The vast majority of all biomedical research in this country is funded through government organizations such as the National Science Foundation (NSF) and the National Institutes of Health (NIH). In order to receive funding from organizations like these, academic scientists first have to write a detailed research proposal that they submit for evaluation and review by a panel of experts. Although there are many different kinds of proposals, most of those submitted to the NSF and NIH follow the general format requirement of the NIH Research Project Grant (R-01). Your assignment is to develop and write a research project grant using the organizational requirements of the R01 as a general guide.

ASSIGNMENT DESCRIPTION

The research proposal includes three main sections in addition to the reference list:

1. **Specific Aims**
   The specific aims section of the proposal is analogous to the abstract of a normal research paper. Begin this section with general background and goals for the project. Next, state your hypothesis and provide supporting evidence (from the primary literature). Finally, (and most importantly), list at least two specific aims for the project followed by a brief description of the experiments you will do to accomplish these aims. This section will typically be about 2-3 pages.

2. **Background and Significance**
   In this section, you have a chance to bring the reviewer up to speed on the area of research you plan to do. This is where you go from the general to the specific, giving the reader detailed information on the area of study, the open questions in the field, and the information directly relevant to your hypothesis. It is important in this section to relate your work to human health, since this a mock NIH proposal and human health is fundamental to the NIH mission. This section should be about 4-5 pages.

3. **Research Design and Methods**
   This section is the heart of the technical part of your proposal. This is the part of the paper where you talk about what you propose to do, what reagents you’ll need (and how to make them), and what kind of results you expect. This is also where you describe how you will evaluate your hypothesis based on your expected results. In addition, you’ll want to talk about how unexpected results affect your hypothesis. This part of the proposal will be about 3-4 pages.

Reference List

Your references should number between 15-25 and should be formatted according to the CEA style guide. See the ZOOL 351 LibGuide at the OWU Libraries webpage for details.