**How to Write Specific Aims**

The specific aims for your study can be summed up in a few neat paragraphs. Each paragraph will contain concise and pertinent information for your study, remember to keep it simple, keep it relevant, and keep the reader moving smoothly through your thought process.

1. Introductory Paragraph

* *Opening sentence* containing around 3-4 extremely creative thoughts. This will grab the attention of your reader.
* State what is *known* about this issue.
* State what is *unknown* about this issue.
* *State why is this lack (gap) of knowledge important*, i.e., how it prevents the vertical propulsion of this field of medicine.

2. What, Why Whom Paragraph

* State the overall, long-term goal of your mission. This represents any future projections or the continuum of your line of research.
* State the overall objective of this application. This is a step to achieving your long-term goal.
* Clearly state your central hypothesis.
* State your rationale for your hypothesis, or how did you come up with the central hypothesis.

3. Specific Aims (1-3):

Briefly detail your specific aims that will test your central hypothesis.

*They should look like this:*

Aim Title: **Title in Bold** (*Identify factors that bind to X during cell migration*)

Rationale/Why: Why are you doing this? (*Identifying new protein regulators that bind to X during cell migration will determine how X is specifically regulated during migration*.)

Approach/How: Briefly tell what approach you will use to determine this.

(*Quantitative proteomics will be used to determine which proteins are enriched between sample A and sample B in light and dark environments.)*

*Each aim should include a technique that you learned in class on Tuesday and from readings*.

Aim 1 (for example) should be a technique you learned from the first part of class (Genomics through Domain analysis). Next 2 Aims will be from the second and third part of your readings.

**Aim 1: Genomics-Domain Analysis**

**Aim 2: High Throughput Genomics-Chemical Genetics**

**Aim 3: Proteomics1-Y2H**

4. Last paragraph

* State your expected outcomes, or what you expect to find at the conclusion of the study.
* And equally as important to the former pieces of the specific aims section: state plainly and simply the general positive impact that your study will have on the populace at large. In other words, why should we care and what is the payback for your work?

**Format for your aims should look like this:**

* Intro paragraph
  + What is your disease? phenotypes?
  + What gene is associated with your disease and what does it do?
  + What happens when your genes is mutated? specific phenotypes
  + *Gap in knowledge*
* Hypothesis
* Goal
* **Aims (1-3): Title To determine if X binding to Y during mitosis**
  + Rationale/Why: Why are you doing this and why are you are using this particular assay to test your idea?
  + Approach: Explain how you will determine this (Which genomic or proteomic technique should be stated and justified)
* Innovation Paragraph