Global Scientific and Academic Research Journal of Multidisciplinary Studies
ISSN: 2583-4088 (Online)
Frequency: Monthly
Published By GSAR Publishers
Journal Homepage Link- https://gsarpublishers.com/journals-gsarjms-home/

ElidanLord MyTime Platform: Voice-Derived Functional Monitoring for Longitudinal Estimation of Oxidative Stress and Health Potential in Remote Patient Monitoring Workflows

By

Dr. Luis CRUZ-RODRIGUEZ, PhD
Elidan Dynamic Corp, Tampa, FL, USA

Article History

Received: 05/03/2026
Accepted: 13/03/2026
Published: 16/03/2026

Vol – 5 Issue –3

PP: - 06-26

Abstract

Remote Patient Monitoring (RPM) systems currently rely on device-derived physiological variables such as heart rate and oxygen saturation to assess patient stability. However, these parameters do not capture behavioral or neurophysiological adaptations associated with autonomic dysregulation and oxidative stress. The ElidanLord MyTime™ [101] platform introduces a multimodal functional monitoring framework that integrates encrypted voice-derived biomarkers —including fundamental frequency, amplitude, intensity, and prosodic stability— with wearable physiological inputs to estimate an Oxidative Stress Index (OSI%). This index is longitudinally derived and subsequently used to compute the Health Potential (HP%) of the monitored subject according to the relationship: HP% = 100 − OSI%. Patients may be algorithmically stratified into targeted supportive pathways based on stress predominance patterns within RPM workflows supervised by Primary Care Providers (PCPs). This non-invasive monitoring model enables scalable longitudinal surveillance of physiological adaptation in patients with chronic conditions, supporting early detection of functional dysregulation and personalized intervention planning within CMS-compatible RPM infrastructures.

Keywords: *ElidanLord MyTime; Platform; Voice biomarkers; Remote Patient Monitoring (RPM); Systemic oxidative stress; Functional health monitoring; Autonomic nervous system; Vagal tone; Non-invasive assessment; Digital health; Healthy aging; Multimodal physiological monitoring; Bioacoustic analysis; Chronic disease risk stratification; Moringa oleifera; Lymphatic support; Preventive healthcare technologies.*

1. INTRODUCTION

Chronic non-communicable diseases remain strongly associated with systemic oxidative stress and autonomic dysregulation processes that precede clinically detectable instability.

📊 Physiological Signals Utilized in Current RPM Infrastructures

Physiological Parameter	Abbreviation	Measurement Unit	Monitoring Purpose
Heart Rate	HR	Beats per minute (bpm)	Reflects cardiovascular activity and hemodynamic status.
Oxygen Saturation	SpO_2	Percentage (%)	Indicates arterial oxygenation and respiratory function.
Respiratory Rate	RR	Breaths per minute (brpm)	Reflects pulmonary activity and ventilatory stability.
Body Mass Index	BMI	kg/m^2	Anthropometric indicator associated with metabolic risk.

However, these parameters may fail to capture early behavioral or neurophysiological adaptations preceding functional deterioration.

Functional Evaluation of Voice as a Biological Indicator Analogous to a guitar, where the length of the strings along the neck determines the possible range of notes —with longer strings producing lower frequencies—, in humans the length and mass of the vocal folds, which differ between men and women, condition the fundamental tone of the voice. Likewise, just as mechanical tension applied by the fingers at specific positions on the guitar neck modifies string vibration to generate a particular note, in the human phonatory system the involuntary contraction and relaxation of laryngeal and thoracic muscles, regulated in part by the vagus nerve and the autonomic nervous system, adjust the tension and airflow required to produce precise variations in vocal frequency and quality. The voice may be understood as a functional consequence of our biometrics, where variables such as weight, height, sex, age, heart rate, respiratory rate, and oxygen saturation create a biological scenario that carries information from its generating source. The ElidanLord MyTime platform enables the functional assessment of systemic oxidative stress by combining biometric parameters with vocal signal behavior. Minimal modifications in parameters such as frequency, amplitude, intensity, and prosody may reflect functional adaptations in their generating source —our organism—. The ElidanLord MyTime platform may be used as a continuous voice monitoring tool that allows estimation of trends in health potential and supports healthy aging processes from a non-invasive and longitudinal perspective.

Human voice production is modulated by respiratory mechanics, laryngeal muscle tension, and autonomic nervous system activity. These interactions may encode biomechanical and regulatory signatures reflecting physiological stress states.

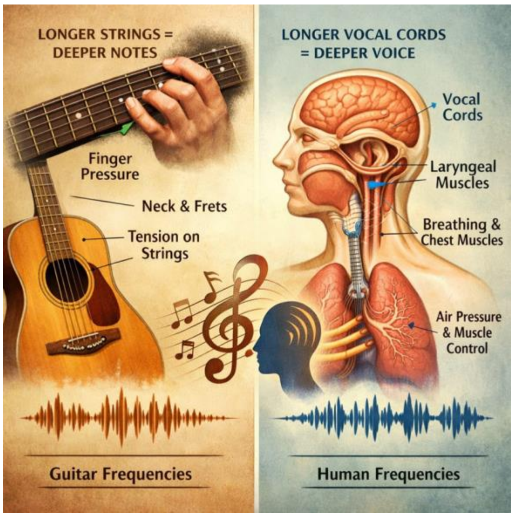


Figure 1. Analogy between mechanical vibration in musical strings and phonatory system tension in human voice production, illustrating how vocal frequency may be modulated by biomechanical and autonomic inputs.

2. CONCEPTUAL FRAMEWORK

📊 Functional Relationship Between OSI% and HP%

Parameter	Measurement Unit	Functional Role	Technical Description
Oxidative Stress Index (OSI%)	(%)	Upstream Functional Biomarker	Represents the estimated systemic oxidative load derived from integrated biometric and voice-based monitoring inputs.
Health Potential (HP%)	(%)	Derived Functional Capacity Indicator	Represents the estimated remaining adaptive energetic capacity of the monitored individual.
HP% Formula	%	Mathematical Relationship	HP% = 100 − OSI%
Systemic Adaptive Load	%	Functional Interpretation Layer	Reflects the organism's cumulative adaptive burden associated with oxidative stress dynamics.

3. MATERIALS AND METHODS

📊 Monitoring Input Parameters

Input Category	Parameter	Measurement Unit	Technical Description
Physiological Input	Heart Rate (HR)	Beats per minute (bpm)	Number of heart beats per minute reflecting cardiovascular activity.
Physiological Input	Heart Rate Variability (HRV)	Milliseconds (ms)	Variation in time intervals between consecutive heartbeats, indicating autonomic nervous system modulation.
Physiological Input	Oxygen Saturation (SpO_2)	Percentage (%)	Estimated proportion of oxygen-

Input Category	Parameter	Measurement Unit	Technical Description
			saturated hemoglobin in arterial blood.
Physiological Input	Respiratory Rate (RR)	Breaths per minute (brpm)	Number of respiratory cycles per minute reflecting pulmonary activity.
Physiological Input	Body Mass Index (BMI)	kg/m²	Anthropometric indicator of body mass relative to height.
Physiological Input	Age	Years	Chronological age of the monitored individual.
Physiological Input	Sex	Categorical (M/F)	Biological classification is relevant for baseline physiological interpretation.

Voice-Derived Inputs:

🔊 **Voice-Derived Parameters and Measurement Units**

Parameter	Measurement Unit (SI / Acoustic)	Technical Description
Fundamental Frequency (F0)	**Hertz (Hz)**	Number of vocal fold vibration cycles per second during phonation. Reflects the primary vocal pitch.
Amplitude	**Pascal (Pa)** or **Normalized Unit (a.u.)**	Magnitude of the acoustic pressure of the sound signal. In digital signal processing, it is often expressed as a dimensionless normalized unit.
Intensity	**Decibels (dB SPL)**	Acoustic energy perceived per unit area. Related to the sound power emitted during vocal production.
Prosodic Stability	**Coefficient of Variation (CV%)** or **Hz/s**	Derived measure evaluating temporal variability of F0, syllable duration, and speech rhythm. Reflects stability in the melodic pattern of speech.

Voice samples are collected via structured check-in protocols and processed through encrypted acoustic analysis pipelines.

4. FUNCTIONAL INDEX GENERATION

Collected inputs are integrated into a longitudinal functional model generating:

📊 Functional Monitoring Indices and Derived Units

Index	Measurement Unit (%)	Technical Description
Oxidative Stress Index (OSI%)	(%)	Longitudinally derived indicator estimating systemic oxidative load based on integrated biometric and voice-derived parameters.
Health Potential (HP%)	(%)	Functional estimate of the individual's remaining adaptive energetic capacity, calculated as: HP% = 100 − OSI%.
Voice Coherence Index (VCI)	(%)	Composite index reflecting stability and synchronization of vocal signal parameters including frequency, amplitude, intensity, and prosodic consistency.
Recovery Potential Stability Index (RPSI)	(%)	Indicator represents the organism's functional capacity to recover adaptive stability over time under monitored conditions.

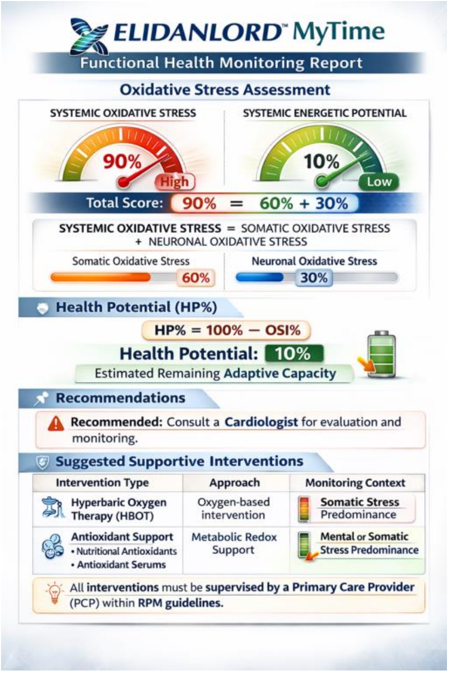


Figure 2. Example of OSI% and HP% estimation derived from integrated voice and physiological monitoring inputs.

5. CLINICAL STRATIFICATION

Patients may be categorized according to:

📊 Stress Predominance Classification Indices

Index	Measurement Unit	Technical Description
Somatic Stress Predominance	(%)	Classification index indicating predominance of physiological or systemic stress-related patterns derived from integrated biometric and voice-based monitoring inputs.
Mental Stress Predominance	(%)	Classification index indicating predominance of neurocognitive or autonomic stress-related patterns derived from integrated biometric and voice-based monitoring inputs.

📊 PCP-Supervised Supportive Pathways Based on Stress Predominance Classification

Supportive Pathway	Intervention Type	Monitoring Context	Technical Description
Oxygen-Based Intervention	Hyperbaric Oxygen Therapy (HBOT)	Somatic Stress Predominance	Controlled exposure to elevated oxygen partial pressure to support mitochondrial function and systemic oxidative balance under PCP supervision.
Antioxidant Metabolic Support	Nutritional Antioxidant Support	Mental or Somatic Stress Predominance	Administration of antioxidant-supportive formulations aimed at modulating systemic oxidative load and supporting adaptive metabolic processes.
Antioxidant Metabolic Support	Hyperbaric Pressure-Induced Redox Modulation	Somatic Stress Predominance	Exposure to hyperbaric conditions may enhance endogenous antioxidant defense mechanisms and improve tissue oxygenation.
Antioxidant Metabolic Support	Antioxidant Serum-Based Support	Mental Stress Predominance	Supervised administration of antioxidant-supportive agents designed to assist in oxidative stress regulation and neuroautonomic balance.

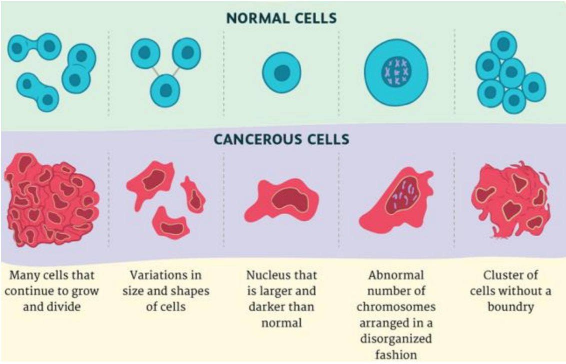


Figure 3. Functional domains associated with oxidative stress-related dysregulation monitored through voice-derived biomarkers.

6. RPM INTEGRATION MODEL

📊 CMS-Compatible RPM Workflow Requirements

Category	Requirement	Description
Clinical Authorization	PCP Order	Monitoring must be prescribed and supervised by a Primary Care Provider (PCP).
Patient Compliance	Patient Consent	Informed patient consent is required prior to RPM enrollment (Anex A)
Transmission Criteria	≥ 16 Days per Month	Minimum of 16 monitored data transmission days per billing cycle is required for reimbursement eligibility.
Billing Code	CPT 99453	Initial setup and patient education on the use of RPM monitoring equipment.
Billing Code	CPT 99454	Device supplies with daily recordings or programmed monitoring.
Billing Code	CPT 99457	Remote physiologic monitoring treatment management services (first 20 minutes).

Figure 4. Integration of voice-based monitoring into RPM workflows for longitudinal physiological assessment.

7. DISCUSSION

Functional voice-derived monitoring may provide early detection of adaptive instability preceding clinically detectable deterioration across cardiovascular, neurological, metabolic, and oncological domains. Traditional Remote Patient Monitoring (RPM) frameworks rely primarily on device-derived physiological variables such as heart rate, oxygen saturation, and respiratory rate to assess patient stability. While these parameters are clinically valuable, they often reflect downstream manifestations of dysregulation rather than the upstream adaptive processes that preceded over physiological decompensation. In this context, systemic oxidative stress has been proposed as a cross-cutting contributor to the progression of multiple chronic disease states, yet its longitudinal monitoring in real-world settings remains limited by the need for invasive sampling or sporadic laboratory assessment.

The ElidanLord MyTime™ [101] platform introduces a non-invasive monitoring paradigm by leveraging voice-derived biomarkers as functional indicators of the organism's adaptive state. The conceptual framework may be analogized to a musical instrument such as a guitar: the length of the strings along the neck determines the possible range of notes, with longer strings producing lower frequencies. In humans, the length and mass of the vocal folds —which differ between individuals based on sex and developmental factors— condition the fundamental tone of the voice. Similarly, just as mechanical tension applied by the fingers at specific positions on the guitar neck modifies string vibration to generate a particular note, the involuntary contraction and relaxation of laryngeal and thoracic musculature —regulated in part by the vagus nerve and the autonomic nervous system— adjust the tension and airflow required to produce precise variations in vocal frequency and quality.

From this perspective, the voice may be understood as a functional consequence of the individual's biometrics, where variables such as body mass, height, age, heart rate, respiratory rate, and oxygen saturation create a physiological scenario that carries information from its generating source. Subtle modifications in vocal parameters including fundamental frequency, amplitude, intensity, and prosodic stability may therefore reflect ongoing functional adaptations within the organism. These adaptations may be associated with neuroautonomic modulation, respiratory mechanics, or metabolic load, all of which are influenced by oxidative stress dynamics and systemic inflammatory tone.

By integrating biometric inputs with encrypted acoustic analysis, the ElidanLord MyTime™ [101] platform enables longitudinal estimation of the Oxidative Stress Index (OSI%) and the derived Health Potential (HP%) according to the relationship HP% = 100 − OSI%. Continuous monitoring of these indices may allow the identification of adaptive trends preceding clinically detectable deterioration, thereby supporting earlier stratification of patients at risk of functional decline across cardiovascular, neurological, metabolic, and oncological pathways. Such stratification may be particularly relevant in chronic disease populations where traditional episodic measurements fail to capture dynamic physiological variability over time.

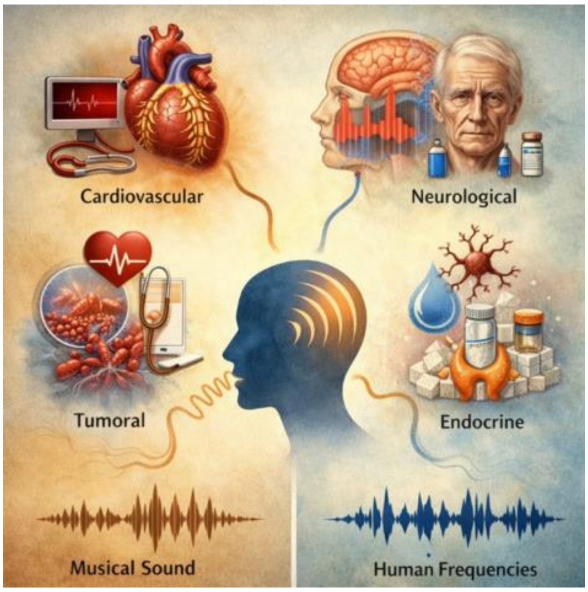


Figure 5: Overview of the most prevalent chronic diseases and their eligibility for reimbursed monitoring via the ElidanLord MyTime™ platform

Finally, the use of voice as a continuously accessible, non-invasive biosignal introduces the possibility of scalable monitoring strategies capable of complementing existing RPM infrastructures without increasing patient burden. Within Primary Care Provider (PCP)-supervised workflows, this approach may support personalized intervention planning and contribute to healthy aging trajectories by identifying shifts in adaptive capacity before irreversible clinical deterioration occurs. Further investigation is warranted to determine the predictive value of voice-derived indices in diverse clinical populations and to validate their integration into standard chronic disease management protocols.

8. LIMITATIONS

Voice-derived monitoring is inherently influenced by inter-individual variability and contextual factors that may affect acoustic signal properties independently of physiological adaptation. Variations in hydration status, emotional state, environmental noise, transient upper airway conditions, or microphone quality may introduce fluctuations in parameters such as frequency, amplitude, intensity, and prosody. Additionally, anatomical differences in vocal fold length and mass across sex and age groups may contribute to baseline heterogeneity, requiring individualized longitudinal calibration to ensure meaningful interpretation of voice-derived indices. These sources of variability underscore the need for repeated measurements and trend-based analysis rather than reliance on isolated acoustic observations.

Furthermore, the clinical integration of this monitoring approach requires supervision by a Primary Care Provider (PCP) to ensure appropriate interpretation and alignment with existing Remote Patient Monitoring (RPM) care pathways. The implementation of voice-based monitoring within CMS-compatible infrastructures is also contingent upon reimbursement eligibility criteria, including minimum transmission requirements and provider oversight. As such, operational scalability may be influenced by payer adjudication processes and RPM billing dependencies, which could affect the continuity of monitoring services in certain healthcare settings.

9. CONCLUSION

The ElidanLord MyTime™ [101] platform may function as an upstream functional stratification layer within Remote Patient Monitoring (RPM) infrastructures, enabling personalized adaptive monitoring through non-invasive multimodal inputs. By integrating biometric parameters with voice-derived functional indicators, this approach provides a longitudinal perspective on systemic oxidative stress and adaptive capacity that may precede clinically detectable deterioration. Such early identification of functional instability has the potential to support timely intervention planning within Primary Care Provider (PCP)-supervised care pathways, particularly in populations affected by chronic conditions.

From an organizational standpoint, the implementation of continuous, non-invasive monitoring tools may contribute to improved health planning strategies by allowing clinicians to monitor adaptive trends over time rather than relying solely on episodic clinical assessments. The estimation of Health Potential (HP%) derived from Oxidative Stress Index (OSI%) may offer an additional functional layer to guide preventive health strategies, ultimately supporting healthier aging trajectories through individualized surveillance of physiological resilience and stress response.

Furthermore, the accessibility of voice as a biosignal introduces opportunities for scalable population-level monitoring without increasing patient burden or requiring invasive sampling techniques. This characteristic may facilitate broader adoption across diverse healthcare environments, including outpatient settings and community-based care models, where longitudinal monitoring resources are often limited.

Finally, the integration of voice-based functional assessment within RPM workflows presents a framework that may be adapted across global healthcare systems, supporting standardized yet personalized monitoring strategies for chronic disease management and healthy aging initiatives. As such, the ElidanLord MyTime™ [101] platform may represent a complementary digital health infrastructure capable of enhancing both individual health planning and system-level preventive care strategies on an international scale.

10. RECOMMENDATIONS

In the short term, it is recommended that the ElidanLord MyTime™ [101] platform be implemented within outpatient clinical environments to support the functional evaluation and monitoring of systemic oxidative stress in patients with chronic conditions. Initial deployment within affiliated primary care or specialty clinics may facilitate supervised integration into existing Remote Patient Monitoring (RPM) workflows, enabling the collection of voice-derived and biometric inputs under standardized clinical conditions. This phase may support the validation of longitudinal trends in Oxidative Stress Index (OSI%) and Health Potential (HP%), while allowing providers to incorporate non-invasive adaptive monitoring into preventive health planning strategies.

Additionally, clinic-based implementation may provide an opportunity for organizational training of technical staff responsible for patient onboarding, voice sample acquisition, and physiological data integration. The establishment of structured monitoring protocols within clinical settings may improve adherence to RPM transmission requirements and ensure appropriate Primary Care Provider (PCP) oversight during the initial operational phase.

In the medium term, expansion toward community-based monitoring strategies is recommended through the deployment of mobile evaluation units equipped with trained personnel. These minibuses may function as decentralized monitoring hubs capable of conducting in-home or neighborhood-based assessments, including voice sample collection and biometric data acquisition, thereby extending access to populations with mobility limitations or reduced access to clinical facilities.

Such mobile evaluation units may support continuity of monitoring by facilitating periodic reassessment outside traditional healthcare environments, contributing to longitudinal surveillance of adaptive capacity in aging populations. This model may also enhance patient engagement and adherence to monitoring protocols, particularly in rural or underserved areas where healthcare access remains limited.

Figure 6: Representation of the exterior of a mobile unit of the ElidanLord MyTime platform

Figure 7: Representation of the interior of a mobile unit of the ElidanLord MyTime platform

Finally, the progressive integration of clinic-based and mobile monitoring strategies may support the scalable implementation of personalized adaptive monitoring frameworks across diverse healthcare systems, promoting preventive health planning and facilitating healthier aging trajectories at both individual and population levels.

11. ANTIOXIDANT SUPPORT RECOMMENDATIONS

In patients presenting elevated Oxidative Stress Index (OSI%) values within Remote Patient Monitoring (RPM) workflows, the supervised incorporation of antioxidant-supportive strategies may be considered as part of an individualized adaptive health support plan.

Plant-derived micronutrient sources have been described as contributors to systemic redox balance through their potential role in mitochondrial metabolism and inflammatory modulation. In this context, the use of nutritional formulations derived from Moringa oleifera, a botanical source characterized by a broad spectrum of micronutrients including vitamins A, C, E, B-complex elements, essential amino acids, and trace minerals, may be considered as a complementary antioxidant-supportive intervention.

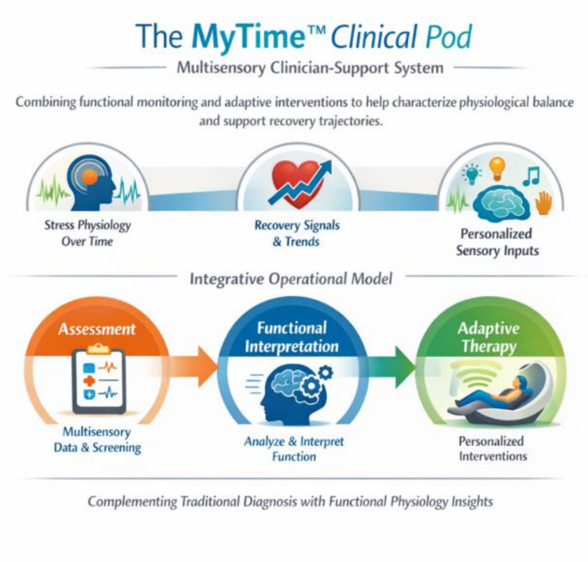
Within the ElidanLord MyTime™ [101] platform framework, such nutritional support may be implemented through the supervised use of NEURON ON™ [102], a moringa-derived micronutrient formulation designed to provide antioxidant metabolic support aligned with longitudinal monitoring trends in OSI% and Health Potential (HP%). The inclusion of this formulation is not intended to replace pharmacological treatment but may complement preventive health strategies aimed at supporting adaptive capacity and reducing systemic oxidative load.

Additionally, lymphatic support interventions may be considered in selected individuals to promote peripheral metabolic clearance. The application of plant-based topical formulations such as Bioactive Lymphatic Oil [103], under professional guidance, may assist in manual lymphatic stimulation protocols designed to support waste product mobilization and improve tissue-level fluid dynamics associated with systemic stress states.

12. BUSINESS OPORTUNITIES

MyTime™ Clinical Pod — Scientific Rationale and Evidence Base (Conceptual Framework)

The MyTime™ Clinical Pod can be positioned as a multisensory, clinician-support system that combines functional monitoring and adaptive interventions to help characterize physiological balance and support recovery trajectories.



Figures 8A,and 8B: The conceptual model integrates three operational stages—Assessment → Functional Interpretation → Adaptive Therapy—and is designed to complement (not replace) traditional diagnosis by adding a functional physiology layer: how stress physiology and self-regulation behave over time, how recovery signals evolve, and how individualized sensory or behavioral inputs can be tuned to support stabilization. [1,4-8]

12.1 Closed-Loop Functional Monitoring and Adaptive Therapy Model

The MyTime Clinical Pod operates through a closed-loop functional architecture in which physiological monitoring, computational interpretation, and adaptive therapeutic interventions interact continuously. [1,7,17]

The system follows a cyclical operational sequence designed to support dynamic physiological regulation and personalized therapeutic adaptation. [1,7,17]

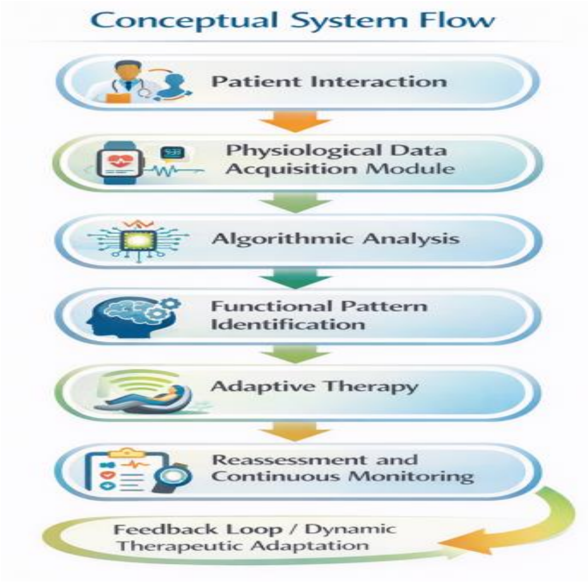


Figure 9: Conceptual System Flow

12.2 Conceptual Interpretation

This architecture represents a continuous physiological feedback system, where patient-generated data are transformed into interpretable functional signals and used to guide personalized therapeutic responses. [1,7,17]

Unlike static diagnostic frameworks, the MyTime architecture emphasizes longitudinal monitoring and adaptive regulation, allowing the system to refine therapeutic interventions over time. [4,7,17]

The cyclical nature of the system enables:

- continuous physiological monitoring
- real-time computational interpretation
- dynamic adjustment of therapeutic stimuli
- longitudinal tracking of recovery patterns

Through this structure, the system functions as a closed-loop therapeutic ecosystem, integrating sensing technologies, analytic algorithms, and multisensory interventions within a single clinical workflow. [1,4,7,17]

12.3 Conceptual Categories of Architecture

1. Data Layer
   Patient-generated signals
   - voice biomarkers
   - heart rate
   - oxygen saturation
   - behavioral interaction
2. Analytical Layer
   Computational processing
   - signal extraction
   - machine learning pattern recognition
   - functional state estimation
3. Intervention Layer
   Therapeutic modulation

• neurotraining
• cognitive behavioral stimulation
• multisensory regulation

4. Adaptive Feedback Layer Continuous monitoring of therapeutic response. [1,7,17]

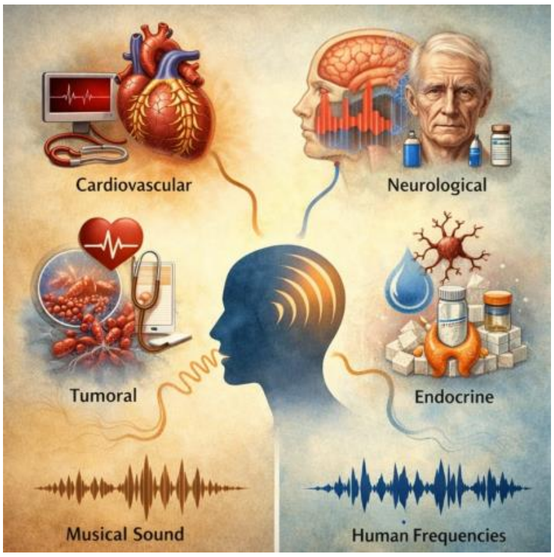


Figure 10: Conceptual Categories of Architecture

12.4 HARDWARE COMPONENTS – Expanded Introductory Section

The **MyTime Clinical Pod** is supported by an integrated hardware architecture designed not only for multimodal physiological monitoring, but also for the coordinated delivery of adaptive therapeutic stimuli within the operational framework of the **ElidanLord MyTime™ Platform**. In this context, each hardware element should not be understood as an isolated device, but rather as a functional component embedded within a continuously monitored and algorithm-guided system. The therapeutic value of the hardware therefore emerges from its integration with the platform's monitoring logic, analytical modules, and longitudinal evaluation capacity.

The physical structure of the MyTime Clinical Pod includes an **acoustic pod**, **physiological sensors**, and a **cognitive therapy display system**, all operating as complementary extensions of the platform's functional assessment model. The acoustic pod provides an ergonomically controlled environment optimized for high-quality voice acquisition, minimizing environmental interference through acoustic isolation and supporting reliable capture of vocal biomarkers. Physiological sensors, including heart rate and oxygen saturation devices, contribute real-time biometric inputs that complement voice-derived parameters and strengthen the platform's capacity to estimate adaptive physiological status over time.

A particularly important component is the **Cognitive Therapy Display System**, which should not be interpreted as a standalone visual interface, but as an integrated therapeutic module whose role depends on its connection to the broader MyTime ecosystem. When incorporated into the platform, the display system becomes a dynamic intervention tool capable of delivering guided visual, cognitive, and multisensory stimuli in response to the functional profile generated through continuous monitoring. Its value lies not merely in presenting therapeutic content, but in doing so within a monitored loop in which physiological signals, voice-derived indicators, and adaptive trends can inform the timing, intensity, and nature of the intervention.

This integration introduces a significant conceptual and operational advantage. Without continuous monitoring and analytical coupling, a visual or cognitive stimulation system may remain limited to generic use, lacking physiological contextualization and personalized therapeutic adjustment. By contrast, when embedded within the **ElidanLord MyTime™ Platform**, the display system gains a new clinical and technological dimension: it becomes part of a closed-loop architecture in which evaluation, interpretation, and intervention are linked in a coordinated workflow. In such a model, the platform may use ongoing functional assessment to determine when supportive cognitive stimulation, sensory modulation, or behavioral guidance should be delivered as part of an individualized adaptive strategy.

In practical terms, this means that the MyTime Clinical Pod is not simply a collection of hardware devices, but a structured therapeutic environment in which monitoring and intervention coexist continuously. The hardware components provide the necessary physical interface for capturing physiological data and delivering adaptive therapeutic outputs, while the platform supplies the interpretive and regulatory layer that gives those components functional meaning. This integration enhances the system's potential utility for longitudinal support in individuals experiencing oxidative stress–related dysregulation, autonomic imbalance, cognitive vulnerability, or chronic disease–associated functional decline.

Through this combined architecture, the **Cognitive Therapy Display (*Figure 11*) System** acquires strategic importance as a platform-dependent therapeutic resource. Its incorporation into a system of constant functional evaluation allows therapeutic content to be personalized, adjusted, and potentially optimized according to the monitored state of the patient. This represents a substantial advancement over conventional standalone therapeutic screens or audiovisual tools, as the MyTime model frames the display system within an evolving process of assessment-guided intervention rather than passive content delivery. In this sense, the therapeutic screen is not separate from the platform; it is one of the platform's intervention arms, activated and contextualized by continuous physiological intelligence.

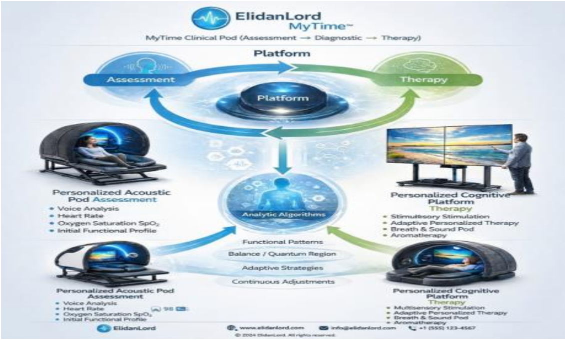


Figure 11: Environmental Control Systems: • acoustic output, • lighting modulation,• optional aromatic modulation [1,3,7,10-12]

12.4.1 Real-Time Biometric Feedback Control Architecture

A central operational feature of the **ElidanLord MyTime™ Platform** is the incorporation of a real-time biometric feedback control architecture designed to connect physiological monitoring with adaptive therapeutic modulation. Within this framework, physiological parameters such as **blood oxygen saturation (SpO_2)** and **heart rate (HR)** are continuously acquired through integrated sensors embedded in the **MyTime Clinical Pod**. These signals serve as immediate indicators of the patient's cardiopulmonary status, autonomic activity, and physiological stability during interaction with the platform.

The biometric data captured by the sensors are transmitted to the platform's analytical layer, where signal processing algorithms evaluate real-time variations and trends in physiological response. These biometric inputs are interpreted alongside other monitoring parameters—including voice-derived biomarkers and behavioral interaction signals—to generate an integrated representation of the patient's adaptive physiological state. The platform then uses this information to regulate and personalize the therapeutic environment delivered through the system's cognitive and multisensory interfaces.

Within this architecture, the **Cognitive Therapy Display System** and environmental modulation components operate as responsive therapeutic outputs. Based on the monitored physiological signals, the platform may dynamically adjust visual stimulation patterns, cognitive task intensity, pacing of interactive exercises, and other sensory parameters in order to maintain physiological balance and prevent excessive autonomic stress. For example, variations in heart rate or oxygen saturation may prompt the system to modulate stimulus intensity, introduce relaxation-oriented content, or adjust the temporal structure of cognitive activities to support adaptive regulation.

This configuration establishes a **closed-loop therapeutic control system** in which physiological monitoring continuously informs therapeutic delivery. Rather than relying on static or pre-programmed therapy sessions, the MyTime platform enables interventions to evolve in response to the patient's physiological feedback in real time. Through this feedback-driven approach, the system aims to maintain an optimal interaction between cognitive stimulation, autonomic regulation, and metabolic stability.

By integrating **real-time biometric sensing**, **voice-based functional monitoring**, and **adaptive therapeutic interfaces**, the ElidanLord MyTime™ Platform provides a technological framework for personalized cognitive and physiological support within a continuously monitored environment. This architecture represents a shift from passive monitoring systems toward interactive digital health ecosystems capable of combining assessment and intervention within a unified operational structure.

12.4.2 Adaptive Cognitive Therapy Modulation within the MyTime Platform

Within the ElidanLord MyTime™ Platform, cognitive and multisensory therapeutic interventions are not delivered as fixed or preprogrammed routines but are dynamically modulated according to the physiological feedback obtained through continuous monitoring. The integration of biometric indicators such as **heart rate (HR)** and **blood oxygen saturation (SpO_2)** allows the system to evaluate the patient's physiological tolerance and autonomic response during each interaction session within the **MyTime Clinical Pod**.

Through the platform's analytical modules, real-time physiological data are interpreted alongside behavioral interaction signals and voice-derived functional biomarkers. This integrated evaluation enables the system to determine the most appropriate therapeutic intensity and stimulation pattern for each individual. In practice, this may involve adjusting the pacing of cognitive exercises, modifying visual or auditory stimuli, or temporarily shifting the therapeutic program toward relaxation-oriented or regulatory activities when physiological indicators suggest elevated autonomic stress.

The **Cognitive Therapy Display System**, therefore, functions as an adaptive interface through which the platform delivers personalized therapeutic content. The display does not operate as an independent therapeutic device but rather as an intervention module controlled by the MyTime monitoring architecture. By linking physiological monitoring with cognitive stimulation, the platform ensures that therapeutic inputs remain aligned with the patient's functional state and adaptive capacity throughout the session.

This adaptive modulation approach provides an important advantage over traditional cognitive therapy interfaces, which typically deliver standardized stimulation protocols without continuous physiological context. In contrast, the MyTime system incorporates biometric monitoring into the therapeutic loop, enabling the therapy itself to evolve in response to the patient's physiological feedback. Such integration may contribute to improved patient engagement, greater therapeutic precision, and enhanced support for individuals experiencing chronic stress, cognitive vulnerability, or oxidative stress–related physiological imbalance.

12.4.3 System Workflow and Patient Interaction Cycle

The operational workflow of the **MyTime Clinical Pod** is structured as a continuous interaction cycle in which physiological monitoring, functional assessment, and adaptive therapeutic responses occur in an integrated sequence. Each session begins with the acquisition of baseline physiological parameters, including **heart rate (HR)** and **blood oxygen saturation (SpO_2)**, obtained through integrated biometric sensors. These baseline measurements provide an initial reference of the patient's physiological state before the initiation of cognitive or multisensory therapeutic stimulation.

Following baseline acquisition, the patient interacts with the **acoustic pod environment**, where voice samples and additional behavioral signals may be captured as part of the platform's multimodal monitoring process. These signals are transmitted to the MyTime analytical layer, where biometric inputs and voice-derived parameters are processed to estimate the individual's functional physiological state and adaptive response patterns.

Once this initial evaluation phase is completed, the system initiates the **adaptive cognitive therapy sequence** delivered through the platform's **Cognitive Therapy Display System** and environmental modulation components. The therapeutic program may include guided visual stimuli, cognitive engagement exercises, and sensory modulation elements designed to promote autonomic regulation and adaptive physiological responses.

Throughout the session, physiological signals continue to be monitored in real time. Variations in heart rate, oxygen saturation, and voice-derived parameters are continuously analyzed by the platform's control architecture. These data streams allow the system to dynamically regulate the intensity, pacing, and type of therapeutic stimulation delivered to the patient. If physiological indicators suggest increased stress or reduced tolerance, the system may adjust the therapeutic sequence by introducing regulatory stimuli or temporarily reducing cognitive demand.

The session concludes with a post-intervention monitoring phase in which physiological parameters are reassessed to evaluate the adaptive response generated during the therapeutic interaction. These measurements are incorporated into the patient's longitudinal monitoring record within the **ElidanLord MyTime™ Platform**, contributing to the ongoing evaluation of physiological trends and adaptive capacity over time.

Through this cyclical workflow, the MyTime Clinical Pod operates as a **closed-loop monitoring and therapeutic interaction system**, where physiological sensing, analytical interpretation, and adaptive intervention function as interconnected components of a unified digital health platform. This integrated interaction cycle enables the system to support personalized monitoring and therapeutic modulation within a continuously supervised physiological environment.

12.5 Hardware Components

The operational functionality of the **MyTime Clinical Pod** is supported by an integrated set of hardware components designed to enable the acquisition of physiological and acoustic signals while facilitating adaptive therapeutic interaction within a controlled environment. These hardware elements form the physical interface through which the **ElidanLord MyTime™ Platform** performs multimodal monitoring and delivers personalized cognitive and sensory interventions.

The hardware architecture combines several complementary subsystems including an **acoustic pod environment**, **physiological sensors**, and a **cognitive therapy display system**. Together, these components allow the platform to capture biometric information, analyze behavioral and voice-derived parameters, and deliver adaptive therapeutic stimuli in response to the patient's physiological state.

A key characteristic of this architecture is that the hardware devices do not operate as independent instruments. Instead, they function as integrated components of the MyTime monitoring ecosystem, where data acquisition, physiological interpretation, and therapeutic modulation occur as part of a unified operational framework. Physiological sensors continuously measure biometric parameters such as **heart rate (HR)** and **blood oxygen saturation (SpO_2)**, providing real-time information about the patient's cardiovascular and respiratory status during platform interaction. These signals are transmitted to the analytical layer of the platform and contribute to the estimation of the patient's adaptive physiological state.

The **acoustic pod** provides a controlled environment optimized for high-quality voice acquisition. Through acoustic isolation and ergonomic patient support, the pod enables reliable capture of voice-derived biomarkers that may reflect neuroautonomic and physiological regulation processes. These voice signals complement the biometric measurements obtained through physiological sensors and form part of the platform's multimodal monitoring strategy.

In parallel, the **Cognitive Therapy Display System** serves as the primary interactive interface through which the platform delivers guided cognitive and multisensory stimulation. Rather than functioning as a standalone therapeutic device, the display system operates as a responsive module integrated into the MyTime monitoring architecture. Visual stimuli, cognitive exercises, and sensory modulation programs delivered through the display may be dynamically adjusted according to the physiological feedback obtained from the monitoring sensors.

System Component	Monitoring Function	Therapeutic Interaction	Platform Role
Physiological Sensors (HR, SpO_2)	Continuous acquisition of cardiovascular and oxygenation	Physiological signals influence the intensity and pacing of	Provides real-time biometric input to the MyTime

System Component	Monitoring Function	Therapeutic Interaction	Platform Role
	parameters to evaluate the patient's physiological stability in real time.	cognitive stimulation delivered during the session.	analytical layer.
Acoustic Pod Environment	Controlled acoustic environment enabling reliable voice signal acquisition and reduction of environmental noise interference.	Supports voice-based interaction and voice-derived biomarker acquisition that may reflect neuroautonomic regulation.	Ensures high-quality signal capture for the platform's monitoring algorithms.
Cognitive Therapy Display System	Receives physiological feedback signals indirectly through the platform's control architecture.	Delivers guided visual stimuli, cognitive exercises, and multisensory therapeutic content adapted to physiological response patterns.	Operates as an intervention interface regulated by the platform's adaptive therapy modules.
Environmental Control Systems (lighting, acoustic output, optional aromatic modulation)	Environmental parameters can be adjusted according to physiological indicators during the session.	Supports sensory modulation strategies that may facilitate relaxation, cognitive engagement, or autonomic stabilization.	Allows the platform to implement adaptive environmental adjustments as part of therapeutic modulation.
MyTime Analytical Platform	Integrates biometric signals, voice-derived indicators, and interaction data to estimate the patient's functional physiological state.	Determines therapeutic adjustments and regulates cognitive stimulation programs in response to physiological feedback.	Coordinates the closed-loop interaction between monitoring, analysis, and adaptive therapy delivery.

Table I. Parallel interaction between physiological monitoring and adaptive cognitive therapy within the MyTime Clinical Pod

Through the integration of these hardware components, the MyTime Clinical Pod establishes a structured environment in which **monitoring, analysis, and adaptive intervention** are interconnected. This configuration allows the platform to operate as a physiologically informed therapeutic system, capable of continuously evaluating the patient's state and modulating cognitive or sensory interventions accordingly. The following subsections describe the functional architecture that enables this interaction between biometric monitoring, therapeutic modulation, and patient engagement within the MyTime platform.

Physiological Indicator	Monitoring Interpretation	Possible Therapeutic Adjustment	Platform Objective
Stable Heart Rate (HR)	Indicates physiological stability and adequate autonomic balance during interaction.	Cognitive stimulation intensity may be progressively increased through more complex visual or cognitive tasks.	Maintain engagement while preserving physiological stability.
Elevated Heart Rate	May indicate increased autonomic activation or cognitive stress.	Reduction of cognitive task intensity; introduction of relaxation-oriented visual stimuli or slower pacing of exercises.	Prevent excessive physiological stress and promote autonomic regulation.
Reduced Oxygen Saturation (SpO_2)	Suggests possible respiratory inefficiency or reduced oxygenation during the session.	Temporary reduction of cognitive demand; introduction of breathing guidance or calming visual environments.	Support respiratory stability and maintain physiological safety.
Improved Oxygen Saturation	Indicates recovery of adequate oxygenation and physiological	Gradual reintroduction of cognitive engagement tasks and interactive	Restore adaptive therapeutic progression.

Physiological Indicator	Monitoring Interpretation	Possible Therapeutic Adjustment	Platform Objective
	balance.	stimuli.	
Stable HR and SpO_2 over time	Indicates consistent physiological tolerance during therapy session.	Continuation or progression of the therapeutic protocol.	Reinforce adaptive cognitive stimulation within a stable physiological environment.

Table II. Example of real-time physiological feedback modulation within the MyTime Clinical Pod

12.6 Strategic Deployment and Financial Facilitation Framework

The implementation and expansion of the **ElidanLord MyTime™ Platform** within regional healthcare systems requires not only technological infrastructure but also a coordinated financial framework capable of facilitating adoption by medical institutions, clinical networks, and healthcare entrepreneurs. In this context, the deployment strategy of the platform integrates both **technological development and financial accessibility mechanisms**, enabling healthcare providers to participate in the MyTime monitoring ecosystem through a structured licensing and operational model.

A complementary component of this strategy involves the participation of **financial brokerage support**, represented in the initial deployment phase by **Broker Zabala**, who acts as a financial facilitator for institutions and investors interested in participating in the development and expansion of the platform within the State of Florida. This financial coordination mechanism is designed to support clinics, medical groups, and healthcare entrepreneurs that wish to integrate the MyTime system but may require structured capital access to implement the necessary technological infrastructure.

Within this framework, financing mechanisms may be structured as **non-commission lending agreements**, allowing interested entities to obtain the capital necessary to acquire operational licenses, deploy the required monitoring technology, or participate in the development of platform-related infrastructure. These financing arrangements may support multiple levels of participation, including direct investment in the technological and scientific development of the platform, the acquisition of **clinical monitoring licenses**, and the deployment of mobile health units equipped with MyTime monitoring systems.

One of the operational applications of this financing strategy includes the development of **mobile clinical laboratories**, such as medically equipped monitoring vans capable of transporting patients and performing remote physiological monitoring. These mobile units extend the reach of the platform beyond traditional clinical environments and allow healthcare providers to expand monitoring services to community-based or home-care settings. Financing support may therefore facilitate the acquisition and equipment of such mobile monitoring units as part of the broader MyTime healthcare ecosystem.

In addition to infrastructure development, financial facilitation may also support individual clinic owners or healthcare entrepreneurs seeking to acquire **territorial or institutional MyTime licenses**. Through structured financing arrangements, these entities may gain access to the platform's technological capabilities, including voice-based monitoring systems, physiological signal integration, and adaptive digital health monitoring workflows. This approach enables broader participation in the MyTime network while promoting the expansion of distributed monitoring systems across regional healthcare environments.

From a strategic perspective, the collaboration with financial facilitators such as **Broker Zabala** represents an operational mechanism aimed at accelerating the adoption of the MyTime platform during its initial deployment stage in Florida. By aligning technological innovation with accessible financing structures, the platform seeks to reduce entry barriers for healthcare institutions and support the creation of a scalable monitoring network capable of integrating clinics, mobile health units, and regional health coordinators.

Through the combination of **technological infrastructure, licensing architecture, and financial facilitation**, the ElidanLord MyTime™ Platform aims to establish a sustainable framework for the expansion of distributed health monitoring systems, supporting both clinical innovation and the economic viability of participating healthcare institutions.

12.5.1 Financial Brokerage Strategy for the Regional Implementation of the ElidanLord MyTime™ Platform

The **ElidanLord MyTime™ Platform** is designed as a scalable clinical coordination network in which regional coordinators may deploy the platform through sublicensing agreements with healthcare providers, with financial facilitation supported by **Broker Zabala**.

Broker Zabala has more than **15 years of operational experience** in the management and structuring of **personal, corporate, and non-profit financing programs**. Throughout its activity at both **national and international levels**, the brokerage has facilitated the allocation of more than **$88 million in structured financing**, supporting the growth of emerging businesses, the development of institutional projects, and the preservation and restructuring of personal and corporate assets. Its financial management approach is based on maintaining a balanced relationship between responsible financing strategies and sustainable financial advisory practices.

Figure 12: The ElidanLord MyTime™ Platform is designed as a scalable clinical coordination network where regional coordinators deploy the platform through sublicensing agreements with healthcare providers, with financial support coordinated by Broker Zabala.

Why Broker Zabala?

Broker Zabala also operates in coordination with **Affordable Care Act (ACA)–related insurance frameworks**, supporting financial models compatible with healthcare reimbursement systems. Through this coordination, medical activities and monitoring programs that are recognized within ACA healthcare priorities may be eligible for reimbursement when integrated within compliant clinical environments.

Among these healthcare priorities are **chronic diseases associated with long-term physiological dysregulation and oxidative stress–related conditions**. Within this context, the **ElidanLord MyTime™ Platform** provides a technological system capable of evaluating and monitoring physiological indicators associated with such conditions. Through the integration of financial facilitation and healthcare reimbursement pathways, the platform may be supported operationally and financially by Broker Zabala in its early deployment stages.

Its participation in advisory and financial coordination processes has enabled the development of multiple projects across diverse sectors, where access to structured capital and strategic financial guidance has been essential for long-term growth and operational stability.

12.6 ElidanLord MyTime™

12.6.1 Platform Licensing Structure

The **ElidanLord MyTime™ Platform** is designed as a scalable clinical coordination network where regional coordinators can deploy the platform through sublicensing agreements with healthcare providers.
The licensing model is based on three hierarchical operational levels:

Level	License Type	Scope
Level 1	Clinical License	Individual clinic
Level 2	County Coordinator	Multiple clinics in a county
Level 3	Florida State	Multiple clinics in Florida
Level 4	Regional Coordinator	Entire state or national territory

This structure allows the platform to scale rapidly while maintaining centralized technological infrastructure and intellectual property control.

12.6.2 Example: Florida Regional Deployment

Florida represents the **initial regional market** for the ElidanLord MyTime™ monitoring platform.
Approximate healthcare infrastructure:
• ~22 million population
• ~5,000+ outpatient clinics
• ~1,000+ specialty practices

The platform does not require full penetration to become profitable.
Example adoption scenario:

Conservative Scenario

Parameter	Value
Clinics affiliated	150
Patients monitored per clinic	100
Total monitored patients	15,000

This scenario matches the **current pilot projections already discussed**.

12.6.3 Monitoring Revenue Potential

Average monitoring programs associated with RPM / RTM / BHI services typically generate:
Estimated average monitoring revenue per patient:
$50 – $80 per month
For modeling purposes we use a **conservative $60 monthly value**.

Annual Monitoring Volume

Metric	Calculation
Patients	15,000
Monthly revenue	$60
Monthly gross monitoring	$900,000
Annual monitoring volume	$10.8M

12.6.4 Net Operational Benefit Example

Assuming operational costs and distribution:
Estimated **Net Operational Benefit**

≈ $2.8M per year

12.6.5 Revenue Distribution Example

Stakeholder	%	Annual Revenue
Regional Investor / Coordinator	12%	$336,000
Sales Network	5%	$140,000
Land Infrastructure Partner	8%	$224,000
Platform Operations	75%	$2.1M

This distribution maintains operational sustainability while allowing regional partners to benefit from network growth.

12.6.6 Expansion Potential

The previous model assumed only **15,000 monitored patients**, which represents a very small percentage of the Florida healthcare market.

A moderate expansion scenario could reach:

Scenario	Patients
Conservative	15,000
Moderate	35,000
Expanded	50,000+

If monitoring reaches **50,000 patients**, the platform revenue may reach:

$36M annual monitoring volume.

12.6.7 Sublicensing Potential

Regional coordinators may also generate additional revenue through sublicensing.

Example:

License Type	Price
Clinical License	$15,000 – $25,000
County Coordinator	$120,000 – $250,000
Regional Territory	$1M – $3M

Example Florida network:

License Type	Quantity	Revenue
Clinics	150	$3M
County Coordinators	20	$3M – $5M
Regional License	1	$1M – $3M

Total possible licensing revenue:
$7M – $11M

12.6.8 International Replication

Once validated in Florida, the model is designed for replication in additional territories including:

- Mexico
- Colombia
- Dominican Republic
- Canada
- European regions
- Montenegro

These markets may adopt the same **regional licensing model**.

12.6.9 Strategic Value for Investors

An investor affiliating as a **Regional MyTime Coordinator** gains:

- territorial licensing rights
- sublicensing authority
- participation in monitoring revenue streams
- access to a scalable clinical technology platform.

The value of the license increases as the network expands and the number of monitored patients grows.

12.6.10 Partial Conclusions

The Regional MyTime Coordinator model represents a strategic entry point for investors seeking participation in the expansion of digital health monitoring infrastructure.

Through territorial licensing and sublicensing capacity, investors are positioned not merely as passive stakeholders but as active facilitators in the deployment of a scalable healthcare technology network.

As the number of affiliated clinics and monitored patients increases, the structural value of each regional license grows proportionally. This dynamic creates a compounding value effect in which early participants benefit from network expansion and increasing demand for preventive health monitoring solutions.

Furthermore, the integration of voice-based functional monitoring, physiological data streams, and clinical coordination within a unified platform positions the MyTime system as a next-generation infrastructure for decentralized health management.
In this context, the Regional MyTime Coordinator role provides investors with:

- participation in an expanding healthcare technology ecosystem
- exposure to recurring monitoring-based revenue streams
- the opportunity to contribute to the development of preventive and longevity-focused healthcare models.

Ultimately, the long-term strategic value of the MyTime platform lies in its capacity to build a distributed monitoring network capable of supporting clinics, healthcare professionals, and patients across multiple regions while continuously increasing the value of the licensing structure.

*Corresponding Author: **Dr. Luis CRUZ-RODRIGUEZ, PhD**

13. STRATEGIC VALUE FOR INVESTORS AND REGIONAL COORDINATORS

The expansion of the **ElidanLord MyTime™ Platform** relies on a distributed deployment model designed to integrate clinical institutions, regional healthcare coordinators, and technology partners within a scalable monitoring network. Within this structure, **regional coordinators and strategic investors** play an important role in facilitating the territorial implementation of the platform and supporting the operational integration of participating healthcare providers.

Individuals or institutions affiliating with the platform as **Regional MyTime Coordinators** may obtain territorial licensing rights that allow them to promote and coordinate the adoption of the system within defined geographic areas. This role may include the facilitation of clinical partnerships, the coordination of monitoring programs across healthcare providers, and the support of technological deployment in clinics, wellness centers, and community-based healthcare environments.

An important strategic aspect of this model is the potential **sublicensing capacity** associated with regional coordination roles. Through this mechanism, regional coordinators may facilitate the integration of additional clinics and healthcare facilities into the MyTime monitoring network, contributing to the expansion of the platform's distributed health monitoring infrastructure. As the number of affiliated institutions increases, the operational reach of the platform expands accordingly, creating a progressively interconnected monitoring ecosystem.

Participation in the MyTime network may also allow investors and regional coordinators to engage in **revenue streams derived from monitoring services and platform licensing activities**. Because the platform integrates voice-based physiological analysis, biometric monitoring, and adaptive digital health tools, each affiliated clinic or monitoring unit contributes to the growth of the platform's monitoring infrastructure and associated service activity.

Another element contributing to the strategic value of participation is the **scalability of the technological framework**. The MyTime platform is designed as a modular digital health system capable of integrating new monitoring devices, expanding clinical applications, and supporting additional healthcare environments such as mobile monitoring laboratories, community health programs, and specialized clinical units. As the network expands geographically and the number of monitored patients increases, the overall value of the monitoring ecosystem may grow accordingly.

From a long-term perspective, the participation of regional coordinators and strategic investors contributes to the establishment of a **distributed digital health infrastructure**, where clinical monitoring, physiological analytics, and preventive health strategies can be deployed across multiple healthcare environments. By combining technological innovation with coordinated territorial implementation, the MyTime platform aims to facilitate the development of a scalable monitoring network capable of supporting early detection strategies, preventive care models, and long-term physiological monitoring across diverse patient populations.

In this context, the strategic participation of investors and regional coordinators represents not only a financial opportunity but also a structural component in the development of a **distributed healthcare monitoring ecosystem**, in which technology, clinical practice, and regional coordination operate together to support the expansion of the ElidanLord MyTime™ Platform.

14. RECOMMENDED NUTRITIONAL SUPPLEMENT

14.1 The Neuron On™ nutritional supplement

The Neuron On™ nutritional supplement has been developed as a supportive formulation aimed at promoting neuronal resilience and metabolic balance through antioxidant-based nutritional strategies. Oxidative stress is widely recognized as a contributing factor in the progression of multiple chronic conditions, including neurological, cardiovascular, and metabolic disorders.

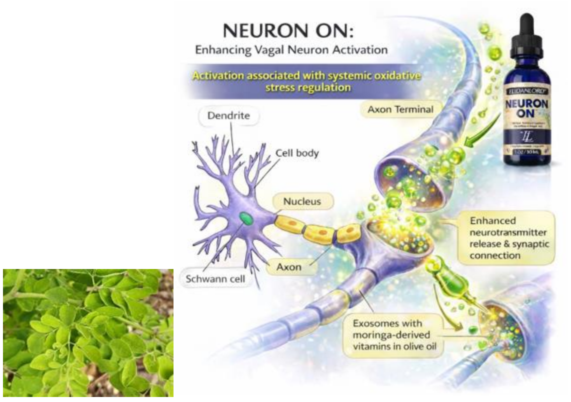


Figure 8 illustrates a conceptual representation of a possible mechanism of action through which antioxidant components may contribute to the protection of cellular structures and the regulation of oxidative stress pathways.

14.2 Antioxidant-supportive and lymphatic oil

Oxidative stress has been widely recognized as a key biological factor involved in the development and progression of multiple chronic conditions, including metabolic disorders, cardiovascular disease, neurodegenerative processes, and age-related functional decline. When the balance between reactive oxygen species production and the organism's antioxidant defense mechanisms becomes disrupted, cellular structures may experience cumulative oxidative damage that affects physiological regulation and systemic homeostasis.

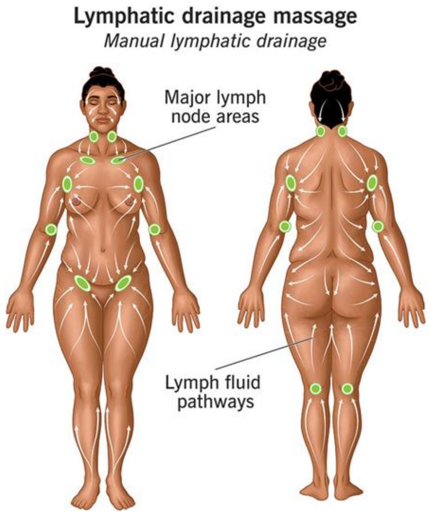


Figure 9. Anatomical representation of major lymph node regions and lymphatic fluid pathways involved in systemic detoxification and metabolic clearance. Manual lymphatic drainage techniques may support lymph circulation and contribute to the removal of oxidative and metabolic byproducts associated with systemic oxidative stress.

Within this context, plant-derived formulations containing antioxidant and bioactive compounds have been increasingly explored as supportive strategies aimed at promoting detoxification pathways and enhancing lymphatic and metabolic clearance mechanisms. Such formulations may contribute to reducing oxidative burden, supporting cellular resilience, and facilitating the elimination of metabolic byproducts associated with oxidative stress.

In the framework of the MyTime monitoring platform, these interventions can be conceptually integrated as complementary strategies guided by the Oxidative Stress Index (OSI%). By linking physiological monitoring with targeted nutritional and botanical support, it becomes possible to design personalized approaches that aim to restore metabolic balance, improve adaptive capacity, and support long-term functional health maintenance.

Figure 10. Conceptual representation of antioxidant-supportive and lymphatic stimulation strategies derived from plant-based formulations incorporated as complementary interventions within OSI%-guided monitoring workflows.

14.3 Personalized Nutraceutical Support within OSI%-Guided Monitoring

One of the distinguishing features of the ElidanLord MyTime™ platform is its capacity to integrate physiological monitoring with personalized supportive interventions aimed at maintaining functional health balance. By incorporating the Oxidative Stress Index (OSI%) as a dynamic monitoring parameter, the platform provides a framework through which nutraceutical and plant-based formulations may be recommended and adjusted according to the individual physiological profile of each monitored subject.

Within this context, nutraceutical products such as the Neuron On™ formulation may serve as targeted antioxidant-support strategies designed to promote neuronal resilience and metabolic stability. When combined with plant-derived formulations intended to stimulate detoxification pathways and lymphatic circulation, these interventions may contribute to reducing oxidative burden and supporting systemic homeostasis. The monitoring capabilities of the MyTime platform allow these supportive strategies to be aligned with the individual's physiological state, enabling adaptive recommendations that evolve as oxidative stress indicators change over time.

Furthermore, the ability to associate nutraceutical support with continuous monitoring introduces a personalized dimension in which dosage, formulation selection, and complementary interventions can be modulated according to OSI%-guided trends. This approach reinforces the concept of integrative health management, where digital monitoring tools and nutritional support strategies operate in synergy to support preventive health, improve adaptive capacity, and potentially contribute to the long-term management of oxidative stress-related conditions.

14.4 Integrative Perspective on Oxidative Stress Management

This conceptual model illustrates how the **ElidanLord MyTime™ Platform** integrates physiological monitoring, nutritional support, and clinical coordination to support the management of oxidative stress–related conditions.

At the center of the model, the **Oxidative Stress Index (OSI%) monitoring system** represents the core analytical component of the platform. This module integrates multiple physiological signals, including voice analysis and functional health indicators, to estimate the oxidative stress status of the organism and its associated **Health Potential**.

The platform connects several complementary components that may contribute to improving metabolic balance and physiological resilience:

- **Voice Analysis**
  Voice signal analysis is used as a non-invasive digital biomarker capable of capturing subtle physiological variations associated with metabolic and neurological regulation.
- **Nutraceutical Support (Neuron On™)**
  The Neuron On™ formulation represents an antioxidant-supportive nutraceutical designed to contribute to

*Corresponding Author: **Dr. Luis CRUZ-RODRIGUEZ, PhD**

neuronal protection, metabolic regulation, and reduction of oxidative stress burden through bioactive nutritional compounds.

- **Lymphatic Stimulation**

Strategies aimed at stimulating lymphatic circulation may support the physiological elimination of metabolic byproducts and contribute to improved detoxification processes.

- **Plant-Based Detox Formulations (Lymphatic Detox Oil)**

Plant-derived formulations incorporating antioxidant and bioactive compounds may assist in supporting detoxification pathways, metabolic clearance mechanisms, and systemic balance.

- **Clinical Monitoring Network**

The MyTime™ system operates within a distributed clinical monitoring network that allows healthcare professionals to interpret physiological indicators, guide supportive interventions, and follow patient evolution over time.

Through this integrative framework, the **ElidanLord MyTime™ Platform** proposes a coordinated strategy that combines **physiological monitoring, nutraceutical support, detoxification approaches, and clinical supervision** to support personalized oxidative stress management and long-term functional health maintenance.

Figure 11. Integrated Oxidative Stress Management Model within the ElidanLord MyTime™ Platform

The management of oxidative stress represents an increasingly relevant component in the prevention and long-term control of chronic diseases affecting neurological, metabolic, and cardiovascular systems. The interaction between cellular oxidative burden, metabolic byproduct accumulation, and physiological regulatory mechanisms highlights the need for integrative strategies capable of addressing multiple biological processes simultaneously. In this context, antioxidant-based nutraceutical formulations and plant-derived detoxification approaches may provide supportive interventions aimed at reducing oxidative damage, improving metabolic clearance, and reinforcing cellular resilience.

The ElidanLord MyTime™ platform introduces a novel dimension to this framework by enabling the monitoring of functional physiological indicators associated with oxidative stress dynamics. Through OSI%-guided evaluation and adaptive monitoring workflows, supportive interventions such as antioxidant nutraceuticals and lymphatic stimulation strategies can be aligned with the evolving physiological profile of each individual. This integrative approach allows nutritional and botanical support strategies to be implemented in a personalized and monitored manner, potentially strengthening preventive health models and contributing to the long-term management of oxidative stress–associated conditions within a coordinated digital health ecosystem.

IX. References

1. Cruz Rodriguez L, et al. Voice-Based Functional Monitoring to Estimate Oxidative Stress and Stratify Somatic vs Mental Stress, Enabling Targeted Recommendations of Hyperbaric Oxygen Therapy and NEURON ON™ Nutritional Antioxidant Support: The ElidanLord MyTime™ Platform. *Archives in Neurology & Neuroscience*. In progress.
2. Cruz Rodriguez L, et al. NEURON ON: A Bioactive Moringa Oil Targeting Oxidative Stress and Silent Synapses in Neurological Disorders Including Epilepsy. *Archives in Neurology & Neuroscience*. 2025;6(5):1-7.
3. Cruz Rodriguez L, et al. Hyperbaric Therapy "Long Life Oxy-Lord" As New Protocol Facing the Oxidative Stress Associated with Metabolic Imbalance such as Neurodegenerative and Cancer Diseases. *American Journal of Medical and Clinical Research & Reviews*. 2024;3(9):1-16. doi:10.58372/2835-6276.1211.
4. Centers for Medicare & Medicaid Services. Remote patient monitoring. Baltimore (MD): CMS; 2025.
5. Lehrer PM, Gevirtz R. Heart rate variability biofeedback: how and why does it work? *Appl Psychophysiol Biofeedback*. 2014;39(3-4):195-212.
6. Lehrer P, Kaur K, Sharma A, Shah K, Huseby R, Bhavsar J, et al. Heart rate variability biofeedback improves emotional and physical health and performance: a systematic review and meta analysis. *Appl Psychophysiol Biofeedback*. 2020;45(3):109-129.
7. Fagherazzi G, Fischer A, Ismael M, Despotovic V. Voice for health: the use of vocal biomarkers from research to clinical practice. *Digit Biomark*. 2021;5(1):78-88.
8. Lin H, Toh YC, Ngiam KY. Identification of digital voice biomarkers for cognitive health. *Explor Med*. 2020;1(3):234-245.
9. Higa E, Hariharan S, Botheju W, et al. Discovery and analytical validation of a vocal biomarker to

monitor COVID-19 symptoms. *JMIR Med Inform*. 2022;10(11):e35622.

10. Thepsatitporn S, et al. Multi-sensory stimuli improve relaxation and sleep quality in adults: a comparative study. *Sleep Sci Pract*. 2024.
11. Gou Q, et al. Meta-narrative review: the impact of music therapy on sleep quality. *Front Psychiatry*. 2025.
12. US Department of Health and Human Services. Summary of the HIPAA Security Rule. Washington (DC): HHS; 2024.
13. US Food and Drug Administration. Software as a Medical Device (SaMD). Silver Spring (MD): FDA; 2018 [updated 2025].
14. US Department of Health and Human Services. Telehealth and remote patient monitoring. Washington (DC): HHS; 2024.
15. Centers for Medicare & Medicaid Services. Telehealth & remote monitoring. MLN901705. Baltimore (MD): CMS; 2026.
16. Centers for Medicare & Medicaid Services. Behavioral Health Integration Services. MLN909432. Baltimore (MD): CMS; 2026.
17. Zhang Y, et al. The comprehensive clinical benefits of digital phenotyping. *NPJ Digit Med*. 2025.
18. Kandlur NR, et al. Sensory modulation interventions for adults with mental illness: a scoping review. *Front Psychiatry*. 2023;14:1287107.

TRADEMARK

ELIDANLORD™ [104]

Trademark Application – Serial Number: 97558693

COPYRIGHTS

TXu002227926 – Viral Transmission in Enclosed Areas (SARS-CoV-2)

TXu002229629 – Fusion Stability & Exosome Affinity Algorithms

TXu002244018 – Multiepitope RNA-Peptide Vaccine

TXU002465588 – LONGLIFE OXY-LORD (LLOL) Calculator

PATENTS

Granted

US11246922B1 – RNA-Peptide Vaccine against SARS-CoV-2

US11987775B1 – System for Extracting THC from Cannabis Plants

PUBLICATIONS

2026

Cruz Rodriguez L "An Integrative Platform for Functional Physiological Monitoring Using Voice Biomarkers, Physiological Signals and Multisensory Adaptive Therapy: MyTime™ Clinical Pod"(In progress)

2024 – 2025

2. **Cruz Rodriguez L**. et al, "NEURON ON: A Bioactive Moringa Oil Targeting Oxidative Stress and Silent Synapses in Neurological Disorders Including Epilepsy ", Archives in Neurology & Neuroscience 6(5):1-7, 2025
3. **Cruz Rodriguez L**. et al, "Hyperbaric Therapy "Long Life Oxy-Lord" As New Protocol Facing the Oxidative Stress associated with metabolic imbalance such as Neurodegenerative and Cancer diseases. American Journal of Medical and Clinical Research & Reviews 03(09):01-16 DOI:10.58372/2835-6276.1211, 2024

2022 – 2023

4. **CRUZ RODRIGUEZ L**., et al (2023). Cannabidiol and Aloe vera Extract to Human Cells: Bioactive Molecules as a Promising Anti-Lung Cancer Drug. J Medical Case Repo, 5(2):1-13.

2020 – 2021

5. Mahdieh Mostafidi, Faezeh Shirkhan, Maryam Tamaskani Zahedi, Parisa Ziarati, Bernhard Hochwimmer and **Cruz-Rodriguez L**.."Bioaccumulation of the Heavy Metals Contents in Green Leafy Vegetables": J N food sci tech; 2021. vol 2, Issue 1.
6. **Cruz-Rodriguez L**, Zayas Tamayo A. Dilsiz N, and Lambert Brown D. "New Drug/Vaccine RNA-Peptide Named Melody Against SARS-CoV-2: Adapting Antiviral Pathways in Cell Culture WM-266 As Temporal Memory of "In Vitro Cell"". I J Infectious Disea; 2021. Volume 2, Issue 2.
7. **Cruz-Rodriguez L**, Dilsiz N, Ziarati P, Hochwimmer B, Zayas Tamayo A. and Lambert Brown D. "The Algorithms Cruz Rodriguez (CR) are Proposing a Novel Vaccine RNA Peptide Against Liver Cancer Disease: Exosomes as Carrier in Cancer Progression". Acta Scientific Medical Sciences 5.5 (2021): 31-38.
8. **Cruz-Rodriguez L**, Zayas Tamayo A. Dilsiz N, and Lambert Brown D. "A Novel Vaccine RNA-peptide against HIV-1: Exosomes as Carrier in Viral Progression". I J Infectious Disea; 2021. Volume 2, Issue 2.
9. **Cruz-Rodriguez L**, Dilsiz N, Barea R, Ziarati P, Hochwimmer B, Zayas Tamayo A and Lambert Brown D. "The Algorithms Cruz Rodriguez (CR) are Cancers Disease: Exosomes as Carrier in Cancer Progression and Metastasis". J Med – Clin Res & Rev. 2021; 5(2): 1-16.
10. Parisa Ziarati, Bernhard Hochwimmer, **Cruz-Rodriguez L**, Nader Tanideh, Aida Iraji, Bahareh Kamyab-Moghadas" Lung Cancer Disease and Arsenic: The Medical Geology as Key".J Med Discov (2020); 5(4):jmd20070; doi:10.24262/jmd.5.4.20070.
11. Ziarati P., Amina Sultan, Bahareh Kamyab-Moghadas, Faezeh Shirkhan, **Cruz–Rodriguez L**., Akanksha Juneja. "An insight into the prevailing trends of self-immunity and lifestyle in protection from Covid-19 amongst the health care workers": J Med Discov (2020); 5(4):jmd20065; doi:10.24262/jmd.5.4.20065.

12. Ahmadreza Fatahi, Ziarati P, Afshin Jafarpour, **Cruz-Rodriguez L**. "Heavy Metal Removal from Edible Leafy Vegetable by Low Cost Novel Adsorbents: Hazelnut Shell ": J Sci Discov (2020); 4(2): jsd20039; doi:10.24262/jsd.4.2.20039.
13. **Cruz-Rodriguez L**., Ziarati P, Hochwimmer B., Kaabar M. K. A., Bin Zhao, N., Dilsiz N., Sanchez Batista L., Barea R., Pelaez Figueroa Y. (2020). A DNA-Peptide Fusion as a Vaccine Candidate against Breast and Ovarian Cancer Metastasis: Consequent Benefit in Certain Lung Cancers. Journal of Bioscience & Biomedical Engineering1 (3), 1-11.
14. Sepideh Tajik, Parisa Ziarati, **Cruz-Rodriguez L**. Coffee Waste as Novel Bio-adsorbent : Detoxification of Nickel from Contaminated Soil and Coriandrum Sativum 2020. Journal of Bioscience & Biomedical Engineering.
15. KAMYAB-MOGHADAS B., ZIARATI P., **CRUZ-RODRIGUEZ L**. "BREAST CANCER DISEASE AND ARSENIC : GEOLOGY BEHAVIOR AS KEY" 2020 Gynecology and Women's Health Care.
16. Zhaoxuan Wang, Zhiyu Yu, Changlin Tian, **Cruz-Rodriguez L**, Sanchez Batista L and Bin ZHAO. "Differential equation analysis on COVID-19" 2020. Clinical Research and Clinical Trials Volume 2, Issue 1.
17. **CRUZ-RODRIGUEZ L**., RODOLFO BAREA, ZAYAS TAMAYO A.M., HOCHWIMMER B., BEN HADDA T., ALMALKI F. A., LAMBERT BROWN D, PELAEZ FIGUEROA Y., SANCHEZ BATISTA L. and WARAD I. "ELIDAN Certificate: BEHAVIOR is the key to save places from Covid-19", Journal of Bioscience & Biomedical Engineering, Volume 1, Issue 2.
18. **Cruz-Rodriguez L**, Sanchez Batista L, Hochwimmer B, Bin Zhao and Ziarati P. The mathematical formula to estimate the Exosome Affinity between miRNA-peptide and Exosome : ALGORITHM "CRUZRODRIGUEZ (EA)". Journal of Bioscience & Biomedical Engineering, Volume 1, Issue 2.
19. **CRUZ-RODRIGUEZ L**., SANCHEZ BATISTA L., HOCHWIMMER B., TAIBI BEN HADDA, ALMALKI F.A., DILSIZ N., CAPARROS J.L., LAMBERT BROWN D., ZIARATI P., ZAYAS TAMAYO A.M., PELAEZ FIGUEROA Y., HERRERA SANCHEZ M.B., GARCIA HERNANDEZ A., BIN ZHAO. "How to Evaluate Viral Transmission in Enclosed Areas. Medical Geology saving places from Covid-19" Journal of Bioscience & Biomedical Engineering; 2020.
20. **CRUZ-RODRIGUEZ L**., DILSIZ N., ZIARATI P., LAMBERT BROWN D., HOCHWIMMER B., ZAYAS TAMAYO AM., SANCHEZ BATISTA L., MORADI M. "A miRNA-PEPTIDE FUSION AS A VACCINE CANDIDATE AGAINST THE NOVEL CORONAVIRUS (COVID-19).
21. **CRUZ-RODRIGUEZ L**., ZAYAS TAMAYO AM., SANCHEZ BATISTA L., LAMBERT BROWN D., HOCHWIMMER B. and ZIARATI P.; "A Novel vaccine candidate with double antiviral activity against the HIV-1 and Covid-19".
22. **Cruz-Rodriguez L**, Cruz-Rodriguez LD, Sanchez Batista L, Hochwimmer B. Calculation of Fusion Stability of [DNA or RNA] - Peptide (FS) Algorithm "Cruz-Rodriguez''.
23. **CRUZ-RODRIGUEZ L**., LAMBERT BROWN D., HOCHWIMMER B., SELINUS O., CRUZ-RODRIGUEZ LD., CRUZ-RODRIGUEZ ME., ZAYAS TAMAYO AM. and SANCHEZ BATISTA L.; "A RNA-Peptide fusion as a vaccine candidate against the novel Coronavirus (COVID-19)".
24. Hochwimmer B., Ziarati P., Selinus O., Elwej A., Lambert Brown D., Zayas Tamayo AM., Moradi M., **Cruz-Rodriguez L**. "A predictive geological tool of Type3 Diabetes (Alzheimer's disease).

2014 – 2019

25. **Cruz-Rodriguez L**.; "High performance liquid chromatography as acceptance criteria in antiviral capsules" ; Philadelphia, USA (2018)
26. **Cruz-Rodriguez L**.; "Glycosylation and PARP-1 polymerase activities as Biomarkers and drug targets in cancer diseases" ; New York, USA (2018)
27. Garreau-Balandier I, Lefebvre M, Jacquard S, Caillat S, **Cruz-Rodriguez L**, Ishak L, Agier V, Morel F, Lachaume P, Dubessay P, Sauvaigo S, Alziari S, Vernet P. "A comprehensive approach to determining BER capacities and their change with aging in Drosophila melanogaster mitochondria by oligonucleotide microarray"Volume 588, Issue 9, 2 May 2014, Pages 1673-1679
28. ELIDANLORD™. Trademark Application – Serial Number: 97558693.
29. TXu002227926 – Viral Transmission in Enclosed Areas (SARS-CoV-2).
30. TXu002229629 – Fusion Stability & Exosome Affinity Algorithms.
31. TXu002244018 – Multiepitope RNA-Peptide Vaccine.
32. TXU002465588 – LONGLIFE OXY-LORD (LLOL) Calculator.
33. US11246922B1 – RNA-Peptide Vaccine against SARS-CoV-2.
34. US11987775B1 – System for Extracting THC from Cannabis Plants.
35. US 63,320,184 – Aromatic Oil Extraction from Plant Biomass (Pending).
36. US Q08012204 – RNA-Peptide Vaccine against Lung Cancer (Pending).
37. Cruz Rodriguez L, et al. Voice-Based Functional Monitoring to Estimate Oxidative Stress and Stratify Somatic vs Mental Stress. Arch Neurol Neurosci. 2026 (In progress).

38. Cruz Rodriguez L, et al. NEURON ON: A Bioactive Moringa Oil Targeting Oxidative Stress and Silent Synapses. Arch Neurol Neurosci. 2025;6(5):1-7.
39. Cruz Rodriguez L, et al. Hyperbaric Therapy "Long Life Oxy-Lord". Am J Med Clin Res Rev. 2024;03(09):01-16.
40. Cruz Rodriguez L, et al. Cannabidiol and Aloe vera Extract to Human Cells. J Medical Case Repo. 2023;5(2):1-13.
41. Mostafidi M, et al. Bioaccumulation of Heavy Metals in Green Leafy Vegetables. J N Food Sci Tech. 2021;2(1).
42. Cruz-Rodriguez L, et al. RNA-Peptide Melody Against SARS-CoV-2. Int J Infect Dis. 2021;2(2).
43. Cruz-Rodriguez L, et al. Novel Vaccine RNA Peptide Against Liver Cancer. Acta Sci Med Sci. 2021;5(5):31-38.
44. Cruz-Rodriguez L, et al. RNA-Peptide Against HIV-1. Int J Infect Dis. 2021;2(2).
45. Cruz-Rodriguez L, et al. Exosomes as Carrier in Cancer Progression. J Med Clin Res Rev. 2021;5(2):1-16.
46. Ziarati P, et al. Lung Cancer Disease and Arsenic. J Med Discov. 2020;5(4):jmd20070.
47. Ziarati P, et al. Self-immunity and lifestyle in protection from Covid-19. J Med Discov. 2020;5(4):jmd20065.
48. Fatahi A, et al. Heavy Metal Removal from Edible Leafy Vegetable. J Sci Discov. 2020;4(2):jsd20039.
49. Cruz-Rodriguez L, et al. DNA-Peptide Fusion as Vaccine Candidate. J Biosci Biomed Eng. 2020;1(3):1-11.
50. Tajik S, et al. Coffee Waste as Bio-adsorbent. J Biosci Biomed Eng. 2020.
51. Kamyab-Moghadas B, et al. Breast Cancer Disease and Arsenic. Gynecol Womens Health Care. 2020.
52. Wang Z, et al. Differential equation analysis on COVID-19. Clin Res Clin Trials. 2020;2(1).
53. Cruz-Rodriguez L, et al. ELIDAN Certificate: Behavior is the key to save places from Covid-19. J Biosci Biomed Eng. 2020.
54. Cruz-Rodriguez L, et al. Exosome Affinity Algorithm (EA). J Biosci Biomed Eng. 2020.
55. Cruz-Rodriguez L, et al. Viral Transmission in Enclosed Areas. J Biosci Biomed Eng. 2020.
56. Cruz-Rodriguez L, et al. miRNA-PEPTIDE Fusion as Vaccine Candidate against COVID-19. 2020.
57. Cruz-Rodriguez L, et al. Double antiviral activity against HIV-1 and Covid-19. 2020.
58. Cruz-Rodriguez L, et al. Fusion Stability Algorithm (FS). 2020.
59. Cruz-Rodriguez L, et al. RNA-Peptide fusion against Coronavirus. 2020.
60. Hochwimmer B, et al. Predictive geological tool of Type 3 Diabetes. 2020.
61. Cruz-Rodriguez L. HPLC as acceptance criteria in antiviral capsules. 2018.
62. Cruz-Rodriguez L. Glycosylation and PARP-1 in cancer diseases. 2018.
63. Garreau-Balandier I, et al. BER capacities in Drosophila mitochondria. 2014.

*Corresponding Author: **Dr. Luis CRUZ-RODRIGUEZ, PhD**