DUKE UNIVERSITY MEDICAL CENTER

Paul R. Stauffer
Radiation Oncology Physics

Dr Gerard Aknine, Chairman
Hyperthermia Cancer Corporation of America

December 3, 2010

Dear Gerard,

We at Duke University Medical School are pleased to provide you with this letter chronicling our initial research and development together, recording our results using your hyperthermia cancer treatment device, and expressing our interest in collaborating with you in moving this exciting new technology through clinical testing, FDA approval, and into widespread clinical practice in the US.

I am the Director of Hyperthermia Physics and Engineering at Duke. I have over 30 years experience in the engineering development and clinical application of hyperthermia for cancer therapy and I must admit I have never seen performance to equal that of your equipment in terms of deep penetration and precise localization of electromagnetic heating. While to date we have studied your antennas only with SAR characterization, our results help explain your descriptions of high response rates and pain free treatments in your initial clinical experiences in veterinary and human patient use outside the US. From what we have seen, the heating performance of your metamaterial antennas is many times better than any applicators available on the market and it is clear this will make a major impact in the field in the near future.

Our goal is to collaborate with HCCA and co-develop additional metamaterial applicator configurations that will expand the usefulness of this new technology and improve cancer treatments for a large number of patients. We anticipate moving quickly to clinical trial testing in disease sites such as superficial bladder cancer and muscle invasive bladder cancer – diseases with substantial numbers of patients that currently have no good treatment alternatives. In addition, we would like to assist HCCA in completing site-optimized patient interfaces for sites such as breast, head and neck, and eventually other sites and diseases based on the success of initial treatments. Also, we intend to conduct Phase I and II clinical trials and assist HCCA with interactions with the FDA, and making available preclinical and clinical data as necessary to obtain FDA approvals for HCCA hyperthermia systems.

The HCCA conversion of hyperthermia technology from bulky, awkward and only partially effective heating approaches to small convenient systems with deep-penetrating, patient-conforming applicators that effectively heat entire disease is long awaited. Without doubt, your equipment in combination with the novel shielding and phased array technology developed during our collaboration will provide a technology solution that will transform the field and open the gateway for widespread application of hyperthermia to enhance drug delivery and drug activation. It is well-known that companies like Celsion are pleading for technology such as yours to effectively heat tumors for enhancing the local release of liposome encapsulated therapeutics. Your system is surprisingly and admirably lightweight, compact, and simple to use, and notably lower in cost than previous systems of this kind. Along with its improved overall performance, HCCA units should spread rapidly to provide effective hyperthermia throughout the world.

We look forward to working with HCCA on present and future projects treating cancer. We know firms like Celsion and other companies will seek your equipment to advance their complimentary treatments, and we will encourage them to collaborate with you for mutual benefit. We look forward to assisting the integration of this exciting new technology into clinical practice in the United States. And please let us know how we can help expedite making your system available for cancer treatment worldwide.

Sincerely,

Paul R. Stauffer
Director of Hyperthermia Physics and Engineering

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