

NCF appeals to patient community to raise additional \$ 40K for new research based on patent findings

by

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In 2019, Dr. Kenny DeMeirleir was issued a world patent on a new CFIDS discovery, the increase of asparaginyl beta-hydroxylase (ASPH) in the cells of patients [1].

As a result, the NCF approached Dr. Jack Wands, Professor of Gastroenterology and Medicine at Brown University Medical School, to share DeMeirler's patent with him. The NCF approached Wands because he is a world expert on ASPH. After a Zoom meeting with Wands and his team, the NCF determined that it would be worthwhile to fund a \$ 100,000 research grant to Wands for "CFIDS and ASPH." To date, the NCF has already raised \$ 60,000 towards this research and is now appealing to the patient community to help in this fund-raising effort.

You may be asking, "What is ASPH and why is it important?" Asparaginyl beta-hydroxylase is a transmembrane protein and the member of the alpha-ketoglutarate-dependent dioxygenase family [2]. In the last few decades, accumulating evidence has indicated that ASPH expression is upregulated in numerous types of human malignant cancer and is associated with poor survival and prognosis [3]. The ASPH protein aggregates on the surface of tumor cells.

ASPH is highly expressed in cancers of the liver, pancreas, stomach, colon, breast, prostate, lung and brain. ASPH is necessary and sufficient to promote tumor cell migration, invasion, motility and distant metastatic spread both in-vitro and in-vivo [4].

The NCF feels that it is imperative to pursue this research because we have identified a specific protein that may serve as a critical link to a radiation exposure-induced oncogenic cancer process. We do anticipate collaborative assistance between Dr. Wands' research group at Brown University and Dr. Mothersill's group at McMaster University. In a Zoom meeting with Wand, the NCF learned that pancreatic cancer patients develop a "Chronic Fatigue Syndrome-like illness" several years before the full-blown development of pancreatic cancer.

In epidemiologic work done by the National Cancer Institute, CFIDS was associated with an increased risk of non-Hodgkin lymphoma (NHL) and cancers of the pancreas, kidney, breast, as well as oral cavity and pharynx [5].

According to Gail Kansky, NCF's President, "Now is a critical time for the patient community to donate to the NCF to fund Dr. Wands' research group at Brown University. Covid-19 has proven to be a challenge to our typical fund-raising efforts." Patients can send donations directly to the National CFIDS Foundation, 103 Aletha Road, Needham, MA 02492 or can phone the NCF at 781-449-3535. As a true charity, the NCF has no paid positions and all money raised goes directly to fund research. To date, the NCF has funded \$ 4.5 million dollars in directed research grants. If you are able, please help us to help you by donating to this important research!

References:

1. Methods and means for diagnosing and and/or treating a fatiguing illness; Applicant: Protea Biopharma NV; Inventors: Roelant CHS, DeMeirleir KL; World Patent # WO2019/012159;

Issued: 17 January 2019

2. Recent advances in research on aspartate β -hydroxylase (ASPH) in pancreatic cancer: A brief update; Hou G, Xu B, Bi Y, Wu C, Ru B, Sun B, Bai X; *Bosn J Basic Med Sci* 2018 Nov 5;18(4): 297-304.

3. Diverse molecular functions of aspartate β -hydroxylase in cancer (Review); Zheng W, Wang X, Hu J, Bai B, Zhu H; *Oncol Rep* 2020 Dec;44(6):2364-2372.

4. Inhibitors of beta-hydroxylase for treatment of cancer; Inventors: Wands JR, De La Monte S, Aihara A, Olsen MJ, Thomas JM; Applicant: Rhode Island Hospital, Midwestern University; US Patent Application # 20200361925; November 19, 2020

5. Chronic fatigue syndrome and subsequent risk of cancer among elderly US adults; Chang CM, Warren JL, Engels EA; *Cancer* 2012 Dec 1;118(23):5929-36.
