

**2017 MIAMI VALLEY TECH PREP SHOWCASE – BIOTECHNOLOGY JUDGING FORM**

<b>KNOWLEDGE ACHIEVED</b>				<b>Individual judges points</b>
<p><b>Superior 10-9 pts</b></p> <ul style="list-style-type: none"> <li>Outstanding use and understanding of terms and principles</li> <li>Project far exceeds grade level understanding and depth of knowledge</li> <li>Extensive literature search and source/literature citations</li> <li>Supplements answers with additional relevant information</li> </ul>	<p><b>Excellent 8 – 6 pts</b></p> <ul style="list-style-type: none"> <li>Great use and understanding of terms and principles</li> <li>Project exceeds grade level understanding and depth of knowledge</li> <li>Additional literature search and source/literature citations</li> <li>Supplements answers with relevant information</li> </ul>	<p><b>Good 5 – 3 pts</b></p> <ul style="list-style-type: none"> <li>Good use and understanding of terms and principles</li> <li>Project meets grade level understanding and depth of knowledge</li> <li>Minimal literature search and source/literature citations</li> <li>Minor supplementation of answers with relevant information</li> </ul>	<p><b>No Evidence 2 – 1 pts</b></p> <ul style="list-style-type: none"> <li>Substandard use and understanding of terms and principles</li> <li>Project does not meet grade level understanding and knowledge</li> <li>Little to no literature search and sourcing</li> <li>No supplementation of answers</li> </ul>	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10
<b>USES OF SCIENTIFIC METHOD</b>				
<p><b>Superior 10-9 pts</b></p> <ul style="list-style-type: none"> <li><b>Question</b> clearly focuses on the scientific problem</li> <li><b>Hypothesis</b> clearly states an educated guess</li> <li><b>Procedure</b> clearly defines the steps involved in the experiment</li> <li><b>Data Analysis</b> summarizes several trials/samples and presents data in tables, graphs, etc.</li> <li><b>Conclusion</b> is detailed and represented by a summary of the data</li> </ul>	<p><b>Excellent 8 – 6 pts</b></p> <ul style="list-style-type: none"> <li><b>Question</b> identifies the scientific problem</li> <li><b>Hypothesis</b> states a guess with some backup info</li> <li><b>Procedure</b> needs some explanation of steps involved in the experiment</li> <li><b>Data Analysis</b> summarizes one or two trials/samples and presents some graphic forms</li> <li><b>Conclusion</b> is somewhat detailed and represented by a summary of the data</li> </ul>	<p><b>Good 5 – 3 pts</b></p> <ul style="list-style-type: none"> <li><b>Question</b> identifies the scientific problem</li> <li><b>Hypothesis</b> states a guess without substantiation</li> <li><b>Procedure</b> defines the steps involved with gaps</li> <li><b>Data Analysis</b> summarizes one trials/sample and presents data in only a few types of graphic form</li> <li><b>Conclusion</b> is provided with some reference to the data and hypothesis</li> </ul>	<p><b>No Evidence 2 – 1 pts</b></p> <ul style="list-style-type: none"> <li><b>Question</b> identifies no scientific problem</li> <li><b>Hypothesis</b> is missing</li> <li><b>Procedure</b> defines the steps involved with many gaps</li> <li><b>Data Analysis</b> summarizes data with no graphic representation</li> <li><b>Conclusion</b> - No conclusion was apparent OR important details were overlooked.</li> </ul>	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10
<b>CLARITY OF EXPRESSION</b>				
<p><b>Superior 10-9 pts</b></p> <ul style="list-style-type: none"> <li><b>Lab Journal/ data record book</b> clearly shows experimental procedures, materials used, and shows the data</li> <li><b>Visual Display:</b> Includes title, abstract, Hypothesis, Material List, Procedure, Data Analysis and Conclusion</li> <li><b>Oral Presentation:</b> Uses the scientific method to present experiment; questions answered correctly &amp; clearly, &amp; shows good eye contact</li> </ul>	<p><b>Excellent 8 – 6pts</b></p> <ul style="list-style-type: none"> <li><b>Lab Journal/ data record book</b> shows experimental procedures, materials used, and shows the data</li> <li><b>Visual Display:</b> Is missing one of the important aspects from the superior rating</li> <li><b>Oral Presentation:</b> Uses the scientific method to present experiment; questions answered correctly and clearly and eye contact minimal</li> </ul>	<p><b>Good 5 – 3 pts</b></p> <ul style="list-style-type: none"> <li><b>Lab Journal/ data record book</b> has gaps in experimental procedures, materials used, and shows minimal data</li> <li><b>Visual Display:</b> Is missing two or three of the important aspects from the superior rating</li> <li><b>Oral Presentation:</b> Uses the scientific method to present experiment; questions answered with unclear mastery of the subject, little eye contact</li> </ul>	<p><b>No Evidence 2 – 1 pts</b></p> <ul style="list-style-type: none"> <li><b>Lab Journal/ data record book</b> little evidence of experimental procedures, materials used, and data</li> <li><b>Visual Display:</b> Is missing many of the important aspects from the superior rating</li> <li><b>Oral Presentation:</b> Little evidence of scientific method, questions unanswered, eye contact minimal</li> </ul>	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10
<p><b><u>MORE CRITERIA OVER</u></b></p>				

ORIGINALITY, CREATIVITY				
<p><b>Superior 10-9 pts</b></p> <ul style="list-style-type: none"> <li>New idea, concept, principle, hypothesis, insight or non-obvious approach</li> <li>Novel association or relationship of previous discoveries or knowledge</li> <li>Rigorous and exhaustive analyses of extensive or robust data or results that reveal previously unknown relations</li> <li>Inquiry or design based experiment rather than a summary of knowledge</li> <li>Relates to the scientific community or business partner</li> </ul>	<p><b>Excellent 8 – 6 pts</b></p> <ul style="list-style-type: none"> <li>Different idea, concept, principle, hypothesis, insight or approach</li> <li>Conventional association or relationship of previous discoveries</li> <li>Routine analyses of data or results previously known</li> <li>Some inquiry or design based experimentation used but relies on summary of previous knowledge</li> <li>Somewhat related to the scientific/business community</li> </ul>	<p><b>Good 5 – 3 pts</b></p> <ul style="list-style-type: none"> <li>Ordinary idea, concept, principle, hypothesis, insight or approach</li> <li>Familiar association or relationship of previous discoveries</li> <li>Routine analyses of data or results that previously known</li> <li>Slight inquiry or design based experimentation used but relies on summary of previous knowledge</li> <li>Little relationship to the scientific/business community</li> </ul>	<p><b>No Evidence 2 – 1 pts</b></p> <ul style="list-style-type: none"> <li>Non-novel idea, concept, principle, hypothesis, insight or approach</li> <li>No association or relationship of previous discoveries</li> <li>No analyses of data or results that previously known</li> <li>No inquiry or design based experimentation used but relies on summary of previous knowledge</li> <li>No relationship to the scientific/business community</li> </ul>	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10
TEAMWORK				
<p><b>Superior 10-9 pts</b></p> <ul style="list-style-type: none"> <li>Partnerships were <u>exemplary</u>, clearly demonstrating a <u>multitude</u> of project partners/business or industry advisors</li> <li><u>Complete</u> team work explained and demonstrated by project evaluation and team members answers to judges questions</li> </ul>	<p><b>Excellent 8 – 6 pts</b></p> <ul style="list-style-type: none"> <li>Partnerships were <u>evident</u>, clearly demonstrating project partners/business or industry advisors</li> <li><u>Adequate</u> teamwork explained and demonstrated by project evaluation and answers to judges questions</li> </ul>	<p><b>Good 5 – 3 pts</b></p> <ul style="list-style-type: none"> <li>Partnerships were evident, demonstrating <u>limited</u> project partners/business or industry advisors</li> <li><u>Weak</u> teamwork explained and demonstrated by project evaluation and answers to judges questions</li> </ul>	<p><b>No Evidence 2 – 1 pts</b></p> <ul style="list-style-type: none"> <li>Partnerships were <u>not evident</u> demonstrating any project partners or business/industry advisors</li> <li><u>No demonstration and explanation of</u> teamwork between team members</li> </ul>	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10
				<p>PROJECT SCORE (5-50 points) _____</p> <p>SUMMARY SCORE (0-5 points) _____</p> <p><b>TOTAL OVERALL SCORE (5-55) _____</b></p>

**JUDGES MUST ADD COMMENTS BELOW:** Please add your comments about the project. Students especially look for constructive criticism to improve the project for future science competitions.