
BioZone

# BioZone Healthcare Biodefense Project Summary

## Introduction

The BioZone System and BioZone Unit (BICU) is a revolutionary Healthcare Innovation integrating a multitude of proprietary technologies into a single standalone system apparatus. Currently, the means and methods of over forty novel medical innovations have been functionally coordinated to provide, in one general aspect, a **New Generation** multispecialty Medical and Pharmaceutical station. The BioZone System and BICU will functionally cooperate with the BioZone Wildlife component version to provide Early Warning Biodefense countermeasures and mitigants for numerous healthcare problems across and known to the industry inclusive of the next pandemic, provide significant advancements to conventional medical equipment, and introduce breakthrough technologies applicable across the Healthcare and Pharmaceutical arenas.

Through the provided integration of BioZone System solutions, significant reductions in medical errors, tremendous cost savings for the Healthcare Industry, a new generation of stationary or mobile diagnostic, analytic, and therapeutic modalities will be introduced. Pure and simple, countless lives will be saved. The BioZone Innovation Unit may quite well prove to be one of the most relevant healthcare technological advancements of the past several decades.

The BioZone Unit is designed to deliver and comprise a '**Hybrid**' all-in-one medical unit station with the goal of providing New Age advanced and superior technologies intended to integrate with AI and vast informational libraries therein perpetually expanding the scope and functional utility. The provisions of the BioZone Unit are designed for functional interoperability between component technologies and the modular construct provides for customization based on the needs of the healthcare provider or facility. Additionally, the BioZone's partitioned CPU is formatted for continual expansion wherein the scientific communities as a whole can strive to submit a continuum of input for further improvement and expanded technologies. In this aspect, the BioZone System provides available

technology compatibility given a proprietary adaptation platform and licensing agreement. For instance, a novel Biosensor means for resonance or photonic determination and identification of specific viral and or bacterial contagions will soon become an integrated component of the BioZone System. Perhaps such a viral or bacterial identification means will then lead to an endemic awareness program which will serve to activate epidemiological parameters and avoid propagation to an epidemic status. In this aspect, the BioZone System and Unit develops as a diversified platform and limited multispecialty healthcare subecosystem.

The BioZone Unit is initially presented herein in the general aspects relative to applicable utilities for the Biodefense and Healthcare arenas. In its true essence, the BioZone Unit itself is a readily modifiable '**Concept Innovation**' that can be designed and configured to apply and conform to a multitude of environments and utilities. The BioZone System and Unit, through its onsite diagnostic analytics, interventional and therapeutic capacity coupled to the remote interpretive networking will rapidly mitigate advanced healthcare delivery not only to convention healthcare facilities but additionally to the inadequately and or underserved areas of the world.

In one general aspect, the BioZone Unit may be designed to be an all-in-one Emergency and Critical Care Apparatus, whether installed in a healthcare facility or a tent in the desert. An office or treatment facility 'go to' in the case of an unexpected patient's deterioration, a specialized dialysis apparatus, an isolation cabinet and decontamination means for serious contagious presentations that permits direct patient care and intervention without the need for protective garments, a PICU, a surgical station, an obstetrical delivery station, an environmentally protective chemotherapy delivery station, a pharmaceutical pulmonary drug delivery system, a pulmonary injury rehabilitation modality, a fully mobile and readily deployable medical station for battlefields or less intensive arenas such as on ships, large aircraft, or submarines, are some applicable examples of the BioZone utilities. There is even a preliminary design for utilization in the relative confinement of a spacecraft intended to mitigate prolonged space mission detriments such as radiation injuries. Additionally, research is ongoing as to the potential integration of Artificial Intelligence and machine learning as a BioZone provision of a mental health and drug addiction treatment apparatus.

The introduction of the BioZone System as currently developed is extremely exciting yet the unforeseen potential of what is to come is even more intriguing. The perseverance through nearly a decade of personal research, development, and early system prototyping is nearing fruition in regard to product development. The

costs and time input has been trying, to say the least, while to date being privately managed and funded. The completed delivery of such breakthrough technologies will undoubtedly require considerable additional research commitment as well as funding beyond the capabilities of our capacity. We have the mission driven dedication, perseverance, and innovative prowess yet appreciate the relative research and funding constraints of going this alone. On this behalf, we are selectively and privately reaching out for consideration of partnering with our ongoing BioZone Project research and development. We therefore request your sincere evaluation of our project potential as being an extremely meaningful value addition to the Healthcare Industry and to mankind as a whole, our project success towards the innovation thereof, and becoming a collaborative part of our **BioZone Team** venture and endeavor.

For length of presentation sake and current Company confidentiality and protection of Intellectual Properties, a brief overview of the some of the amazing technologies developed for the BioZone System will ensue. Please note that the following information is merely a representation of what some BioZone System project accomplishments are to date. It is that of which the BioZone System can become years from now that we hope to stimulate interest thereof.

## Applications and Utilities

In one preferred embodiment the BioZone System provides a mobile all in one advance medical apparatus capable of detecting Biohazards and communicating the activation mechanism integrated with local, regional, and National Early Warning Biodefense initiatives.

In another aspect, a novel Pulmonary Drug Delivery Platform and means for Pulmonary Rehabilitation is provided. As such, the BioZone Pulmonary Drug Delivery System is a cumulative precursor therapeutical conditioning that mitigates naturally occurring respiratory system barriers to pulmonary drug delivery systems. In this aspect, a relevant and germane complement to conventional drug delivery through the respiratory tract serves to augment the transfer of pharmaceutical agents from inspired air across the alveolar membrane into the pulmonary microcirculation. The BioZone Drug Delivery Platform is therefore not a competitor to existing drug delivery and carrier technologies but alternatively a facilitator means to enhance absorption capabilities. From this point on the enhanced therapeutical agent absorption may be either systemically effectuated and or actively targeted to specific tissues through specific means and provisions of the BioZone System. Through additional BioZone System provisions inflammatory,

infectious, carcinogenic, and radiation induced lung injuries are provided a novel means of mitigation.

In another preferred embodiment the BioZone Unit provides a novel pulmonary rehabilitation means. In this case a host of novel therapeutical treatment provisions are introduced targeting damage incurred to the structures and tissues of the respiratory system of a mammal. For the first time in modern medicine treatment modalities capable of repairing, reactivating, and regenerating damaged pulmonary anatomy and functions stemming from cancer therapy irradiation, cellular damage from high energy radiation, damage from harmful and toxic agents such as cigarette smoke and environmental factors, acute and chronic damage from infectious diseases, fibrosing and or destruction of pulmonary architecture from chronic disease or adverse medication reactions; as examples thereof, may be mitigated. Preemptive and proactive pulmonary health can also be encouraged and addressed through the use of the BioZone provisions so that harm due to a multitude of factors can be prevented and countered prior to permanent damage being sustained.

Another preferred embodiment of the BioZone System provides an airtight N-Class negative pressure enclosure cabinet for treatment of highly contagious life-threatening infectious diseases. As such, the BioZone System provides multiple decontamination and sterilization means for the enclosure atmosphere while at the same time providing a novel means for direct patient care access for healthcare providers without the need for PPE. In this manner the BioZone Unit introduces a novel and proprietary BioFlow device therein creating a desirable enclosure Bio-Atmosphere intended for specific therapeutical purposes. A BioNeb device is provided serving as a smart nebulizer and at the same time, a noninvasive means for affecting pulmonary airflow and receptor dynamics.

In yet another preferred aspect of the invention, the BioZone System serves as a completely mobile hybrid all-in-one ER and ICU apparatus capable of rapid deployment anywhere on land, sea, air, or space. A modular component futuristic design of the apparatus is provided which easily integrates with the mentioned isolation enclosure and pulmonary drug delivery platform. Any area can be readily transformed into an advanced care unit whether in a ‘dead zone’ of a healthcare hospital facility, an office or special care facility such as a dialysis unit, a military tent, a cruise ship, submarine, aircraft, nursing home, for example. A series of advanced medical devices are situated in lateral arrays on each side of the apparatus providing superior capabilities in comparison to conventional equipment. The BioZone Intensive Care Unit or BICU easily converts to a surgical arena, an

obstetrical delivery means, an Oncology center to administer toxic medications, as examples.

In yet another preferred embodiment the BioZone System therapeutic provisions are applicable to Migraine Headache attenuation, non-narcotic pain control, burn therapy, cellular regeneration and repair, physical therapy and rehabilitation, stress management, sleep disorder detection and therapy, reactivation of hair follicle function, deactivation of stimulated leukocytes and platelets, intervention in cytokine storm development and reduction of inflammatory pathway activation therein treating a host of inflammatory and autoimmune diseases, treatment of various Dermatological disorders, wound healing treatment modalities, bariatric injuries, viral and bacterial pulmonary infections, reactive airway mitigation including noninvasive reversal of acute and or chronic Bronchoconstriction, Asthma and COPD exacerbations, hyper or hypothermic presentations, inhaled toxin intervention, acute Ischemic events such as Stroke and Acute Coronary Syndrome and Myocardial Infarction, acute or chronic CHF exacerbations, premature labor, irradiation and ionizing radiation induced lung injuries (RILI), as examples. As mentioned, applications for the treatment of mental health disorders and drug addiction through AI integration is under development.

The product realization of the BioZone System is in the early stages with the Minimal Viable Products having already been developed. The isolation enclosure provision as well as the Pulmonary Drug Delivery System and Pulmonary Rehabilitation have been prioritized due to the Covid Pandemic. Our intent is to become the global leader in preparedness and interventional capabilities to combat the next pandemic with a **Paradigm Shifting** approach. The BICU development will follow and the entire construct of the apparatus and technologies have been comprehensively planned for. We are actively seeking the adequate funding for further research and development of the BioZone Project and Global Initiative and are reaching out accordingly.

We sincerely appreciate your consideration to be a part of the **BioZone Team** and BioZone Project and look forward to hearing back from you.

With kindest regards,

*Dennis J. Morris MD*

Dr. Dennis J. Morris, MD Founder and CEO of the BioZone Project