Life Sciences

Historical Transactions

Representative Engagements in Medical Devices and Technology

- **Breast cancer diagnostics** - Utilizing the electrical activity differential between cancerous and noncancerous cells based on algorithmic application of neural networking
- **Breast cancer diagnostics-** Utilizing spectrum of light technology to perceive the angiogenetic differentiation between cancerous and noncancerous lesions
- **Breast cancer therapeutics**- Utilizing focus microwave induced necrosis of cancerous lesion
- **BPH reduction**- Utilizing focus microwave technology to ablate and cause necrosis of hyperplastic prostates
- **Melanoma and related cancer diagnosis-** Utilizing confocal microscopy to create a virtual biopsy for early disease detection
- **Alternative drug candidate evaluation-** Using sample ablation as an alternative to 92 well plate chemical analysis to directly introduce ablated samples into mass spectroscopy
- **Atrial fibrillation therapeutic**- Utilizing laser technology to perform ablation
- **Postsurgical astomosis**- Using radiofrequency to heat collagen in end to and anastomosis procedures as an alternative to US surgical stapling process
- **Diagnosis and treatment of vulnerable plaque**- Utilizing Ramen spectroscopy for non-invasive analysis of vulnerable plaque and follow-on treatment
- **Removal of surgically created blood and body fluids-** Utilizing continuous in the wall plumbing system in the operating room to remove surgically created blood and body fluids as opposed to separate fluid bottles in common use
- **Pain diagnosis and management**- Utilizing brain scans for identifying and quantifying the specific impact of pain medication

Representative Engagements in Medical Devices and Technology Continued

- **Neurosurgery**- Unique intubated internal use of cooling fluids to induce hypothermia in brain surgery to avoid unintended blood clots during brain surgery.
- **Autism diagnosis-** Utilizing MRI scans to make an objective early diagnosis for autism and spectrum related disease
- **Brain scan diagnosis for mental disorders-** Addresses the failure of second and third line therapy for psychological diseases because of lack underlying physical causation
- **Acceleration of healing and body part scaffolding-** Utilizing unique polymers with controllable variable rates of hardening
- **Enhanced ultrasound technology-** Several efforts to enhance the ability of ultrasound to penetrate bone and surgically deposited solid matter
- **Diabetes diagnostics-** Utilization of wired enzyme technology to extract information based on glucose alone without the need for finger-based needle sticking or blood draw, which system was designed for adoption and payment by insurance companies
- **Sudden coronary death syndrome (SCD)-** The development of algorithms to analyze the competitive interaction of the brain and the heart's own electrical signaling as causation factors to the disease
- **Wellness program for insurance companies**- The development of an algorithm-based analysis of claims history of insured's population to produce a targeted program designed insureds who are experiencing the initial onset of diabetes related disease and therefore create increased cost to the insurance company
- **Brain surgery-** The development of a unique internally applied cooling system to lower brain temperature during surgery to avoid dispersed neural apoptosis

Representative Engagements in Drug Development

- **Biologics/Bio Similars-** Work with Zimmerman Bio and Signal Chem, Inc in the interrelated development of biologic based drug candidates including Kinase based signaling proteins.
- **Optometry**-development of accommodative lenses for presbyopia
- **Cardiology/mitochondrial medicine**- Utilization of repurposed cyclosporine to minimize secondary apoptosis in the aftermath of cardiac ischemia
- **TBI/mitochondrial medicine** - Utilization of the same technology also arrest secondary apoptosis
- **Mitochondrial medicine- NASH**- Utilization of a repurposed weight loss drug to enhance mitochondrial function by selectively eliminating underperforming mitochondria
- **TBI-** Utilization of unique polymer matrix to insert stem cells in open wound TBI(combination biologic drug\device undertaking)
- **Cancer**- Immune-based therapy centering on the t contemporaneous up regulation of both CD4 and CD8 cells
- **Cancer**- Combination of defective Tus 2 gene replacement therapy, immune-based therapy and a unique lipid vesicle delivery system
- **Cancer-** The prevention of metastases by impeding the process of epithelial mesenchymal transport (EMT) by the use of proprietary enzymes
- **Cancer-** The development of protein kinases assets to intersect the miss signaling that can lead to cancerous development
- **Cancer**- The development of peptide-based drug candidate in pancreatic cancer to prevent metastases, in part through the prevention of EMT

Representative Engagements in Drug Development Continued

- **Cancer**- A repurposed use of Artemisia based on sublingual delivery of the antigen which created sustaining high blood levels and demonstrated efficacy in tumor reduction
- **HIV\AIDS**- The development of whole killed HIV viruses as a therapeutic vaccine (undertaken prior to the successful completion of current combination or cocktail technology)
- **Infectious disease**- The development of a novel antibiotic or “Lantibiotic” to address the problem of drug-resistant infectious agents.
- **Organ transplantation**- The development of non-autologous “tolerogenic” vaccine to train the immune system to tolerate or accept donated organ with minimizing and perhaps eliminating the need for immune suppressing drugs
- **Vaccines**- The development of peptide-based vaccines without the use of adjuvants
- **De novo use of computational chemistry**- Development of the ability to identify a lead drug candidate solely with the use of computational chemistry\computers without the need for the currently accepted costly and time-consuming regenerative wet chemistry process
- **Pain reduction**- The development of an NSAID with modified chemistry to eliminate gastric side effects currently resulting from NSAID use
- **Pain reduction-** Repurposing of NSAIDs through the development of novel spray and insertion delivery methods as a substitute for the use of addictive opioids
- **Drug delivery**- Utilization of "Vaults”, submicroscopic entities that exist in the body to be utilized as a vesicles for drug delivery, primarily in cancer