BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed for Form Page 2.
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NAME	POSITION TITLE
Tien-Min Gabriel Chu	Associate Professor
eRA COMMONS USER NAME	
tgchu1	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Kaohsiung Medical University, Taiwan	DDS	1989	Dentistry
University of Michigan, Ann Arbor, Michigan	PhD	1999	Materials Sci. & Eng.
University of Michigan, Ann Arbor, Michigan	Post-Doc	2001	Biomed. Engineering

A. Positions and Honors

Position

1999 - 2001 Post-Doc research fellow, Department of Material Sciences and Engineering, College of Engineering, University of Michigan

1999 - 2000 Adjunct Lecturer, Department of Biological and Materials Sciences, Division of Prosthodontics, School of Dentistry, University of Michigan

2000 - 2002 Adjunct Assistant Professor, Department of Biological and Materials Sciences, Division of Prosthodontics, School of Dentistry, University of Michigan

2001 - 2002 Assistant Research Scientist, Department of Biomedical Engineering, College of Engineering, University of Michigan

2003 - 2007 Assistant Professor, Department of Biomedical Engineering, Indiana University Purdue University Indianapolis

2007 - Associate Professor, Department of Restorative Dentistry, School of Dentistry, Indiana University

B. Selected Peer-Reviewed Publication

1. H. R. Yeom, S. Blanchard, S. Kim, S. Zunt, and T. G. Chu, Correlation Between Micro-Computed Tomography (μCT) and Histomorphometry for Assessment of New Bone Formation in a Calvarial Experimental Model. *Journal of Craniofacial Surgery*, 2007, in press

2. T. G. Chu, Warden SJ, Turner CH, Stewart RL. Segmental Bone Regeneration Using a Load Bearing Biodegradable Carrier of Bone Morphogenetic Protein-2. *Biomaterial* 2007:28(3), 459-467

3. US Patent 7,174,282 (2006) “Design methodology for tissue engineering scaffolds and biomaterial implants”, Scott J.;Chu, Gabriel Tien-Min; Taboas, Juan M

4. US Patent 7,087,200 (2007) “Controlled local/global and micro/macro-porous 3D plastic, polymer and ceramic/cement composite scaffold fabrication and applications thereof” Taboas, Juan M; Maddox, Rachel D.; Krebsbach, Paul H.; Hollister, Scott J.; Chu, Tien-Min Gabriel

5. T.G. Chu, Warden SJ, Turner CH, Stewart RL. Segmental Bone Regeneration Using a Load Bearing Biodegradable Carrier of Bone Morphogenetic Protein-2. Biomaterial 2007:28(3), 459-467

6. T. G. Chu, P. W. Sargent, S. J. Warden, C. H. Turner, and R. L. Stewart, "Preliminary Evaluation of a Load-Bearing BMP-2 Carrier for Segmental Defect Regeneration," Biomedical Sciences Instrumentation, vol. 42, pp. 42-47, 2006.

7. K. N. Gonnerman, L. S. Brown, and T. G. Chu, "Effects of Growth Factors on Cell Migration and Alkaline Phosphatase Release," Biomedical Sciences Instrumentation, vol. 42, pp. 60-65, 2006.

8. D. E. Howk and T. G. Chu, "Design Variables for Mechanical Properties of Bone Tissue Scaffolds," Biomedical Sciences Instrumentation, vol. 42, pp. 278-283, 2006.

9. J. R. Metz, K. N. Gonnerman, A. Chu, and T. G. Chu, "Effect of Crosslinking Density on Swelling and Mechanical Properties of PEGDA400/PCLTMA900 Hydrogels," Biomedical Sciences Instrumentation, vol. 42, pp. 296-301, 2006.

10. J. R. Metz, P. W. Sargent, and T. G. Chu, "Bovine Albumin Release and Degradation Analysis of Dicalcium Phosphate Dihydrate Cement," Biomedical Sciences Instrumentation, vol. 42, pp. 389-394, 2006.

11. T-M. G. Chu "Solid Freeform Fabrication of Tissue Engineering Scaffolds" in Scaffolding in Tissue Engineering, Eds. X. Ma and J. Eliseeff, Marcel Dekker, Inc., 2006 p.139-154

12. Hollister, S.J., Taboas, J.M., Schek, R.M., Lin, C.Y., and Chu, T.M. (2004) "Design and Fabrication of Bone Tissue Engineering Scaffolds" in Bone Tissue Engineering, Eds, Hollinger et al. CRC Press LLC. P. 167-192

13. T-M. G. Chu, D.G. Orton, J.W. Halloran, S.J. Hollister, S.E. Feinberg, “Mechanical and in vivo performance of hydroxyapatite implants containing controlled internal architecture” *Biomaterials* **23** (2002) p.1283-1293

14. T-M. G. Chu, J.W. Halloran, S.J. Hollister, S.E. Feinberg, “Hydroxyapatite implants with controlled internal architecture” *Journal of Materials Science: Materials in Medicine* **12** (2001) p.471-478

15. S.E. Feinberg, S.J. Hollister, J.W. Halloran, T.M.G. Chu, and P.H. Krebsbach, “Image-Based Biomimetic approach to reconstruction of the temporomandibular joint” *Cells Tissues Organs* **163** (2001) p.309-321

16. Hollister, S.J., Zysset, P.K., Guldberg, R.E., Chu, T.M. and Halloran, J.W. "Engineering microstructures to evaluate and replace trabecular bone." *Adv Exp Med Biol* **496** (2001) p.199-211.

17. T-M. G. Chu, and J.W. Halloran, “High-Temperature Flow Behavior of Ceramic Suspensions” *Journal of the American Ceramic Society* **83** (2000) p.2189-2195

18. T-M. G. Chu and J.W. Halloran, “Curing of highly-loaded ceramic suspensions in acrylates” *Journal of the American Ceramic Society* **83** (2000) p.2375-2380

19. S.J. Hollister, T.M. Chu, R.A. Levy, J.W. Halloran, and S.E. Feinberg, “An Image-Based Approach for Designing and Manufacturing Craniofacial Scaffolds” *International Journal of Oral and Maxillofacial Surgery* **29** (2000) p.67-71

20. M.L. Griffith, J.W. Halloran, and T.M. Chu, US Patent 6,117,612 “StereoLithography Resin for Rapid Prototyping of Ceramics and Metals” (2000)

C. Research Support

Current Research Project

Orthopedic Trauma Association Research Grant, Stewart (PI) 1/1/2007-12/31/2007
Segmental Defect Regeneration Using Biodegradable, Load-Bearing BMP-2 Carriers in a Canine Model
Role: co-Investigator

Completed Research Project

1 R03 EB005426-01(NIBIB/NIH), Chu (PI) 9/1/2005 - 8/31/2007
Development of a biodegradable, load-bearing DBM carrier
Role: PI