TECHNOLOGY

Novartis and Google to Work on Smart Contact Lenses

Eyewear Will Monitor Blood-Sugar Levels for Diabetics

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ZURICH—Novartis AG and Google Inc. are joining forces to work on a smart contact lens that monitors blood-sugar levels and corrects vision in a new way, the latest in a series of technology products designed to monitor body functions.

On Monday, the two companies said Novartis's Alcon eye-care division would license and commercialize "smart lens" technology designed by Google[x], a development team at the search engine giant. Financial details of the partnership weren't provided.

The smart lenses, which Google unveiled in January, are part of a growing number of wearable technology and software products used to monitor health and fitness. Last month, Google debuted its Google Fit platform to track health metrics, such as sleep and exercise, on devices running its Android mobile operating system. Apple Inc. unveiled a similar platform called HealthKit.

The lenses contain a tiny sensor that relays data on glucose contained in tears via an equally tiny antenna. In a news release earlier this year, Google described the electronics in the lenses as being "so small they look like bits of glitter" and said the antenna is thinner than human hair.
Novartis Chief Executive Joe Jimenez said the move toward wearable health technology, like the smart lenses, was part of a broader trend to involve patients in managing their own health. Such technology has the potential to lower the cost of managing chronic disease.

"This will be a very important growth area in the future," Mr. Jimenez said in an interview. He added that the smart lens technology had the potential to become a "large revenue stream" for the company.

Monitoring glucose levels through the lenses could prove to be easier and more comprehensive than current techniques, which generally require diabetics to prick their fingers for droplets of blood.

About 382 million people—one in every 19—around the world have diabetes, a class of diseases in which the body is unable to deal with sugar, usually because of inadequate or no production of insulin. In the U.S., more than 29 million people, or 9.3% of the population, suffer from the disease, according to the American Diabetes Association.

Mr. Jimenez said the smart lenses may also be used can also correct vision in a manner similar to the lenses on autofocus cameras.

Novartis hopes to have a prototype available for research-and-development reviews by early 2015.

The Novartis deal underscores Google's interest in commercializing the emerging technology being developed at the company's skunkworks unit with the help of big partners with established reputations in their field. For example, Google partnered with Luxottica Group SpA and VSP Global to help bring Google Glass, its Web-connected eyewear, to market.

Google CEO Larry Page has said he wants his company to avoid the fate of past inventors, such as Nikola Tesla, who dreamed up revolutionary technologies—such as the alternating-current engine—but failed to profit from their breakthroughs.

The Novartis deal comes a day after Babak Parviz, one of the inventors of the smart contact lens, announced he was leaving Google[x] to join Amazon.

Analysts said the partnership made sense because of Novartis's huge presence in the eye-care market through its Alcon unit. Alcon, Novartis's second-largest business, posted net sales of $10.5 billion in 2013, about a fifth of overall net sales.

"Given Alcon's leading role in the market of contact lenses, it was a smart move on Google's side to team up with this Novartis division," to innovate this market by marrying microchip-based technology with that of a contact lens as a carrier," Helvea analyst Olav Zilian wrote in a research note. He rates Novartis a "buy."

— Rolfe Winkler contributed to this article.

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