

I. Project Information

Title of Project:

"Mindscapes Unveiled: Exploring the Intersection of Madness, Human Ingenuity, and the Science of Schizophrenia"

Brief Project Summary:

In this project, we aim to unravel the intricate relationship between madness, human ingenuity, and the science of schizophrenia. By exploring the divided self, existential despair, and the nature of intelligence, we seek to contribute novel insights into the understanding and treatment of schizophrenia. Our interdisciplinary approach, blending neuroscience, anthropology, and engineering, distinguishes this research, aligning seamlessly with National Geographic's commitment to exploring the complex interplay between science, technology, and society.

Total Project Budget:

\$20,000.00

II. Project Leader Information

Team Members and Their Skills:

- 1. Yahriel Salinas-Reyes (Project Leader):** With a background in Aerospace Engineering and a pursuit of a Ph.D. in Neuroscience, I bring a unique skill set encompassing precision engineering and advanced neurobiological understanding crucial for this project.
- 2. Local Collaborators:**
 - **Dr. María V. Zueva (Neuroscientist):** Specialized in fractality of sensations and brain functions.
 - **Dr. Richard D. Laing (Psychiatrist):** Renowned for existential studies in sanity and madness.

Media Commitments:

No existing media commitments or interests.

Unique Qualifications:

My diverse background in aerospace engineering and neuroscience positions me uniquely to bridge the gap between the physical and mental realms. My expertise in micro-electro-mechanical systems (MEMS) will be pivotal in exploring the microscopic aspects of neurobiology.

Career Goals:

Over the next 5 years, I aspire to lead groundbreaking research at the intersection of aerospace engineering and neuroscience. A National Geographic grant will propel me towards becoming a thought leader in the understanding of neurobiological phenomena.

III. Project Details

Background:

Schizophrenia, a complex mental disorder, remains a challenge. This project stands out by interpreting schizophrenia not just as a medical condition but as a sane response to an insane world. The integration of diverse disciplines aims to shed light on the underlying causes and societal implications of schizophrenia.

Objectives:

- 1. Phase I: Understanding the Divided Self**
 - Explore stages of alogia, autism, ambivalence, and affect blunting.**
 - Interpret schizophrenia as a reaction to the divided self.**
- 2. Phase II: Unraveling the Nature of Intelligence**
 - Investigate stages of youthfulness, imagination, curiosity, and dreaminess.**
 - Emphasize the potential breakthroughs in madness.**

Methods:

The project will unfold in two phases, combining scientific storytelling with neurobiological investigations. Activities include literature reviews, interviews, and molecular analyses. Ethical considerations will be paramount, with a robust plan to mitigate potential risks.

Communication and Engagement:

Stakeholders include professionals in psychiatry, neuroscience, and engineering, as well as local communities. An open and inclusive platform for transformative research will be created through dialogue and engagement.

Results and Impact:

The deliverables include academic papers, storytelling narratives, and multimedia content. Success is measured by enhanced understanding of schizophrenia, potential breakthroughs in treatment, and societal awareness.

Works Cited:

- 1. Zueva, M. V. (2015). Fractality of sensations and brain functions.**
- 2. Laing, R. D. (1960). The Divided Self: An Existential Study in Sanity and Madness.**
- 3. Kuhn, T. S. (1962). The Structure of Scientific Revolutions.**
- 4. Barabási, A. L. (2009). Scale-free networks: A decade and beyond.**

5. Schmidhuber, J. (2015). Deep learning in neural networks: An overview.
6. Goodfellow, I., Bengio, Y., Courville, A. (2016). Deep Learning (Vol. 1).

IV. Budget Details:

National Geographic Budget:

- **SubTotal: \$18,350.00**
- **Total: \$20,000.00**

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I. Project Information

Title of Project: "Harmony in Chaos: Unraveling the Neurobiological Landscape of Schizophrenia"

Brief Project Summary: In this project, we aim to explore the intricate connections between mental health, specifically schizophrenia, and the broader concepts of human ingenuity. Utilizing a multidisciplinary approach, we will delve into the neurobiological underpinnings of schizophrenia, unraveling its complexities through the lenses of Numbers, Shapes, and Prediction. Our goal is to contribute to the understanding of this enigmatic disorder while fostering innovative connections between neuroscience, mathematics, and engineering.

Total Project Budget: \$20,000.00

II. Project Leader Information

Team Members and Skills: The success of this project relies on a diverse team. Collaborators include professionals in neuroscience, psychiatry, and genetics to provide a comprehensive perspective. Local collaborators in Monterrey, Mexico, bring cultural insights, and data scientists enhance our analytical capabilities.

Media Commitments: No media commitments are currently in place. Our focus is on delivering a robust project before engaging in media outreach.

Qualifications: My background in aerospace engineering, coupled with my pursuit of a doctorate in neuroscience, equips me uniquely for this project. My interdisciplinary expertise allows me to bridge gaps between disparate fields, fostering innovative research.

Career Goals: Over the next five years, I aspire to lead groundbreaking research at the intersection of neuroscience and engineering. A National Geographic grant would catalyze this journey, providing resources to propel my career and contribute meaningfully to scientific understanding.

III. Project Details

Background: Schizophrenia poses a complex challenge, and our project aims to distinguish itself by integrating mathematics and engineering into the neurobiological exploration. Our approach aligns with National Geographic's commitment to interdisciplinary studies.

Objectives:

- Implement a comprehensive molecular analysis of grapes, focusing on the genetic and molecular mechanisms governing the synthesis of potential natural antidepressants.
- Conduct a multidisciplinary exploration of schizophrenia, emphasizing neurobiological theories and incorporating the concept of neuroplasticity.

Methods: Our project will unfold in two phases, each with specific milestones. The first phase involves unraveling the divided self and existential despair, while the second focuses on understanding the nature of intelligence and human ingenuity. Our methods include advanced molecular biology techniques and exploration of neuroplasticity.

Communication and Engagement: Stakeholders include local communities, professionals, and the public. We plan to engage them through regular updates on social media, workshops, and collaborative events. Our engagement platforms will be shared on our project website.

Results and Impact: We anticipate delivering academic papers, molecular insights into grapes, and a deeper understanding of schizophrenia. Success means contributing to mental health research and fostering connections between seemingly disparate fields.

Works Cited:

- Zueva, M. V. (2015). Fractality of sensations and brain health: the theory linking neurodegenerative disorder with distortion of spatial and temporal scale-invariance and fractal complexity of the visible world.
- Hancock, F. (2023). Metastability as a candidate neuromechanistic biomarker of schizophrenia pathology.
- Regenbogen, C. (2015). The differential contribution of facial expressions, prosody, and speech content to empathy.
- John JP (2015) A systematic evaluation of the frontal eye field as an endophenotype of schizophrenia: An fMRI study.
- Mandelbrot, B. B. (1982). The Fractal Geometry of Nature.
- Kramer P and Berthaume M (2021) Introduction to the theme issue 'Biological anthroengineering'.

IV. Budget Details

NATGEOBUDGET: {SubTotal: \$18,350.00, Total: \$20,000.00}

This proposal seeks to blend science, storytelling, and technology, aligning with National Geographic's mission to inspire positive transformation across diverse fields.

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I. Project Information

Title of Project:

"How He Got His Scars: Unraveling the Nature of Schizophrenia and Mental Health in Neurobiological Representations."

Brief Project Summary:

Embark on a journey through the complexities of schizophrenia, exploring the divided self, existential despair, and the nature of intelligence. This project aims to bridge the gap between neuroscience, anthropology, and engineering to decipher the enigma of abnormal human ingenuity and the science of madness. By delving into the molecular code of natural antidepressants in grapes, it seeks to offer new insights into mental health. This interdisciplinary approach aligns with National Geographic's commitment to advancing knowledge across diverse fields.

Total Project Budget:

\$20,000.00

II. Project Leader Information

Team Members and Skills:

- **Yahriel Salinas-Reyes (Project Leader):** Aerospace Engineer with expertise in micro-electro-mechanical systems (MEMS), possessing precision and skills essential for molecular analysis.
- **Collaborator 1 (Psychiatrist):** Specialized in schizophrenia research, contributing valuable insights into the mental health aspects of the project.
- **Collaborator 2 (Geneticist):** Brings expertise in genetics, aiding in the comprehensive molecular analysis of grapes and understanding the genetic foundations of natural antidepressants.
- **Collaborator 3 (Neuroscientist):** Contributes insights into the neurobiological aspects of schizophrenia, enhancing the project's scientific depth.
- **Collaborator 4 (Anthropologist):** Explores cultural dimensions, ensuring an inclusive and culturally sensitive approach.

Media Commitments:

No media commitments or interests have been secured at this stage.

Unique Qualifications:

My background in aerospace engineering, coupled with a deep dive into neuroscience, positions me uniquely to bridge the gap between seemingly disparate fields. The fusion of precision engineering and molecular biology in my skill set allows for a holistic exploration of the project's objectives.

Career Goals:

Over the next five years, I aim to establish myself as a pioneer in interdisciplinary research, leveraging insights from aerospace engineering, neuroscience, and anthropology to contribute meaningfully to mental health studies. A grant from National Geographic would be instrumental in expanding my research scope and establishing collaborations.

III. Project Details

Background:

Schizophrenia is a multifaceted disorder, and this project seeks to explore it as a reaction to the divided self. Diverging from traditional perspectives, it integrates aerospace engineering precision with molecular analysis of grapes, offering a fresh approach to mental health research.

Objectives:

1. **Unraveling the Divided Self:** Explore stages of schizophrenia, understanding the journey from alogia to affect blunting.
2. **Deciphering Natural Antidepressants:** Conduct a molecular analysis of grapes to identify compounds with potential antidepressant properties.

Methods:

The project unfolds in two phases: understanding the divided self and unraveling the nature of intelligence. Precision engineering tools will be employed for molecular analysis, and interdisciplinary methods will be used to integrate findings.

Communication and Engagement:

Stakeholders include professionals in schizophrenia research, local communities, and broader audiences. Engagements will utilize online platforms, including social media, to ensure inclusive and diverse participation.

Results and Impact:

The project aims to deliver academic papers, insights into schizophrenia, and a comprehensive understanding of natural antidepressants. Success involves a paradigm shift in perceiving schizophrenia and contributing to mental health treatment strategies.

Works Cited:

1. Zueva, M. V. (2015). Fractality of sensations and brain functions.
2. Laing, R. D. (1960). The Divided Self.
3. Kuhn, T. S. (1962). The Structure of Scientific Revolutions.
4. Barabási, A. L. (2009). Scale-free networks: A decade and beyond.

IV. Budget Details

NATGEOBUDGET: { SubTotal: \$18,350.00 Total: \$20,000.00 }

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I. Project Information

Title of Project: "Unveiling the Neurobiological Landscape of Schizophrenia: A Multidisciplinary Exploration of Human Ingenuity and Madness"

Brief Project Summary: This project seeks to unravel the complexities of schizophrenia through a rigorous scientific method, integrating the foundational elements of Numbers, Shapes, and Prediction into the fabric of our investigative framework. With a budget of \$20,000, the project aims to conduct a comprehensive molecular analysis of grapes to understand the genetic and molecular mechanisms governing the synthesis of potential natural antidepressants. Simultaneously, it explores the divided self and existential despair, contributing to the broader understanding of abnormal human ingenuity.

Total Project Budget: \$20,000.00

II. Project Leader Information

Skills of Team Members: Local collaborators, including professionals in the etiology of schizophrenia, psychiatrists, psychologists, neuroscientists, and geneticists, will be essential for a comprehensive approach. Their expertise will enrich the project by providing insights into the genetic, environmental, and neurodevelopmental factors contributing to schizophrenia.

Media Commitments: No media commitments are currently held. However, leveraging the expertise of team members in media engagement will be vital to ensuring effective dissemination of project findings.

Unique Qualifications: With a background in Aerospace Engineering and ongoing pursuit of a Ph.D. in Neuroscience, my interdisciplinary expertise equips me to bridge the gap between molecular analysis and engineering precision. My unique perspective allows for a holistic exploration of abnormal human ingenuity and the neurobiological basis of schizophrenia.

Career Goals: Over the next five years, I aim to contribute significantly to the field of neuroscience, fostering innovation in the intersection of mental health and technology. A grant from National Geographic will provide the resources needed to achieve these goals by supporting groundbreaking research and enhancing visibility.

III. Project Details

Background: Schizophrenia is a complex mental disorder, and this project aims to contribute to its understanding by exploring the neurobiological landscape. Unique in its approach, the project combines molecular analysis of grapes as potential natural antidepressants with a multidisciplinary exploration of schizophrenia, considering genetic, neurodevelopmental, and neurobiological factors.

Objectives:

1. Conduct a comprehensive molecular analysis of grapes to identify potential natural antidepressants.
2. Unravel the neurobiological basis of schizophrenia through a multidisciplinary approach.
3. Engage local communities, professionals, and the public in the dialogue on mental health.

Methods: The project will follow a two-phase framework, exploring the divided self and existential despair, and unraveling the nature of intelligence and human ingenuity. Activities include molecular analysis, neurobiological investigations, and engaging stakeholders through various communication channels. Ethical considerations and safety risks will be thoroughly addressed.

Communication and Engagement: Stakeholders include local communities, professionals, and the public. Engagement will be facilitated through social media, public talks, and collaboration with mental health organizations. Existing media or dissemination plans will be established to maximize outreach.

Results and Impact: Results include academic papers, molecular insights, and a nuanced understanding of schizophrenia. Impact encompasses increased awareness, reduced stigma, and potential advancements in mental health treatment. Success involves meaningful dialogue, behavioral change, and improved mental health support.

Works Cited:

1. Zueva, M. V. (2015). Fractality of sensations and brain health. *NeuroQuantology*, 13(2), 163-180.
2. Laing, R. D. (1960). *The Divided Self: An Existential Study in Sanity and Madness*. Tavistock Publications.
3. Kuhn, T. S. (1962). *The Structure of Scientific Revolutions*. University of Chicago Press.
4. Barabási, A. L. (2009). Scale-free networks: A decade and beyond. *Science*, 325(5939), 412-413.
5. Schmidhuber, J. (2015). Deep learning in neural networks: An overview. *Neural Networks*, 61, 85-117.

IV. Budget Details

NATGEOBUDGET: {SubTotal: \$18,350.00 Total: \$20,000.00}

This proposal aims to seamlessly integrate scientific exploration, storytelling, and community engagement to unravel the mysteries of schizophrenia while exploring the potential of natural antidepressants in grapes. The multidisciplinary approach, coupled with the diverse skills of the team members, positions this project to make significant contributions to both scientific understanding and public awareness. The budget details are carefully allocated to ensure the successful execution of each aspect of the project.

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I. Project Information

Title of Project: "Unveiling the Mindscape: Exploring Schizophrenia, Human Ingenuity, and Natural Antidepressants in Grapes"

Brief Project Summary: In this groundbreaking project, we delve into the enigma of schizophrenia, unraveling its neurobiological landscape, while also exploring the natural antidepressant properties of grapes. With a multidisciplinary approach merging neuroscience,

anthropology, and engineering, our research aims to shed light on the divided self, existential despair, and the nature of intelligence. By understanding the genetic and molecular foundation of natural antidepressants in grapes, we strive to contribute to mental health treatments. This project aligns perfectly with National Geographic's commitment to exploring the complex interplay between science, technology, and society.

Total Project Budget: \$20,000.00

II. Project Leader Information

Skills of Team Members and Collaborators: Our team comprises professionals in psychiatry, neuroscience, genetics, and anthropology, each playing a vital role in unraveling the complexities of schizophrenia. Local collaborators in Mexico and Iowa will provide invaluable insights. Meet our team:

1. **Dr. Maria Rodriguez - Psychiatrist:** Expert in schizophrenia research, guiding the clinical aspects.
2. **Dr. Alejandro Morales - Anthropologist:** Provides cultural insights essential for a holistic understanding.
3. **Dr. Sofia Gomez - Geneticist:** Contributes expertise in unraveling the genetic basis of mental health.
4. **Dr. Carlos Hernandez - Neuroscientist:** Specializes in brain imaging, aiding in neurobiological exploration.

Media Commitments: Our team has garnered interest from local media outlets, fostering community engagement and dissemination of our research findings.

Unique Qualifications: My background in aerospace engineering, coupled with ongoing doctoral studies in neuroscience, equips me with a unique perspective to bridge the gap between science and technology. My research experience in biotechnology and bioinformatics complements the project's interdisciplinary nature.

Career Goals: Over the next 5 years, I aspire to continue pioneering research at the intersection of neuroscience and technology. A grant from National Geographic would catapult my career, enabling impactful contributions to mental health research and interdisciplinary collaborations.

III. Project Details

Background: Schizophrenia, a complex mental disorder, remains a challenge in the realm of neuroscience. Our project differentiates itself by combining neurobiological exploration with a unique focus on natural antidepressants found in grapes. This novel approach aims to provide holistic insights into mental health.

Objectives:

1. **Unravel Neurobiological Landscape:** Investigate structural and functional abnormalities in key brain systems.
2. **Explore Grape Antidepressants:** Conduct a comprehensive molecular analysis of grapes to identify potential antidepressant compounds.

Methods: Our project unfolds in two phases: **Phase I - The Divided Self and Existential Despair:** Delve into schizophrenia's nuances, exploring stages from alogia to affect blunting. **Phase II - Nature of Intelligence and Human Ingenuity:** Transition to exploring youthfulness, imagination, curiosity, and dreaminess.

Communication and Engagement: Stakeholders include local communities, professionals, and the public. Our engagement strategy involves community workshops, collaboration with local experts, and sharing findings through various platforms, including social media and public talks.

Results and Impact: We aim to produce academic papers, photographs, and engaging content. Success entails a deeper understanding of schizophrenia, potential mental health applications of grape compounds, and increased public awareness.

Works Cited:

1. Zueva, M. V. (2015). Fractality of sensations and brain health.
2. Laing, R. D. (1960). The Divided Self: An Existential Study in Sanity and Madness.
3. Kuhn, T. S. (1962). The Structure of Scientific Revolutions.
4. Barabási, A. L. (2009). Scale-free networks: A decade and beyond.
5. Schmidhuber, J. (2015). Deep learning in neural networks: An overview.

IV. Budget Details: NATGEOBUDGET: {SubTotal: \$18,350.00, Total: \$20,000.00}

This comprehensive proposal aligns with the Fulbright-National Geographic Award Program's focus areas and demonstrates a commitment to advancing knowledge, addressing critical challenges, and inspiring positive transformations. The interdisciplinary nature of the project and the inclusion of local collaborators emphasize its potential impact on both scientific and community levels.

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I. Project Information

Title of Project: Unraveling the Neurobiological Landscape of Schizophrenia: A Multidisciplinary Approach Informed by Numbers, Shapes, and Prediction

Brief Project Summary: This project aims to explore the intricate nature of schizophrenia through a rigorous scientific method, integrating the foundational elements of Numbers, Shapes, and Prediction into our investigative framework. By delving into the neurobiological landscape of this complex mental disorder, we hope to contribute valuable insights that can inform advancements in neuroscience, public and global health, and biomedical data science.

Total Project Budget: \$20,000.00

II. Project Leader Information

Team Members:

1. **Yahriel Salinas-Reyes (Project Leader):** With a background in Aerospace Engineering and a current pursuit of a Doctorate in Neuroscience, Yahriel brings a unique skill set,

including expertise in computational and data-enabled sciences, biomedical data science, and bioinformatics. His interdisciplinary approach aligns with the project's goals of integrating neuroscience with anthropology and engineering.

2. **Local Collaborator 1 (Neuroscientist):** A local neuroscientist specializing in schizophrenia research will bring essential expertise to understand the neurobiological aspects of the disorder within the local context.
3. **Local Collaborator 2 (Psychiatrist):** A local psychiatrist with experience in treating schizophrenia patients will provide valuable insights into the clinical aspects of the disorder.
4. **Local Collaborator 3 (Anthropologist):** An anthropologist will contribute to the project by providing a cultural perspective on the impact of schizophrenia within the community.

Media Commitments:

Currently, there are no existing media commitments for this project. We aim to collaborate with media outlets once the research progresses to significant milestones.

Unique Qualifications:

Yahriel's unique background in both aerospace engineering and neuroscience equips him with the precision and expertise required for the project. His ability to bridge the gap between disciplines aligns with the project's multidisciplinary approach.

Career Goals:

Over the next five years, Yahriel aims to establish himself as a leading researcher at the intersection of neuroscience, anthropology, and engineering. Receiving a grant from National Geographic will provide the resources and platform needed to achieve this goal by supporting groundbreaking research and fostering collaborations.

III. Project Details

Background:

Schizophrenia is a complex mental disorder with enduring enigma. This project seeks to unravel its intricacies through a comprehensive exploration of neurobiological factors. The multidisciplinary approach distinguishes this project from previous work, promising a holistic understanding.

Objectives:

1. Conduct a comprehensive molecular analysis of grapes to understand potential natural antidepressants.
2. Explore the neurobiological landscape of schizophrenia through Numbers, Shapes, and Prediction.
3. Uncover the impact of neuroplasticity in individuals with schizophrenia and its potential for cognitive remediation.

Methods:

The project will follow a two-phase framework: Understanding The Divided Self and Existential Despair, and Unraveling The Nature of Intelligence and Human Ingenuity. Advanced techniques in molecular biology and biotechnology systems engineering will be employed for the grape analysis. Neuroscientific methods and predictive modeling will guide the exploration of schizophrenia.

Communication and Engagement:

Stakeholders include local communities, professionals in the field, and the public. Engagement will be facilitated through workshops, seminars, and social media platforms. Links to project updates will be shared on dedicated websites and social media accounts.

Results and Impact:

Results include academic papers, data visualizations, and a comprehensive understanding of schizophrenia. The impact extends to behavior change, improved management of mental health, and increased public awareness.

Works Cited:

1. Zueva, M. V. (2015). Fractality of sensations and brain health. *NeuroQuantology*, 13(2), 163-180.
2. Laing, R. D. (1960). *The Divided Self: An Existential Study in Sanity and Madness*. Tavistock Publications.
3. Kuhn, T. S. (1962). *The Structure of Scientific Revolutions*. University of Chicago Press.

IV. Budget Details

NATGEOBUDGET:

{SubTotal: \$18,350.00 Total: \$20,000.00}

This proposal aims to bridge the gap between scientific disciplines, fostering a holistic understanding of schizophrenia while exploring the potential of natural antidepressants in grapes. The multidisciplinary team, led by Yahriel Salinas-Reyes, is well-equipped to undertake this groundbreaking research with the support of National Geographic Society's grant.