

Biomarkers: The Neurodegenerative Disease Game Changer Webinar – Q&A

Biomarkers: The Neurodegenerative Disease Game Changer webinar was held on February 25, 2025 together with University of Helsinki. Here is a comprehensive compilation of all the questions raised during the webinar, along with their detailed answers.

1. Which biomarkers would you say are the most promising for Alzheimer's disease?

Prof. Myöhänen: At the moment pTau217 seems ultimately the most promising early diagnostic marker for AD, as it seems reliable and prognostic also in the plasma samples. Then again if we want to follow e.g. the impact of the treatment, I would combine pTau217 with GFAP or Nfl to assess the efficacy on neuronal degeneration.

2. How extensively are biomarkers currently used in the diagnostics of Alzheimer's disease, and do you think they will eventually replace imaging techniques?

Prof. Myöhänen: In AD, mainly CSF Amyloid-beta levels are measured but there is clearly room for increasing use of fluid biomarkers. CSF puncture is invasive and not without risks, so therefore in order to have wider use of fluid biomarkers, blood-based biomarkers are needed. This may well replace expensive imaging techniques such as PET.

3. I am looking for specific neurology marker but can't find it from Medix Biochemica catalog? Can I suggest new antibodies for development?

Dr. Voutilainen: Absolutely! We're open to suggestions for new antibody development. We consider customer requests and evaluate them based on market potential and technical feasibility. Just contact our team to discuss your specific needs and suggest new antibodies for development or you can also find the [contact us](#) form from our website.

4. For many neurodegenerative diseases, recognizable symptoms appear relatively late. Should people in their 50s be screened with some of these biomarkers?

Prof. Myöhänen: Yes and no. E.g. pTau217 has already quite long prediction for Alzheimer's disease but on the other hand we don't yet have effective treatment for Alzheimer's. We can compare this to blood cholesterol measurement – it is done routinely, and increased LDL cholesterol level is a risk factor for cardiac diseases.

However, we can effectively reduce high cholesterol to reduce the risk but we cannot do the same for Alzheimer's disease apart from focusing on diet, exercise etc. where the efficacy to prevent Alzheimer is anyway mild. But as soon as we have better therapies for Alzheimer's disease, routine biomarker screening is certainly welcome.

5. We are currently testing several analytes from Medix Biochemica. If we would happen to run into any issues, what kind of support you have available for troubleshooting?

Dr. Voutilainen: We offer really good support for troubleshooting. Our team is always happy to help resolve any issues you might encounter. You can for example reach out to our customer support at techsupport@medixbiochemica.com for assistance with any technical difficulties or questions during your testing process. Additionally, our R&D team is happy to have a call with you to discuss troubleshooting in more detail.

6. What new analytes you have for the neuro field upcoming?

Dr. Voutilainen: We already have a great range of **analytes for neurological research and diagnostics**. And we're about to launch Amyloid Beta as one of the newest members of our portfolio. We're constantly collecting feedback on our current products and also consider enhancements and upgrading products as necessary. We're always expanding our portfolio to support advancements in neurological diagnostics and as already mentioned, anyone can suggest new analytes to the portfolio through our website or by contacting us directly.

7. What do you see as the future of diagnostics for neurodegenerative conditions? Are we moving towards blood-based assays and routine testing?

Prof. Myöhänen: At least in Alzheimer's disease this is where we are going. For other neurodegenerative diseases we still need more specific and more predictive biomarkers but luckily there is lot going on in this field.

8. How is Medix Biochemica addressing sustainability topics?

Dr. Voutilainen: At Medix Biochemica, **sustainability** is one of our key values: We care for the people and the world around us. We prioritize high product quality, chemical- and biosafety, and customer satisfaction. Plus, we're working on reducing our carbon footprint, recycling waste, and optimizing resource usage. Our supply chain is also held to high standards for quality, reliability, and environmental and social responsibility. Moreover, we have recombinant capabilities for monoclonal antibodies and antigens, and offer animal-free production. We have also received the EcoVadis Silver rating in 2024, which places us above 89% of companies assessed for their sustainability practices.

9. How long before the onset of symptoms might we be able to detect ND in the future, realistically?

Prof. Myöhänen: At the moment, the estimate for e.g. pTau217 is up to 20 years. However, I feel this might be a bit optimistic prediction but when we start to get more data all around the world with pTau217, I'm sure we can go above 10 years. As I mentioned in the talk, this warrants also treatments and not only biomarkers if we can detect the risk of ND several years before the symptoms. However, if we know well in advance that certain persons have increased risk for AD or other NDs, they can take care of their blood pressure and high cholesterol, and use non-medical treatments, like sports, healthy food, social life etc. that are known to reduce risks for ND.

10. Can Medix Biochemica provide biospecimen for TBI differentiating between mild-moderate and severe TBI?

Dr. Voutilainen: Medix Biochemica offers biospecimens related to TBI and similar conditions across various products along with capabilities to rank the severity of the condition as well. Please reach out to biologicals@medixbiochemica.com to begin discussion and feasibility today!

11. In terms of suitable biomarker, does it matter if pS217 is accompanied with pS214 or not?

Prof. Myöhänen: p217 Tau seems at the moment very promising and accurate biomarker for AD but combination of two biomarkers usually increases the accuracy. However, pS214 has not been very widely used as a fluid biomarker for AD, and I'm not quite sure if it would bring any further accuracy on p217 Tau.

12. How can lifestyle alter the progression of AD in the absence of treatment?

Prof. Myöhänen: It is well known that keeping the blood pressure, blood cholesterol and blood glucose levels in the healthy limits reduces the risk of AD. There are effective drug therapies for all of the abovementioned conditions but healthy lifestyle – food, sports, education and social life – are effective as well. These all have significant effect on reducing the risk on having the AD.

13. Based on your expertise, what lifestyle changes people can make to prevent neurological diseases?

Prof. Myöhänen: Unfortunately, I am not doing clinical work so I cannot answer to this question.

Should you have any additional inquiries or need further clarification, please feel free to contact us at medix@medixbiochemica.com

View the webinar on demand at:

medixbiochemica.com/biomarkers-the-neurodegenerative-disease-game-changer-webinar

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