

**How to Plan and Carry Out
a Research Project:
The Essential Ingredients for Success**

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**Paradox #1 of
academic medicine:**

"Find the time"

Every day:



Dr. Boss

I know how much you care
about your research, but
don't forget your patient care
and teaching responsibilities...

The judgment day:

**"Publish or
perish!"**



Committee for Appointments
and Promotions

Next day:

I'm sorry your promotion was
not approved, but you know
that your weak point is your
publications...



Dr. Boss



Essential ingredients of a successful project

- ☐ Innovative
- ☐ Important (impact on the field)
- ☐ Clear, attainable goals
- ☐ Motivated, well-adjusted team
- ☐ Appropriate, state of the art tools
- ☐ Available resources (subjects, equipment)
- ☐ Competitive for funding
- ☐ Publishable in high-impact journal



How do I come up with an idea?

- ☐ wait patiently for the right idea to come to you
- ☒ read current literature
- ☒ listen to others present their work and see where you can contribute
- ☒ ask your senior colleagues if there is something they have been interested in but haven't had the time to work on



How do I develop my idea?



- ☒ extensive literature search for concrete details
- ☒ discuss with your peers (talking helps thinking)
- ☒ write a short summary (writing helps thinking)
- ☒ ask your peers to read and comment
- ☒ be open to adding/removing/changing

Innovation:

1997:
2002:
2007:
2012:



Edited for HIPAA
compliance!!!

~~Doctors don't need to buy insurance to see you again?~~

Innovation:

- Most research projects take months to complete.
- Most journals are monthly!!!
- Search the latest literature repeatedly along the way.

Paradox #2 of academic medicine:

“Is innovative publishable?”

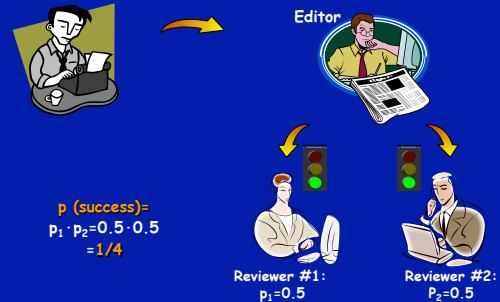
or

“When innovative is
controversial”

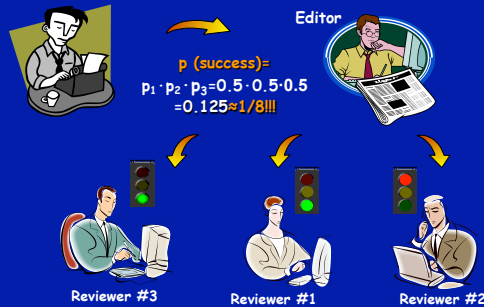
Statistics lesson 1

- Probability of events 1 and 2:
 p_1 and p_2
- Events 1 and 2 independent
- Probability of both events happening: $p_1 \cdot p_2$

When innovative is controversial



When innovative is controversial



When “innovative” = “controversial”

Conclusions:

- ✓ Avoid controversial subjects...
- ✓ Focus on what is well known and is not likely to be disputed...

???

Investment specialist's advice:

Diversify your research!!!

- low-yield but low-risk studies that prove or confirm what is generally expected -
“bonds” projects
- more risky and challenging studies that can potentially move your field forward -
“stocks” projects

Available resources

This is the best idea I have ever had, but after 3 years we have only seen 2 patients who fit the inclusion criteria...

Make sure to:

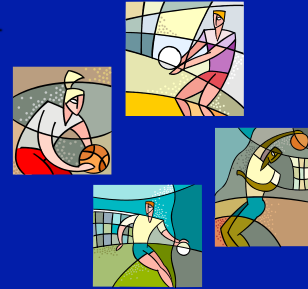
- ☑ use realistic inclusion criteria
- ☑ offer monetary incentives to potential subjects



Team is key!!!

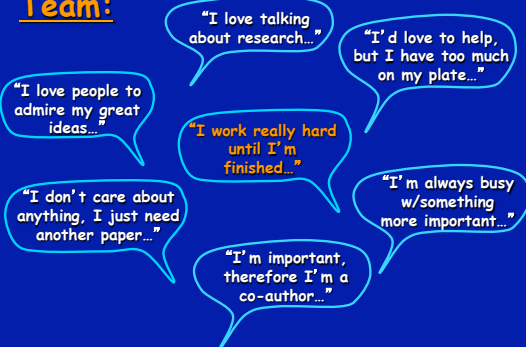


Team:

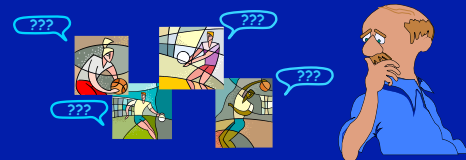


- Team consists of individual players...

Team:



How do I know who is who?



- ☐ Develop connections with the FBI
- ☐ Install video cameras throughout the lab
- ☒ Check their track record
- ☒ Trust your "gut-feeling" and try
- ☒ Learn from your mistakes

How do I make my team work?

- ☒ Make the goals of the study clear
- ☒ Make your expectations clear
- ☒ Keep everyone updated and motivated
- ☒ Listen to their opinions and complaints
- ☒ Help resolve problems
- ☒ Replace non-performers
- ☒ Make artificial deadlines
- ☒ Be kind to people you work with!!!

Sweet success!!!

