Writing Successful Grants

(A Twelve Step Program)

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Grant Activity at UTK, 2012:

- About 1/3 of eligible faculty actively involved in proposal development

- Number of proposals submitted: 1,536

- Amount requested: $620,000,000

- Average dollars per request: $403,000

- Awards received : 1,251

- Dollars awarded: $163,000,000

- About 25% of eligible faculty participated in funded projects

Academic writing sample…

From a study on workplace aggression:

Taken together with the findings from the present study that (a) workplace aggression in the primary job was more closely associated with negative work experiences and (b) both situational and individual characteristics played a role in aggression in the secondary job, future research might benefit from a greater focus on the subjective salience of the job as a moderator of the relationship between workplace experiences and supervisor-targeted aggression. Indeed, despite the differential effects of situational and individual difference factors on aggression, it is notable that the individual difference factors exerted a consistent but relatively low-level effect on aggression across contexts, whereas the more salient situational experiences exerted context-specific effects.

Inness, M., Barling, J., & Turner, N. (2005). Understanding supervisor-targeted aggression: A within-person, between-jobs design. *Journal of Applied Psychology,* **90, 4, 731-739**.

Contrasting perspectives

Academic writing:

Researcher-centered:
Scholarly passion
Past oriented:
Work you have done
Expository:
Explaining to reader
Impersonal:
Objective, dispassionate
Individualistic:
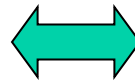*Usually solo activity*
Verbosity rewarded:
Few length constraints:
Specialized terminology:
"Insider jargon"

Grant writing:

Sponsor-centered:
Service attitude
Future oriented:
Work you wish to do
Persuasive:
"Sell" the reader
Personal:
Convey excitement
Team-oriented:
Feedback needed
Brevity rewarded:
Strict length constraints
Accessible language:
Broad audience

Thesis, theme, theory:
World of ideas

Project, activities, outcomes:
World of action

Grant Writing:
A Low Probability Game?

- Proposal success rates average 20 to 30 per cent (NSF, NIH, USDA, most private foundations)

  - More than half (60%) are rejected on first reading because:
    - Proposal did not match program
   - Applicant did not follow directions

New & Quick, Grantseeker's Toolkit, 1998

The Critics Weigh In…

(Actual comments made by actual reviewers)

- *"The problem statement, such as it is, is too global, showing no relationship to reality with no potential solution being indicated or even possible."*
- *"This problem has been studied to death. I'm surprised the writer doesn't know this."*
- *"It is almost impossible to understand what the author wants to study or what the main theme is. The problem is full of jargon and totally unclear as stated."*
- *"I cannot ascertain what approach the researcher will take in examining the problem as outlined."*
- *The writer has a flair for the dramatic. The world will not collapse if we do not fund a study of students' daydreams."*
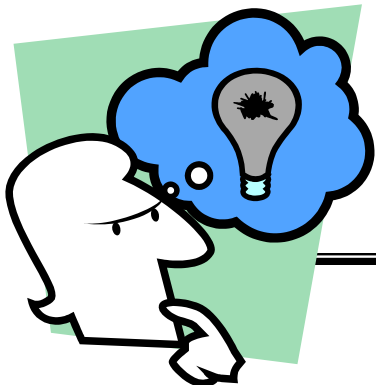
So what's the problem?…

"The problem makes the proposal."

- ✓ An important need or issue that should be addressed
- ✓ A gap between where we are now and where we could be
- ✓ A limitation of current knowledge or way of doing things

It's also an opportunity...

- ✓ A fresh idea that can advance our understanding or address a societal need
- ✓ A refinement that improves efficiency or lowers the cost of goods and/or services
- ✓ A new paradigm that reshapes our thinking or way of doing things

Reviewers are looking for…

- ✓ Significance
- ✓ Creativity (uniqueness)
- ✓ Clearly delineated project
- ✓ Research plan (methodology)
- ✓ Outcomes (evaluation)
- ✓ Clear, concise writing

Consider the Reviewer...

- Many competitive programs utilize review panels (especially federal and state)

- Most private foundations use staff to "screen" proposals for Program Director

- The more competitive, the more reviewer(s) will look for reasons to reject proposals

Success = Good Ideas - Pitfalls

- **There is plenty of evidence to show that good ideas are often undermined by missteps in proposal preparation**

- **The following are some common proposal pitfalls and strategies to avoid them**

Pitfalls
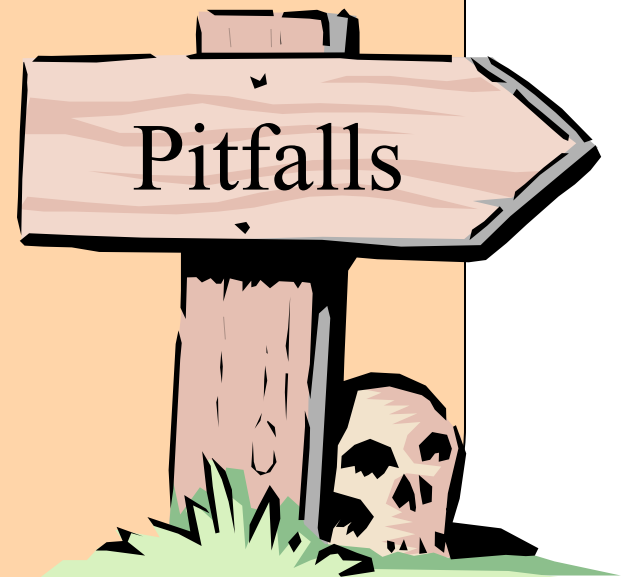
A Starting Point...

- **What are you passionate about?**

- **What is the problem (and why is it important)?**

- **How is existing knowledge or practice inadequate?**
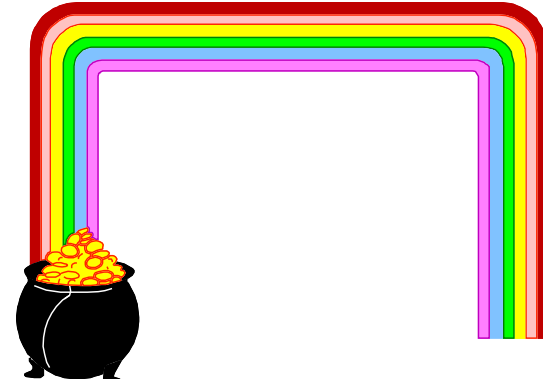
- **Why is your idea better?**

- **How is it new, unique, different?**

- **What will it contribute and who will benefit from it?**

1. Verify the match

- Develop your funding search skills
- Study program goals and eligibility
- Make contact with program officer before starting proposal!

- Read program announcement carefully; note questions
- Research previous awards!
- Send brief (2-3 short paragraphs) overview of proposed project
- Inquire about alternative funding sources

2. Structure the Proposal

Always follow the format provided by the sponsor! Where none is provided, build your case in distinct sections:

I.   Problem Statement; or Significance of the Research

II.   Project Purpose (Overall goal + Specific objectives)
        NB: Cite "fit" with program objectives!

III.   Research Design; or Workplan (Activities + Timelines)

IV.   Applicant Qualifications and Capabilities

V.   Evaluation Plan; or Expected Outcomes

VI.   Budget (Summary + Justifications)
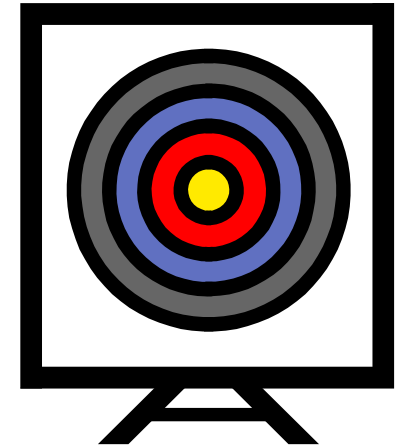
Appendix (supplementary materials)

3. Prove the importance of your project

- State your purpose and case for need up front; build a compelling argument

- Think "Op Ed," not academic journal

- Cite an authoritative source(s)

EX:

"This proposal addresses a priority of the World AIDS Foundation: AIDS prevention in developing countries. Specifically, we propose to conduct a series of five-day AIDS prevention workshops in four cities in Indonesia. The participants will be…"

Start with the Pitch: Sell Your Idea!

I. Set the Stage – Lay Out the Problem *("Who Cares?")*

    A. Get the reviewer interested at the outset

    B. Identify the importance—stress the need

    C. Summarize the state of the art

    D. Describe technical challenges to solving the problem and potential benefits

II. State the theme – Your Solution

    E. Describe the concept and establish credibility

    F. Describe your project's fundamental purpose

III. Create a Vision *("So What?")*

    G. Show how your work will advance the field

    H. Envision the world with the problem solved
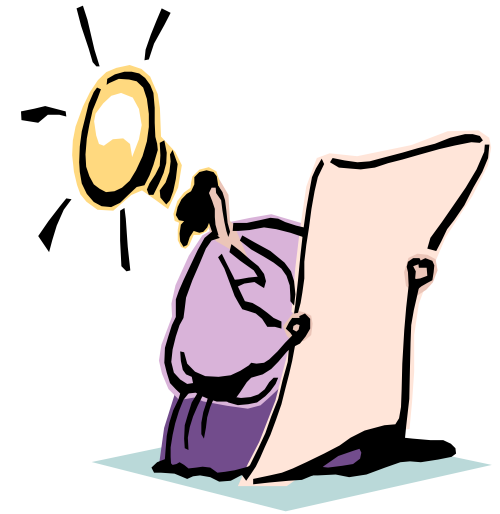
> The "pitch" should be the opening 2 - 3 paragraphs of the proposal's very first section (after the abstract), <u>regardless of what that section is called</u> (INTRODUCTION, BACKGROUND, PROBLEM STATEMENT, SIGNIFICANCE OF THE RESEARCH, SPECIFIC AIMS, etc.)

Sample Pitch: USDA Grant
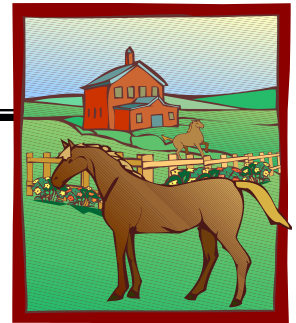
Intravenous Magnesium as a Treatment Modality for Recurrent Airway Obstruction

I. SETTING THE STAGE

(A) Recurrent Airway Obstruction (RAO) is a progressive, debilitating respiratory disease, occurring in 50% of mature horses, (B) with 5% affected severely enough to result in an end to their working careers or to euthanasia. [1,2] It is a chronic, recurrent condition with clinical characteristics that are well recognized, although its pathogenesis is complex, multifactorial, and currently not well understood. As an indication of industry concern, in June of 2000, 30 of the world's leading investigators were joined by pharmaceutical companies at a Michigan State University conference devoted entirely to improving RAO prevention and management.[3] (C) Further, current management and therapeutic regimens for horses with chronic or severe disease are either not efficacious or are not able to be implemented. (D) For example, drugs commonly used to manage RAO, such as corticosteriods with anti-inflammatory properties and bronchodialators that open the passageways, also stress the heart, adding additional risk to an already debilitated animal.[4,5] Strategies to remove environmental precipitators such as dust and mold often fail as many horse owners are unable or unwilling to comply with such husbandry recommendations.[5]

II. PROJECT THEMES

(E) With this study, we propose to administer intravenous magnesium to horses with acute and chronic RAO to determine if this treatment improves respiratory function and/or reduces arterial hypertension, without the deleterious side effects of other commonly administered drugs. Recent case reports show magnesium to be efficacious for acute human asthmatics who fail to respond to more conventional therapy.[7,8] (F) As RAO is increasingly seen as an equine analog to asthma in humans (replacing the previous use of the COPD model),[9,10] and severely affected RAO horses demonstrate many of the same clinical signs as human asthmatics, RAO horses could be equally responsive to this treatment.

Sample Pitch: USDA Grant, cont'd
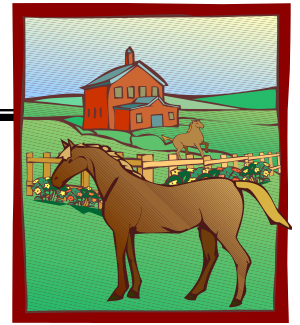
Intravenous Magnesium as a Treatment Modality for Recurrent Airway Obstruction

III. VISION

(G) Should the research hypothesis be proved, clinicians will have another viable
treatment modality at their disposal, one that is inexpensive, and effective in treating a resistant disease
without the damaging side effects of other modalities. (H) Additionally, horse owners and breeders
could reduce the significant financial losses caused by the malady, currently estimated at more than

$800 million annually in the US alone.[11]

4. Assume an uninformed but intelligent reader

- Use clear, accessible language
- Stick with direct statements and active voice
- Avoid insider jargon and acronyms

"An expanding awareness of the limitations of our training settings, the political fallout of our training mission, the consequence of having therapists work in a particular work setting, and the need to change established institutional structures (e. g., child protective services, Aid to Families with Dependent Children, juvenile court) are examples of the contextualization of training and supervision."

Passive vs. Active Voice

- *It has been demonstrated by research that…*

- *The SAP program is being implemented by our department…*

- *Following administration of the third dosage, measurements will be taken...*

- *Research shows clearly that…*

- *Our department launched SAP this year…*

- *After dosage 3, we will measure…*

5. Formulate specific, measurable objectives

Goal: General statement of the project's overall purpose(s)

"Our goal with this innovative curriculum is to improve the supply of graduates with National Registry certification."

Objective: A specific, measurable outcome or milepost
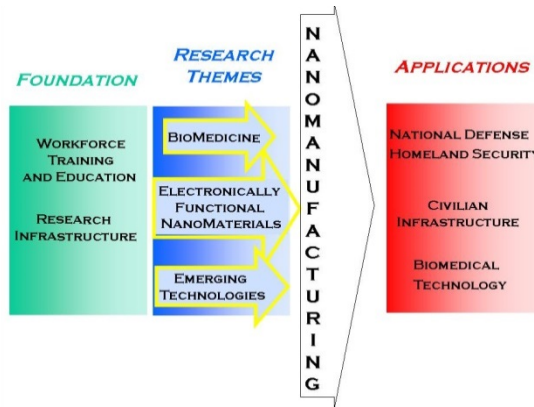
Which is the better objective? Why?

"It is anticipated that completion of the new curriculum will result in enhanced student scores."

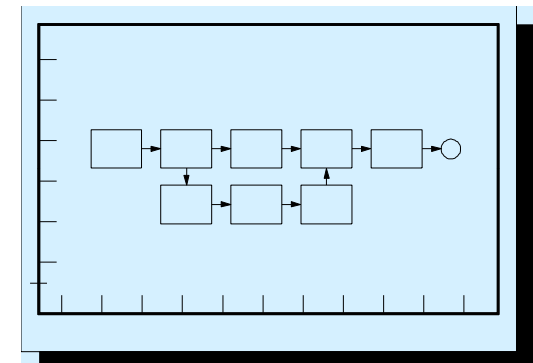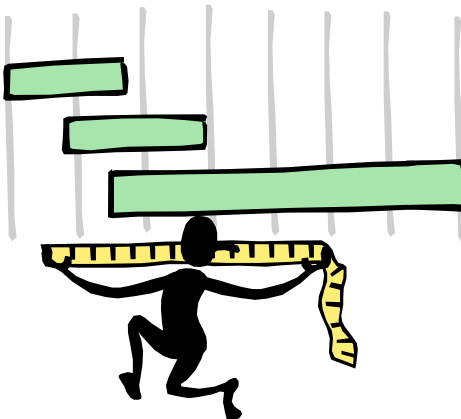*"At least 90 per cent of course graduates will pass the National Registry Examination."*

6. Illustrate: Project concept and the work plan

1) Overall concept:

1) Visualize the overall project with a drawing

2) Specify major tasks and timelines; use Gantt charts, calendars or flow charts

2) Work plan:

# 7. Follow application instructions <u>exactly</u>!

- Common sins:

  - **Late submission**

  - **Narrative too long**

  - **Fonts, margins, spacing too small**

  - **Signatures, certifications missing**

  - **Budget narrative missing**

  - **Insufficient number of copies**

  - **Inappropriate binding**

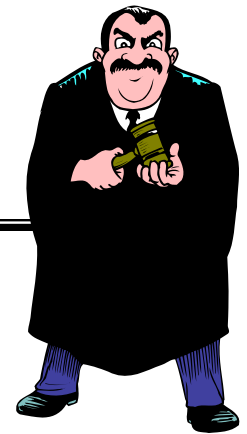# 8. Pay attention to all review criteria

- Read evaluation standards carefully; then reference them in the project narrative

- Touch all the bases--not just the ones you're comfortable with
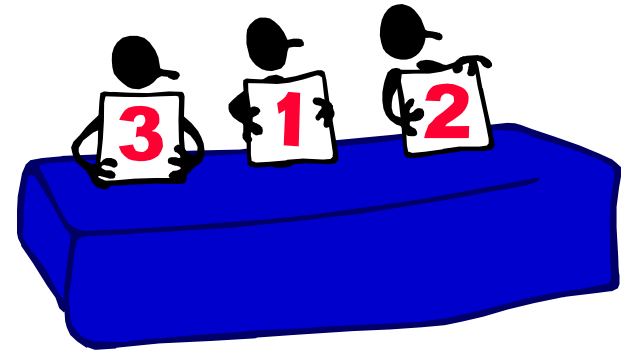
Reviewers will use the criteria to "score" your proposal

P.S. NSF Means it!

Two key merit review criteria:

1) What is the intellectual merit of the proposed activity?

2) What are the broader impacts of the proposed activity? (since 1997)

"(PIs) must address **both** merit review criteria in **separate statements** within the one-page **Project Summary**. This chapter also reiterates that broader impacts resulting from the proposed project **must be addressed in the Project Description and described as an integral part of the narrative.**"

"Effective October 1, 2002, NSF will **return without review** proposals that do not **separately address both merit review criteria within the Project Summary**."

- Grant Proposal Guide, Ch. III

9. Polish the abstract

- Written last, but read first by reviewers
- Must be an intriguing "first advertisement"
- Should reflect entire scope of project
- Summarizes project purpose and methods
- Must convey:
  - **- What researcher intends to do**
  - **- Why it's important**
  - **- Expected outcome(s)**
  - **- How work will be accomplished**
- Has to be both CONCISE and COMPLETE!

*This may be the only narrative
that some reviewers will read*

10. Presubmission review

- Ask seasoned colleagues for comments and suggestions

- Should be qualified to critiques proposal content

- Check your ego at the door

- Allow time for rewrites!

# 11. Use proofreaders

- Find an eagle eyed perfectionist
- Proofreaders read for <u>form</u>, not <u>content</u>
- Must be someone who has no stake in the project!
- Learn to love what s/he will do for you
- Zero tolerance--no error is too small to correct
- Root out inconsistencies in <u>format</u> as well as typos, misspellings, grammar, etc.

12. Write, rewrite & rewrite

- Most winning proposals have been polished repeatedly

- Let it rest in between; sleep on every rewrite

- Fight the evil Pride of Authorship

- Must allow time!
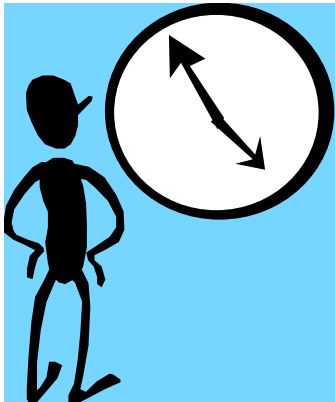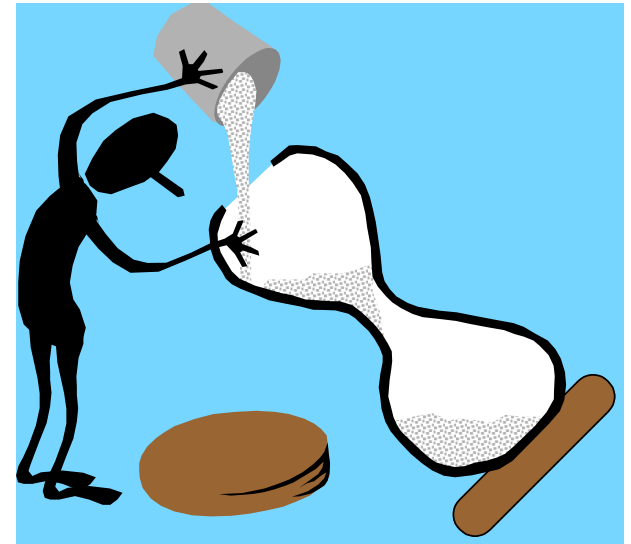
(Famous rewriters: Hemingway, Michener)

And Tips for Success...

- Fit research and grant writing into your job
- Find a mentor(s)
- Read successful grants; attend workshops
- Find collaborators; network
- Get on a review panel!
- Get funding alerts; conduct your own searches regularly
- Think big, think small, think different
- Submit, revise & resubmit!
- Treat it like a game (which it is)