

- Guo, J., Su, K., Wang, L., Feng, B., You, X., Deng, M., . . . Xia, J. (2024). Poly(p-coumaric acid) nanoparticles alleviate temporomandibular joint osteoarthritis by inhibiting chondrocyte ferroptosis. *BIOACTIVE MATERIALS*, 40, 212-226. doi: [10.1016/j.bioactmat.2024.06.007](https://doi.org/10.1016/j.bioactmat.2024.06.007)
- Jiang, Y., Shi, J., Di, W., Teo, K. Y. W., & Toh, W. S. (2024). Mesenchymal Stem Cell-Based Therapies for Temporomandibular Joint Repair: A Systematic Review of Preclinical Studies. *CELLS*, 13(11), 30 pages. doi: [10.3390/cells13110990](https://doi.org/10.3390/cells13110990)
- Lam, W. M. R., Zhuo, W. -H., Yang, L., Tan, R., Lim, S. K., Hey, H. W. D., & Toh, W. S. (2024). Mesenchymal Stem Cell Exosomes Enhance Posterolateral Spinal Fusion in a Rat Model. *CELLS*, 13(9), 14 pages. doi: [10.3390/cells13090761](https://doi.org/10.3390/cells13090761)
- Welsh, J. A., Goberdhan, D. C. I., O'Driscoll, L., Buzas, E. I., Blenkiron, C., Bussolati, B., . . . Anderson, J. D. (2024). Minimal information for studies of extracellular vesicles (MISEV2023): From basic to advanced approaches. *Journal of Extracellular Vesicles*, 13(2). doi: [10.1002/jev2.12404](https://doi.org/10.1002/jev2.12404)
- Soh, Y. J., Lin, R. Y. -T., Sriram, G., Toh, W. S., Yu, V. S. H., & Dubey, N. (n.d.). Injectable microcarrier-hydrogel composite for dental stem cell delivery and tissue regeneration. *SMARTMAT*, 17 pages. doi: [10.1002/smm2.1268](https://doi.org/10.1002/smm2.1268)
- Shi, J., Teo, K. Y. W., Zhang, S., Lai, R. C., Rosa, V., Tong, H. J., . . . Toh, W. S. (2023). Mesenchymal stromal cell exosomes enhance dental pulp cell functions and promote pulp-dentin regeneration. *Biomaterials and Biosystems*, 11. doi: [10.1016/j.bbiosy.2023.100078](https://doi.org/10.1016/j.bbiosy.2023.100078)
- Teo, K. Y. W., Tan, R., Wong, K. L., Hey, D. H. W., Hui, J. H. P., & Toh, W. S. (2023). Small extracellular vesicles from mesenchymal stromal cells: the next therapeutic paradigm for musculoskeletal disorders. *CYTOTHERAPY*, 25(8), 837-846. doi: [10.1016/j.jcyt.2023.04.011](https://doi.org/10.1016/j.jcyt.2023.04.011)
- Toh, W. S., Yarani, R., El Andaloussi, S., Cho, B. S., Choi, C., Corteling, R., . . . Lim, S. K. (2023). A report on the International Society for Cell & Gene Therapy 2022 Scientific Signature Series, "Therapeutic advances with native and engineered human extracellular vesicles". *CYTOTHERAPY*, 25(8), 810-814. doi: [10.1016/j.jcyt.2023.02.009](https://doi.org/10.1016/j.jcyt.2023.02.009)
- Teo, K. Y. W., Zhang, S., Loh, J. T., Lai, R. C., Hey, H. W. D., Lam, K. -P., . . . Toh, W. S. (2023). Mesenchymal Stromal Cell Exosomes Mediate M2-like Macrophage Polarization through CD73/Ecto-5'-Nucleotidase Activity. *PHARMACEUTICS*, 15(5), 17 pages. doi: [10.3390/pharmaceutics15051489](https://doi.org/10.3390/pharmaceutics15051489)
- Chng, W. H., Muthuramalingam, R. P. K., Lou, C. K. L., New, S., Neupane, Y. R., Lee, C. K., . . . Pastorin, G. (2023). Extracellular Vesicles and Their Mimetics: A Comparative Study of Their Pharmacological Activities and Immunogenicity Profiles. *PHARMACEUTICS*, 15(4), 21 pages. doi: [10.3390/pharmaceutics15041290](https://doi.org/10.3390/pharmaceutics15041290)
- Papait, A., Silini, A. R., Gazouli, M., Malvicini, R., Muraca, M., O'Driscoll, L., . . . Giebel, B. (2022). Perinatal derivatives: How to best validate their immunomodulatory functions. *FRONTIERS IN BIOENGINEERING AND BIOTECHNOLOGY*, 10, 15 pages. doi: [10.3389/fbioe.2022.981061](https://doi.org/10.3389/fbioe.2022.981061)

- Chuah, S. J., Yong, C. W., Teo, K. Y. W., Chew, J. R. J., Cheow, Y. A., Zhang, S., . . . Toh, W. S. (2022). Mesenchymal stromal cell-derived small extracellular vesicles modulate macrophage polarization and enhance angio-osteogenesis to promote bone healing. *GENES & DISEASES*, 9(4), 841-844. doi:[10.1016/j.gendis.2021.11.012](https://doi.org/10.1016/j.gendis.2021.11.012)
- Wong, K. L., Zhang, S., Tan, S. S. H., Cheow, Y. A., Lai, R. C., Lim, S. K., . . . Toh, W. S. (2022). Mesenchymal Stem Cell Exosomes Promote Growth Plate Repair and Reduce Limb-Length Discrepancy in Young Rats. *JOURNAL OF BONE AND JOINT SURGERY-AMERICAN VOLUME*, 104(12), 1098-1106. doi:[10.2106/JBJS.21.00789](https://doi.org/10.2106/JBJS.21.00789)
- Teo, K. Y. W., Sevensan, C., Cheow, Y. A., Zhang, S., Leong, D. T., & Toh, W. S. (2022). Macrophage Polarization as a Facile Strategy to Enhance Efficacy of Macrophage Membrane-Coated Nanoparticles in Osteoarthritis. *SMALL SCIENCE*, 2(4), 11 pages. doi:[10.1002/smsc.202100116](https://doi.org/10.1002/smsc.202100116)
- Lee, C. K., Zhang, S., Venkatesan, G., Irsan., Chong, S. Y., Wang, J. -W., . . . Pastorin, G. (2022). Enhanced skin penetration of berberine from proniosome gel attenuates pain and inflammation in a mouse model of osteoarthritis. *BIOMATERIALS SCIENCE*, 10(7), 1752-1764. doi:[10.1039/d1bm01733k](https://doi.org/10.1039/d1bm01733k)
- Tan, T. T., Toh, W. S., Lai, R. C., & Lim, S. K. (2022). Practical considerations in transforming MSC therapy for neurological diseases from cell to EV. *EXPERIMENTAL NEUROLOGY*, 349, 7 pages. doi:[10.1016/j.expneurol.2021.113953](https://doi.org/10.1016/j.expneurol.2021.113953)
- Zhang, S., Wong, K. L., Ren, X., Teo, K. Y. W., Afizah, H., Choo, A. B. H., . . . Toh, W. S. (2022). Mesenchymal Stem Cell Exosomes Promote Functional Osteochondral Repair in a Clinically Relevant Porcine Model. *AMERICAN JOURNAL OF SPORTS MEDICINE*, 50(3), 788-800. doi:[10.1177/03635465211068129](https://doi.org/10.1177/03635465211068129)
- Hede, K. T. C., Christensen, B. B., Olesen, M. L., Thomsen, J. S., Foldager, C. B., Toh, W. S., . . . Lind, M. C. (2021). Mesenchymal Stem Cell Extracellular Vesicles as Adjuvant to Bone Marrow Stimulation in Chondral Defect Repair in a Minipig Model. *CARTILAGE*, 13(2_SUPPL), 254S-266S. doi:[10.1177/19476035211029707](https://doi.org/10.1177/19476035211029707)
- Tan, S. H. S., Kwan, Y. T., Neo, W. J., Chong, J. Y., Kuek, T. Y. J., See, J. Z. F., . . . Hui, J. H. P. (2021). Intra-articular Injections of Mesenchymal Stem Cells Without Adjuvant Therapies for Knee Osteoarthritis: A Systematic Review and Meta-analysis. *AMERICAN JOURNAL OF SPORTS MEDICINE*, 49(11), 3113-3124. doi:[10.1177/0363546520981704](https://doi.org/10.1177/0363546520981704)
- Gimona, M., Brizzi, M. F., Choo, A. B. H., Dominici, M., Davidson, S. M., Grillari, J., . . . Lim, S. K. (2021). Critical considerations for the development of potency tests for therapeutic applications of mesenchymal stromal cell-derived small extracellular vesicles. *CYTOTHERAPY*, 23(5), 373-380. doi:[10.1016/j.jcyt.2021.01.001](https://doi.org/10.1016/j.jcyt.2021.01.001)
- Pei, Y. A., Dong, Y., He, T. -C., Li, W. -J., Toh, W. S., & Pei, M. (2021). Editorial: Extracellular Vesicle Treatment, Epigenetic Modification and Cell Reprogramming to Promote Bone and Cartilage Regeneration. *FRONTIERS IN BIOENGINEERING AND BIOTECHNOLOGY*, 9, 3 pages. doi:[10.3389/fbioe.2021.678014](https://doi.org/10.3389/fbioe.2021.678014)
- Tan, S. S. H., Tjio, C. K. E., Wong, J. R. Y., Wong, K. L., Chew, J. R. J., Hui, J. H. P., & Toh, W. S. (2021). Mesenchymal Stem Cell Exosomes for Cartilage Regeneration: A Systematic Review of Preclinical <i>In Vivo</i> Studies. *TISSUE ENGINEERING PART B-REVIEWS*, 27(1), 1-13. doi:[10.1089/ten.teb.2019.0326](https://doi.org/10.1089/ten.teb.2019.0326)

- Boerger, V., Weiss, D. J., Anderson, J. D., Borrás, F. E., Bussolati, B., Carter, D. R. F., . . . Giebel, B. (2020). International Society for Extracellular Vesicles and International Society for Cell and Gene Therapy statement on extracellular vesicles from mesenchymal stromal cells and other cells: considerations for potential therapeutic agents to suppress coronavirus disease-19. *CYTOTHERAPY*, 22(9), 482-485. doi: [10.1016/j.jcyt.2020.05.002](https://doi.org/10.1016/j.jcyt.2020.05.002)
- Wong, K. L., Zhang, S., Wang, M., Ren, X., Afizah, H., Lai, R. C., . . . Toh, W. S. (2020). Intra-Articular Injections of Mesenchymal Stem Cell Exosomes and Hyaluronic Acid Improve Structural and Mechanical Properties of Repaired Cartilage in a Rabbit Model. *ARTHROSCOPY-THE JOURNAL OF ARTHROSCOPIC AND RELATED SURGERY*, 36(8), 2215-+. doi:[10.1016/j.arthro.2020.03.031](https://doi.org/10.1016/j.arthro.2020.03.031)
- Tan, S. H. S., Wong, J. R. Y., Sim, S. J. Y., Tjio, C. K. E., Wong, K. L., Chew, J. R. J., . . . Toh, W. S. (2020). Mesenchymal stem cell exosomes in bone regenerative strategies-a systematic review of preclinical studies. *MATERIALS TODAY BIO*, 7, 16 pages. doi: [10.1016/j.mtbio.2020.100067](https://doi.org/10.1016/j.mtbio.2020.100067)
- Teo, A. Q. A., Wong, K. L., Shen, L., Lim, J. Y., Toh, W. S., Lee, E. H., & Hui, J. H. P. (2019). Equivalent 10-Year Outcomes After Implantation of Autologous Bone Marrow-Derived Mesenchymal Stem Cells Versus Autologous Chondrocyte Implantation for Chondral Defects of the Knee. *AMERICAN JOURNAL OF SPORTS MEDICINE*, 47(12), 2881-2887. doi:[10.1177/0363546519867933](https://doi.org/10.1177/0363546519867933)
- Zhang, S., Teo, K. Y. W., Chuah, S. J., Lai, R. C., Lim, S. K., & Toh, W. S. (2019). MSC exosomes alleviate temporomandibular joint osteoarthritis by attenuating inflammation and restoring matrix homeostasis. *BIOMATERIALS*, 200, 35-47. doi: [10.1016/j.biomaterials.2019.02.006](https://doi.org/10.1016/j.biomaterials.2019.02.006)
- Chew, J. R. J., Chuah, S. J., Teo, K. Y. W., Zhang, S., Lai, R. C., Fu, J. H., . . . Toh, W. S. (2019). Mesenchymal stem cell exosomes enhance periodontal ligament cell functions and promote periodontal regeneration. *ACTA BIOMATERIALIA*, 89, 252-264. doi: [10.1016/j.actbio.2019.03.021](https://doi.org/10.1016/j.actbio.2019.03.021)
- Witwer, K. W., Van Balkom, B. W. M., Bruno, S., Choo, A., Dominici, M., Gimona, M., . . . Lim, S. K. (2019). Defining mesenchymal stromal cell (MSC)-derived small extracellular vesicles for therapeutic applications. *JOURNAL OF EXTRACELLULAR VESICLES*, 8(1), 12 pages. doi:[10.1080/20013078.2019.1609206](https://doi.org/10.1080/20013078.2019.1609206)
- Toh, W. S., Zhang, B., Lai, R. C., & Lim, S. K. (2018). Immune regulatory targets of mesenchymal stromal cell exosomes/small extracellular vesicles in tissue regeneration. *CYTOTHERAPY*, 20(12), 1419-1426. doi:[10.1016/j.jcyt.2018.09.008](https://doi.org/10.1016/j.jcyt.2018.09.008)
- Thery, C., Witwer, K. W., Aikawa, E., Jose Alcaraz, M., Anderson, J. D., Andriantsitohaina, R., . . . Zuba-Surma, E. K. (2018). Minimal information for studies of extracellular vesicles 2018 (MISEV2018): a position statement of the International Society for Extracellular Vesicles and update of the MISEV2014 guidelines. *JOURNAL OF EXTRACELLULAR VESICLES*, 7(1), 43 pages. doi:[10.1080/20013078.2018.1535750](https://doi.org/10.1080/20013078.2018.1535750)
- Toh, W. S., Lai, R. C., Zhang, B., & Lim, S. K. (2018). MSC exosome works through a protein-based mechanism of action. *BIOCHEMICAL SOCIETY TRANSACTIONS*, 46, 843-853. doi:[10.1042/BST20180079](https://doi.org/10.1042/BST20180079)

- Srinivasan, A., Chang, S. -Y., Zhang, S., Toh, W. S., & Toh, Y. -C. (2018). Substrate stiffness modulates the multipotency of human neural crest derived ectomesenchymal stem cells via CD44 mediated PDGFR signaling. *BIOMATERIALS*, *167*, 153-167. doi: [10.1016/j.biomaterials.2018.03.022](https://doi.org/10.1016/j.biomaterials.2018.03.022)
- Zhang, S., Chuah, S. J., Lai, R. C., Hui, J. H. P., Lim, S. K., & Toh, W. S. (2018). MSC exosomes mediate cartilage repair by enhancing proliferation, attenuating apoptosis and modulating immune reactivity. *BIOMATERIALS*, *156*, 16-27. doi: [10.1016/j.biomaterials.2017.11.028](https://doi.org/10.1016/j.biomaterials.2017.11.028)
- Reiner, A. T., Witwer, K. W., van Balkom, B. W. M., de Beer, J., Brodie, C., Corteling, R. L., . . . Lim, S. K. (2017). Concise Review: Developing Best-Practice Models for the Therapeutic Use of Extracellular Vesicles. *STEM CELLS TRANSLATIONAL MEDICINE*, *6*(8), 1730-1739. doi:[10.1002/sctm.17-0055](https://doi.org/10.1002/sctm.17-0055)
- Sun, Y., Wang, T. L., Toh, W. S., & Pei, M. (n.d.). THE ROLE OF LAMININS IN CARTILAGINOUS TISSUES: FROM DEVELOPMENT TO REGENERATION. *EUROPEAN CELLS & MATERIALS*, *34*, 40-54. doi:[10.22203/eCM.v034a03](https://doi.org/10.22203/eCM.v034a03)
- Toh, W. S., Lai, R. C., Hui, J. H. P., & Lim, S. K. (2017). MSC exosome as a cell-free MSC therapy for cartilage regeneration: Implications for osteoarthritis treatment. *SEMINARS IN CELL & DEVELOPMENTAL BIOLOGY*, *67*, 56-64. doi: [10.1016/j.semcdb.2016.11.008](https://doi.org/10.1016/j.semcdb.2016.11.008)
- Lim, S. M., Yap, A. U. J., Loo, C. S. L., Ng, J., Goh, C. Y., Hong, C. H. L., & Toh, W. S. (2017). Comparison of cytotoxicity test models for evaluating resin-based composites. *HUMAN & EXPERIMENTAL TOXICOLOGY*, *36*(4), 339-348. doi: [10.1177/0960327116650007](https://doi.org/10.1177/0960327116650007)
- Chu, W. C., Zhang, S., Sng, T. J., Ong, Y. J., Tan, W. -L., Ang, V. Y., . . . Toh, W. S. (2017). Distribution of pericellular matrix molecules in the temporomandibular joint and their chondroprotective effects against inflammation. *INTERNATIONAL JOURNAL OF ORAL SCIENCE*, *9*(1), 43-52. doi:[10.1038/ijos.2016.57](https://doi.org/10.1038/ijos.2016.57)
- Toh, W. S., Brittberg, M., Farr, J., Foldager, C. B., Gomoll, A. H., Hui, J. H. P., . . . Spector, M. (2016). Cellular senescence in aging and osteoarthritis: Implications for cartilage repair. *ACTA ORTHOPAEDICA*, *87*, 6-14. doi:[10.1080/17453674.2016.1235087](https://doi.org/10.1080/17453674.2016.1235087)
- Foldager, C. B., Bendtsen, M., Berg, L. C., Brinchmann, J. E., Brittberg, M., Bunger, C., . . . Spector, M. (2016). Aarhus Regenerative Orthopaedics Symposium (AROS): Regeneration in the ageing population. *ACTA ORTHOPAEDICA*, *87*, 1-5. doi: [10.1080/17453674.2017.1297918](https://doi.org/10.1080/17453674.2017.1297918)
- Zhang, S., Chu, W. C., Lai, R. C., Lim, S. K., Hui, J. H. P., & Toh, W. S. (2016). Exosomes derived from human embryonic mesenchymal stem cells promote osteochondral regeneration. *OSTEOARTHRITIS AND CARTILAGE*, *24*(12), 2135-2140. doi: [10.1016/j.joca.2016.06.022](https://doi.org/10.1016/j.joca.2016.06.022)
- Movahednia, M. M., Kidwai, F. K., Jokhun, D. S., Squier, C. A., Toh, W. S., & Cao, T. (2016). Potential applications of keratinocytes derived from human embryonic stem cells. *BIOTECHNOLOGY JOURNAL*, *11*(1), 58-70. doi:[10.1002/biot.201500099](https://doi.org/10.1002/biot.201500099)

- Toh, W. S., Foldager, C. B., Hui, J. H. P., Olsen, B. R., & Spector, M. (2016). Exploiting Stem Cell-Extracellular Matrix Interactions for Cartilage Regeneration: A Focus on Basement Membrane Molecules. *CURRENT STEM CELL RESEARCH & THERAPY*, *11*(8), 618-625. doi:[10.2174/1574888X10666150723150525](https://doi.org/10.2174/1574888X10666150723150525)
- Yap, A. U. J., Pandya, M., & Toh, W. S. (2016). Depth of cure of contemporary bulk-fill resin-based composites. *DENTAL MATERIALS JOURNAL*, *35*(3), 503-510. doi:[10.4012/dmj.2015-402](https://doi.org/10.4012/dmj.2015-402)
- Foldager, C. B., Toh, W. S., Christensen, B. B., Lind, M., Gomoll, A. H., & Spector, M. (2016). Collagen Type IV and Laminin Expressions during Cartilage Repair and in Late Clinically Failed Repair Tissues from Human Subjects. *CARTILAGE*, *7*(1), 52-61. doi:[10.1177/1947603515604022](https://doi.org/10.1177/1947603515604022)
- Zhang, S., Lu, Q., Cao, T., & Toh, W. S. (2016). Adipose Tissue and Extracellular Matrix Development by Injectable Decellularized Adipose Matrix Loaded with Basic Fibroblast Growth Factor. *PLASTIC AND RECONSTRUCTIVE SURGERY*, *137*(4), 1171-1180. doi:[10.1097/PRS.0000000000002019](https://doi.org/10.1097/PRS.0000000000002019)
- Toh, W. S., Yap, A. U. J., & Lim, S. Y. (n.d.). *In Vitro* Biocompatibility of Contemporary Bulk-fill Composites. *OPERATIVE DENTISTRY*, *40*(6), 644-652. doi:[10.2341/15-059-L](https://doi.org/10.2341/15-059-L)
- Zhang, S., Yap, A. U. J., & Toh, W. S. (2015). Stem Cells for Temporomandibular Joint Repair and Regeneration. *STEM CELL REVIEWS AND REPORTS*, *11*(5), 728-742. doi:[10.1007/s12015-015-9604-x](https://doi.org/10.1007/s12015-015-9604-x)
- Cherbuin, T., Movahednia, M. M., Toh, W. S., & Cao, T. (2015). Investigation of Human Embryonic Stem Cell-Derived Keratinocytes as an In Vitro Research Model for Mechanical Stress Dynamic Response. *STEM CELL REVIEWS AND REPORTS*, *11*(3), 460-473. doi:[10.1007/s12015-014-9565-5](https://doi.org/10.1007/s12015-014-9565-5)
- Movahednia, M. M., Kidwai, F. K., Zou, Y., Tong, H. J., Liu, X., Islam, I., . . . Cao, T. (2015). Differential Effects of the Extracellular Microenvironment on Human Embryonic Stem Cell Differentiation into Keratinocytes and Their Subsequent Replicative Life Span. *TISSUE ENGINEERING PART A*, *21*(7-8), 1432-1443. doi:[10.1089/ten.tea.2014.0551](https://doi.org/10.1089/ten.tea.2014.0551)
- Liu, H., Zhang, Z., Toh, W. S., Ng, K. W., Sant, S., & Salgado, A. (2015). Stem Cells: Microenvironment, Micro/Nanotechnology, and Application. *STEM CELLS INTERNATIONAL*, *2015*, 2 pages. doi:[10.1155/2015/398510](https://doi.org/10.1155/2015/398510)
- Lu, Q., Pandya, M., Rufaihah, A. J., Rosa, V., Tong, H. J., Seliktar, D., & Toh, W. S. (2015). Modulation of Dental Pulp Stem Cell Odontogenesis in a Tunable PEG-Fibrinogen Hydrogel System. *STEM CELLS INTERNATIONAL*, *2015*, 9 pages. doi:[10.1155/2015/525367](https://doi.org/10.1155/2015/525367)
- Toh, W. S., & Cao, T. (2015). Derivation of chondrogenic cells from human embryonic stem cells for cartilage tissue engineering. *Methods in Molecular Biology*, *1307*, 263-279. doi:[10.1007/7651_2014_89](https://doi.org/10.1007/7651_2014_89)
- Toh, W. S., & Loh, X. J. (2014). Advances in hydrogel delivery systems for tissue regeneration. *MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS*, *45*, 690-697. doi:[10.1016/j.msec.2014.04.026](https://doi.org/10.1016/j.msec.2014.04.026)

- Toh, W. S., Foldager, C. B., Pei, M., & Hui, J. H. P. (2014). Advances in Mesenchymal Stem Cell-based Strategies for Cartilage Repair and Regeneration. *STEM CELL REVIEWS AND REPORTS*, 10(5), 686-696. doi:[10.1007/s12015-014-9526-z](https://doi.org/10.1007/s12015-014-9526-z)
- Li, Y., Kandasamy, K., Chuah, J. K. C., Lam, Y. N., Toh, W. S., Oo, Z. Y., & Zink, D. (2014). Identification of Nephrotoxic Compounds with Embryonic Stem-Cell-Derived Human Renal Proximal Tubular-Like Cells. *MOLECULAR PHARMACEUTICS*, 11(7), 1982-1990. doi:[10.1021/mp400637s](https://doi.org/10.1021/mp400637s)
- Wang, L. -S., Du, C., Toh, W. S., Wan, A. C. A., Gao, S. J., & Kurisawa, M. (2014). Modulation of chondrocyte functions and stiffness-dependent cartilage repair using an injectable enzymatically crosslinked hydrogel with tunable mechanical properties. *BIOMATERIALS*, 35(7), 2207-2217. doi:[10.1016/j.biomaterials.2013.11.070](https://doi.org/10.1016/j.biomaterials.2013.11.070)
- Rosa, V., Toh, W. S., Cao, T., & Shim, W. (2014). Inducing pluripotency for disease modeling, drug development and craniofacial applications. *EXPERT OPINION ON BIOLOGICAL THERAPY*, 14(9), 1233-1240. doi:[10.1517/14712598.2014.915306](https://doi.org/10.1517/14712598.2014.915306)
- Foldager, C. B., Toh, W. S., Gomoll, A. H., Olsen, B. R., & Spector, M. (2014). Distribution of Basement Membrane Molecules, Laminin and Collagen Type IV, in Normal and Degenerated Cartilage Tissues. *CARTILAGE*, 5(2), 123-132. doi:[10.1177/1947603513518217](https://doi.org/10.1177/1947603513518217)
- Li, Y., Oo, Z. Y., Toh, W. S., & Zink, D. (2013). Predictive human kidney-specific in vitro models. *TOXICOLOGY LETTERS*, 221, S158. doi:[10.1016/j.toxlet.2013.05.332](https://doi.org/10.1016/j.toxlet.2013.05.332)
- Toh, W. S., Foldager, C. B., Olsen, B. R., & Spector, M. (2013). Basement membrane molecule expression attendant to chondrogenesis by nucleus pulposus cells and mesenchymal stem cells. *JOURNAL OF ORTHOPAEDIC RESEARCH*, 31(7), 1136-1143. doi:[10.1002/jor.22330](https://doi.org/10.1002/jor.22330)
- Lim, T. C., Rokkappanavar, S., Toh, W. S., Wang, L. -S., Kurisawa, M., & Spector, M. (2013). Chemotactic recruitment of adult neural progenitor cells into multifunctional hydrogels providing sustained SDF-1 α release and compatible structural support. *FASEB JOURNAL*, 27(3), 1023-1033. doi:[10.1096/fj.12-221515](https://doi.org/10.1096/fj.12-221515)
- Kidwai, F. K., Liu, H., Toh, W. S., Fu, X., Jokhun, D. S., Movahednia, M. M., . . . Cao, T. (2013). Differentiation of Human Embryonic Stem Cells into Clinically Amenable Keratinocytes in an Autogenic Environment. *JOURNAL OF INVESTIGATIVE DERMATOLOGY*, 133(3), 618-628. doi:[10.1038/jid.2012.384](https://doi.org/10.1038/jid.2012.384)
- Toh, W. S., Lim, T. C., Kurisawa, M., & Spector, M. (2012). Modulation of mesenchymal stem cell chondrogenesis in a tunable hyaluronic acid hydrogel microenvironment. *BIOMATERIALS*, 33(15), 3835-3845. doi:[10.1016/j.biomaterials.2012.01.065](https://doi.org/10.1016/j.biomaterials.2012.01.065)
- Lim, T. C., Toh, W. S., Wang, L. -S., Kurisawa, M., & Spector, M. (2012). The effect of injectable gelatin-hydroxyphenylpropionic acid hydrogel matrices on the proliferation, migration, differentiation and oxidative stress resistance of adult neural stem cells. *BIOMATERIALS*, 33(12), 3446-3455. doi:[10.1016/j.biomaterials.2012.01.037](https://doi.org/10.1016/j.biomaterials.2012.01.037)
- Peng, Y., Bocker, M. T., Holm, J., Toh, W. S., Hughes, C. S., Kidwai, F., . . . Raghunath, M. (2012). Human fibroblast matrices bio-assembled under macromolecular crowding support stable propagation of human embryonic stem cells. *JOURNAL OF TISSUE ENGINEERING AND REGENERATIVE MEDICINE*, 6(10), e74-e86. doi:[10.1002/term.1560](https://doi.org/10.1002/term.1560)

- Toh, W. S., Lee, E. H., & Cao, T. (2011). Potential of Human Embryonic Stem Cells in Cartilage Tissue Engineering and Regenerative Medicine. *STEM CELL REVIEWS AND REPORTS*, 7(3), 544-559. doi:[10.1007/s12015-010-9222-6](https://doi.org/10.1007/s12015-010-9222-6)
- Fu, X., Toh, W. S., Liu, H., Lu, K., Li, M., & Cao, T. (2011). Establishment of Clinically Compliant Human Embryonic Stem Cells in an Autologous Feeder-Free System. *TISSUE ENGINEERING PART C-METHODS*, 17(9), 927-937. doi:[10.1089/ten.tec.2010.0735](https://doi.org/10.1089/ten.tec.2010.0735)
- Toh, W. S., Spector, M., Lee, E. H., & Cao, T. (n.d.). Biomaterial-Mediated Delivery of Microenvironmental Cues for Repair and Regeneration of Articular Cartilage. *MOLECULAR PHARMACEUTICS*, 8(4), 994-1001. doi:[10.1021/mp100437a](https://doi.org/10.1021/mp100437a)
- Toh, W. S., Lee, E. H., Guo, X. -M., Chan, J. K. Y., Yeow, C. H., Choo, A. B., & Cao, T. (2010). Cartilage repair using hyaluronan hydrogel-encapsulated human embryonic stem cell-derived chondrogenic cells. *BIOMATERIALS*, 31(27), 6968-6980. doi:[10.1016/j.biomaterials.2010.05.064](https://doi.org/10.1016/j.biomaterials.2010.05.064)
- Fu, X., Toh, W. S., Liu, H., Lu, K., Li, M., Hande, M. P., & Cao, T. (2010). Autologous Feeder Cells from Embryoid Body Outgrowth Support the Long-Term Growth of Human Embryonic Stem Cells More Effectively than Those from Direct Differentiation. *TISSUE ENGINEERING PART C-METHODS*, 16(4), 719-733. doi:[10.1089/ten.tec.2009.0360](https://doi.org/10.1089/ten.tec.2009.0360)
- Rufaihah, A. J., Haider, H. K., Heng, B. C., Ye, L., Tan, R. S., Toh, W. S., . . . Cao, T. (2010). Therapeutic angiogenesis by transplantation of human embryonic stem cell-derived CD133⁺ endothelial progenitor cells for cardiac repair. *REGENERATIVE MEDICINE*, 5(2), 231-244. doi:[10.2217/RME.09.83](https://doi.org/10.2217/RME.09.83)
- Toh, W. S., Lee, E. H., Richards, M., & Cao, T. (2010). In vitro derivation of chondrogenic cells from human embryonic stem cells.. *Methods in molecular biology (Clifton, N.J.)*, 584, 317-331.
- Toh, W. S., Guo, X. -M., Choo, A. B., Lu, K., Lee, E. H., & Cao, T. (2009). Differentiation and enrichment of expandable chondrogenic cells from human embryonic stem cells <i>in vitro</i>. *JOURNAL OF CELLULAR AND MOLECULAR MEDICINE*, 13(9B), 3570-3590. doi:[10.1111/j.1582-4934.2009.00762.x](https://doi.org/10.1111/j.1582-4934.2009.00762.x)
- Liu, H., Toh, W. S., Lu, K., MacAry, P. A., Kemeny, D. M., & Cao, T. (2009). A subpopulation of mesenchymal stromal cells with high osteogenic potential. *JOURNAL OF CELLULAR AND MOLECULAR MEDICINE*, 13(8B), 2436-2447. doi:[10.1111/j.1582-4934.2009.00793.x](https://doi.org/10.1111/j.1582-4934.2009.00793.x)
- Yang, Z., Sui, L., Toh, W. S., Lee, E. H., & Cao, T. (2009). Stage-Dependent Effect of TGF- β 1 on Chondrogenic Differentiation of Human Embryonic Stem Cells. *STEM CELLS AND DEVELOPMENT*, 18(6), 929-940. doi:[10.1089/scd.2008.0219](https://doi.org/10.1089/scd.2008.0219)
- Heng, B. C., Toh, W. S., Pereira, B. P., Tan, B. L., Fu, X., Liu, H., . . . Cao, T. (2008). An autologous cell lysate extract from human embryonic stem cell (hESC) derived osteoblasts can enhance osteogenesis of hESC. *TISSUE & CELL*, 40(3), 219-228. doi:[10.1016/j.tice.2007.12.003](https://doi.org/10.1016/j.tice.2007.12.003)

- Rufaihah, A. J., Haider, H. K., Heng, B. C., Ye, L., Toh, W. S., Tian, X. F., . . . Cao, T. (2007). Directing endothelial differentiation of human embryonic stem cells via transduction with an adenoviral vector expressing the VEGF₁₆₅ gene. *JOURNAL OF GENE MEDICINE*, 9(6), 452-461. doi:[10.1002/jgm.1034](https://doi.org/10.1002/jgm.1034)
- Ye, C. P., Heng, B. C., Liu, H., Toh, W. S., & Cao, T. (n.d.). Culture media conditioned by heat-shocked osteoblasts enhances the osteogenesis of bone marrow-derived mesenchymal stromal cells. *CELL BIOCHEMISTRY AND FUNCTION*, 25(3), 267-276. doi:[10.1002/cbf.1330](https://doi.org/10.1002/cbf.1330)
- Toh, W. S., Yang, Z., Liu, H., Heng, B. C., Lee, E. H., & Cao, T. (2007). Effects of culture conditions and bone morphogenetic protein 2 on extent of chondrogenesis from human embryonic stem cells. *STEM CELLS*, 25(4), 950-960. doi:[10.1634/stemcells.2006-0326](https://doi.org/10.1634/stemcells.2006-0326)
- Toh, W. S., Yang, Z., Heng, B. C., & Cao, T. (2007). Differentiation of human embryonic stem cells toward the chondrogenic lineage.. *Methods in molecular biology (Clifton, N.J.)*, 407, 333-349. doi:[10.1007/978-1-59745-536-7_23](https://doi.org/10.1007/978-1-59745-536-7_23)
- Heng, B. C., Ye, C. P., Liu, H., Toh, W. S., Rufaihah, A. J., & Cao, T. (2006). Kinetics of cell death of frozen-thawed human embryonic stem cell colonies is reversibly slowed down by exposure to low temperature. *ZYGOTE*, 14(4), 341-348. doi:[10.1017/S0967199406003893](https://doi.org/10.1017/S0967199406003893)
- Heng, B. C., Ye, C. P., Liu, H., Toh, W. S., Rufaihah, A. J., Yang, Z., . . . Cao, T. (2006). Loss of viability during freeze-thaw of intact and adherent human embryonic stem cells with conventional slow-cooling protocols is predominantly due to apoptosis rather than cellular necrosis. *JOURNAL OF BIOMEDICAL SCIENCE*, 13(3), 433-445. doi:[10.1007/s11373-005-9051-9](https://doi.org/10.1007/s11373-005-9051-9)
- Toh, W. S., Yang, Z., Heng, B. C., & Cao, T. (2006). New perspectives in chondrogenic differentiation of stem cells for cartilage repair. *THE SCIENTIFIC WORLD JOURNAL*, 6, 361-364. doi:[10.1100/tsw.2006.66](https://doi.org/10.1100/tsw.2006.66)
- Toh, W. S., Liu, H., Heng, B. C., Rufaihah, A. J., Ye, C. P., & Cao, T. (2005). Combined effects of TGFβ1 and BMP2 in serum-free chondrogenic differentiation of mesenchymal stem cells induced hyaline-like cartilage formation. *GROWTH FACTORS*, 23(4), 313-321. doi:[10.1080/08977190500252763](https://doi.org/10.1080/08977190500252763)
- Cao, T., Heng, B. C., Ye, C. P., Liu, H., Toh, W. S., Robson, P., . . . Stanton, L. W. (2005). Osteogenic differentiation within intact human embryoid bodies result in a marked increase in osteocalcin secretion after 12 days of in vitro culture, and formation of morphologically distinct nodule-like structures. *TISSUE & CELL*, 37(4), 325-334. doi:[10.1016/j.tice.2005.03.008](https://doi.org/10.1016/j.tice.2005.03.008)