

**Welcome to the 2nd Annual Baltimore County Public Schools
Student Independent Research Symposium - May 21, 2014**

AGENDA

Please use the provided Comment Cards to share feedback with student researchers.

- 6:00 - 7:00 Student Poster Sessions and Multimedia Products**
Please enjoy some light refreshments as you visit student research exhibits.
- 7:00 - 7:45 Student Oral Presentations**
Please be seated in the presentation audience area.
- 7:45 - 8:00 Congratulations and Recognition of Student Researchers**
Closing remarks and presentation of student Certificates of Achievement.

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Brooke Hairston Junior	Dundalk High School	Poster Session
<p>Title: <i>Effects of School Censorship and Book Banning</i></p> <p>Statement of purpose: The purpose of this research is to examine the affects that banning books in schools can have on the development of children.</p> <p>Background: Every year a list of banned books is published, and these books are being removed from schools. Censorship has a negative effect on everyone involved. For example, censorship does not allow authors to express their ideas without worrying whether or not their books will be allowed in schools. Censorship also denies students the opportunity to be exposed to different perspectives and great literature.</p> <p>Significance: This topic is significant because banning books in schools can be interpreted as a violation of our right to free speech under the First Amendment of the U.S. Constitution. I began studying this topic because I personally believe that it is wrong to ban a book from schools just because some people believe its content is “controversial.”</p>		

Grayson McNew Junior	Dundalk High School	Poster Session
<p>Title: <i>The Morality of Stem Cell Research</i></p> <p>Statement of purpose: The point of my research is to persuade the public that using stem cells is helpful and not harmful. Stem cells are the future! They have the ability to rebuild someone’s body from the inside-out. They can cure cancer, and save lives.</p> <p>Background: Millions of people die each year from diseases like cancer, Alzheimer’s, and Parkinson’s disease. My family was not exempt from that number; I have lost many of my family members to these diseases. If stem cells had been an option, they may have been saved. I am researching stem cell use to analyze the pros and cons, and find out why the government is not funding research to learn more about their life saving potential.</p> <p>Significance: This research is important because it opens people’s eyes to the facts about stem cells. Stem cells have the potential to save the lives of millions of people. So why isn’t the government funding stem cell research?</p>		

Summer Nevins Junior	Dundalk High School	Poster Session
<p>Title: <i>Effects of Sleep Deprivation on Students</i></p> <p>Statement of purpose: The purpose of my research is to ensure awareness of the hazardous effects of sleep deprivation and it's relation to our students. By bringing this subject to light, I hope to persuade students to take more of an interest in their sleeping habits. Additionally, I would like to educate society regarding the amount of sleep that is necessary for students to become a healthier, more vibrant, and more alert generation.</p> <p>Background: Schools in 41 states have recognized the need as well as the benefits of changing school start times to later, as they saw academic improvements and an increase in the attendance rate amongst students. I believe by switching the start times of high school, since high school students require more sleep on average, we will be ensuring a brighter future for society in general.</p> <p>Significance: By researching the effects of sleep deprivation, I can discover the importance of sleep as a necessary function for health and alertness in order to persuade others, including the school board, to be aware of its importance for students.</p>		

Cesar Ricardo Junior	Dundalk High School	Poster Session
<p>Title: <i>Effects of Video Gaming on Society</i></p> <p>Statement of purpose: The purpose of this research project is to show the effects that video gaming has over society, as well as to examine both sides of the controversial discussion about the overall impacts of videogames on children's character formation.</p> <p>Background: The main reason of I chose this topic is because I want to become a video-game designer/programmer, and this issue has always provoked discomfort in me. It got me thinking about possible misconceptions about video game violence. Was the media just reacting negatively to violence in videogames as a response to violent crimes in the news like school shootings, and then forgetting all about the issue? Or was it me who had the wrong idea, thinking that violence in video games is always a problem and needs to be addressed on a long term basis?</p> <p>Significance: This topic is significant because video gaming is so widespread, and there seems to be no real oversight of this industry.</p>		

Scott Sekercan Senior	Loch Raven High School	Poster Session
<p>Title: <i>Impact of Emerging Smart Guitar Technology on Musicians and Their Music</i></p> <p>Question: What impact, if any, does emerging smart guitar technology have on guitar players, and to what degree?</p> <p>Statement of purpose: As new electric guitar technologies emerge and become accessible to the general public, the choice must be made whether or not their application is a hindrance or advancement to the original guitar being <i>improved</i>. Upon research of existing smart guitar technology, my aim is to make the most user friendly smart guitar possible.</p> <p>Background: Listening to music inspired me to play music; playing music caused me to immerse myself in the culture and advancement of music technology. From my experience as a musician, my frustration with the electric guitar is its limited range of tonal possibilities.</p> <p>Significance: As the field of electronics continues to create an increasingly smaller physical product, it is applied to fields where it could have once been considered absurd. The electric guitar was once a stranger to circuit boards and vast electrical connections; but now it is possible to create a tonally ideal electric guitar. The world I which we live has us blindly reaching for the newest technologies, without giving much thought to how a technological advancement actually impacts us, and whether it is actually useful or just a cool new toy. Specifically, is it worthwhile to use smart guitars? Are they the future? This is the beginning of what could be the long lasting future of the electric guitar as we know it.</p>		

Sean Brown Junior	Parkville High School	Oral Presentation
<p>Title: <i>Constructing a Super Computer and Holographic Device for Crime Scene Investigation</i></p> <p>Statement of purpose: This research was designed to construct a mechanical marvel to aid the efforts of criminal investigators. The super computer will create 3d images to simulate a crime scene, allowing the viewer to get a substantially clearer scope of the situation.</p> <p>Background: I chose to do this research because I have always been interested in the use of super computers throughout history. They have been used to simulate nuclear explosions, produce a recreation of the “big bang,” and much more.</p> <p>Significance: This research can be the forerunner for future constructs of faster and more powerful super computers that can produce a nearly infinite amount of floating point operations and so forth.</p>		

Jessica Jones Junior	Parkville High School	
Title: <i>Exploring the Lack of Diversity in American Television and Comedy</i>		

Tiaju McCalup Senior	Parkville High School	Multimedia Product
<p>Title: <i>How to Write a Best-Selling Novel</i></p> <p>Statement of purpose: Since I was younger, I have always enjoyed writing. It is something I am very passionate about, and something I want to study in college to further perfect my skills. Writing a novel was a way for me to exercise my writing skills, improve them, and create something that attracts readers. Therefore, I decided to conduct research on what books sell best to create an enjoyable novel for readers.</p> <p>Background: Prior to starting my manuscript, I conducted research to find out which book topics and genres sell the best. I found that books such as <i>Fifty Shades of Gray</i>, <i>The Twilight Saga</i>, and <i>The Hunger Games</i> were the most popular books within the past few years. I also found out which elements made them best sellers, such as forbidden love, sex, romance, and escape from the real world. Learning about these elements, and researching into each book individually, gave me in-depth perception into what readers want, helping me to draft my manuscript.</p> <p>Significance: From this research I learned that readers turn to books to escape from reality. It provides them with mystery and romance that their real life does not provide. Now that I know what readers search for, I am able to provide this in my own writing.</p>		

Starr Rasheed Senior	Parkville High School	Multimedia Product
<p>Title: <i>Impact of Television on the Public's Perception of the Legal System</i></p> <p>Statement of purpose: My purpose for doing this research was to determine how television crime shows influence the public's perception of the real legal system.</p> <p>Background: I decided on this research topic because I love watching crime shows on television. As I would sit and watch, I wondered whether what I was seeing on television was different from what happens in the legal system in real life.</p> <p>Significance: This topic is significant because people should know the differences between reality and television with regard to our legal system.</p>		

Sierra Slide Senior	Parkville High School	Multimedia Product
<p>Title: <i>Improving Mitochondria DNA Analysis</i></p> <p>Statement of purpose: I chose to conduct research about DNA because I enjoy learning about how DNA is able to tell us so much about a human being. My interest in DNA began from watching crime shows like Law and Order on television. One day I plan to become a DNA Analyst so that I can have a hands-on experience.</p> <p>Background: The most powerful method of DNA analysis is mitochondria DNA analysis. This method allows law enforcement to trace a person using DNA evidence from a crime scene. This method has been used for many years, but the process for getting results takes a very long time. I would like to work on speeding up the process to get DNA analysis results more quickly.</p> <p>Significance: This research would benefit society by helping law enforcement to identify people they are looking for more quickly. The results of this research will be of interest to anyone interested in a career as a DNA Analyst.</p>		

Brenna Washington Senior	Parkville High School	Multimedia Product
<p>Title: <i>Treatment Plan for Adolescents with Dysthymia</i></p> <p>Statement of purpose: I chose to research treatment methods for dysthymia, because I have suffered with major depression for as long as I can remember. The results I get from my research could not only benefit me, but also others who suffer with this disorder.</p> <p>Background: Scientists have been studying mental illnesses for years. Treatment methods have greatly improved over time. Some of the first antipsychotic medications were Thorazine, Haldol, Clazopine, Prolixin, Navane, Lithium, and Mellaril. Scientists and researchers soon realized that most of these medications caused dangerous side effects.</p> <p>Significance: I am currently surveying information to develop a combination treatment for dysthymia, by using specific medications and cognitive therapy.</p>		

Britnee Wright Senior	Parkville High School	Multimedia Product
<p>Title: <i>The Psychology of Visual Social Media: What Attracts YouTube Viewers?</i></p> <p>Statement of purpose: The purpose of this research is to discover what attracts people to certain YouTube videos and/or channels, and whether certain techniques could be replicated by others to achieve the success of popular “YouTubers.” I am interested in evaluating the impact that quality and editing have on viewership, analyzing the success of advertising for YouTube channels, and studying the relationship between psychology visual social media.</p> <p>Background: Working with cameras and directing is my career interest, so I knew it would be beneficial to me to pick a topic where I could learn more about the requirements of directing effectively. This research will help me to get a better view of what the future might hold for me as a director.</p> <p>Significance: This topic is worth considering, because it gives insight into how we trust and view the media and information presented to us. Advertising agencies would most likely use the psychology information to help with promoting products through video advertising. This information would also be relevant for individuals that want to start a YouTube channel or are interested in filmmaking.</p>		

Savannah Speir Senior	Perry Hall High School	Oral Presentation
<p>Title: <i>The Effect of Histone Modifications and Oxidative Stress on Aging</i></p> <p>Statement of purpose: I hope to find links between epigenetic modifications, metabolism, and aging. How does oxidative stress affect the aging process? How does the epigenome change with age? How can particular epigenetic markers promote healthy aging or cause age-related disease?</p> <p>Background: I became interested in the molecular basis of aging when I read an interview with Aubrey de Grey, a theoretician in the field of gerontology. He viewed aging not as an inevitable fact of life, but as a disease with treatable causes, like cell senescence and accumulation of harmful metabolic byproducts. I had already been interested in molecular biology, but his interview immediately made me interested in molecular gerontology.</p> <p>Significance: Unlike some diseases that only affect a comparatively small number of people, aging affects everyone alive. Everyone on Earth stands to benefit from treatments to promote healthy aging that could be developed using this research. In addition, as population grows, the number of elderly people grows. Treatments developed using this research could enhance their quality of life.</p>		

Andrew Yu Junior	Perry Hall High School	Poster Session
<p>Title: <i>Does Extra-Sensory Perception Exist?</i></p> <p>Statement of purpose: The purpose of this research is to determine if there is scientific evidence that could prove the existence of ESP.</p> <p>Background: Extra-sensory perception is a means of perception without using the five known senses. It is a “sixth sense” that allows people to gain knowledge subconsciously.</p> <p>Significance: For decades, scientists have debated whether ESP exists. There has been a stalemate, as neither side has been able to provide conclusive evidence. Quantitative proof that either proves or disproves ESP, or the development of a rigorous experiment whose data would help make a final decision, would be significant.</p>		

Alex Jerome Senior	Pikesville High School	Video Presentation
<p>Title: <i>LookInto.me</i>: How could a business create a product that uses social-media and other public databases to create in-depth portfolios of a user’s associates?</p> <p>Statement of Purpose: The purpose of this research is to dive into the entrepreneurship process and learn how to create a technological start-up. I will be working to create a pitch deck, a business model and financial plans, and mockups of the actual web-app, with guidance from my mentor Tom Kuegler, an actual venture capitalist. Questions arose regarding the feasibility of the product. Was it a useful product in the competitive space?</p> <p>Background: In 8th grade I started doing freelance marketing through social-media, video, print-work and many other mediums. Ever since then, I have been trying to broaden my experience and learning opportunities within the business world— especially within the entrepreneurship area.</p> <p>Significance: Learning about the processes involved in venture capitalism and entrepreneurship has led me to think about creating my own business and changing the world through it. I believe that entrepreneurship leads to earth-shattering ideas. I hope to empower those ideas in the future as well as create them—whether it’s for “LookInto.me” or not.</p>		

Karas Leeks Junior	Randallstown High School	Poster Session
<p>Title: <i>Cultural Origins and Significance of Nonverbal Communication</i></p> <p>Statement of purpose: The purpose of this research is to understand how the values of a society or culture can affect a person not only mentally, but also physically.</p> <p>Background: I was aware that there were differences in body language in different cultures. However, I never knew the origin behind them. Researching the origins lead me to question if social mores can affect nonverbal communication.</p> <p>Significance: People in different cultures tend to be judgmental of other cultures. This can lead to miscommunication which could have serious consequences. Understanding the cultural differences in nonverbal communication is important not only for visitors to other countries; it is also important for citizens of countries like the United States where the population is diverse.</p>		

Ibrahim Samateh Junior	Randallstown High School	
<p>Title: <i>Race, Intelligence and Epigenetics: What is the Connection?</i></p> <p>Statement of purpose: The purpose of this research is find reasons why an intelligence gap exists between African-Americans, Caucasians and Asians. What are the genetic factors that could influence intelligence? I am studying the burgeoning field of <i>epigenetics</i> to seek a correlation between intelligence and significant environmental factors that could have impacted particular races, for example, the diet and extreme living and emotional conditions of African-American slaves.</p> <p>Background: Caucasians consistently score higher than African-Americans on Intelligence Quota tests, while Asians continually outperform both African-Americans and Caucasians. Nutritional and behavioral epigenetic studies are proving that the diet and life events of our predecessors, for example, traumatic experiences, can alter the brains of descendants. Historical oppression, including educational inequality and economic instability, could play a role in the intelligence gap between African-Americans and Caucasians.</p> <p>Significance: This research could help explain how some intelligence is achieved genetically. In addition, once correlations are shown between the lives of descendants and their ancestors, and there is awareness in the community, adjustments in life style changes, etc. could eventually alter the brains of their successors.</p>		

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