Author’s Note (Preface)

I was part of a family with FG syndrome who was studied at a military hospital in Washington for three months. Although the study’s primary focus was on my brothers, I was also tested extensively during that time. I remember being classified as having abnormal pattern recognition — the ability to see almost the whole puzzle before the pieces were given. As a child, I could assemble puzzles upside down in record time, perceiving structure where others saw fragments. These experiences, though not the main subject of the study, revealed that my brain processes information differently.  
  
This memory forms part of the foundation for the ideas presented here. Combined with decades of lived experience, abstinence from foreign chemicals, meditation, and coherence practices, I have refined this capacity into a clearer understanding of the mechanical structures underlying reality. This framework is both personal and scientific — an invitation to study, validate, and collaborate around the unique perceptual abilities that emerge from atypical neurological and genetic architectures.

Research Framework: Genetic–Neurophysiological Basis of Probability-Perception & Higher-Dimensional Experience

# 1. Abstract

This proposal investigates whether specific genetic variants and neurophysiological traits enable atypical processing of uncertainty—manifesting subjectively as perception of 'higher-dimensional' or cross‑timeline information—and whether these states couple to environmental field fluctuations (e.g., geomagnetic activity). We focus on five linked domains: (i) genomics (e.g., MED12 and related neurodevelopmental/synaptic genes), (ii) large‑scale brain network dynamics (EEG/MEG/fMRI), (iii) electrophysiological sensitivity to weak electromagnetic fields, (iv) heart–brain coherence (HRV) during intentional practices (gratitude, heart‑focused breathing), and (v) psychophysics of probabilistic decision‑making. The goal is a pre‑registered, ethically grounded program that yields replicable, quantitative evidence—even when results are null—to establish a credible scientific basis for these experiences.

# 2. Background & Significance

Reports of 'multidimensional perception' often map to measurable differences in neural connectivity, sensory gating, and autonomic regulation. Genes that guide neurodevelopment (e.g., axon guidance, interhemispheric connectivity, synaptic plasticity) and neuromodulation (dopaminergic/serotonergic systems) can produce atypical integration across cortical networks. The heart generates a substantial electromagnetic field; directed breathing and gratitude practices increase HRV coherence and synchronize cortical rhythms. Environmental fields (e.g., Schumann resonances, geomagnetic indices) are known to correlate with human physiology. We hypothesize that certain genetic architectures and network dynamics could heighten sensitivity to subtle internal/external signals, experienced phenomenologically as higher‑dimensional information flow.

# 3. Specific Aims

1. Aim 1: Identify genetic variants associated with atypical sensory gating, interhemispheric connectivity, and autonomic regulation.
2. Aim 2: Quantify brain network dynamics during coherence practices vs. rest, testing for extended maintenance of probabilistic states (slower perceptual collapse).
3. Aim 3: Test physiological sensitivity to weak electromagnetic fields in controlled settings and correlate states with environmental field proxies.
4. Aim 4: Model behavioral and physiological markers of 'probability perception' in preregistered psychophysics tasks.

# 4. Hypotheses

* H1: Participants with specific variants (e.g., in MED12‑related pathways or ion‑channel genes) will show altered sensory gating and network integration.
* H2: Heart‑focused gratitude breathing increases HRV coherence and stabilizes large‑scale brain networks, enabling prolonged maintenance of multiple competing predictions (reduced premature commitment).
* H3: In shielded lab conditions, a subset of participants exhibits reproducible physiological responses to weak ELF/ULF EM fields at lower thresholds than controls.
* H4: During synchronized practice windows, time‑locked deviations in physiological signals correlate with environmental field proxies more than during matched control windows.

# 5. Study Design Overview

Cohort: N=20–40 (pilot) enriched for lived multidimensional perception experiences; N=20 matched controls.  
Design: Within‑subject repeated measures across (i) rest, (ii) coherence practice (gratitude/heart breathing), and (iii) EM‑modulation blocks; plus synchronized group windows for environmental correlation.  
Pre‑registration: All primary outcomes, inclusion criteria, and analyses registered before data collection.

# 6. Methods

## 6.1 Genomics

• Saliva/blood for whole‑exome or targeted sequencing (MED12 pathway, ion channels, synaptic/axon guidance genes).  
• Variant annotation; exploratory genotype–phenotype correlations with neural/physiological endpoints.

## 6.2 Neuroimaging & Electrophysiology

• EEG (rest, coherence practice, task); optional MEG/fMRI.  
• Metrics: spectral power, connectivity, metastability, entropy, interhemispheric coherence, DMN–salience–executive dynamics.

## 6.3 Electromagnetic Sensitivity

• Double‑blind, sham‑controlled exposure to weak ELF/ULF fields.  
• Outcomes: EEG, HRV, skin conductance, subjective reports; threshold estimation.

## 6.4 Heart–Brain Coherence

• HRV coherence indices concurrent with EEG.  
• Coupling analyses: cardioneural synchronization, baroreflex sensitivity, respiration–cardiac entrainment.

## 6.5 Psychophysics

• Tasks: bistable perception, near‑threshold detection, predictive‑coding oddball paradigms.  
• Metrics: perceptual switch rates, confidence weighting, drift‑diffusion modeling.

## 6.6 Environmental Field Correlations

• Time‑locked sessions to measure correlations with geomagnetic indices, Schumann resonance proxies.  
• Matched control windows; permutation testing for robustness.

# 7. Data Analysis Plan

Primary endpoints: HRV coherence change; EEG network stability; EM‑sensitivity threshold; psychophysics dwell time shifts.  
Statistics: mixed‑effects models, Bayesian inference, correction for multiple comparisons.  
Genotype–phenotype analyses exploratory.

# 8. Ethics & Safety

IRB approval; informed consent with emphasis on genetic privacy.  
Right to withdraw; counseling for medically relevant findings.  
Cultural respect in site‑based practices; reciprocity with knowledge keepers.

# 9. Feasibility & Resources

EEG, HRV, shielded environment, statistical support.  
Partnerships with psychophysiology labs and data providers sought.

# 10. Expected Outcomes

Evidence for or against atypical network dynamics and EM sensitivity in multidimensional perception experiences.  
Framework linking genetics → network dynamics → coherence → perception.  
Replicable protocol for future research.

# 11. Risks & Limitations

Small pilot sample size; mitigated with preregistration and effect‑size focus.  
Expectancy effects; mitigated via blinding and objective measures.  
Multiple comparisons; controlled via preregistered endpoints and corrections.

# 12. Timeline

Month 0–1: Approvals & preregistration.  
Month 2–3: Recruitment, baseline, genomics.  
Month 4–5: Lab sessions, synchronized practices.  
Month 6: Analysis and reporting.

# 13. Budget (Outline)

Genomics: $300–$1000/participant.  
EEG/HRV: equipment & lab time.  
Personnel: PI, assistants, statistician.

# 14. Team & Collaborators

PI: Artemis O’Fallon.  
Advisors: psychophysiology, neurogenetics, biophysics, indigenous protocol.  
Partners: measurement labs, environmental data providers.

# Author’s Note (Closing)

I am not a product of traditional academia. My background is lived experience, decades of personal observation, and a long period of purification — abstinence from all foreign substances, alongside daily meditation and energy practices. Through this process, I’ve cultivated a clarity that allows me to perceive and refine the underlying mechanics of complex reality structures. What follows is not speculation, but the crystallization of years of lived data into a testable framework that science can investigate. This document is both an offering and an invitation: to scientists, visionaries, and collaborators who are ready to bridge experiential knowledge with empirical study, so that we may together deepen our understanding of human perception and planetary coherence.