Research Flow

Initial Idea
- Identify general research question
- Refine question with additional information and preliminary literature review
- Develop initial hypothesis

Early Study Design Phase (Develop Precis)
- Select a study design
- Obtain consensus statement or reporting standard (e.g., ARRIVE, CONSORT, REFLECT, STARD, STROBE)
- Identify outcome variable, group classifying variables, and establish measuring processes
- Construct a focused, statistically-testable hypothesis of a clinically-important difference in that outcome based on changes or differences in the independent classifying variables
- Perform pilot study to generate pilot data and missing variance information
- Perform sample size calculation
- Determine study feasibility (FINER)

Study Proposal Construction Phase
- Obtain call for proposals, proposal formatting guidelines, and institution forms
- Identify protocols and standards for laboratory procedures (e.g., AOAC, ATCC, CLSI, OIE, Springer)
- Write study proposal draft
- Establish and document collaborations
- Obtain in-house critiques
- Obtain institution overhead and indirect requirements
- Establish budget
- Submit institution forms and obtain institution signatures
- Submit completed proposal by due date

Review Response Phase
- Rewrite, respond to critiques
- Update institutional approvals
- Resubmit

Study Performance Phase
- Obtain research account
- Accumulate study subjects
- Perform study
- Submit interim reports
- Statistically analyze data

Study Writeup & Presentation Phase
- Submit abstracts and posters
- Perform oral presentations

Publishing Phase
- Obtain instructions to authors for journal
- Update literature review
- Circulate drafts among coauthors
- Submit properly formatted manuscript
- Respond to reviewer critiques and resubmit
- Proof galleys

Start Cycle Again