



# DEBIOJECT MICRO-NEEDLE

DON'T LIKE SHOTS? FEAR NO MORE!

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With the Debioject micro-needle by Debiotech, injections are no longer something to fear. Measuring less than a millimeter, the needle penetrates the top layers of the epidermis where it does not significantly affect nerve endings. This makes administering vaccines and other drugs pain-free, more effective, and—because the new injection system reduces the amount of drug required by a factor of ten—more economical.



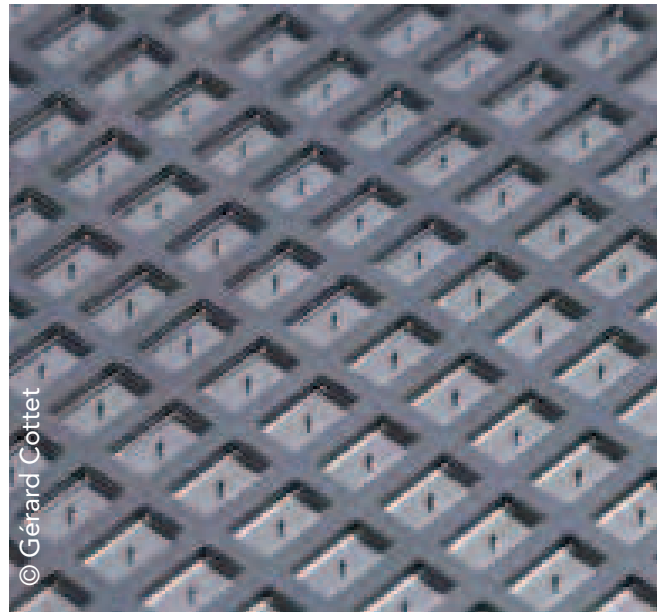


## THE TECHNOLOGY

The 700-micron-long micro-needle is made from silicon, chosen for its mechanical properties. The needle was invented and co-patented by KTH (Royal Institute of Technology, Sweden), and later prototyped at the Swiss Federal Institute of Technology in Lausanne. Leti launched larger-scale production of the needle for the first clinical trials, improving production yields by using more stable processes on 200 mm wafers.

The needle is formed by a series of deep engravings on the silicon. The injection canal is engraved on the back side, and then the body of the needle is formed on the front side. The two axes are offset slightly to create a hole located on the side of the needle, through which the drug is ultimately injected.

Each wafer yields around 1,400 needles; the needles are then cut out and mounted on a plastic injector by a plastics subcontractor.



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## CONTACTS

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