

Accelerated Cure Project for MS

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Repository Spotlight – DxTerity, Managing MS Through Genomic Monitoring

Genomics may play a key role in understanding how to effectively treat autoimmune diseases like MS. Genomic studies look at how an individual's genes (DNA) interact with their environment, or the medications they may be taking. The information encoded into an individual's genes is expressed via transcription of the genetic information into RNA. Thus, while DNA generally stays the same throughout one's lifetime, a person's RNA profile can change in response to these external factors (like the environment or medications) and provide important information on what is happening in the body. Collecting samples from people over time and studying their RNA profile is helping researchers develop better ways to monitor and treat diseases like MS. There are numerous MS treatments available. The ability to predict how an individual will respond to a given treatment through RNA monitoring could help clinicians and those living with MS better manage, and even get ahead of, the disease. [DxTerity](#), a genomics company, is developing a low-cost, user-friendly device to collect a small amount of blood for RNA sequencing. People with MS will be able to use this device at home and mail their sample to a lab for analysis. This information may help physicians monitor disease activity, and may make it easier to make more effective treatment choices based on an individual's biology. This innovative research to develop at-home genomic monitoring builds off of the work of a large number of researchers who focus on disease-associated transcriptional changes. Several studies using samples from the ACP Repository have focused on transcriptional changes and have advanced this field of study. Researchers hope these new advances in technology will lead to more groundbreaking opportunities for advancing and accelerating research into MS!

