["Firefly rats" as an organ/cellular source for long-term in vivo bioluminescent imaging.](https://www.ncbi.nlm.nih.gov/pubmed/16641605)

Hakamata Y, Murakami T, **Kobayashi E**.

Transplantation. 2006 Apr 27;81(8):1179-84

**Stem Cell Research**

[Bioimaging assessment and effect of skin wound healing using bone-marrow-derived mesenchymal stromal cells with the artificial dermis in diabetic rats.](https://www.ncbi.nlm.nih.gov/pubmed/19123682)

Inoue H, Murakami T, Ajiki T, Hara M, Hoshino Y, **Kobayashi E**.

J Biomed Opt. 2008 Nov-Dec;13(6):064036. doi: 10.1117/1.3042266.

[Intra-articular Injected synovial stem cells differentiate into meniscal cells directly and promote meniscal regeneration without mobilization to distant organs in rat massive meniscal defect.](https://www.ncbi.nlm.nih.gov/pubmed/19350690)

Horie M, Sekiya I, Muneta T, Ichinose S, Matsumoto K, Saito H, Murakami T, **Kobayashi E**.

Stem Cells. 2009 Apr;27(4):878-87. doi: 10.1634/stemcells.2008-0616

[Primary immune system responders to nucleus pulposus cells: evidence for immune response in disc herniation.](https://www.ncbi.nlm.nih.gov/pubmed/20077401)

Murai K, Sakai D, Nakamura Y, Nakai T, Igarashi T, Seo N, Murakami T, **Kobayashi E**, Mochida J.

Eur Cell Mater. 2010 Jan 14;19:13-21

[Luminescence imaging of regenerating free bone graft in **rats**.](https://www.ncbi.nlm.nih.gov/pubmed/21200203)

Yamaguchi A, Murakami T, Takahashi M, **Kobayashi E**, Sugawara Y.

Plast Reconstr Surg. 2011 Jan;127(1):78-87. doi: 10.1097/PRS.0b013e3181f959b2

[Bone marrow-derived mesenchymal stem cells ameliorate hepatic ischemia reperfusion injury in a **rat** model.](https://www.ncbi.nlm.nih.gov/pubmed/21559442)

Kanazawa H, Fujimoto Y, Teratani T, Iwasaki J, Kasahara N, Negishi K, Tsuruyama T, Uemoto S, **Kobayashi E**.

PLoS One. 2011 Apr 29;6(4):e19195. doi: 10.1371/journal.pone.0019195

[Cardiac cell sheet transplantation improves damaged heart function via superior cell survival in comparison with dissociated cell injection.](https://www.ncbi.nlm.nih.gov/pubmed/21875331)

Sekine H, Shimizu T, Dobashi I, Matsuura K, Hagiwara N, Takahashi M, **Kobayashi E**, Yamato M, Okano T.

Tissue Eng Part A. 2011 Dec;17(23-24):2973-80. doi: 10.1089/ten.tea.2010.0659. Epub 2011 Aug 29.

[Transplantation of engineered chimeric liver with autologous hepatocytes and xenobiotic scaffold.](https://www.ncbi.nlm.nih.gov/pubmed/22691372)

Hata T, Uemoto S, Fujimoto Y, Murakami T, Tateno C, Yoshizato K, **Kobayashi E**.

Ann Surg. 2013 Mar;257(3):542-7. doi: 10.1097/SLA.0b013e31825c5349

[Transplantation of aggregates of synovial mesenchymal stem cells regenerates meniscus more effectively in a rat massive meniscal defect.](https://www.ncbi.nlm.nih.gov/pubmed/23685144)

Katagiri H, Muneta T, Tsuji K, Horie M, Koga H, Ozeki N, **Kobayashi E**, Sekiya I.

Biochem Biophys Res Commun. 2013 Jun 14;435(4):603-9. doi: 10.1016/j.bbrc.2013.05.026. Epub 2013

[In vitro fabrication of functional three-dimensional tissues with perfusable blood vessels.](https://www.ncbi.nlm.nih.gov/pubmed/23360990)

Sekine H, Shimizu T, Sakaguchi K, Dobashi I, Wada M, Yamato M, **Kobayashi E**, Umezu M, Okano T.

Nat Commun. 2013;4:1399. doi: 10.1038/ncomms2406

[In vivo cell tracking by bioluminescence imaging after transplantation of bioengineered cell sheets to the knee joint.](https://www.ncbi.nlm.nih.gov/pubmed/24360579)

Takaku Y, Murai K, Ukai T, Ito S, Kokubo M, Satoh M, **Kobayashi E**, Yamato M, Okano T, Takeuchi M, Mochida J, Sato M.

Biomaterials. 2014 Feb;35(7):2199-206. doi: 10.1016/j.biomaterials.2013.11.071. Epub 2013 Dec 20

[The fate of nonvascularized fat grafts: histological and bioluminescent study.](https://www.ncbi.nlm.nih.gov/pubmed/25289234)

Sunaga A, Sugawara Y, Katsuragi-Tomioka Y, **Kobayashi E**.

Plast Reconstr Surg Glob Open. 2013 Oct 7;1(6):e40. doi: 10.1097/GOX.0b013e3182a7e827. eCollection 2013 Sep.

[In vivo bioimaging analysis of stromal vascular fraction-assisted fat grafting: the interaction and mutualism of cells and grafted fat.](https://www.ncbi.nlm.nih.gov/pubmed/25405913)

Zhou SB, Chiang CA, Xie Y, Li H, Liu K, **Kobayashi E**, Li QF.

Transplantation. 2014 Nov 27;98(10):1048-55. doi: 10.1097/TP.0000000000000397

[Synovial mesenchymal stem cells promote meniscus regeneration augmented by an autologous Achilles tendon graft in a **rat** partial meniscus defect model.](https://www.ncbi.nlm.nih.gov/pubmed/25993981)

Ozeki N, Muneta T, Matsuta S, Koga H, Nakagawa Y, Mizuno M, Tsuji K, Mabuchi Y, Akazawa C, **Kobayashi E**, Saito T, Sekiya I.

Stem Cells. 2015 Jun;33(6):1927-38. doi: 10.1002/stem.2030.

[Hypothermic temperature effects on organ survival and restoration.](https://www.ncbi.nlm.nih.gov/pubmed/25900715)

Ishikawa J, Oshima M, Iwasaki F, Suzuki R, Park J, Nakao K, Matsuzawa-Adachi Y, Mizutsuki T, Kobayashi A, Abe Y, **Kobayashi E**, Tezuka K, Tsuji T.

Sci Rep. 2015 Apr 22;5:9563. doi: 10.1038/srep09563

[Not single but periodic injections of synovial mesenchymal stem cells maintain viable cells in knees and inhibit osteoarthritis progression in rats.](https://www.ncbi.nlm.nih.gov/pubmed/26880531)

Ozeki N, Muneta T, Koga H, Nakagawa Y, Mizuno M, Tsuji K, Mabuchi Y, Akazawa C, **Kobayashi E**, Matsumoto K, Futamura K, Saito T, Sekiya I.

Osteoarthritis Cartilage. 2016 Jun;24(6):1061-70. doi: 10.1016/j.joca.2015.12.018. Epub 2016 Feb 12

**Drug Screening**

[Luminescence technology in preservation and transplantation for **rat** islet.](https://www.ncbi.nlm.nih.gov/pubmed/21505276)

Negishi K, Teratani T, Iwasaki J, Kanazawa H, Kasahara N, Lefor AT, Uemoto S, Fujimoto Y, **Kobayashi E**.

Islets. 2011 May-Jun;3(3):111-7. Epub 2011 May 1

[Impact of normothermic preservation with extracellular type solution containing trehalose on rat kidney grafting from a cardiac death donor.](https://www.ncbi.nlm.nih.gov/pubmed/22457739)

Iwai S, Kikuchi T, Kasahara N, Teratani T, Yokoo T, Sakonju I, Okano S, **Kobayashi E**.

PLoS One. 2012;7(3):e33157. doi: 10.1371/journal.pone.0033157. Epub 2012 Mar 21.

[A luminance-based heart chip assay for assessing the efficacy of graft preservation solutions in heart transplantation in rats.](https://www.ncbi.nlm.nih.gov/pubmed/23585802)

Maeda M, Kasahara N, Doi J, Iijima Y, Kikuchi T, Teratani T, **Kobayashi E**.

Heart Asia. 2013 Jan 17;5(1):7-14. Print 2013.

[Luminescence-based assay to screen preservation solutions for optimal ability to maintain viability of rat intestinal grafts.](https://www.ncbi.nlm.nih.gov/pubmed/23953567)

Kasahara N, Kikuchi T, Doi J, Teratani T, Fujimoto Y, Uemoto S, Yasuda Y, **Kobayashi E**.

Transplant Proc. 2013 Jul-Aug;45(6):2486-90. doi: 10.1016/j.transproceed.2013.02.117.

[Use of Mesenchymal Stem Cell-Conditioned Medium to Activate Islets in Preservation Solution.](https://www.ncbi.nlm.nih.gov/pubmed/26858869)

Kasahara N, Teratani T, Doi J, Iijima Y, Maeda M, Uemoto S, Fujimoto Y, Sata N, Yasuda Y, **Kobayashi E**.

Cell Med. 2013 May 14;5(2-3):75-81. doi: 10.3727/215517913X666477. eCollection 2013 Nov 10

[Evaluation of liver preservation solutions by using rats transgenic for luciferase.](https://www.ncbi.nlm.nih.gov/pubmed/24507027)

Doi J, Teratani T, Kasahara N, Kikuchi T, Fujimoto Y, Uemoto S, **Kobayashi E**.

Transplant Proc. 2014 Jan-Feb;46(1):63-5. doi: 10.1016/j.transproceed.2013.07.077

[Muscle is a target for preservation in a rat limb replantation model.](https://www.ncbi.nlm.nih.gov/pubmed/25289265)

Iijima Y, Ajiki T, Teratani T, Hoshino Y, **Kobayashi E**.

Plast Reconstr Surg Glob Open. 2013 Dec 6;1(8):e70. doi: 10.1097/GOX.0000000000000017. eCollection 2013 Nov.

[Involvement of a proapoptotic gene (BBC3) in islet injury mediated by cold preservation and rewarming.](https://www.ncbi.nlm.nih.gov/pubmed/27117005)

Omori K, **Kobayashi E**, Komatsu H, Rawson J, Agrawal G, Parimi M, Oancea AR, Valiente L, Ferreri K, Al-Abdullah IH, Kandeel F, Takahashi M, Mullen Y.

Am J Physiol Endocrinol Metab. 2016 Jun 1;310(11):E1016-26. doi: 10.1152/ajpendo.00441.2015. Epub 2016 Apr 26.

[Ebselen Preserves Tissue-Engineered Cell Sheets and their Stem Cells in Hypothermic Conditions.](https://www.ncbi.nlm.nih.gov/pubmed/27966584)

Katori R, Hayashi R, Kobayashi Y, **Kobayashi E**, Nishida K.

Sci Rep. 2016 Dec 14;6:38987. doi: 10.1038/srep38987

**New Probe**

[Functional molecular imaging of ILK-mediated Akt/PKB signaling cascades and the associated role of beta-parvin.](https://www.ncbi.nlm.nih.gov/pubmed/20164304)

Kimura M, Murakami T, Kizaka-Kondoh S, Itoh M, Yamamoto K, Hojo Y, Takano M, Kario K, Shimada K, **Kobayashi E**.

J Cell Sci. 2010 Mar 1;123(Pt 5):747-55. doi: 10.1242/jcs.052498

[New class of bioluminogenic probe based on bioluminescent enzyme-induced electron transfer: BioLeT.](https://www.ncbi.nlm.nih.gov/pubmed/25761130)

Takakura H, Kojima R, Kamiya M, **Kobayashi E**, Komatsu T, Ueno T, Terai T, Hanaoka K, Nagano T, Urano Y.

J Am Chem Soc. 2015 Apr 1;137(12):4010-3. doi: 10.1021/ja511014w. Epub 2015 Mar 19

[Development of a Sensitive Bioluminogenic Probe for Imaging Highly Reactive Oxygen Species in Living Rats.](https://www.ncbi.nlm.nih.gov/pubmed/26474404)

Kojima R, Takakura H, Kamiya M, **Kobayashi E**, Komatsu T, Ueno T, Terai T, Hanaoka K, Nagano T, Urano Y.

Angew Chem Int Ed Engl. 2015 Dec 1;54(49):14768-71. doi: 10.1002/anie.201507530. Epub 2015 Oct 16.

.

**Reviews**

[In vivo bioimaging using photogenic rats: fate of injected bone marrow-derived mesenchymal stromal cells.](https://www.ncbi.nlm.nih.gov/pubmed/18222064)

Hara M, Murakami T, **Kobayashi E**.

J Autoimmun. 2008 May;30(3):163-71. doi: 10.1016/j.jaut.2007.12.007. Epub 2008 Jan 25. Review

[Islets from rats and pigs transgenic for photogenic proteins.](https://www.ncbi.nlm.nih.gov/pubmed/22587516)

Teratani T, Matsunari H, Kasahara N, Nagashima H, Kawarasaki T, **Kobayashi E**.

Curr Diabetes Rev. 2012 Sep;8(5):382-9. Review

[In Vivo Bioimaging Rat**s** for Translational Research in Cell and Tissue Transplantation.](https://www.ncbi.nlm.nih.gov/pubmed/28058175)

Teratani T, **Kobayashi E**.

Cell Med. 2012 May 15;3(1-3):3-11. doi: 10.3727/215517912X639342. eCollection 2012 Jan.

[Bioimaging of Transgenic Rats Established at Jichi Medical University: Applications in Transplantation Research.](https://www.ncbi.nlm.nih.gov/pubmed/26858864)

Teratani T, **Kobayashi E**.

Cell Med. 2013 Aug 29;5(2-3):45-51. doi: 10.3727/215517913X666549. eCollection 2013 Nov 10. Review.

[Promising future for the transgenic rat in transplantation research.](https://www.ncbi.nlm.nih.gov/pubmed/24975516)

Doorschodt BM, Teubner A, **Kobayashi E**, Tolba RH.

Transplant Rev (Orlando). 2014 Oct;28(4):155-62. doi: 10.1016/j.trre.2014.05.002. Epub 2014 May 27. Review

[Cell Therapy for Liver Disease Using Bioimaging Rats.](https://www.ncbi.nlm.nih.gov/pubmed/28174669)

Haga J, Enosawa S, **Kobayashi E**.

Cell Med. 2016 Oct 21;9(1-2):3-7. doi: 10.3727/215517916X693104. eCollection 2017 Jan 8. Review.