The Future of Amyloid Detection

Solex LLC. (www.solex-biomedical.com) has licensed a peptide-based technology for the diagnostic visualization of amyloid burden in patients with amyloid-related diseases by using molecular imaging techniques. This 31 amino acid, synthetic peptide p5 can be easily produced for human use, and can be used in most hospitals worldwide for the detection of Amyloidosis.

Knoxville, Tennessee (PRWEB) November 07, 2013 -- Solex LLC has licensed a peptide-based technology for the diagnostic visualization of amyloid burden in patients with amyloid-related diseases by using molecular imaging techniques. This 31 amino acid, synthetic peptide p5 can be easily produced for human use, and can be tagged with common radioactive nuclides. When injected into a patient, scanners can visualize where the disease is located. A few of the many targets that p5 can image include amyloid associated with Alzheimer's disease (Aβ) - cerebral amyloid angiopathy, type 2 diabetes (AIAPP), rheumatoid arthritis (AA), and aging (ATTR).

Other methods for imaging amyloid employ agents that cannot be used in the USA, thus peptide p5 is the future in diagnostic imaging of amyloid related diseases in this country.

Solex LLC. is comprised of a team of researchers from the University of Tennessee Medical Center, Knoxville who’s combined experience in the amyloid field has led to the discovery of peptide p5. The primary focus of this team for over 15 years has been amyloidosis and amyloid related disorders. Solex has now found the solution for amyloid detection. Solex LLC. is a spin-off from the work performed at the University of Tennessee Medical Center, Knoxville and the researchers have partnered with the University of Tennessee Research Foundation to promote this intellectual property to the patients it was intended to serve.

The synthetic peptide p5 may be coupled with the long-lived radionuclide iodine-124 to allow nationwide delivery of patient-ready doses. PET/CT (Positron Emission Tomography/Computed Tomography) imaging using this radiotracer will provide a rapid, quantitative diagnostic test and tool for monitoring the response to therapy in patients with amyloidosis. This same technology with future development may also serve as a vital tool for detecting cerebral amyloid angiopathy in patients with Alzheimer's disease - as well as the amyloid in patients with type 2 diabetes (AIAPP), rheumatoid arthritis (AA), and certain forms of cancer.

In preclinical studies, the peptide has been shown to be highly effective at binding to amyloid in a mouse model of (AA) amyloidosis. The binding of the radiolabeled p5 was able to detect and pinpoint the location of disease using both PET and SPECT (Single Photon Emission Tomography) imaging techniques. Imaging of laboratory mice with p5 peptide has been compared directly with a radiotracer that is routinely used in Europe, serum amyloid P component, for imaging patients with amyloidosis, and it has been shown to be equivalent for imaging in liver and spleen and superior in imaging of disease in heart and pancreas. In contrast to the European reagent, the new peptide radiotracer is licensable in the US and easy to produce as human grade material.
The principal goal of Solex is to test peptide p5 radiotracer in an FDA-approved clinical trial in patients with peripheral amyloidosis such as AA. Solex plans to use p5 initially within hospitals in the USA and North America, and then expand its use to international sites as well. Patients across the United States need peptide p5 to aid in their treatment. With the help of this diagnostic tool patients will finally have an answer.
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