Accepted Manuscript

Electrochemicolor imaging of endogenous alkaline phosphatase and respiratory activities of mesenchymal stem cell aggregates in early-stage osteodifferentiation

Kosuke Ino, Takehiro Onodera, Yusuke Kanno, Atsushi Suda, Ryota Kunikata, Tomokazu Matsue, Hitoshi Shiku

PII: S0013-4686(18)30389-X

DOI: 10.1016/j.electacta.2018.02.094

Reference: EA 31289

To appear in: *Electrochimica Acta*

Received Date: 2 November 2017

Revised Date: 17 February 2018

Accepted Date: 17 February 2018

Please cite this article as: K. Ino, T. Onodera, Y. Kanno, A. Suda, R. Kunikata, T. Matsue, H. Shiku, Electrochemicolor imaging of endogenous alkaline phosphatase and respiratory activities of mesenchymal stem cell aggregates in early-stage osteodifferentiation, *Electrochimica Acta* (2018), doi: 10.1016/j.electacta.2018.02.094.

Electrochimica Acta **Special Issue (VSI: ISE Mtg 2017 Providence)**

Electrochemicolor imaging of endogenous alkaline phosphatase and respiratory activities of mesenchymal stem cell aggregates in early-stage osteodifferentiation

Kosuke Ino,[*a] Takehiro Onodera,[a] Yusuke Kanno,[b] Atsushi Suda,[c] Ryota Kunikata,[c] Tomokazu Matsue,[b] Hitoshi Shiku[*a]

[a]Graduate School of Engineering, Tohoku University, 6-6-11-406 Aramaki-aza Aoba, Aoba-ku, Sendai 980-8579, Japan.

[b]Graduate School of Environmental Studies, Tohoku University, 6-6-11-604 Aramaki-aza Aoba, Aoba-ku, Sendai 980-8579, Japan.

[c]Japan Aviation Electronics Industry, Ltd. 1-1, Musashino 3-chome, Akishima-shi, Tokyo 196-8555, Japan

*Corresponding authors:

kosuke.ino@tohoku.ac.jp and hitoshi.shiku.c3@tohoku.ac.jp

Keywords: electrochemical bioimaging; mesenchymal stem cells; cell analysis; electrode array device; osteogenesis