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Promising results from Liechtenstein study on early detection of Covid-19 / Sensory bracelet indicates infection two days before appearance of first symptoms

Vaduz (ots) -

A scientific consortium led by Liechtenstein scientists and entrepreneurs Lorenz Risch and Martin Risch launched the prospective "COVI-GAPP study", involving more than 1100 subjects from the Principality of Liechtenstein, in April 2020. The aim was to show whether a sensory bracelet, already used successfully to monitor women's fertility cycles, could be adapted with a new algorithm to detect Covid-19 early. The study, which was funded mainly by the Princely House of Liechtenstein and the Liechtenstein government, has published its first interim analysis. The results have fulfilled the high expectations: in 71% of cases, the bracelet indicated an infection two days before the first symptoms appeared.

"This is a real breakthrough in the early detection of Covid-19 infection and in the fight against the pandemic," says Lorenz Risch. "Because one of the big challenges is to identify virus carriers as early as possible. A lot of people who catch Covid-19 only show symptoms days afterwards, so the virus is often passed on unknowingly, which aids its spread and makes effective tracking difficult. The situation has been made even more difficult by the emergence of virus mutations that seem to spread more quickly from person to person than the original strain. Early detection is therefore increasingly important."

The earlier a Covid-19 infection is detected the faster measures can be taken to minimize the effects. Carriers can be isolated or put in quarantine earlier, which reduces the risk of infection, and so protects healthcare systems against overload. Heavily exposed healthcare staff will be less likely to be infected, so hospitals and care facilities won't have to cope with so many absences.

Following the success in Liechtenstein, the EU is financing a large-scale trial of the AVA bracelet in real time with more than 20,000 people in Holland.

The Ava bracelet was developed by Swiss digital health company Ava AG, which is dedicated to utilizing the interaction between artificial intelligence and clinical research for practical applications. The bracelet tested in the Liechtenstein COVI-GAPP study is a certified medical product. The technology it uses is based on an algorithm that Ava AG is continuously improving. It monitors skin temperature, pulse rate and respiratory rate during sleep and also observes blood circulation and heart rate variability. Changes that the bracelet detects in these vital signs indicate a possible infection even before the wearer of the bracelet feels any symptoms". In more than two out of three cases, this method identified a Covid-19 infection two days before the onset of symptoms.

Following these outstanding results from the Liechtenstein study, the bracelet will now be tested in a large-scale EU-funded trial with more than 20,000 people in Holland in order to identify Covid-19 infections in real time. This is the first ever trial of its kind. The study is backed by a global consortium, also headed by the Dr. Risch Group, which is active in Switzerland and Liechtenstein and which initiated the COVI-GAPP study in Liechtenstein. The consortium also includes the Dutch subsidiary of Roche, the Swiss pharmaceuticals and diagnostic group that is developing corona tests.

Mauro Pedrazzini, Liechtenstein's Minister for Public Health: "It's gratifying to see that the major commitment made by the Princely House, the country and its health experts to fighting the pandemic is paying off in such a concrete way. Liechtenstein can be proud of the important scientific impulse delivered by the COVI-GAPP study, the benefits of which can now be taken further by the EU-funded study in the Netherlands. Ultimately the entire international community will benefit."

Early detection remains important even after vaccination

The Liechtenstein study shows that digital health approaches can make an effective contribution to the fight against the pandemic and are a good complement to COVID vaccination programs. Early detection of infection remains important even after vaccination. Maureen Cronin, Ava's Chief Medical Officer: "If we want to curb the spread of the virus as much as possible, we have to identify Covid-19 infections in asymptomatic and presymptomatic populations. Estimates suggest that these cases may account for up to 79 percent of person-to-person transmission." Lea von Bidder, CEO and co-founder of Ava adds: "We are very pleased that our scientific expertise and technology is proving effective in the fight against Covid-19. We proud to be helping in the effort to overcome the pandemic."

Photos of the sensory bracelet can be downloaded from the following page: <https://www.avawomen.com/media/>

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