

Free the child's potential, and you will transform him into the world. -Maria Montessori





## THE EMPOWERMENT OF DREAMS

Allow children to have an equal opportunity to grow in a healthy environment that meets all their developmental and emotional needs while creating thriving communities that work towards a greener and more sustainable earth.



# A MILLION →

children out of school and nearly a million left behind due to the migration crisis, we cannot afford to wait.

Turkewitz, J. and Kohut, M. (2020) Nearly a million children left behind in Venezuela as parents migrate, The New York Times. Available at: https://www.nytimes.com/2020/03/24/world/americas/venezuela-migrationchildren.html (Accessed: 01 August 2023).





## THE WHY BEHIND OUR PROJECT

- Electricity shortages
- Unsanitary water
- Economic crisis
- Escalating starvation
- Health Crisis
- Violence
- Corruption
- Organized crime

with the economic crisis being especially difficult given that professionals like doctors and engineers make as little as \$10/month.





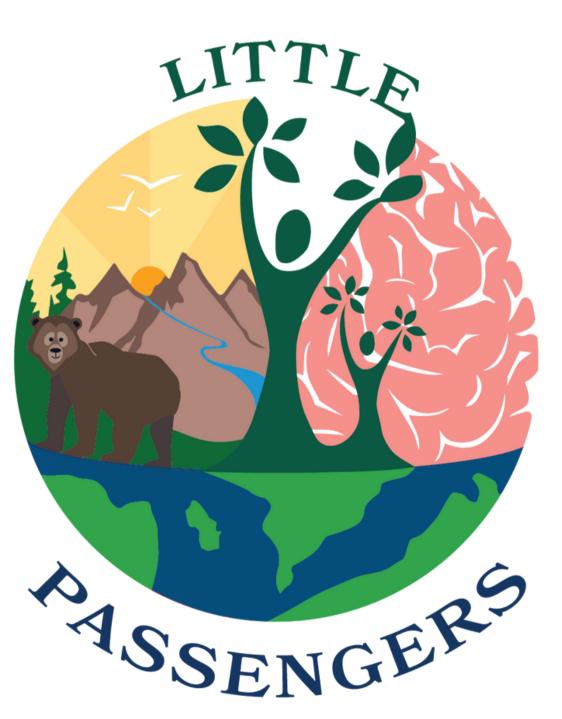
## THE POWER OF LOCAL EMPOWERMENT

Temporary donations, like food and clothing, hinder local economies and foster dependence.

The true solution lies in empowering communities to take control of their own destinies.







### **LITTLE PASSENGERS**

A student-led neuroscience and environmental research non-profit focused on supporting youth in Latin America

### **MEET THE TEAM**



**Albany Merinsky** President, Research Chair Neuroscience & Philosophy



Nicole Orellana Legal Chair Political Science and Communications



Mailynn Lam President **Political Science B.S** 



**Grace Tallon** Legal Chair International Business





Nya Martin **Engineering Chair Biomedical engineering** 



Sofia Duque Campus Öutreach Neuroscience





Juliana Santiago Membership Chair Neuroscience, Natural & Applied Sciences

**Emily Bejerano Research Chair** Neuroscience



**Pamela Carrillo Finance Chair** Economics B.S



**Rodrigo Ribeiro Research Chair** Neuroscience

## MEET THE TEAM

#### **MENTOR TEAM**







Dr. Juan de **Rivero Vaccari**, Ph.D., M.S.B.A.

**Maura Alvarez Baumgartner**, MD, MPH

**Dr. Jennifer** Muñoz Pareja, M.D

Dr. De Rivero Vaccari,

- Associate Professor of Neurological Surgery, The Miami Project to Cure Paralysis,
- Cellular Physiology & Molecular Biophysics Graduate Programs
- The Center for Cognitive Neuroscience and Aging at the University of Miami, Miller School of Medicine. • Expertise: Neuroinflammation, Biomarker Science, and Drug Discovery & Development.

Dr. Alvarez Baumgartner

- Completing her medical residency at the University of Miami Hospital
- Founded CUMIS, a Venezuelan medical organization dedicated to aiding underserved communities.

Dr. Muñoz Pareja

- Medicine at The Miami Project to Cure Paralysis Care Medicine Fellowship Program Hospital at Harvard Medical School
- Associate Professor of Pediatric Critical Care • Associate Program Director of the Pediatric Critical • Pediatric Fellowship at Massachusetts General • An active member of organizations bringing
- healthcare to underprivileged children

• Master's in public health from Harvard T.H. Chan School of Public Health



## **ADVERSE EXPERIENCES IN** EARLY CHILDHOOD

mental health.

- Poverty
- Abuse or neglect • Parental substance abuse or mental illness
- Exposure to violence
- Malnutirtion

Inbrief: The impact of early adversity on children's development (2020) Center on the Developing Child at Harvard University. Available at: https://developingchild.harvard.edu/resources/inbrief-the-impactof-early-adversity-on-childrens-development/ (Accessed: 10 July 2023).

### Can have a cumulative toll on an individual's physical and



### THERE IS HOPE

While early life adversities may increase children's susceptibility to developmental challenges, they do not determine their fate. Research has shown that by introducing evidence-based early interventions, we can pave a path toward promoting the healthy development of these children.

Lisa J. Berlin, Jeanne Brooks-Gunn, Cecelia McCarton, Marie C. McCormick, The Effectiveness of Early Intervention: Examining Risk Factors and Pathways to Enhanced Development, Preventive Medicine, Volume 27, Issue 2,1998, Pages 238–245, ISSN 0091–7435,

#### The Power of Play

We plan to introduce these STEAM workshops to children in Venezuela as part of our intervention , driven by our firm belief in the transformative potential of play as a key that unlocks a realm of boundless opportunities for each child's future.







## **ULTIMATE GOAL**

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This study aims to examine two low income communities to evaluate their exposure to adverse life experience and neurodevelopment

We will use this data to develop a science-based locally-led humanitarian intervention in these communities that will lead to their sustainable development.



## STAGES



Population

Collect population data to create an intervention plan tailored to this community's specific needs.



#### Exam

Yearly neuropsychological, socialemotional, physical, and EEG tests to monitor and understand how the children's brain development is influenced by our intervention.



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#### Intervention

Psychological and medical services, enhancing education through STEM and art, offering parents professional sessions for economic growth, and collaborating for clean energy and water solutions



## THE PHILOSOPHY THAT GUIDES US

"Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime."



### **STANDARD OF ETHICS**

It's essential to highlight that both children and adults from these two communities will undergo a comprehensive physical assessment, prioritizing ethical considerations at the forefront of our efforts to enhance overall community health.





## **STAGE 1- POPULATION**

The research will cover approximately 300 children from two low-income coastal communities in Venezuela, specifically Caroa and La Sabana in the Vargas state





## **STAGE 2- EXAMS**



Each participant will be given an early life adversity questionnaire and then we will divide the children into three groups of increasing quantity of ELA.

Following the ELA survey, each participant will be given the following evaluations. • Neurological evaluation for LATAM populations

- (NIH Toolbox)
- General physical evaluation.

Paolillo, Emily W et al. "NIH Toolbox® Emotion Batteries for Children: Factor-Based Composites and Norms." Assessment vol. 27,3 (2020): 607-620.

Ostrosky-Solís, F et al. "NEUROPSI: a brief neuropsychological test battery in Spanish with norms by age and educational level." Journal of the International Neuropsychological Society : JINS vol. 5,5 (1999): 413-33. doi:10.1017/s1355617799555045

• Adverse Childhood Experiences (ACE) test adapted by Dr. Anna Christine Grellert -Childhood Development Advisor at World Vision Latin America and the Caribbean.

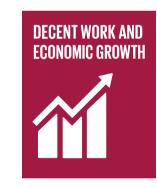
Social-emotional evaluation (NIH Toolbox)

## STAGE 3 SUSTAINABLE DEVELOPMENT GOALS - LONG TERM

Our comprehensive intervention aims to optimize their cognitive growth, focusing on four goals, all aimed at promoting their neurological development. In all our goals, we will support the local economy by partnering with doctors, engineers, and local businesses.



Access to Healthcare: Humanitarian Health Camps twice a year to provide medical and psychological aid and promote disease prevention.



Increase Household Income: Monthly Workshops for parents to develop professional skills and knowledge that would guide them to selfsustainability.



Quality education: Monthly art and science and engineering workshops for kids and biannual training for teachers to improve the school's curriculum.

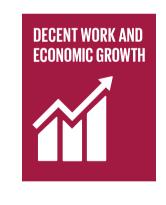


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## STAGE 3 Why did we choose those 4 goals?



**Healthcare Access:** Children who have access to healthcare are not only more inclined towards healthy development, but also benefit from early illness detection and prevention, receive vital mental health support, achieve important cognitive development milestones, and enjoy a range of additional advantages.



**Increase Household Income:** Parental financial stability crucially shapes children's neurological development, particularly in poverty contexts. A stable home environment, devoid of financial strain, fosters optimal brain growth. Minimized exposure to poverty-related stressors positively impacts emotional well-being and cognitive maturation, leading to improved neurological outcomes.



**Quality Education:** Quality education significantly impacts children's neurological development. It enhances cognitive abilities, memory, and executive functions. Language and social skills flourish, while stress regulation and resilience improve. A strong foundation for lifelong learning is built, promoting brain connectivity and preventing cognitive decline.



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## Membership Opportunities



Work alongside neuroscientists and doctors to develop this to-be-published transformative research that you will get to plan by joining the research committee



Help Underprivileged Children

Help underprivileged children improve their neurological development while contributing to form sustainable communities



Real-world experience

Start your science career being a part of a transformative project that you will see through!





#### Leadership Experience

There are opportunities for many different majors, as we offer the experience of working in a nonprofit, a community service club, and research opportunity with different focuses on environmental engineering, neuroscience, and biology - and you can choose a specific committee you'd like to participate in d e



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Connect with corporations, neuroscientists, medical doctors, public figures, lawyers, and students from all backgrounds helping us in making this project come to life.



### "If you treat an individual as he is, he will remain how he is. But if you treat him as if he were what he ought to be and could be, he will become what he ought to be and could be."

— Johann Wolfgang von Goethe







#### Follow us on Insta!



# THANK YOU!

Contact us if there are any questions.

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