weak aim
3. Be as mechanistic as possible; “this aim is descriptive”
4. Have the right collaborators or co-PI
5. Be very convincing about your expertise
6. Be innovative; “bread and butter” or “logical but boring follow-up” science is a killer
7. The English must be fixed and the proposal should be very well written
8. Those who have a clear mind write well, easily and clearly

A very nice baby indeed!

...as summarized by the scientific officer

- “This is a clear and well written proposal with a strong rationale that will enhance our understanding of the biochemical basis of $\alpha\beta\chi\delta\epsilon\phi\gamma$. It addresses the important question of zzzzz and has the potential of opening a new avenue in the field of bath tubs. The PI is a young investigator who was extremely well trained in the laboratory of Dr Archimedeus where he/she published excellent manuscripts in the gazette of Syracuse. The application contains many innovative aspects, is based on very solid preliminary data, each aim is strong and the PI has the required expertise to perform the work. The technology to be used is state of the art, potential problems are discussed and convincing alternatives are proposed.”

- NEW CIHR ADJUDICATION CRITERIA

Concept: Significance and Impact of the Research (25%)

a. Is the project idea **creative**?

- The project idea is among the **best formulated ideas in its field**, stemming from new, *incremental*, innovative, and/or high-risk lines of inquiry; new or adapted research and **knowledge translation/commercialization approaches/methodologies**; and opportunities to **apply research findings** nationally and internationally.

b. Is the rationale of the project idea sound?

c. Are the overall goals and objectives of the project well-defined?

- The proposed project **outputs** (i.e., the anticipated results of the Project) are **clearly described** and aligned to the objectives.

d. Are the anticipated project contributions likely to **advance health-related knowledge** (which includes **basic science**, model organisms, and other discovery research), **health care**, health systems and/or health outcomes?

- The context and **needs (issues and/or gaps)** of the project are **clearly described**.
- The anticipated contribution(s) are **realistic**

1.2.2 Approaches and Methods (50%)

- a. Are the **approaches and methods** appropriate to deliver the proposed output(s) and achieve the proposed outcomes?
- b. Are the **timelines** and related deliverables of the project **realistic**?
- Key milestones and deliverables should be feasible given the duration of the project.
- c. Does the proposal identify **potential challenges and appropriate mitigation strategies**?
- Critical scientific, technical, or organizational challenges should be identified, and a realistic plan to tackle these potential risks should be described. An exhaustive list is not expected.

Mandatory Requirements (if applicable)

All applicants to CIHR are expected to **integrate gender and sex considerations** into their research design, where appropriate, to maximize the relevance and applicability of health research findings to both men and women.

1.2.3 Expertise, Experience, and Resources (25%)

a. Does the applicant(s) bring the **appropriate expertise and experience** to lead and deliver the proposed output(s), and to achieve the proposed contribution(s)?

- The **roles and responsibilities of each applicant should be clearly described**, and linked to the objectives of the project.

b. Is there an appropriate level of engagement and/or **commitment from the applicant(s)**? (e.g., time and other commitments)

c. Is the **environment** (academic institution and/or other organization) appropriate to enable the conduct and success of the project?

- Project applicants should have access to the **appropriate infrastructure, facilities, support personnel, equipment, and/or supplies**

Good news recently for CRCHUM-Axe CardioMet-Mtl Diabetes Res Ctr PIs!

How did we proceed?

Complementary expertise (MDRC 55 PI) and solidarity

Senior PIs advise “young” PIs and dedicate much time

“Young PIs” help each other....and learn from this

Feedback from experts both in the field and outside the field

2-3 months ahead of time MP has long discussions with each early & mid career PI about project based on a preliminary abstract that is modified until satisfactory.

Additional discussions among PIs

....the vision and significance early-on

Grant written

1 month before deadline Grant reviewed thoroughly by 1-2 CRCHUM-MDRC PI, 1 MUHC/McGill MDRC PI and by MP. Detailed feedback (writing and meeting)

CRCHUM-MDRC PIs review MDRC-MUHC/McGill

Grant finalized and some additional discussions in between with “Reviewers”

Success rate approx 80% CIHR and 100% NSERC. Those PIs who are “late” or “loners” in trouble

Final tip: Persist through CRAP

C riticism

R ejection

A ssholes

P ressure