# Summary of Recombinant DNA/Bioengineering Research

*\*(If question is not applicable to your research, please write N/A)*

1. **Description of DNA Insert(s)** 
   1. List how and why you are using the recombinant gene inserts in the research:
   2. Provide gene name(s), the biological source/origin (virus, bacteria, human, animal, etc) and all pertinent biological activities of the encoded protein(s):
   3. Please mark all inserts with an asterisk that may pose a specific hazard or risk:
   4. Describe the potential hazards (i.e. oncogenes, inhibitory rDNA molecules and off target effects):
   5. Is the expressed protein a toxin known to affect human, animals and/or invertebrates?
2. **Description of Vector(s)** 
   1. List how and why the host/vector systems are to be used in the research:
   2. Provide vector name:
   3. Will recombinant DNA be inserted into a virus, plasmid, BAC or other vector?
   4. Will a packaging or helper system be used?
      1. If yes, please describe:
   5. Describe features of the viral vector, if any, that are intended to reduce the likelihood of a recombination event that would lead to a replication-competent vector (e.g., gene deletions, expression of packaging genes on multiple plasmids, self-inactivating long terminal repeats):
3. **Description of Host(s)**
   1. Will recombinant DNA molecules be inserted into a bacterial or eukaryotic host cell?
      1. If yes, please identify the host organism or cell type/line:
   2. Will cultures be grown in amounts of 10 liters or more?
   3. Will recombinant DNA be introduced into animals or invertebrates?
      1. If yes, explain:
   4. Will recombinant DNA be used to produce transgenic plants?
      1. If yes, explain:
4. **Safety**
   1. Will the research involve the use of antibiotic selection markers?
      1. If yes, explain why:
   2. Describe the risks that would be associated with accidental human exposure to the viral vector, including the probability and consequences of (1) recombination events leading to restoration of a replication-competent virus, (2) expression of the gene insert product, and (3) integration of the viral vector into the host genome leading to insertional mutagenesis:
   3. Briefly describe the steps that would be taken in the case of an exposure to a viral vector:
   4. Briefly describe the steps that would be taken in the case of a theft, loss or release: