



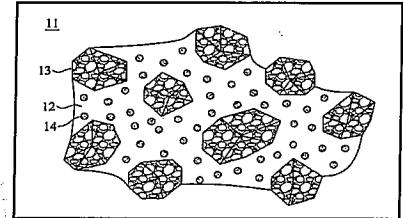
Porosity adjustable artificial bone graft

PI : Assoc. Prof. Chih-Hao Chang

Department of Orthopedic Surgery, National Taiwan University

Experience:

Professor Chih-Hao Chang is currently the Associate Professor in National Taiwan University. He was the Managing Director of Taiwan Society for Surgery of the Hand (TSSH). He was engaged in teaching, research and clinical work for over twenty years. He received his PhD in Biomedical Engineering Institute in 2010 from National Taiwan University. In addition to his university and hospital work, Professor Chang is energetic in research relating to antibacterial material, surface treatment of medical device and 3D-printed orthopedics device.



Market Needs:

After suffering trauma or tumor surgery, patient's alveolar bone and underlying bone have bone defect result from bone absorption because of surgery, extraction and periodontal disease. The repairment of the alveolar bone defect is a crucial object of clinical treatment. In orthopedics, the bone tissue defect results from cutting off infected tissue of bone tumor or osteomyelitis is a thorny problem. The methods can be adopted are autogenously bone graft, allograft and callus lengthening. Consequently, porosity adjustable artificial bone becomes an alternative choice for patients.

Our Technology:

This technique is the combination of 3D printing and porogen. By painting different layers with different slurry (with porogen), we can make an artificial bone graft with different porosity distribution.

Strength:

1. The ability to produce artificial bone independently
2. Expanding the usage of artificial bone graft.

Competing Products:

Intellectual Properties:

Contact (do not need to fill out):

Center for Industry-Academia Cooperation, NTU

Tel: 02-3366-9945, E-mail: ntuciac@ntu.edu.tw