2019 年 6 月 23 日

日本機械学会北海道支部　バイオメカニクス懇話会
第 35 回講演会

（共催：日本機械学会北海道支部，日本機械学会バイオエンジニアリング部門「計測と力学−生体への応用−」研究会）

主査　大橋　俊朗

下記の要領にて第 35 回講演会を開催いたします. 本講演会は日本機械学会北海道支部特別講演会，日本機械学会バイオエンジニアリング部門第 61 回「計測と力学−生体への応用−」研究会と共催いたします．皆様のご参加をお待ちしております.

記

日　時：2019 年 7 月 2 日（火），16:00〜17:30

場　所：北海道大学大学院工学研究院・工学部　A6-63 室

http://www.eng.hokudai.ac.jp/building/?place=outer

講　演：

16:00〜16:45

「Study of keratin from Mongolian camel hair and goat cashmere for biocompatible materials」

Prof. Ganbat Danaa
Mongolian University of Science and Technology (MUST), Mongolia

Keratin, a fibrous structural protein, that is available from a constituent of Mongolian animals, is a potential candidate for the fabrication of scaffolds for tissue engineering. While several sources of keratin can be considered, the bioactivity of the keratins obtained can be different. In this study we discuss the processing, and characterization of keratin from camel hair and goat cashmere. The camel hair and cashmere were dissolved in an ionic liquid, and the characteristics of the soluble and unsoluble keratin were evaluated. The structure and properties of the raw material, soluble and unsoluble keratin were studied. Compared to the starting material, the soluble keratin showed chemical changes, decrease of cysteine, and minor structural changes. Preliminary in vitro biological properties performed by a lactate dehydrogenase (LDH) assay and scratch test showed good bioactivity in keratin from both sources. In particular, cell migration was observed to be faster when cells were cultured in the presence of soluble keratin extracted from camel hair and cashmere [1].

Acknowledgement
This research has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 778078.

Reference
[1] Y.J. Yang, D. Ganbat, P. Aramwit, A. Bucciarelli, J. Chen, C. Migliaresi, A. Motta.

Processing keratin from camel hair and cashmere with ionic liquids. eXPRESS Polymer Letters. Vol.13, No2 (2019) 97-108.

16:45～17:30
「Engineering limbs: Helping amputees walk in Vietnam」
Prof. Peter Lee
The University of Melbourne, Australia

Over 25 million people in the world need prosthetic orthotic devices, many of whom come from developing countries where access to specialised personnel and services is a major challenge. Demand for artificial limbs is even more urgent in countries where land mines from wars are still prevalent. Professor Peter Lee from the Department of Biomedical Engineering at the University of Melbourne, will discuss his biomechanical engineering research in developing low –cost artificial limbs, using the Pressure Cast (PCAST) technique, a portable and easy to use prosthetic socket fitting system that requires less technical skill and labour to administer. He will also discuss his experience working with patients and clinics in Vietnam to implement PCAST.

問い合わせ先：
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