Post-implantation, release of SiO$_2$ triggers angiogenesis, enhances osteoblastic differentiation, and stimulates bone formation$^5$. Silica gel is rapidly replaced by autologous organic matrix. Once organic matrix is in place, the process of cell-mediated bone formation and resorption proceeds.
Very Large Internal Surface Area is Crucial for Protein Adhesion and Bone Regeneration\textsuperscript{6,7}

The large internal surface area of NanoBone strongly attracts and binds autologous osteopontin, osteocalcin, and BMP-2 molecules that are critical for new bone formation. The internal surface area also determines the resorption rate of bone grafts. In clinical cases, NanoBone is completely converted to autologous bone in as little as 12-14 months.

More Than Ten Years of Clinical Experience

In a prospective study of trauma cases, fracture healing with NanoBone Bone Graft alone was comparable to autograft and had a lower complication rate.\textsuperscript{8} NanoBone has been used in more than 400,000 patients worldwide in all indications.
REFERENCES: