

More accurate MS diagnostics possible

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A group of proteins identified by researchers at Stockholm's KTH Royal Institute of Technology could play a role in helping multiple sclerosis patients get more accurate diagnostics about the severity and progress of their disease.

Like other autoimmune diseases, MS is complex and difficult to cure or to mitigate. At SciLifeLab in Stockholm, Peter Nilsson, professor in Proteomics at the School of Biotechnology, leads a group that is looking for answers in large scale [protein analysis](#).

By analysing tens of thousands of protein fragments for new autoimmunity [biomarkers](#), or indicators, the group is identifying proteins that distinguish groups of MS patients according to the severity of the disease and how the disease develops over time. Their progress was published in the June 3 issue of *Molecular & Cellular Proteomics*.

"A group of 51 proteins have been identified as useful in future research around the diagnosis of MS," Nilsson says. "This is to study the origin of the disease and its development – how severe it will be and how quickly it evolves over time."

As part of the Human Protein Atlas (HPA) project, Nilsson's group has access to more than 38,000 [protein fragments](#). Nilsson says the HPA offers a unique resource that enables the team, which also includes Burcu Ayoglu, Anna Häggmark, Mohsen Khademi, Tomas Olsson, Mathias Uhlén and Jochen Schwenk, to continue their research with confidence.

"We expect a whole new field of research to open up around autoimmune disease, and with that, new insights," Nilsson says.

Ayoglu, a senior graduate student and researcher on the project, agrees that their work could yield much more knowledge about autoimmune diseases, such as hyperthyroidism, type 1 diabetes, vitiligo, rheumatoid arthritis, Sjogren's syndrome and psoriasis.

"Many autoimmune diseases are very complex and we currently lack complete knowledge of them," she says. "Most likely there are many more indicators to find. Our wide approach – in which we study thousands of proteins – is very suited to studying these [autoimmune diseases](#)."

Provided by KTH Royal Institute of Technology

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