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## Gecko Grip Equals Better Band-Aid

By Brandon Keim February 19, 2008 | 11:41:25 AM Categories: [Materials Science](#), [Medical Devices](#), [Nanotechnology](#)

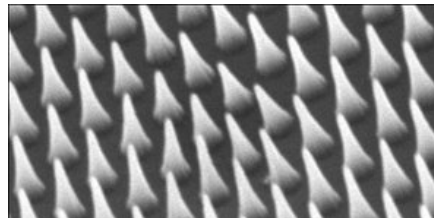
Wouldn't it be great if a simple bandage could replace surgical stitches and staples?

That's the promise of an adhesive dressing inspired by patterns on the skin of geckos, a type of lizard renowned for its ability to walk upside-down across ceilings.

In a study published yesterday in the *Proceedings of the National Academy of Sciences*, researchers from Harvard University and the Massachusetts Institute of Technology started with a thin layer of a biorubber invented by MIT materials guru Robert Langer, one of the study's co-authors.

With machines normally used to etch patterns on microchips, they gave the rubber the texture of a gecko's foot, which is covered with half a million hairs. Each of those hairs is covered by thousands of protrusions measuring just a few millimeters of an inch across; the resulting capillary and atomic forces produce a seemingly magical power of adhesion.

This time, the researchers added a layer of biodegradable glue to help the bandage stay sticky when wet. Then they tried it out on pig intestines and rats given hernia surgery. The bandages passed the tests with flying colors.



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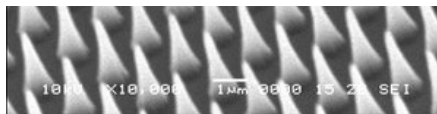


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A human-ready adhesive could be on the market in a few years. The researchers hope to suffuse them with growth factors, antibiotics and anti-inflammatory drugs.

Much better than stitches.

[A biodegradable and biocompatible gecko-inspired tissue adhesive \[PNAS\]](#)

Image: [Steve Evans](#), PNAS

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Mmm, lizard inspired hairy bandages.

Posted by: **Kouroth** | **Feb 19, 2008 2:34:27 PM**

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15	16	17	18	19	20	21
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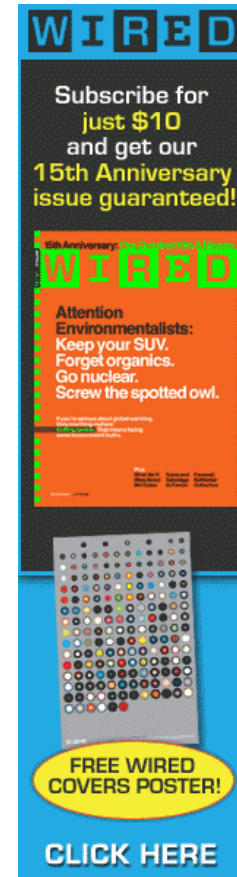
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