

3D cell culture by using hydrogels

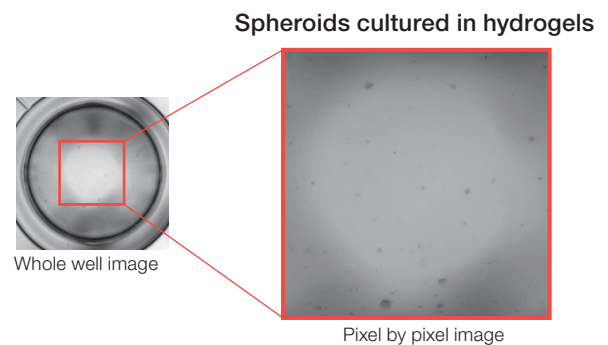
By courtesy of Shono Naito and Dr. Noriho Kamiya (Department of Biotechnology, Center for Future Chemistry, Kyusyu University)

KEYWORD 1) Spheroid 2) 3D cell culture 3) Hydrogel 4) Label free assay

OBJECTIVE Spheroids cultured in hydrogel were quantified by using Cell3iMager neo.

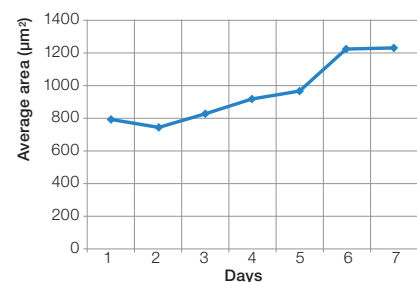
Materials and Methods

Cell Line: HepG2 cells (RIKEN BRC)
 Medium: MEM (Life Technology Gibco)
 Reagents: Redox-responsive hydrogels
 Plates: 96-well plate F-bottom (Greiner)
 Culture Days: 1 - 7 days
 Scan setting: 2400 dpi, Bracket Focus (stacked)

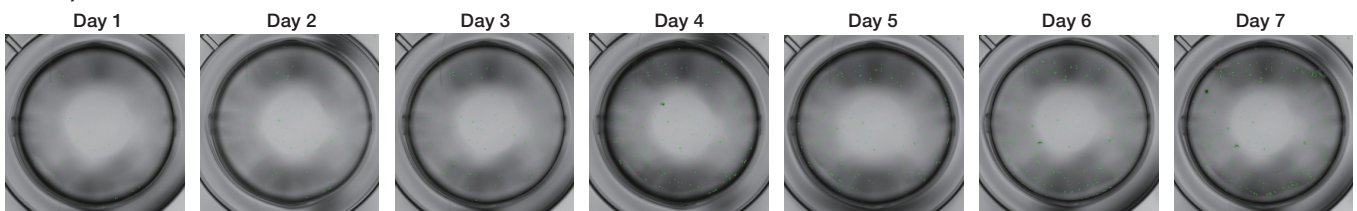


Results and Conclusions

- These figures show that the area of spheroids increased in a time dependent manner.
- 3D cultured cells can be quantified in label free manner.
- Dissolving gels are not necessary to obtain data.



With object detection



References

K. Moriyama, S. Naito, R. Wakabayashi, M. Goto, N. Kamiya
 Biotechnol. J., 11, 1452-1460 (2016) DOI: 10.1002/biot.201600087

Kyushu University Center for Future Chemistry Division of Biotechnology
 Biocatalysis & Biomolecular Engineering Lab
 Shono Naito, Noriho Kamiya, Ph.D.
 Sponsored by SCREEN Holdings Co., Ltd.

Material creation: August 2018

SCREEN Holdings Co., Ltd.

KYOTO (Head office) / Tenjinkita-machi 1-1, Teranouchi-agaru 4-chome, Horikawa-dori,
 Kamigyo-ku, Kyoto 602-8585, Japan

Life Science Business Development and Sales Division
 KYOTO (Rakusai)

Furukawa-cho 322, Hazukashi, Fushimiku, Kyoto 612-8486, Japan
 Tel: +81-75-931-7824 / Fax: +81-75-931-7826

TOKYO
 7th Floor, Yamatane Bldg., 2-21 Etchujima 1-chome, Koto-ku, Tokyo 135-0044, Japan
 Tel: +81-3-4334-7977 / Fax: +81-3-4334-7978

Email: screen_lifescience@screen.co.jp

www.screen-cell3imager.com