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求实 创新 勤奋

师资队伍

基本构成
学科带头人
博士生导师
硕士生导师
学院师资
人才需求

贺喜白乙教授简介

贺喜白乙博士, Bayar Hexig Ph.D.
内蒙古大学 生命科学学院 & 实验动物研究中心
 Research Center for Laboratory Animal Science
 & College of Life Science,
 Inner Mongolia University
 24 Zhao Jun Road, Hohhot,
 Inner Mongolia Autonomous Region, 010070,
 P. R. China
 Tel: ++8 6-471-529-4030 ;
 E-mail: bhexig@mongol-ncf.com; bayar98@hotmail.com

贺喜白乙 教授:男,蒙古族,1972年出生于内蒙古库伦旗,博士,2012年内蒙古大学引进的高层次人才。2005年3月在日本东京工业大学获得博士学位。2005-2007年在日本国立医药品食品卫生研究所作博士后。

2007-2012年在东京工业大学生命工学研究科任助理教授。长期从事干细胞在再生医学上的应用研究。研究工作涉及发育生物学,生物功能材料与再生医学,生物-纳米界面等交叉领域。曾分担两项日本科学振兴会的重大项目和一项日医学实现化的重大委托事业项目。发表研究论著1部,研究论文20多篇,其中SCI论文14篇,还有授权国际专利2项。

学术贡献:

- 1、研发了可反复“单一细胞级”干细胞培养系统,彻底改变了多能干细胞培养过程中存在的由于细胞团块而无法形成单能性的缺陷;
- 2、研发了无损均匀增殖胚胎干细胞和诱导干细胞的大量培养系统,在控制干细胞的功能方面取得了卓越的成就,研国际同行的研究水平;
- 3、开发了高效率定向分化诱导干细胞到成熟肝脏细胞的技术和高效率筛选目的功能细胞的技术;
- 4、提出了新的临床医疗-生物材料细胞毒性评价方法。

近年发表的代表性论文(著):

1. S. Sakai, J. Kim, B. Hexig, Y. Okahata, C.S. Cho, T. Akaike. Adsorption behaviors of recombinant E-cadherin-IgG Fc fusic polystyrene surface. *Colloids and Surfaces B: Biointerfaces* 1; 94: 192- 198, 2012 .
2. Qingyuan Meng, Amranul Haque, **Bayar Hexig**, Toshihiro Akaike. The differentiation and isolation of mouse stem cells toward hepatocytes using galactose-carrying substrata . *Biomaterials*. 33, 1414-1427 , 2012.
3. Amranul Haque, **Bayar Hexig**, Qingyuan Meng, Sharif Hossain, Masato Nagaoka, Toshihiro Akaike. The effect of recombinant E-cadherin substratum on the differentiation of endoderm-derived hepatocyte-like cells from embryonic stem cells. *Bior* 32, 2032-2042, 2011
4. Bayar Hexig, Ryusuke Nakaoka, Toshie Tsuchiya. Safety Evaluation of Surgical Materials by Cytotoxicity Test. *Journ Organs*, 11, 204-211, 2008
5. Bayar Hexig , Hexig Alata, Naoki Asakawa, Yoshio Inoue. Generation of Compositional Gradient Structure in Biodegradable Immiscible Polyester/Polyether Blend through Intermolecular Hydrogen Bonding Interaction. *Advanced Functional Materials* 1630-1634, 2005

科研项目 and 成果:

- (1) 研发细胞活性型融合蛋白质细胞外基质而控制 ES/iPS细胞的功能和分化过程。基盘研究 S (日本科学振兴会) 2014 , 分担研究者
- (2) 以钙粘素融合蛋白质作为细胞外基质的 ES/iPS细胞的单一细胞级培养系统的开发。(日本文部省委托研究事业“再生医疗实现项目” 2008-2010 , 分担负责项目执行)
- (3) 研发单一细胞级培养系统和刺激反应探测系统而分析 ES细胞的彷徨变异的机制。基盘研究 C, 日本科学振兴会 分担研究者
- (4) 研究分析高分子表面和可固定性融合蛋白之间的相互作用、共固定融合蛋白质的机制 东京工业大学 GCOE 青金 2008-2009 主持

Research interests

Stem cell biology; Developmental biology; Directed differentiation; Cell reprogramming; Regenerative medicine; Biomaterial biointerface

Research Experience

2012-Present **Professor**, Research Center for Laboratory Animal Science & College of Life Science, Inner Mongolia P. R. China

2008 - 2012 **Assistant professor**, Graduate School of Bioscience and Biotechnology & Frontier Research Center



Institute of Technology, Japan

- 2007 - 2008 ? Evolving Education and Research Center for Spatio-Temporal Biological Network
Researcher, Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, Japan
? Evolving Education and Research Center for Spatio-Temporal Biological Network
- 2005 - 2007 Postdoctoral Researcher, Division of Medical Devices, National Institute of Health Science, Japan
? Health and Labor Sciences Grants for Research on Advanced Medical Technology and Risk Analysis of Pharmaceuticals by Ministry of Health, Labor and Welfare

Education

- 2005 Ph. D. in Biomolecular Engineering, Tokyo Institute of Technology, Japan
- 2001 M.Sc. in Biological & Chemical Engineering, Gunma University, Japan
- 1994 B. S. c. in Physics, Inner Mongolia Normal University, China

Grants & Funding

2013-2015 **Project leader**

Supported by Program of Higher-level talents of Inner Mongolia University (SPH-IMU)

2011- 2014 **Project member**

Grants-in Aid for Specific Research (S), Integrated Science and Innovative Science (Comprehensive fields)
Project: Regulation of functions and differentiation of ES/iPS cells by designing cell-recognizable chimera

2008-2011 **Project member**

The Project for Realization of Regenerative Medicine; sponsored by Ministry of Education, Culture, Sports
Technology (MEXT), Japan
Project: Development of novel single cell level culture system for ES/iPS cells based on E-cadherin chimera
matrix

2009 -2011 **Project member**

Grants-in Aid for Specific Research (C) (JSPS), Japan

Project: Single-cell microscopy with stimulus and response device to analyze relaxation mechanism
of ES cells fluctuation

Selected peer-reviewed publications

1. S. Sakai, J. Kim, B. Hexig, Y. Okahata, C.S. Cho, T. Akaike. Adsorption behaviors of recombinant E-cadherin-IgG Fc fusion polystyrene surface. *Colloids and Surfaces B: Biointerfaces*, 94:192-198, 2012.
2. Qingyuan Meng, Amranul Haque, Bayar Hexig, Toshihiro Akaike. The differentiation and isolation of mouse embryonic toward hepatocytes using galactose-carrying substrata. *Biomaterials*, 33:1414-1427, 2012.
3. Amranul Haque, Bayar Hexig, Qingyuan Meng, Sharif Hossain, Masato Nagaoka, Toshihiro Akaike. The effect of recombinant E-cadherin substratum on the differentiation of endoderm-derived hepatocyte-like cells from embryonic stem cells. *Biomaterials*, 32:2032-2042, 2011.
4. Dragomirka Jovic, Amranul Haque, Bayar Hexig, Masato Nagaoka, Toshihiro Akaike. Control of singular cell cycle synchrony of mouse ES cells for hepatocyte differentiation on E-cadherin substratum. *Journal of Biotechnology and Biomaterials*, 1:1-10, 2012.
5. Bayar Hexig, Kazuo Isama, Yuji Haishima, Yoshio Inoue, Toshie Tsuchiya, Toshihiro Akaike. Self-organization of the concentration gradient structure in hyaluronic acid and poly(*N*-isopropylacrylamide) blend film. *Journal of Biomaterials Science*, 21:15-21, 2010.
6. Bayar Hexig, Ryusuke Nakaoka, Toshie Tsuchiya. Safety evaluation of surgical materials by cytotoxicity test. *Journal of Biomedical Materials Research*, 11:204-211, 2008.
7. Nobuyuki Osugi, Tunggalag Dong, Bayar Hexig, Yoshio Inoue. Generation and characterization of compositional gradient structure in the biodegradable chitosan/Poly(ethylene oxide) blend. *Journal of Applied Polymer Science*, 104: 2939-2946, 2007.
8. H. Alata, B. Hexig, Y. Inoue. Effect of poly(vinyl alcohol) fine particles as a novel biodegradable nucleating agent on the crystallization of poly(3-hydroxybutyrate). *Journal of Polymer Science, Part B: Polymer Physics*, 44:1813-1820, 2006.
9. Bayar Hexig, Hexig Alata, Naoki Asakawa, Yoshio Inoue. Generation of compositional gradient structure in biodegradable immiscible polyester/polyether blend through intermolecular hydrogen bonding interactions. *Advanced Functional Materials*, 15:1630-1634, 2005.
10. B. Hexig, H. Alata, Y. Inoue. Self-organization of functional gradient structure in the biodegradable chitosan/poly(vinyl alcohol) blend film from aqueous solution. *Journal of Polymer Science, Part B: Polymer Physics*, 43:3069-3076, 2005.
11. B. Hexig, H. Alata, N. Asakawa, Y. Inoue. Novel biodegradable poly(butylene succinate)/poly(ethylene oxide) blend film with compositional and spherulite-size gradients. *Journal of Polymer Science, Part B: Polymer Physics*, 43: 368-377, 2005.
12. Bayar Hexig, Yong He, Naoki Asakawa, Yoshio Inoue. Diphenol miscibility effect on the immiscible polyester/polyether blends through intermolecular hydrogen-bonding interaction. *Journal of Polymer Science, Part B: Polymer Physics*, 42:2004-2010, 2004.

Book chapter and review papers

1. Alata Hexig and Bayar Hexig. Characterization of compositional gradient structure of polymeric materials by FT-IR spectroscopy. *Theophanides Theophile, Infrared Spectroscopy/ Book 1*, Croatia, INTECH open access publisher, 2012.
2. Bayar Hexig, Toshihiro Akaike. Development of large scale culture system for ES and iPS cells based on E-cadherin coated substrate. *Journal of Clinical and Experimental Medicine (IGAKU NO AYUMI)*, 238, 1181- 1187, 2011 (in Japanese)
3. Bayar Hexig, Toshihiro Akaike. Non-stress homogeneous ES/iPS cells culture system for large scale production, *Regenerative Medicine*, 9, 323-331, 2010 (in Japanese).
4. Bayar Hexig, Meng QingYuan, Toshihiro Akaike. The technology of nano-fiber in innovative regenerative medicine, *Engineering Materials*, 58, 42-47, 2010 (in Japanese).
5. Md Amranul Haque, Masato Nagaoka, Bayar Hexig and Toshihiro Akaike. Artificial extracellular matrix for embryonic stem cell cultures: a new frontier of nanobiomaterials. *Sci. Technol. Adv. Mater.* 11, 1-9, 2010.

Selected conference presentations

1. Bayar Hexig, Toshihiro Akaike. Large scale non-stress homogeneous proliferation of ES/iPS cells on E-cadherin chip material. The 3rd Asian Biomaterials Congress, Busan, KOREA. (September, 2011)
2. Bayar Hexig, Toshihiro Akaike. Stress-free culture system for ES/iPS cells. The 9th Congress of the Japanese Society for Medicine. Hiroshima, Japan. (March, 2010)
3. Bayar Hexig, Toshihiro Akaike. Application of cell recognizable matrix-coated nano-fiber network scaffolds for regenerative medicine. The 7th Congress of the Japanese Society for Regenerative Medicine. Nagoya, Japan (March 2008)
4. Bayar Hexig. Development of E-cadherin/Fc-based 3D culture system for large-scale ES/iPS cells production. The 2nd / Congress of Regenerative Medicine & Stem Cell, Dalian, China. (August, 2009) (Invited Presentation)
5. Bayar Hexig, Toshihiro Akaike. Development of E-cadherin/Fc-based 3D culture system for large-scale ES/iPS cells production. TERMIS World Congress & 2009 Seoul Stem Cell Symposium, Seoul, Korea. (September, 2009)
6. Bayar Hexig, Toshihiro Akaike. Development of 3D culture system for large-scale ES/iPS cells production. 2008 Annual of Tissue Engineering and Regenerative Medicine International Society - Asian Pacific Region, (TERMIS-AP-2008) Taipei (November, 2008)

Professional service

Organization member of international symposium of GCOE program (Evolving Education and Research Center for Spatio-Biological Network), Tokyo Institute of Technology

The 7th GCOE international symposium on Nano-biomaterials Science and Technology for Medicine and Biology

The 5th GCOE international symposium on Frontier in Biomaterials Science and Technology for Regenerative Medicine Gene/Drug Delivery.

上一条: 任冬

下一条: 郭旭东