

“The 21st century is widely heralded as the century of biology. Building on the fundamental understanding achieved in the second half of the last century, revolutionary advances are expected to improve many aspects of our lives, from clean energy and targeted, safer medicines to new industries. Prominent among emerging technologies is ‘synthetic biology,’ which aims to apply standardized engineering techniques to biology and thereby create organisms or biological systems with novel or specialized functions to address countless needs.”

— The Presidential Commission for the Study of Bioethical Issues



# BIOLOGY CLUB

ST. MARK'S BIOTECHNOLOGY INITIATIVE

ESTABLISHED IN 2007

**SMiGEM**   
**Biotechnology Initiative**

Wednesday & Thursday

9th Period

S120

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**ST. MARK'S SCHOOL OF TEXAS iGEM TEAM  
BIOTECHNOLOGY BROCHURE  
APRIL 2014**

what is iGEM? WHY JOIN BIO-CLUB?  
**WHAT IS BIO-TECH?**

THE **TECHNIQUE**  
 OF USING **LIVING**  
**organisms** TO  
**PERFORM** **CHEMICAL**  
**PROCESSING**

**what is iGEM?**  
 International Genetically Engineered Machine (iGEM) is the premier student synthetic biology competition started at the **Massachusetts Institute of Technology (MIT)** initially aimed at undergraduates but has since expanded to include high schoolers and entrepreneurs. The vision of the competition is to create a catalog of standardized parts in what is called the Registry of Standard Biological Parts. This would enable biologists to connect BioBricks (pieces of DNA) in the same way you would snap together Legos. **Ultimately, the hope is to create biological tools to solve some of the world's most pressing problems.**

**why should you join the St. Mark's iGEM Team?**

CONDUCT **RESEARCH**

St. Mark's provides an ideal environment for the exploration of synthetic biology. **Few secondary schools can match St. Mark's quality of instructors, resources, and inquisitive ethos.** In line with the school's mission, iGEM fosters intellectual curiosity through scientific inquiry. The competition provides Marksmen with an **outlet to conduct original research at the high school level.**

JOIN A **GLOBAL** COMMUNITY

Every June, more than fifty high school iGEM Teams from around the world present their biologically engineered systems at MIT. We are the first high school iGEM team from the state of Texas.

**EXPLORE**

Since synthetic biology fuses Science, Technology, Engineering, and Math (STEM), St. Mark's iGEM also aims to promote an **interdisciplinary approach** to solving problems at St. Mark's. By combining the talents and interests of team members, we can research and innovate with an open mind to new possibilities. Pursuing research in biotechnology sets St. Mark's at the forefront of secondary science education. **The collaboration, curiosity, and consideration of ethics necessary for iGEM present Marksmen with real world problems and opportunities for growth both intellectually and personally.**

