

Nusmetics Publications

I. Microneedle Publications

1. Park S, **Nguyen DV**, Kang L. Feb 2021. Immobilized nanoneedle-like structures for intracellular delivery, biosensing and cellular surgery. Nanomedicine. 16(4), 335–349. DOI: 10.2217/nnm-2020-0337.
2. Lim SH, **Kathuria H**, Muhd Hafiz bin Amir, Zhang X, Duong HTT, Ho CLP, Kang L. Jan 2021. High resolution photopolymer for 3D printing of personalised microneedle for transdermal delivery of anti-wrinkle small peptide.
3. **Kathuria H**, Lim D, Cai J, Chung BG, and Kang L. Aug 2020. Microneedles with tunable dissolution rate. ACS Biomaterials Science & Engineering. DOI: 10.1021/acsbiomaterials.0c00759
4. **Kathuria H**, Kang K, Cai J, Kang L. Feb 2020. Rapid microneedle fabrication by heating and photolithography. International Journal of Pharmaceutics. 103:109772. DOI: 10.1016/j.ijpharm.2019.118992.
5. **Kathuria H**, Li H, Pan J, Lim SH, Kochhar JS, Wu C, Kang L. Sep 2016. Large size microneedle patch to deliver lidocaine through skin. Pharmaceutical Research. 33(1): 2653–2667. DOI:10.1007/s11095-016-1991-4.
6. **Kathuria H**, Kochhar JS, Fong MH, Hashimoto M, Iliescu C, Yu H, Kang L. Nov 2015. Polymeric microneedle array fabrication by photolithography. Journal of Visualized Experiment. 105:e52914. DOI: 10.3791/52914.
7. **Kathuria H**, Fong MH, Kang L. Aug 2015. Fabrication of photomasks consisting microlenses for the production of polymeric microneedle array. Drug Delivery and Translational Research. 5(4):438-50. DOI: 10.1007/s13346-015-0245-z.

II. Drug Delivery Publications

Skin Delivery

1. **Kathuria H.**, Handral H.K., Cha S., Nguyen D.T.P., Cai J., Cao T., Wu C., Kang L. Enhancement of Skin Delivery of Drugs Using Proposome Depends on Drug Lipophilicity. *Pharmaceutics*. 2021 Sep 13;13(9):1457. [Pubmed-34575533](#)
2. **Kathuria H**, Nguyen DTP, Handral HK, Cai J, Cao T, Kang L. Proposome for transdermal delivery of tofacitinib. *Int J Pharm*. 2020 Jul 30; 585:119558. [Pubmed-32565283](#)
3. Kumar P, Singh SK, Handa V, **Kathuria H**. Oleic Acid Nanovesicles of Minoxidil for Enhanced Follicular Delivery. *Medicines*. 2018 Sep; 5(3): 103. [Pubmed-PMC6165169](#)
4. **Nguyen DV**, Li F, Li H, Wong BS, Low CY, Liu XY, Kang L. Feb 2015. Drug permeation through skin is inversely correlated with carrier gel rigidity. *Molecular Pharmaceutics*. 12(2):444–452. DOI: 10.1021/mp500542a.

Oral delivery

5. Murthy A, Ravi PR, **Kathuria H**, Malekar S. Oral Bioavailability Enhancement of Raloxifene with Nanostructured Lipid Carriers. *Nanomaterials (Basel)*. 2020 May 31;10(6):1085. [Pubmed-32486508](#)
6. Murthy A, Ravi PR, **Kathuria H**, Vats R. Self-assembled lecithin-chitosan nanoparticles improve the oral bioavailability and alter the pharmacokinetics of raloxifene. *Int J Pharm*. 2020 Oct 15; 588:119731. [Pubmed-32763388](#)
7. Ravi PR, Aditya N, **Kathuria H**, Malekar S, Vats R. Lipid Nanoparticles for Oral Delivery of Raloxifene: Optimization, Stability, In-vivo Evaluation and Uptake Mechanism. *Eur. J. Pharm. Biopharm*. 87(1):114-24. [Pubmed-24378615](#)

Intranasal delivery

8. Hinge NS, **Kathuria H**, Pandey MM. Rivastigmine-DHA ion-pair complex improved loading in hybrid nanoparticles for better amyloid inhibition and nose-to-brain targeting in Alzheimer's. *Eur J Pharm Biopharm*. 2023 June 16. <https://doi.org/10.1016/j.ejpb.2023.06.007>
9. P. Saha, **Himanshu Kathuria**, MM Pandey. Intranasal nanotherapeutics for brain targeting and clinical studies in Parkinson's disease. *J Control Release*. 2023 May 9; 358: 293-318. doi: 10.1016/j.jconrel.2023.04.021. <https://pubmed.ncbi.nlm.nih.gov/37061193/>

10. P. Saha, P. Singh, **Himanshu Kathuria**, D. Chitkara, MM Pandey. Self-Assembled Lecithin-Chitosan Nanoparticles Improved Rotigotine Nose-to-Brain Delivery and Brain Targeting Efficiency. *Pharmaceutics*. 2023 Mar 5;15(3):851. doi: 10.3390/pharmaceutics15030851.
<https://pubmed.ncbi.nlm.nih.gov/36986712/>
11. P. Saha, **Himanshu Kathuria**, MM Pandey. Nose-to-brain delivery of rotigotine redispersible nanosuspension: In vitro and in vivo characterization. *Journal of Drug Delivery Science and Technology*, Volume 79, January 2023, 104049. <https://doi.org/10.1016/j.iddst.2022.104049>
12. Hinge NS, **Kathuria H**, Pandey MM. Engineering of structural and functional properties of nanotherapeutics and nanodiagnostics for intranasal brain targeting in Alzheimer's. *Appl. Mater. Today*. Volume 26, March 2022, 101303. [ScienDirect S2352940721003668](https://doi.org/10.1016/j.matpr.2022.101303)

III. Tissue Engineering Publications

1. Tan JJY, **Nguyen DV**, Common JE, Wu C., Ho PCL, Kang L. Feb 2021. Investigating PEGDA and GelMA microgel models for sustained 3D heterotypic dermal papilla and keratinocyte co-cultures. *International Journal of Molecular Sciences*. 2021, 22, 2143. DOI:10.3390/ijms22042143.

IV. Animal Study & Translational Research Publications

1. Thang Duc Vu, Min Zin Oo, **Duc-Viet Nguyen**, Ocampo Ervin Marquez, Cheyyatraivendran Arularasu Su, Ti Lian Kah, Theodoros Kofidis, Transapical Cardioscopic Mitral Annuloplasty: A Short-term Survival Study in a Porcine Model, *Interact Cardiovasc Thorac Surg*. 2018 Jan 1;26(1):131-138. doi: 10.1093/icvts/ivx282.
2. Thang Duc Vu, **Duc-Viet Nguyen**, Min Zin Oo, Mohamed Alaa, Ervin Marquez Ocampo, Suganya Cheyyatraivendran Arularasu, Phyo Wai Win, Nurdiyana Ja'afar, Goh Si-Guim, Patsy Ong, Lian Kah Ti, Arthur Mark Richards, Theo Kofidis, On-pump transapical cardioscopic mitral valve replacement with cardiac arrest:

short-term results in a porcine survival model, *Interactive CardioVascular and Thoracic Surgery* 27 (2018) 437–445.

V. 3D printing publications

1. Jain P., **Kathuria H.**, Dubey N.K. Advances in 3D bioprinting of tissues/organs for regenerative medicine and in-vitro models. *Biomaterials*. 2022 Jun 20;287:121639. [Pubmed 35779481](#)
2. Lim SH, **Kathuria H**, Muhd Hafiz bin Amir, Zhang X, Duong HTT, Ho CLP, Kang L. Jan 2021. High resolution photopolymer for 3D printing of personalised microneedle for transdermal delivery of anti-wrinkle small peptide.
3. Lim S.H., **Kathuria H.**, Tan J.J.Y., Kang L. 3D Printed Drug Delivery & Testing Systems --- A Passing Fad or the Future? *Adv. Drug Deliv. Rev.* 2018 July; 132:139-168. [Pubmed-29778901](#)
4. Sun Y, Ruan X, Li H, **Kathuria H**, Du G, Kang L. Fabrication of non-dissolving analgesic suppositories using 3D printed moulds. *Int J Pharm.* 513(1-2): 717–724. [Pubmed-27686053](#)
5. **Himanshu Kathuria**, Nilesh Dubey. 3D Bioprinting of Tissues/Organs for Biomedical Applications. *Pharma Focus Asia*. Issue 50, 2023. <https://www.pharmafocusasia.com/latest-ebook> *News article/Magazine*

VI. Biosensing Publications

1. **Nguyen DV**, Jiang S, He C, Lin Z, Lin N, Nguyen AT, Kang L, Han MY, Liu XY. Oct 2016. Elevating biomedical performance of ZnO/SiO₂@amorphous calcium phosphate – bioinspiration making possible the impossible. *Advanced Functional Materials*. 26(38): 6921–6929. DOI: 10.1002/adfm.201601481.
2. Faraji-Dana S, **Nguyen DV**, Kochhar JS, Liu XY, Kang L. Jun 2013. UV-curable pressure sensitive adhesive films: effects of biocompatible plasticizers on mechanical and adhesion properties. (Featured by LabScholars. <http://labscholars.com/item/69967>) *Soft Matter*. 9, 6270–6281. DOI: 10.1039/C3SM50879J.

