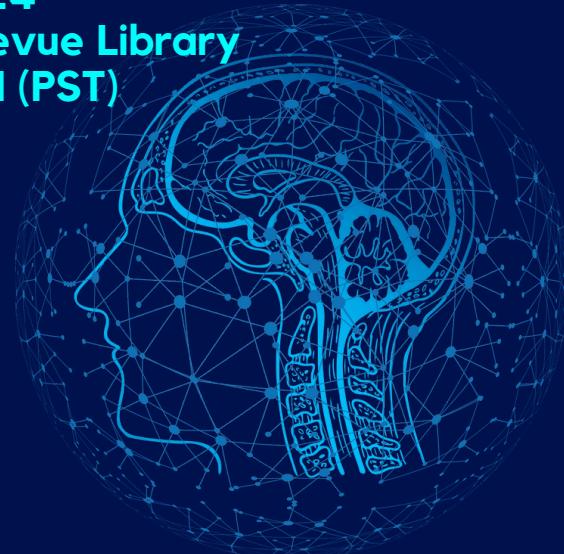




SEATTLE NEURO EDUCATIVE INITIATIVE

Date : July 21st 2024
Venue : Meeting Room1, Bellevue Library
Timing : 12noon to 4 PM (PST)



KEYNOTE SPEAKERS



Dr. Vandita Samavedi M.D, FACP, has over 20 years of experience treating complex medical conditions. She completed her medical education from CMC Vellore in India and her Internal Medicine residency from the University of Illinois, Chicago. She is the co-founder of Haldi Living LLC. She has co-authored a book, "Nature's Mantra for Healthy Living", which emphasizes a holistic lifestyle, and gives a modern integrative approach to managing prediabetes and diabetes. She also serves as a Board member for the Inclusive Technology of Washington. ITW is a non-profit education program that serves various populations including special needs, rural communities, and the Girl Scouts of America. She volunteers regularly at community health events and was part of a medical mission team in Kenya. She enjoys spending time with her family, practicing yoga, and cooking.



Sagarika Samavedi graduated from Stanford University with a BS in Bioengineering and Biomedical Engineering last year and an MS in Computer Science last month.

She is a results-oriented Bio-Engineer with a passion for fusing biology and computer science. Her foundation in research is strong, with experience in plant and marine biology, systems biology modeling, and computational analysis. She was a Research Assistant at the Covert Lab for Systems Biology, developing interactive resources to make complex concepts more accessible. She has a proven track record of research success, having conducted studies at prestigious institutions like Stanford, Howard Hughes Medical Institute, and the Air Force Research Laboratory. As a Student Fellow at the Hoover Institution, she analyzed US-India relations and presented her findings to high-profile people.

She is a co-founder of Haldi Living along with Dr. Iyer and Dr. Samavedi. Through the Haldi Living platform, she plans to popularize a healthy lifestyle that the youth can follow. She believes healthy food, self-care, and stress management through the Ayurvedic lifestyle and the practice of Pranayama and Yoga can be easily incorporated into the modern busy life. She is an artist and an accomplished Kathak dancer of over ten years. Her research projects span from exploring alternative sources of energy and plant genetics to the analysis of John Steinbeck's literature and geopolitics.

Sagarika Samavedi went to Interlake High School in Washington. She has represented her school at the National Science Bowl 3 times and Washington Science Olympiad for 4 years. Her passion in renewable energy led her to research thermostable enzymes for biofuel production. . She has presented her work at Intel ISEF, Google Science Fair, AJAS, National JSHS, SJWP and the National Army Science and Technology Conference. In her spare time, she can be found following the migratory path of Red Knots, or looking for Jupiter's moons through her telescope. She has performed Kathak, a classical Indian dance form, for 14 years. She is a USABO - Top-20 students in the USA.

AGENDA OF THE DAY

12:00 to 12:15 : CO-Founders Introduction / Purpose of the initiative

12:15 to 12:30 : Keynote speaker speech

12:30 to 2:00 pm : Brain Facts Book-Chapter presentations

Chapter 1 (Brain Basics) presented by Nivriti Chandrasekar

Chapter 2 (Senses & Perception) presented by Sara Sunil

Chapter 3 (Movement) presented by Gayatri Arvindh

Chapter 4 (Learning, Memory & Emotions) presented by Drithi Pasupuleti

Chapter 5 (Thinking, Planning & Language) presented by Saranya Sriramula

Chapter 6 (The Developing Brain) presented by Sanjana Katti

Chapter 7 (Infant, Child & Adolescent Brain) presented by Shreya Karthik

Chapter 8 (Adult & Aging Brain) presented by Arnav Kolluru

Chapter 9 (Brain States) presented by Shivani Venkatesh

Chapter 10 (The Body in Balance) presented by Haarika Nidadavolu

Chapter 11 (Childhood Disorders) presented by Shreyansi Swain

Chapter 12 (Psychiatric Disorders) presented by Aarav Bhandula

Chapter 13 (Addiction) presented by Shruti Vinodkumar

Chapter 14 (Injury & Illness) presented by Akshara Govil

Chapter 15 (Neurodegenerative Disease) presented by Keertana Raghavendra

Chapter 16 (Kinds of Research) Presented by Harshita Sinha

Chapter 17 (Solving Human Problems) presented by Yana Joshi

Chapter 18 (Neuroscience in Society) presented by Saathvik Voora

2:00 to 2:30 pm : Student Research Poster Presentations

1. A mini device to detect infant liver disease (Biliary Atresia)

Shivani Venkatesh, 11th Grade, Juanita High School

2. Harnessing explainable machine learning algorithms to predict brain strokes

Bhavya Kottapalli, 10th Grade, Juanita High School

3. Effects of Pharmaceuticals and Ocean Warming on Zooxanthellae Expulsion and Asexual Reproduction in Aiptasia: A Model for Tropical Coral

Sanjana Katti, 12th Grade, Tesla STEM High School

4. In Silico Investigation of SMAD3, GC-Rich DNA, and SMAD4's MH1 Domain in TGF- β Signaling

Lahari Nellore, 10th Grade, Lake Washington High School

5.



AGENDA OF THE DAY

2:00 pm to 3:30 pm : Brain Facts Book-Chapter pop quizzes

Chapter 1 (Brain Basics) presented by Lahari Nellore
Chapter 2 (Senses & Perception) presented by Akchara Mukunthu
Chapter 3 (Movement) presented by Mahathi Barrenkala
Chapter 4 (Learning, Memory & Emotions) presented by Adhrithi Vutukuri
Chapter 5 (Thinking, Planning & Language) presented by Veer Shah
Chapter 6 (The Developing Brain) presented by Bhavya Kottapalli
Chapter 7 (Infant, Child & Adolescent Brain) presented by Priya Emani
Chapter 8 (Adult & Aging Brain) presented by Shreya Rangaswamy
Chapter 9 (Brain States) presented by Saketh Madiraju
Chapter 10 (The Body in Balance) presented by Lavanya Sharma
Chapter 11 (Childhood Disorders) presented by Chinmayi Buddhavarapu
Chapter 12 (Psychiatric Disorders) by LakshmiSahasra N
Chapter 13 (Addiction) presented by Saket Lingamallu
Chapter 14 (Injury & Illness) by Anagha Rayaprolu
Chapter 15 (Neurodegenerative Disease) by Ashley M
Chapter 16 (Kinds of Research) by Bhadra P
Chapter 17 (Solving Human Problems) by Praya Athi
Chapter 18 (Neuroscience in Society) by Vaishnavi

3:30 to 04:15 : Glossary pop quiz (5 mins per chapter)

Glossary (Acetylcholine to Autism Spectrum) by Gaura Gupta
Glossary (Autonomic Nervous System to Computational Neuroscience) by Navneeth B
Glossary (Cones to Episodic Memory) by Anya Kak
Glossary (Estrogen to Histamine) by Sahasra Kalvakunta
Glossary (Homeostasis to membrane Potential) by Neelansh B
Glossary (Mentalization to Nociceptors) by Vibhi Shukla
Glossary (Nodes of Ranvier to pituitary gland) by Arushi P
Glossary (Plasticity to Spinal cord) by Vaishnavi
Glossary (Stem cells to working memory) by Vaishnavi



ACKNOWLEDGEMENTS

Website : <https://www.seattleneuroeducation.org/>
Design by Saranya Sriramula, Eastlake High School

Seattle Neuro Educative Initiative Annual Flyer
Designed by Shreya Karthik, Henry M Jackson High School

Fund Raising
by Gayatri Arivindh, Eastlake High School

Library Conference Room Booking by Sanjana Katti, Tesla Stem High School

Research Project Student Presentation Book Gifts Sponsor Renuka Vallarapu

MEET OUR CO-FOUNDERS

Shreya Karthik



Hi, my name is Shreya Karthik and I am a rising senior at Henry M. Jackson High School, excited to be a co-founder of the neuro-education initiative. My unbound passion for neuroscience stemmed from a variety of profound experiences, beginning at Camp Prov, where I have been a summer volunteer, working with neurodivergent youth. This experience is what inspired me to delve deeper into learning more about the neurodivergent community. Relating it to my interest in research, I have been investigating biomarker identification research for youth with Autism Spectrum Disorder. For my work, I am honored to have been awarded recognition by the American Psychological Association. Now, I also volunteer at a stroke unit and have continued serving our community in a myriad of ways, promoting mindfulness in youth to advocate for actionable mental health awareness.

In the glimpses of in-between time, you can find me either scouring the newest scientific journals and magazines to learn about novel innovations or perhaps even belting out nostalgic Disney songs with my sister, even belting out nostalgic Disney songs with my sister, but most often, you can find me making new connections, eager to learn, mentor and give as I hope to do with the neuro-education initiative!

Saranya Sriramula

Hello, my name is Saranya Sriramula, a rising senior at Eastlake High School. My interest in the workings of the human mind has led me to develop a deep passion for neuroscience. I am fascinated by the complexity of the brain and the vast potential it holds for understanding human behavior and improving health outcomes. I have been volunteering at a local hospital, where I have had the privilege of interacting with elderly patients with various mental and physical disabilities. I offer them books and magazines, but more importantly, I provide them with meaningful conversations. These interactions have not only helped me understand the impact of different neurodegenerative diseases but have also highlighted the importance of empathy and communication in completely understanding and improving the condition of these disorders. Additionally, I am an active member of the HOSA chapter at my school. My involvement in HOSA has allowed me to participate in medical innovation projects, where I continuously explore ways to improve the healthcare field. This experience has furthered my interest in neuroscience and my desire to contribute to the medical field. I am excited to work as a Co-Founder in the Seattle Neuro-Education Initiative and I can't wait to collaborate with other high schoolers with similar interests.



MEET OUR CO-FOUNDERS

Gayathri Arvindh

Hi, my name is Gayathri Arvindh (I also go by Yatri). I am a rising senior at Eastlake High School. I am passionate about pursuing a career that involves biosciences and engineering, specifically neuroprosthetics. I am inspired by the works of Professor Hugh Herr and would love to follow in his footsteps. I have spent 13 years learning how to assemble and program intelligent robots. At school, courses such as AP Biology and Anatomy & Physiology have been fascinating windows into how the brain functions. In addition, I enjoy participating in DECA and other extracurricular activities. In my free time, I am usually in the outdoors or spending time with friends and family. I am excited to work alongside other motivated high schoolers to ensure education is accessible for all, regardless of socioeconomic status.



Sanjana Katti



I am a rising senior at Tesla STEM High School. In the future, I would like to work in research to help treat traumatic brain injuries. At school, I am a state champion in three events as part of HOSA and TSA (Technology Student Association), and won two special awards at the Central Sound and Washington State Science and Engineering Fairs for my research project in toxicology and endocrine disruption. I am also a volunteer at my local hospital and in my free time, play competitive badminton for my high school. I started SNEI because neuroscience is an ever-expanding field, with new discoveries being made daily that have strong impacts on our future scientists. Our generation has become hugely advocate of mental health disorders, and one step to lessening the stigma of these and other neurological conditions is to normalize and study them. I am excited to help others learn about this incredible field!

Nivritti Chandrasekar

I am a rising senior at Westview High School in Portland, Oregon. I aspire to pursue a career in medicine and hope to be a neurosurgeon. I am the Founder and President of the Oregon Brain Bee. I am a Student Director at ONPRC's Science Ambassadors program and the Outreach Coordinator of the local Operation Smile Chapter. I am a member of HOSA, NHS, SNHS, and Red Cross club at school. I have won awards in the Brain Bee competition at the regional and national level. I am working on a research internship with neuroscientists at OHSU, as part of the PSI program. I enjoy volunteering at my local hospital on weekends. I completed the SAFL Sanskrit program and volunteer as an assistant teacher at Samskrita Bharati Portland Chapter. I have completed the OMTA Level 6 Piano exam and trained in Indian classical music. I love playing badminton, hiking, painting and baking. My strive to promote interest in neuroscience among students, fueled by my passion for the subject, led to co-founding SNEI, a distinguished drive to help the next generation neuroscientists.



MEET OUR CO-FOUNDERS

Drithi Pasupuleti



I am a rising senior at Interlake High School. My aspiration to become a child psychiatrist is driven by my fascination with the intricate complexities of the brain and its profound impact understanding these processes can make for others. Over the past four years, I have been actively involved in mentoring and tutoring middle and high school students, advocating for voter registration, women's rights, and mental health. I currently lead a mental health advocacy group, where I plan and host workshops and create advocacy posts on social media. I have also contributed to earth restoration and horticulture projects. Beyond academics, I find joy in spending time with friends, playing golf, piano, singing, volunteering, and engaging in robotics.

I am eager to continue utilizing these qualities to make a positive impact in the future, and I believe that SNEI will help me accomplish my goals!

Sara Sunil



Hello, my name is Sara Sunil. I am a rising senior at Eastlake High School. I competed in DECA with a 20 page report on coronary heart disease research and its role in the ease of monitoring heart health. Including the use of an electrolyte regulated monitor (ERM) and an amplified heart disease detector(AHDD), two product prototypes I created. In my international internship in Kotputli last summer, I observed 3 surgeons for a total of 240 hours, watching active surgery in the Operating Room. I also gained knowledge about surgery as a medical specialty by observing 1200+ patient contacts through making rounds in the ICU and viewing 12+ invasive surgeries. In July 2023, through the UW YSP neuroscience program I

observed 5 scientists detail neuroscience as a medical specialty including experts in the field such as Sara Georing and her research on Neuroethics and Neurotechnology. By learning about brain-computer interfaces (BCIs) and neural stimulation's potential to restore abilities in individuals with paralysis and addressing conditions like Parkinson's disease and other neuropsychiatric disorders. Attending lectures that detailed the development of encoding algorithms and stimulation patterns, tailored to individual needs and contexts, is crucial for optimizing the effectiveness of BCIs and neural stimulation has peaked my interest in the neurosurgical field. When I'm not competing in a national competition, I'm working on art for my business TheCloudArtsUSA, or painting wall murals for a partnered 501c(3) non-profit, Expressions. I hope to learn and grow through the neuro-education initiative.

Vaishnavi Annamraju

I am a rising senior at Eastlake High School in Redmond, Washington. I hope to pursue a career in medicine as either a neurosurgeon or OB/GYN.

Outside of SNEI, I volunteer at a local hospital on the Acute Rehab unit and interact with patients facing various neurological challenges. I am also a two-time international DECA competitor and an officer at my school's DECA chapter. I am also the founder of Wings for Women, a local nonprofit that address issues that women in our communities face, especially hygiene poverty. I have been a scholar in Kode With Klossy's coding camps for the past three years and will be an Instructor Assistant for their Data Science curriculum for this summer. I am also member of HOSA (5th at state in medical reading), NHS, and MHS at school.

I enjoy volunteering at my local Telugu school on weekends. I am trained in Indian Carnatic vocals and I also take part in my school's choir where I am President. I have also participated in the WMEA All-State Honor Choir. Over the years, I have also volunteered as a Teacher Assistant as Anagha's Math. I love playing badminton, reading medical memoirs, and trying new recipes. My passion for making education more accessible for our future generation of scientists and researchers and interest in neuroscience motivated me to co-found SNEI, a comprehensive approach to neuroscience education.



MEET THE STUDENT OFFICERS

Vice Presidents (Rising Juniors):

Shivani Venkatesh, Juanita High School, Kirkland

Arnav Kolluru, Liberty High school, Renton

Academic Committee(Rising Sophomores) :

Harshita Sinha, Cavelero Mid High School, Lake Stevens

Yana Joshi, Henry M Jackson, Mill Creek

Saathvik Voora, Redmond High School, Redmond

Lahari Nellore, Lake Washington High School, Kirkland

Akchara Mukunthu, Telsa Stem High School, Redmond

Mahathi Barrenkala, Telsa Stem High School, Redmond

Adhrith Vutukuri, Telsa Stem High School, Redmond

Veer Shah, Juanita High School, Kirkland

Bhavya Kottapalli, Juanita High School, Kirkland

Priya Emani, Interlake High School, Bellevue

Shreya Rangaswamy, Lake Washington High School, Kirkland

Saketh Madiraju, Telsa Stem High School, Redmond

Lavanya Sharma, Redmond High School, Redmond

Chinmayi Buddhavarapu, Telsa Stem High School, Redmond

LakshmiSahasra Narlapuram, Juanita High School, Kirkland

Saket Lingamallu, Redmond High School, Redmond

Director for Community Outreach

(Rising Freshman):

Gaura Gupta, Overlake High School, Redmond

Navneeth Badhri, Redmond High School, Redmond

Anagha Rayaprolu, Redmond High School, Redmond

Ashley Mahajan, Emerald Ridge High School, Puyallup

Bhadra P, Telsa Stem High School, Redmond

Praya Athi, Telsa Stem High School, Redmond

Anya Kak, International School, Sammamish

Sahasra Kalvakunta, Henry M Jackson, Mill Creek

Neelansh Bhandari, Skyline High School, Sammamish

Vibhi Shukla, North Creek High School, Bothell

Arushi Prashil, Redmond High School, Redmond

