(idw)

Press release

Fraunhofer-Institut für Algorithmen und Wissenschaftliches Rechnen SCAI Dipl.-Journalist (TU Dortmund) Michael Krapp

02/11/2016

http://idw-online.de/en/news645945

Research projects, Transfer of Science or Research Biology, Information technology, Medicine transregional, national



Creation of PTSD knowledge map will chart a new course for global research efforts

Fraunhofer SCAI, Cohen Veterans Bioscience and Exaptive Collaboration Seeks to Close the Knowledge Gap on PTSD

SANKT AUGUSTIN, Germany / CAMBRIDGE, Mass., February 11, 2016 – Fraunhofer Institute for Algorithms and Scientific Computing (SCAI), Cohen Veterans Bioscience and Exaptive Inc. today announced a new initiative to improve access to post-traumatic stress disorder (PTSD) research. The creation of a PTSD KnowledgeMap(TM) will systematize the current PTSD research space and provide interactive tools for scientists and others studying PTSD.

In the U.S. alone, approximately 8 million adults – both civilian and military populations – will experience PTSD in a given year, according to the U.S. Department of Veterans Affairs' National Center for PTSD. According to a 2013 World Health Organization report, an estimated 3.6% of the world's population had suffered from PTSD in the previous year.

Post-traumatic stress puts a significant strain on families, employers and civilian and military healthcare systems. Despite a number of groups actively investigating PTSD, there is currently no easy way for researchers, policymakers and others to know what areas of study are most active, who is working on what, and where funding is or should be going. In fact, in the past 35 years, more than 100,000 peer-reviewed scientific articles have been published on PTSD. This important body of work forms the basis for many ongoing and future investigations.

The PTSD KnowledgeMap(TM) will bring together research on clinical symptoms, biomarkers, genetic variation, epidemiological studies and many other factors deemed relevant for PTSD. It will include easy-to-use interactive visualizations for people to search vast data in an accessible manner. The partnership will also establish an ongoing process for incorporating new research as it becomes available.

"There has been and will continue to be a wealth of PTSD studies conducted around the globe yet there is no main repository to catalogue the valuable findings that will result," says Magali Haas, MD, PhD, CEO & President of Cohen Veterans Bioscience, the lead funder of the initiative. "Many research endeavors overlap. Our goal is to centralize information and produce a blueprint for global PTSD research. This partnership will harness the novel computational information retrieval system developed by Fraunhofer SCAI and the innovative analytics conceived by Exaptive to create a new data mining tool."

"Despite popular opinion, just amassing data will not by itself lead to insight," says Dave King, Founder and CEO of Exaptive. "Without the ability to quickly and easily navigate data, the information remains largely unusable. We are excited to be working with Cohen Veterans Bioscience and Fraunhofer SCAI to help bring this data to life for such an important area of study."

(idw)

Adds Martin Hofmann-Apitius, PhD, Head of the Department of Bioinformatics at Fraunhofer Institute for Algorithms and Scientific Computing, "The consortium brings together world-class expertise in the area of PTSD and computational neurology, the competency for visualization of complex processes and relationships and the expertise in the area of information retrieval and disease modeling. While it is extremely challenging to model something complex like PTSD, we are optimistic that together with Cohen Veterans Bioscience and Exaptive we can fully represent the state of knowledge in the clinical and molecular context."

The new interactive tool for exploring PTSD research will be made available later this year. The computable model and the software environment supporting exploration and mining of the knowledge map will be shared with researchers worldwide in order to foster rapid uptake of computational systems biology approaches in translational PTSD research.

###

Cohen Veterans Bioscience

Cohen Veterans Bioscience is a 501(c)(3) non-profit research organization dedicated to improving the detection and treatment of PTS and TBI and related co-morbidities through cutting-edge research, so the burden of these conditions may be lessened on service members, veterans, and their families. Through the generosity and support of Steven A. Cohen, we are launching translational research initiatives in Post-Traumatic Stress Disorder and Traumatic Brain Injury. To ensure the future holds improved care for veterans, we seek to assemble high-dimensional biomarker, biosensor, and phenotypic data to build predictive models of disease and accelerate the time to next generation diagnostics and treatments. More information is available at www.cohenveteransbioscience.org and on Twitter.

Exaptive

Exaptive is a software company whose mission is to lower the barriers to analyzing and collaborating with data. The Exaptive platform enables software developers and researchers to interchange and experiment easily with different analytics tools, suggests relevant techniques users haven't tried yet, and connects users to others working on related projects. The goal is to reveal new approaches and make it easy to try them, so that gaining new insight happens faster and big breakthroughs are more frequent. Users can also leverage others' work or monetize their own work as a part of a combinatorial marketplace. More information is available at www.exaptive.com.

Fraunhofer Institute for Algorithms and Scientific Computing

The Fraunhofer Institute for Algorithms and Scientific Computing conducts research in the field of computer simulations for product and process development, and is a prominent corporate partner in the industrial and science sectors. SCAI designs and optimizes industrial applications, implements custom solutions for production and logistics, and offers calculations on high-performance computers. Its services are based on industrial engineering, combined with state-of-the-art methods from applied mathematics and information technology. The team of Martin Hofmann-Apitius has used their knowledge extraction capabilities to successfully generate a large research model of Alzheimer 🛽 Disease. More information is available at www.scai.fraunhofer.de/bio and on Twitter.

Contacts:

Prof. Dr. Martin Hofmann-Apitius Head of the Department of Bioinformatics Fraunhofer Institute for Algorithms and Scientific Computing (SCAI) 53754 Sankt Augustin, Germany E-Mail: martin.hofmann-apitius@scai.fraunhofer.de



phone +49 2241-14-2802, Fax +49-2241-14-2656

Stacey Harris Cohen Veterans Bioscience phone +1 917-697-7746 E-Mail: Stacey@harrishealth1.com