IQuity Lands NIH Grant To Help Identify Alzheimer's Early

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IQuity Labs Inc.'s plan to apply its new machine learning-based data mining and analytics platform to the early detection of Alzheimer's disease has earned the endorsement of the US National Institutes of Health. In September, NIH's National Institute on Aging (NIA) awarded the company a $320,000 supplemental grant to help get the project going.

"This is the foundation. This is the first set of building blocks that we're going to put on the board to go after this problem," iQuity CEO Chase Spurlock told *Medtech Insight*. "We're very humbled by the NIH's support. This is something we're passionate about and we're going to be moving very quickly."

This money will fund the pilot studies, and eventually the company will also conduct a longitudinal study to assess the performance of the Alzheimer's analytics tool it builds. "This supplemental funding from the NIA is being put to use immediately," Spurlock said. "We are recruiting patient specimens, doing the analysis, and looking for the signals in blood that could be early biomarkers for Alzheimer's and then trying to identify the distinct patterns for Alzheimer's in age-matched healthy controls – versus dementia versus mild cognitive impairment – so that we can appropriately 'bucket' and triage these patients at a molecular level."

We'll collect our data and then once the data is collected in the coming months, we're going to apply analytics and machine learning strategies to build models that can effectively discriminate and distinguish these diseases.

IQuity's previous research has focused on diagnostics, based on its *IQIsolate* process, for autoimmune and related diseases, including multiple sclerosis, fibromyalgia syndrome and inflammatory bowel disease. In July, the company announced the launch of a health-care analytics platform that will mine large databases to predict and monitor chronic disease across large populations. The first project announced for the new analytics platform is a pilot study focused on multiple sclerosis, analyzing four million data points from 20 million people in the state of New York. (Also see "iQuity Shifts From Test-Maker To Data Miner And Analyzer" - Medtech Insight, 20 Aug, 2018.)

"Just as we observed in the case of multiple sclerosis and some of these other autoimmune diseases, the RNA patterns [associated with Alzheimer's] – signals we can detect in blood – are present early," Spurlock said.

"In the case of Alzheimer's, it takes a long time, in many cases, to arrive at that diagnosis and the disease may have been present for a long while before the physician realizes it or the patient presents with symptoms that would warrant a suspicion of Alzheimer's," he explained. "We proposed that, by being able to look inside the blood, these RNA patterns could be used as an early alarm system to be able to shine a light on patients with suspected cases of Alzheimer's, mild cognitive impairment or some other associated dementia and to alert the care team that this disease process is at work."

This is the fourth peer-reviewed grant Nashville-based IQuity has received from NIH. IQuity also received a $1m Phase 2 Small Business Innovation Research grant in 2018 for continued research on multiple sclerosis and fibromyalgia syndrome, a separate $1m Phase 2 SBIR grant in 2017 to further its research into early-detection methods for multiple sclerosis, and two initial $150,000 Phase 1 SBIR grants for research on fibromyalgia.

"What's really cool about the future of medicine is that we're going to have therapies coming on line to treat these illnesses," Spurlock said. "These treatments are going to be most effective when they're prescribed early.

Having diagnostics that can spotlight these patients early on and then linking them to new therapeutics, that will soon emerge, is a winning strategy that can make a mark on an illness that has impacted so many lives."

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