

Project Introduction

Autism Diagnostic Test (ADT) for the neurological disorder Autism and its associated conditions

Summary

About 3-5 of every 1000 babies born in western countries suffer from psycho-neurological Autism Spectrum Disorders (ASD) and associated conditions such as Asperger syndrome, DAMP, and ADHD. A substantial increase in the frequency of autism and associated disorders during the last decade has encouraged scientists around the world to search for better and more accurate diagnostic methods.

A discovery of such a method will allow diagnosis of the disease at an early stage after birth, thereby opening for an individual immediate intervention in order to reduce unfavourable development of the conditions, and preventing a lifetime of suffering for thousands of children. At present there is neither any known biochemical markers needed for a blood-based diagnostic test nor any known biochemical treatment principles for development of defined, specific medications.

The Business Idea

Within clinical routines today, a PKU-test (Phenylketinuria-test) will screen for genetic deficiencies of all newborn babies to test for a present or a later in life genetically based disorder developing. Since a corresponding test for neurological conditions, such as Autism does not exist, establishment of such a test would be an extremely valuable diagnostic tool for an early medical and non-medical intervention.

Today ASD diagnosis is based on the psychological criteria according to DSM-IV (Diagnostic and Statistical Manual of Mental Disorders). However, these criteria can only be used when the disease has already developed and symptoms are obvious. Based on the identified autism-related peptide pattern (figure 1) we shall be able to make a user friendly blood-based diagnostic test that is sufficiently clinically accurate.

The test will reveal the presence or absence of the disease in newborn children. The unique properties of a test using our patented method means that a sufficient clinically accurate result will be obtained. An antibody-peptide based test device is planned to be developed.

A research and development (R&D) company registered in the UK and working in co-operation with a University intend to develop a user-friendly diagnostic test based on observation and identification of a low-molecular weight peptide dominant in ASD patients. The company has a Board of Directors linked to its operation and a recognised scientific research reference group. The two parties have been working closely for around 5 years in an effort to develop what will hopefully be an invaluable tool in helping thousands of children across the world.

Although not directly part of the AcePSI Group, a similar ethos exists between the R&D company in the comparison between health and safety, testing and monitoring. The commitment to the provision of a safe and healthy environment for everyone applies just as much with this project and by this any involvement was a logical move.

The Market

The increase in autism and associated disorders during the last decade have made scientist around the world eager to find a better and more accurate diagnostic test method. Considering the increased frequency of ASD diagnoses and the costs for the society, there should be a potential interest to bring down the costs for the community in the developed countries. Based on this assumption, we conclude that there is an obvious market for the product, only taking newborn babies into account.

Our potential key customers are assumed to be medical treatment institutions, primarily located in the western world. Since there is so far no biomarker or blood-based test on the market in this regards, the described diagnostic test will provide a strong advantage in aiding medical and clinical situations.

Enquiries

If you have any questions regarding the project please e-mail us at autism@acepsi.com

Figure 1: Autism-related peptide pattern

