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Relevant Local Fatwā on the Issues of Using Human Tissues in Articular Cartilage Tissue Engineering Experimentation (Article) (Open Access)

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Abstract

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In articular cartilage tissue engineering (ACTE) experimentation, the researchers have utilised cells and tissues sampled from the human donor for research purposes. The cells and tissues may be harvested from the living donor's discarded tissues through a medical procedure, e.g. the total knee replacement surgery. The small pieces of a tissue sample taken from the human donor are essential to study the articular cartilage regeneration for treating joint disease, i.e. osteoarthritis. However, the procedure has raised some ethical and fiqh (Islamic jurisprudence) concerns. The study was done by utilising the secondary analysis of local Muslim jurists' opinions (fatwā) related to the sampling of human biological samples. This paper explores the scenarios of using cell sources taken from the living human donor through the existing fatwā of local Muslim jurists (fuqahā'). The scenarios include: (1) taking samples from the living donor, and (2) discarding human tissue, as practised in ACTE experimentation. The current fatwā has shown that honouring every part of a human body is considered essential in Islam. ACTE researchers may utilise the biological samples from living donors as alternatives in studying articular cartilage regeneration. The donation of human biological samples for research purposes in ACTE experimentation, obtained from a medical procedure, may be permissible, should the stipulated terms and conditions were observed, and the procedure does not cause any additional harm to the donor. © 2021. All Rights Reserved.

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-
- 1 Liu, P.
Muslim struggle to determine if a device is halal seen as opportunity
(2015) *Halal Focus*
1
-
- 2 Zarmani, NF, Ramli, MA, Salleh, SMSSM.
The ethical aspects of halal certification of medical devices in Malaysia
15th Asian Bioethics Conference (ABC 15) & 12th Asia Pacific Conference (APC 12), pp. 303-306.
2 [Internet]
<http://www.apu.ac.jp/rcaps/uploads/fckeditor/Conference/2014APConferencePictures/Proceedings-2.pdf#page=301>
-
- 3 Shah, H., Yusof, F.
Gelatin as an ingredient in food and pharmaceutical products: An islamic perspective

(2014) *Advances in Environmental Biology*, 8 (3 SPEC. ISSUE), pp. 774-780. Cited 12 times.
<http://www.aensiweb.com/aeb/2014/774-780.pdf>
-
- 4 (2018) *Halal Pharmaceuticals: A New Frontier*
4. MIHAS
-
- 5 Aa'zamuddin Ahmad Radzi, M., Sha'ban, M., Mohd. Azharuddin, N.S., Azhim, A., Hashi, A.A.
A Survey on Relevant Malaysian Fatwā about Cadaver concerning Tissue Engineering Research

(2020) *Pertanika Journal of Social Sciences and Humanities*, 28 (2), pp. 1451-1466.
[http://www.pertanika.upm.edu.my/Pertanika%20PAPERS/JSSH%20Vol.%2028%20\(2\)%20Jun.%202020/42%20JSSH-5566-2019.pdf](http://www.pertanika.upm.edu.my/Pertanika%20PAPERS/JSSH%20Vol.%2028%20(2)%20Jun.%202020/42%20JSSH-5566-2019.pdf)
-
- 6 Trommelmans, L, Joseph, S, Kris, D.
Ethical Issues In Tissue Engineering. 2007. Muhammad Aa'zamuddin AR, Hashi AA, Sha'ban M. An overview of the application of Maqasid Al-Shariah into cartilage tissue engineering
(2018) *Int Med J Malaysia*, 17 (1), pp. 151-156.
6. ;(Special)
-
- 7 Rahman, R.A., Radzi, M.A.A., Sukri, N.M., Nazir, N.M., Sha'ban, M.
Tissue engineering of articular cartilage: From bench to bed-side

(2015) *Tissue Engineering and Regenerative Medicine*, 12 (1). Cited 13 times.
<http://www.springer.com.ezaccess.library.uitm.edu.my/biomed/journal/13770>
doi: 10.1007/s13770-014-9044-8

[View at Publisher](#)
-
- 8 (2015) *Financial Encyclopedia. Investment and Finance*
8. Majd. Fiqh al-Nawazil [Internet]. [cited 2019 May 15]
<https://www.investment-and-finance.net/islamic-finance/f/fiqh-al-nawazil.html>
-

- 9 Jabatan Kemajuan Islam Malaysia. Institusi Organisasi [Internet]. Sumber Maklumat al-Ahkam al-Fiqhiyyah. [cited 2019 Jun 19]
http://e-smaf.islam.gov.my/e-smaf/index.php/main/mainv1/maklumat_fatwa/2
-
- 10 Elmer, E.
(2018) *Rasmuson Library. Library Research Process*
10. [Internet]. [cited 2020 Mar 2]
<https://library.uaf.edu/lis101-research-process>
-
- 11 George, MW.
(2008) *The Elements of Library Research*. Cited 3 times.
11. New Jersey: Princeton University Press
-
- 12 Smith, JA.
Textual Analysis
(2017) *The International Encyclopedia of Communication Research Methods*. Cited 4 times.
12 John Wiley & Sons, Inc
-
- 13 *Cambridge Dictionary. Sample*
13. [Internet]. [cited 2019 Oct 9]
<https://dictionary-cambridge-org.ezaccess.library.uitm.edu.my/dictionary/english/sample>
-
- 14 (2015) *Malaysian Guidelines on the Use of Human Biological Samples for Research*. Cited 3 times.
14. National Committee for Clinical Research. [Internet]. 2nd ed. Clinical Research Malaysia. Kuala Lumpur: Clinical Research Malaysia
www.clinicalresearch.my
-
- 15 Zhang, W., Chen, J., Tao, J., Hu, C., Chen, L., Zhao, H., Xu, G., (...), Ouyang, H.W.
The promotion of osteochondral repair by combined intra-articular injection of parathyroid hormone-related protein and implantation of a bi-layer collagen-silk scaffold

(2013) *Biomaterials*, 34 (25), pp. 6046-6057. Cited 59 times.
doi: 10.1016/j.biomaterials.2013.04.055

View at Publisher
-
- 16 Iwata, K., Asawa, Y., Fujihara, Y., Tanaka, Y., Nishizawa, S., Nakagawa, T., Nagata, S., (...), Hoshi, K.
The effects of rapid- or intermediate-acting insulin on the proliferation and differentiation of cultured chondrocytes

(2010) *Current Aging Science*, 3 (1), pp. 26-33. Cited 9 times.
doi: 10.2174/1874609811003010026

View at Publisher
-
- 17 Xiao, B.J., Yong, S.S., Zhang, K., Wang, J., Tai, P.S., Xiao, D.J., Lou, S.Q.
Tissue engineered cartilage from hTGF β 2 transduced human adipose derived stem cells seeded in PLGA/alginate compound in vitro and in vivo

(2008) *Journal of Biomedical Materials Research - Part A*, 86 (4), pp. 1077-1087. Cited 44 times.
doi: 10.1002/jbm.a.31656

View at Publisher
-

- 18 Tamaddon, M., Burrows, M., Ferreira, S.A., Dazzi, F., Apperley, J.F., Bradshaw, A., Brand, D.D., (...), Gentleman, E.
Monomeric, porous type II collagen scaffolds promote chondrogenic differentiation of human bone marrow mesenchymal stem cells in vitro (Open Access)
(2017) *Scientific Reports*, 7, art. no. 43519. Cited 45 times.
www.nature.com/srep/index.html
doi: 10.1038/srep43519
View at Publisher
-
- 19 Li, F., Chen, Y.-Z., Miao, Z.-N., Zheng, S.-Y., Jin, J.
Human placenta-derived mesenchymal stem cells with silk fibroin biomaterial in the repair of articular cartilage defects
(2012) *Cellular Reprogramming*, 14 (4), pp. 334-341. Cited 26 times.
doi: 10.1089/cell.2012.0002
View at Publisher
-
- 20 Koizumi, K., Ebina, K., Hart, D.A., Hirao, M., Noguchi, T., Sugita, N., Yasui, Y., (...), Nakamura, N.
Synovial mesenchymal stem cells from osteo- or rheumatoid arthritis joints exhibit good potential for cartilage repair using a scaffold-free tissue engineering approach (Open Access)
(2016) *Osteoarthritis and Cartilage*, 24 (8), pp. 1413-1422. Cited 31 times.
<http://www.elsevier.com.ezaccess.library.uitm.edu.my/inca/publications/store/6/2/3/0/5/5/index.htm>
doi: 10.1016/j.joca.2016.03.006
View at Publisher
-
- 21 Svobodová, J., Proks, V., Karabiyik, Ö., Çalikoğlu Koyuncu, A.C., Torun Köse, G., Rypáček, F., Studenovská, H.
Poly(amino acid)-based fibrous scaffolds modified with surface-pendant peptides for cartilage tissue engineering
(2017) *Journal of Tissue Engineering and Regenerative Medicine*, 11 (3), pp. 831-842. Cited 15 times.
[http://onlinelibrary.wiley.com.ezaccess.library.uitm.edu.my/journal/10.1002/\(ISSN\)1932-7005](http://onlinelibrary.wiley.com.ezaccess.library.uitm.edu.my/journal/10.1002/(ISSN)1932-7005)
doi: 10.1002/term.1982
View at Publisher
-
- 22 Kim, I.G., Ko, J., Lee, H.R., Do, S.H., Park, K.
Mesenchymal cells condensation-inducible mesh scaffolds for cartilage tissue engineering
(2016) *Biomaterials*, 85, pp. 18-29. Cited 50 times.
<http://www.journals.elsevier.com.ezaccess.library.uitm.edu.my/biomaterials/>
doi: 10.1016/j.biomaterials.2016.01.048
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-
- 23 Zhang, X., Mitsuru, A., Igura, K., Takahashi, K., Ichinose, S., Yamaguchi, S., Takahashi, T.A.
Mesenchymal progenitor cells derived from chorionic villi of +human placenta for cartilage tissue engineering
(2006) *Biochemical and Biophysical Research Communications*, 340 (3), pp. 944-952. Cited 117 times.
doi: 10.1016/j.bbrc.2005.12.091
View at Publisher
-
- 24 Kafienah, W., Mistry, S., Dickinson, S.C., Sims, T.J., Learmonth, I., Hollander, A.P.
Three-dimensional cartilage tissue engineering using adult stem cells from osteoarthritis patients (Open Access)
(2007) *Arthritis and Rheumatism*, 56 (1), pp. 177-187. Cited 137 times.
doi: 10.1002/art.22285
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- 25 (2010) *Jawatankuasa Fatwa Negeri Pulau Pinang. Transplan Organ Dan Tisu*
25
<http://mufti.penang.gov.my/index.php/2014-11-12-02-48-39/fatwa/warta/391-hukum-transplan-organ-dan-tisu-9-disember-2010/file>
-
- 26 (2001) *Jawatankuasa Fatwa Negeri Johor. Hukum Transplan Organ Dan Mati Otak*
26
<http://e-smaf.islam.gov.my/e-smaf/index.php/main/mainv1/fatwa/pr/10621>
-
- 27 (1995) *Lembaga Fatwa Negeri Sarawak. Pemandahan Organ*
27
<http://e-smaf.islam.gov.my/e-smaf/fatwa/fatwa/find/pr/11445>
-
- 28 *Jawatankuasa Fatwa Majlis Kebangsaan Bagi Hal Ehwal Ugama Islam Malaysia. Derma Darah Dan Penggunaan Darah Orang Islam Kepada Orang Bukan Islam Dan Sebaliknya (1982) (1982) Kompilasi Pandangan Hukum Muzakarah Jawatankuasa Fatwa Majlis Kebangsaan Bagi Hal Ehwal Ugama Islam Malaysia*, p. 102.
28 [Internet]. Jabatan Kemajuan Islam Malaysia
http://www.islam.gov.my/images/ePenerbitan/KOMPILASI_MUZAKARAH_MKI_2016.pdf
-
- 29 (1995) *Jawatankuasa Fatwa Majlis Kebangsaan Bagi Hal Ehwal Ugama Islam Malaysia. Penggunaan Graf Tisu Dalam Amalan Perubatan*
29
<http://e-smaf.islam.gov.my/e-smaf/index.php/main/mainv1/fatwa/pr/15241>
-
- 30 (1997) *Lembaga Fatwa Negeri Sarawak. Pendermaan Ginjal*
30
<http://e-smaf.islam.gov.my/e-smaf/index.php/main/mainv1/fatwa/pr/11431>
-
- 31 (2014) *Jawatankuasa Fatwa Majlis Kebangsaan Bagi Hal Ehwal Ugama Islam Malaysia*
31. *Hukum Pendermaan Rahim*
<http://e-smaf.islam.gov.my/e-smaf/index.php/main/mainv1/fatwa/pr/10318>
-
- 32 (2015) *Pendermaan Dan Pemandahan Rahim*
32. *Lembaga Fatwa Negeri Sarawak*
<http://e-smaf.islam.gov.my/e-smaf/fatwa/fatwa/find/pr/15419>
-
- 33 (2016) *Jawatankuasa Majlis Fatwa Negeri Sabah*
33. *Pendermaan Rahim* [cited 2019 Apr 16]
<http://e-smaf.islam.gov.my/e-smaf/fatwa/fatwa/find/pr/15408>
-
- 34 *Jawatankuasa Fatwa Majlis Kebangsaan Bagi Hal Ehwal Ugama Islam Malaysia. Hukum Pengklonan Terapeutik Dan Penyelidikan Sel Stem*
(2005) *Kompilasi Pandangan Hukum Muzakarah Jawatankuasa Fatwa Majlis Kebangsaan Bagi Hal Ehwal Ugama Islam Malaysia*, p. 112. Cited 2 times.
34 [Internet]. Shah Alam, Selangor, Malaysia: Jabatan Kemajuan Islam Malaysia
http://www.islam.gov.my/images/ePenerbitan/KOMPILASI_MUZAKARAH_MKI_2016.pdf
-

- 35 Jawatankuasa Fatwa Negeri Selangor. Hukum pengklonan terapeutik dan penyelidikan sel stem (stem cell) (2006) *Government of Selangor Gazette* 35
<http://www.muftiselangor.gov.my/fatwa-personalisation/fatwa-tahunan/pewartaan/2005-2009/165-hukum-pengklonan-terapeutik-dan-penyelidikan-sel-stem-stem-cell>
-
- 36 (2004) *Jemaah Ulama' Majlis Agama Islam dan Adat Istiadat Melayu Kelantan. Pembuangan Dan Pelupusan Tisu-Tisu Manusia Daripada Pesakit* 36
<http://www.epusara.jawi.gov.my/epusara/webV5/content/154>
-
- 37 (2017) *Jawatankuasa Perundangan Hukum Syarak Negeri Pahang* 37. Pelupusan Anggota, Tisu, Dan Janin Orang Islam
<http://mufti.pahang.gov.my/index.php/perkhidmatan/bahagian-fatwa/keputusan-fatwa/31-keputusan-fatwa-2017/136-hukum-pelupusan-anggota-tisu-dan-janin-orang-islam>
-
- 38 (2017) *Jawatankuasa Majlis Fatwa Negeri Sabah. Pelupusan Anggota, Tisu Dan Janin Orang Islam* 38
<http://e-smaf.islam.gov.my/e-smaf/index.php/main/mainv1/fatwa/pr/15444>
-
- 39 (2018) *Jawatankuasa Fatwa Negeri Sembilan. Pelupusan Anggota, Tisu Dan Janin Orang Islam* 39
<http://www.muftins.gov.my/index.php/arkib2/himpunan-fatwa/171-keputusan-mesyuarat-fatwa/1005-hukum-pelupusan-anggota-tisu-dan-janin-orang-islam>
-
- 40 (2019) *Jabatan Mufti Wilayah Persekutuan. Bayan Linnas Siri ke-170: Anggota, Tisu dan Janin Orang Islam: Hukum Pelupusannya* 40. [Internet]. [cited 2019 Jun 6]
<https://muftiwp.gov.my/en/artikel/bayan-linnas/3180-bayan-linnas-siri-ke-170-anggota-tisu-dan-janin-orang-islam-hukum-pelupusannya>

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