~~frizz~~™
Living proof.™

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Women everywhere know that even the smallest changes in humidity can have a major effect on how their hair looks and feels. Scientists have long determined that humidity affects the hair in two primary ways. First, it changes the surface texture of the hair fiber, making it rough and full of friction. Second, humidity increases the absorption of water in the interior of the hair shaft. All frizzy hair derives from this delicate give-and-take of water between our hair and the environment around us, and nearly all of us suffer from some degree of frizz as a result.

Remarkably, in 30 years of research and development, science has done little to tilt the balance in your (and your hair's!) favor. Nearly every anti-frizz product on the market today – there are more than 1,000 – treats frizz with silicone, a technology in use for three decades. The problem with silicone is that it doesn't address *the causes of frizz*; it doesn't prevent humidity from entering the hair shaft, and it doesn't reduce the surface friction on hair. Rather, silicone works by weighing down hair with oil, ultimately allowing humidity to penetrate, leaving it limp and greasy.

Living Proof scientists identified the problem as one they could solve. The company was created for the purpose of applying advanced technology to solve the toughest beauty challenges. We are a team of scientists led by MIT Institute Professor Dr. Robert Langer, and beauty authorities who share a single vision: to invent efficient formulas with new molecules that deliver results you can see across the room.

To solve frizz, we asked a simple question: *How can we reduce the surface friction of the hair?* Answer: create an extremely thin, smooth layer that perfectly coats the hair and stays put. Then we asked: *How can we prevent the hair, and its surface, from absorbing water?* Answer: produce a hydrophobic material with low surface energy that can coat the hair without weighing it down.

Utilizing our proprietary biomaterials technologies, we searched for materials that could produce control over surface energy and roughness. We steered clear of the minimally effective, traditional anti-frizz technology. We looked at materials from medical devices to contact lenses, and our search eventually led us to the discovery of PolyfluoroEster.

PolyfluoroEster is a smaller molecule than the traditional materials used for frizz control. Due to its small size, it creates a weightless shield on the hair to prevent moisture flux in and out, and it coats the cuticles to reduce the friction between fibers. In fact, repeated use after shampooing improves the hair's own ability to resist humidity changes, so No Frizz works even better.

No Frizz also had some benefits we didn't anticipate. Due to its low surface energy, the technology repels most other materials like water and oils, translating into a non-greasy coating that doesn't attract dirt and other particulates. And Living Proof scientists have found that it is actually more repellent to dirt and particles than natural hair; as a result, you can actually go longer between shampoos.

Frizz solved.

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