



## Recombinant DNA and Biotechnological Safety

<b>Policy Number:</b>	4.2.2
<b>Policy Section:</b>	4.2 Youth Science & Technology Research - Safety
<b>Approved By:</b>	Board
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<b>Related Policies:</b>	3.1.2.5 CWSF Project and Display Safety
<b>Contact:</b>	National Science Fair Committee Chair

### 1 **Recombinant DNA and Animal Viruses**

- 1.1 Projects involving the manipulation of recombinant DNA molecules or animal viruses are allowed if conducted under qualified supervision. Evidence of this supervision, including the supervisor's name, institution, and qualifications must be included in the "Contributions by Others" form and must be available at all times during the fair.

### 2 **Biotechnological Safety**

- 2.1 Biotechnological investigations involving enzymes pose risks of allergic reactions. Work involving DNA technology can be accomplished safely if simple precautions are taken. The use of DNA is, in itself, usually safe, but hazards can arise from chemicals and electrical equipment employed in the manipulation of DNA. Extremely hazardous chemicals, such as ethidium bromide, used to stain DNA, should be avoided. Electrophoresis of DNA fragments should use low voltages or equipment that prevents access to connections at high voltages.
- 2.2 Live tissue samples used in such investigations must be taken either from a continuously maintained tissue culture line already available to institutional researchers, or from animals already being used in an on-going institutional research project. Proof of the source of such material (invoice or letter from supplier) must be available at all times during the fair. These animal tissues may only be displayed at the fair if they are prepared and sealed (lamella, plastination).