

## Chemistry 401 – Final paper

The final assignment for this class is a 5-7 page (2000-2500 word) review paper that addresses a single topic in the literature and draws upon a bibliography of 5 or so research articles (as distinct from review articles). The writing process will be completed in two steps, with a preliminary (but **not** rough) draft due before Thanksgiving and a revised draft due on the last day of final exams. The preliminary draft should be, in your mind, a finished product. But – if I have any concerns about that draft, I'd like to engage in a productive process of revision to create a stronger document if needed.

Although you shouldn't expect to begin writing the paper until after break, it never hurts to begin perusing the literature, in search of potential topics.

### Suitable Topics

My only restrictions on topics are:

1. That you may not use one of the papers we discuss as a group as one of your primary sources, though you may revisit that topic using different research articles.
2. That any topic you choose be chemical in nature – covering issues in the structure, thermodynamics, equilibrium or kinetics of a chemical system plausibly connected to biochemistry. Please feel free to contact me if you're unsure of the suitability of a given topic.

Along the way, you may choose to take advantage of several search tools that will help you comb the scientific literature. My favorites are: Web of Science, PubMed and Google Scholar. But other resources are available as well. I encourage you to consult with Linda Maddux (lbm@reed.edu), Reed's science librarian, to learn more about literature databases. She can assist you in a number of ways.

### Some Comments on Reading and Writing

1. Although you shouldn't use review articles as sources for this paper, they may be useful to you in hunting down sources, but even more importantly they can help you identify useful ways of expressing ideas and phrasing issues. Read several, find a writing style you like and use that as a model for your own.
2. In many instances it will be substantially easier for you to use a figure from an existing paper. Please cite the source of the figure, and also – please note this especially – REWRITE the caption. The figure is now in the context of your document and needs to be explained in that context. Also, using a full caption without quotation marks is not different than copying paragraphs of text.
3. For citations, I recommend keeping an alphabetical list. In your text, refer to the citation as follows:

(Smith, 1999) if only one author

(Smith & Jones, 1999) if two authors

(Smith et al., 1999) if many authors, where Smith is the first author.

Note, however, that a citation is not a person. DO NOT write "Smith et al. found that black is white." It would be better if the sentence read "The results show that black is white", but if you feel that you must label an idea with a name (not often useful, but in cases where it is a singly held opinion or some such extreme case), then "Smith and co-workers found that black is white."