Stanford



Avnesh Thakor

Professor of Radiology (Pediatric Radiology)

Radiology - Pediatric Radiology

CLINICAL OFFICE (PRIMARY)

- **LPCH Pediatric Radiology**

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  MC 5913

  Palo Alto, CA 94304

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ACADEMIC CONTACT INFORMATION

- **Alternate Contact**

  Michelle Qin - Administrative Associate 3

  Email qinm13@stanford.edu

  Tel 650-497-8633

Bio

BIO

Dr Thakor is adult and pediatric-certified Interventional Radiologist, and Physician-Scientist, who practices at Stanford University.

Dr Thakor directs the translational Center of Interventional Radiology Innovation at Stanford (IRIS) and runs an NIH-funded laboratory called: the Laboratory for Advancements in Precision Delivery (LAPD). His research team develops novel approaches in the field of Interventional Regenerative Medicine, specifically investigating how to optimally deliver mesenchymal stem cells (MSCs), and their extracellular vesicles (MSC-EVs), to injured tissues given their ability to restore cellular health and function. To prime these therapies, as well as modulate the tissue microenvironment, his team has been developing and optimizing a novel technology called pulsed focused ultrasound (pFUS), with high resolution genomic and proteomic profiling data showing that soundwaves can change the phenotype of both cell therapies and tissues.

In the clinical setting, Dr Thakor leads targeted delivery efforts using image-guided endovascular (i.e. within blood vessels), percutaneous (i.e. through the skin), endoluminal (i.e. within the bowel, respiratory or urinary system), and device implantation (i.e. bioscaffolds, stents) procedures. By ensuring therapies can reach target cells, this overcomes any potential side effects, and risks, associated with systemic delivery, which includes: first-pass drug metabolism, off-target side effects, lung entrapment of cellular therapies and liver/spleen entrapment of nano or micro scale cell-free and gene-vector therapies. He also performs islet transplantation and has been instrumental in the establishment of both the adult and pediatric programs at Stanford.

As a physician-scientist, Dr Thakor also makes sure that these innovations (i.e. technologies, therapies and devices) are effectively translated from the benchtop to the beside and to that effect, he is a PI and Co-I on several clinical trials.

CLINICAL FOCUS:

Interventional Radiology - Pediatric and Adult

Islet Transplantation

Interventional Oncology

Medical Devices

Cellular and Gene therapies

Ablative technologies

Precision Delivery (Locoregional / Targeted Delivery)

ACADEMIC FOCUS:

Precision Delivery

Focused Ultrasound

Mesenchymal stem cells and their derived extracellular vesicles

Bioscaffolds

Microenvironment Modulation

SUBJECT FOCUS:

Pancreas Regeneration and Islet Transplantation

Kidney Regeneration

Brain Regeneration

Liver Regeneration

Skin Regeneration

Solid Organ Tumors

https://www.stanfordiris.com/

https://www.stanfordprecisiondelivery.com/

CLINICAL FOCUS

- Islet Transplantation
- Regenerative Medicine
- Cell Therapy
- Interventional Oncology
- Ablation Techniques
- High Intensity Focused Ultrasound Therapy
- Interventional Radiology
- Pediatric Interventional Radiology
- Pediatric Radiology
- Precision Delivery
- Lymphatic Interventions

ACADEMIC APPOINTMENTS

- Professor-Univ Med Line, Radiology - Pediatric Radiology
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)

- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Physician Scientist, Radiology, (2015- present)

HONORS AND AWARDS

- Fellow, Society of Interventional Radiologists (2024)
- Distinguished Investigator Award, Academy for Radiology and Biomedical Imaging Research (2023)
- Clinical Translational Fellowship, Eureka and MCHRI (2020)
- Biodesign Fellowship, Stanford (2018)
- Earnest Ring Fellowship, SIR (2018)
- Faculty Scholarship, MCHRI (2018)
- Karol Sicher Cancer Research Fellowship, Royal College of Radiologists (2014)
- Terumo Interventional Radiology Award, Terumo Medical Corporation (2012)
- American Cancer Society International Fellowship for Beginning Investigators (ACSBI), American Cancer Society (2009)
- British Institute of Radiology Philips Research Fellowship, British Institute of Radiology (2009)
- European Association for Cancer Travel Research Fellowship, European Association for Cancer Research (2009)
- NIHR Academic Clinical Fellowship, National Institute for Health Research (2008)
- PEEL Medical Research Trust Fellowship, PEEL Foundation (2008)
- Society for Reproductive Investigation President’s Presenter Award, Society for Reproductive Investigation (2007)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, General Medical Council (UK) (2006 - present)
- Member (Fellow), Royal College of Radiologists (2012 - present)

PROFESSIONAL EDUCATION

- Board Certification: Diagnostic Radiology, The Royal College of Radiologists (2012)
- Fellowship: University of Toronto (2015) Canada
- Fellowship: University Of British Columbia (2014) Canada
- Medical Education: University of Cambridge School of Clinical Medicine (2006) England
- BA, University of Cambridge , Physiology (2001)
- MA, University of Cambridge , Physiology (2005)
- MB BChir, University of Cambridge , Medicine (2006)
- PhD, University of Cambridge , Fetal Cardiovascular Physiology (2006)
- FHEA, Higher Education Academy , Teaching (2009)
- MSc, University of London , Cancer Therapeutics (2010)
- FRCR(IR), Royal College of Radiologists , Radiology (Interventional Radiology sub-specialization) (2012)
- MD, University of Cambridge/Stanford University , Molecular Imaging and Nanotechnology (2013)
- Fellowship, University of Cambridge - Addenbrookes Hospital , Adult Interventional Radiology (2013)
- Fellowship, University of British Columbia - Vancouver General Hospital , Adult Interventional Radiology (2014)
- Fellowship, University of Toronto - SickKids Hospital , Pediatric Interventional Radiology (2015)

LINKS

- Thakor Lab: https://www.stanfordprecisiondelivery.com/
- IRIS Center: https://www.stanfordiris.com
- LinkedIn Profile: https://www.linkedin.com/in/avnesh-thakor-729971a0/

Research & Scholarship

RESEARCH INTERESTS

- Technology and Education

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Dr. Thakor is a Physician Scientist at Stanford University. He is dual fellowship trained in both pediatric and adult Interventional Radiology, and holds a joint appointment as an attending Interventional Radiologist at Lucile Packard Children's Hospital and Stanford University Medical Center. His clinical interests are in pediatric Interventional Radiology, islet transplantation and focused ultrasound therapy.

Dr. Thakor is an Attending Interventional Radiologist who runs his own translational laboratory at Stanford University investigating the use of mesenchymal stem cells (MSCs) based therapies (which includes both the parent cell and their extra-cellular vesicles (EVs)), for multiple disease states given their anti-inflammatory, pro-angiogenic and immunomodulatory properties. In particular, Dr. Thakor's team has been focusing on islet transplantation, pancreas, kidney, lung, skin and neuronal regeneration.

His work focuses on: (i) understanding the genomic and proteomic profiles of different sources of MSCs and their derived EVs, (ii) developing novel Precision Delivery strategies to deliver and home these MSC-based therapies to target tissues, (iii) using focused ultrasound to optimize the injured tissue microenvironment for these therapies and then (iv) imaging the biodistribution of MSCs with novel imaging probes. By translating stem cell therapies into patients using minimally invasive strategies, his team is leading the efforts in a new emerging field called "Interventional Regenerative Medicine (IRM)". In addition, his team has been developing multi-functional bioscaffolds and nanoplatforms to facilitate the clinical translation of different cellular therapies.

CLINICAL TRIALS

- High Dose Steroid Therapy to Treat Flares in Patients With Inflammatory Bowel Disease (IBD), Not Recruiting

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Anjali Patni, Triya Saha

Doctoral Dissertation Co-Advisor (NonAC)

Austin Kwan

Publications

PUBLICATIONS

- **Combined non-myeloablative total lymphoid irradiation and low-dose total body irradiation enhances donor chimerism and leads to islet allograft acceptance.** *American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons*

Pathak, S., Iliopoulou, B. P., Mosher, B., Wells, A., Witherspoon, L., Bader, C. S., Chen, P., Regmi, S., Gupta, B., Dutt, S., Wu, X., Nagy, N., Jensen, et al
2025

- **Adipose-derived mesenchymal stromal/stem cells in type 1 diabetes treatment.** *Communications biology*
  Sood, V., Ricioli, H., Njoku, G. C., Primavera, R., Dietrich, S., Thakor, A. S., Pociot, F., Yarani, R.
  2025; 8 (1): 1094
- **Magnetic nanoparticle as a new cutting-edge drug delivery and diagnostic platform: a review on its properties, synthesis, surface modification and applications** *CARBOHYDRATE POLYMER TECHNOLOGIES AND APPLICATIONS*
  Das, A., Sengupta, P., Khanam, J., Augustine, R., Thakor, A. S., Thomas, S., Roy, S., Ghosal, K.
  2025; 11
- **The Third Pillar of Precision Medicine - Precision Delivery.** *MedComm*
  Thakor, A. S.
  2025; 6 (5): e70200
- **A Theoretical Approach in Applying High-Frequency Acoustic and Elasticity Microscopy to Assess Cells and Tissues.** *Annual review of biomedical engineering*
  Winterroth, F., Wang, J., Wink, O., Carelsen, B., Dahl, J., Thakor, A. S.
  2025
- **Voices of Nanomedicine: Blueprint Guidelines for Collaboration in Addressing Global Unmet Medical Needs.** *ACS nano*
  Prasad, R., Ghosh, A., Patel, V., Peng, B., Mendes, B. B., Win, E. H., Delogu, L. G., Wong, J. Y., Pischel, K. J., Bellare, J. R., Bar-Shir, A., Thakor, A. S., Parak, et al
  2025
- **Controlled Nutrient Delivery to Pancreatic Islets Using Polydopamine-Coated Mesoporous Silica Nanoparticles.** *Nano letters*
  Primavera, R., Wang, J., Buchwald, P., Ganguly, A., Patel, S., Bettencourt, L., Chetty, S., Yarani, R., Regmi, S., Levitte, S., Kevadiya, B., Guindani, M., Decuzzi, et al
  2025
- **Evaluating the therapeutic potential of different sources of mesenchymal stem cells in acute respiratory distress syndrome.** *Stem cell research & therapy*
  Regmi, S., Ganguly, A., Pathak, S., Primavera, R., Chetty, S., Wang, J., Patel, S., Thakor, A. S.
  2024; 15 (1): 385
- **Time-course analysis of cisplatin induced AKI in preclinical models: implications for testing different sources of MSCs.** *Journal of translational medicine*
  Ganguly, A., Chetty, S., Primavera, R., Levitte, S., Regmi, S., Dulken, B. W., Sutherland, S. M., Angeles, W., Wang, J., Thakor, A. S.
  2024; 22 (1): 789
- **Precision Delivery of Therapeutics to the Intestine: A Case Series of Superselective Steroid Administration in Pediatric Intestinal Transplant Recipients.** *Transplantation*
  Levitte, S., Guevara-Tique, A. A., Ganguly, A., Syed, A., Gugig, R., Zhang, K. Y., Bonham, C. A., Thakor, A. S.
  2024; 108 (8): e202-e203
- **Therapeutic potential of exosomes derived from mesenchymal stem cells for treatment of systemic lupus erythematosus.** *Journal of inflammation (London, England)*
  Samavati, S. F., Yarani, R., Kiani, S., HoseinKhani, Z., Mehrabi, M., Levitte, S., Primavera, R., Chetty, S., Thakor, A. S., Mansouri, K.
  2024; 21 (1): 20
- **Mesenchymal stem cell-derived extracellular vesicles for the treatment of acute rejection in pediatric and adult bowel transplant** *AMERICAN JOURNAL OF TRANSPLANTATION*
  Levitte, S., Zhang, K., Guevara-Tique, A. A., Ganguly, A., Dulken, B. W., Nilkant, R., Rigmaiden, M., Kumari, R., Khlifi, K., Thakor, A. S., Bonham, C. A.
  2024; 24 (4): 693-696
- **Precision Delivery of Human Bone Marrow-Derived Mesenchymal Stem Cells Into the Pancreas Via Intra-arterial Injection Prevents the Onset of Diabetes.** *Stem cells translational medicine*
  Primavera, R., Regmi, S., Yarani, R., Levitte, S., Wang, J., Ganguly, A., Chetty, S., Guindani, M., Ricordi, C., Meyer, E., Thakor, A. S.

2024

- **Mesenchymal stem cell-derived extracellular vesicles for the treatment of acute rejection in pediatric and adult bowel transplant.** *American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons*
  Levitte, S., Zhang, K. Y., Guevara-Tique, A. A., Ganguly, A., Dulken, B. W., Nilkant, R., Rigmaiden, M., Kumari, R., Khlifi, K., Thakor, A. S., Bonham, C. A.
  2023
- **Precision Delivery of Steroids as a Rescue Therapy for Gastrointestinal Graft-versus-Host Disease in Pediatric Stem Cell Transplant Recipients.** *Journal of clinical medicine*
  Levitte, S., Ganguly, A., Frolik, S., Guevara-Tique, A. A., Patel, S., Tadas, A., Klein, O., Shyr, D., Agarwal-Hashmi, R., Beach, L., Callard, E., Weinacht, K., Bertaina, et al
  2023; 12 (13)
- **Transjugular intrahepatic portosystemic shunt with portal vein recannulation (TIPS-PVR) in pediatric patients.** *Pediatric transplantation*
  Liu, A., Obi, C., Thakor, A. S.
  2023: e14554
- **β Cell and Autophagy: What Do We Know?** *Biomolecules*
  Mohammadi-Motlagh, H. R., Sadeghalvad, M., Yavari, N., Primavera, R., Soltani, S., Chetty, S., Ganguly, A., Regmi, S., Fløyel, T., Kaur, S., Mirza, A. H., Thakor, A. S., Pociot, et al
  2023; 13 (4)
- **Case Series of Precision Delivery of Methylprednisolone in Pediatric Inflammatory Bowel Disease: Feasibility, Clinical Outcomes, and Identification of a Vasculitic Transcriptional Program.** *Journal of clinical medicine*
  Levitte, S., Yarani, R., Ganguly, A., Martin, L., Gubatan, J., Nadel, H. R., Franc, B., Gugig, R., Syed, A., Goyal, A., Park, K. T., Thakor, A. S.
  2023; 12 (6)
- **Low-count whole-body PET/MRI restoration: an evaluation of dose reduction spectrum and five state-of-the-art artificial intelligence models.** *European journal of nuclear medicine and molecular imaging*
  Wang, Y. J., Wang, P., Adams, L. C., Sheybani, N. D., Qu, L., Sarrami, A. H., Theruvath, A. J., Gatidis, S., Ho, T., Zhou, Q., Pribnow, A., Thakor, A. S., Rubin, et al
  2023
- **Extracellular vesicles in Alzheimer's disease: from pathology to therapeutic approaches.** *Neural regeneration research*
  Garcia-Contreras, M., Thakor, A. S.
  2023; 18 (1): 18-22
- **Precision Delivery of Steroids as a Rescue Therapy for Gastrointestinal Graft-versus-Host Disease in Pediatric Stem Cell Transplant Recipients** *Journal of Clinical Medicine*
  Levitte, s., Ganguly, A., Frolik, S., Guevara-Tique, A., et al
  2023; 12 (4229)
- **Integrated transcriptome-proteome analyses of human stem cells reveal source-dependent differences in their regenerative signature.** *Stem cell reports*
  Ganguly, A., Swaminathan, G., Garcia-Marques, F., Regmi, S., Yarani, R., Primavera, R., Chetty, S., Bermudez, A., Pitteri, S. J., Thakor, A. S.
  2022
- **Umbilical cord mesenchymal stromal cells-from bench to bedside.** *Frontiers in cell and developmental biology*
  Chetty, S., Yarani, R., Swaminathan, G., Primavera, R., Regmi, S., Rai, S., Zhong, J., Ganguly, A., Thakor, A. S.
  2022; 10: 1006295
- **Update on Pediatric Interventional Radiology.** *Radiographics : a review publication of the Radiological Society of North America, Inc*
  Young, V. A., Thakor, A. S., Josephs, S. C.
  2022; 42 (6): 1580-1597
- **Human placenta-derived mesenchymal stromal cells transfusion in a critically Ill infant diagnosed with Coronavirus Disease 2019 (COVID-19): A case report.** *Transfusion and apheresis science : official journal of the World Apheresis Association : official journal of the European Society for Haemapheresis*
  Payandeh, M., Habibi, R., Norooznezhad, A. H., Hoseinkhani, Z., Mansouri, F., Yarani, R., Thakor, A. S., Bakhtiari, M., Esmailli, F., Mansouri, K.
  2022: 103454

- **Mesenchymal stromal cells for the treatment of Alzheimer's disease: Strategies and limitations.** *Frontiers in molecular neuroscience*
  Regmi, S., Liu, D. D., Shen, M., Kevadiya, B. D., Ganguly, A., Primavera, R., Chetty, S., Yarani, R., Thakor, A. S.
  2022; 15: 1011225
- **Autologous conditioned serum for degenerative diseases and prospects.** *Growth factors (Chur, Switzerland)*
  Shakouri, S. K., Dolati, S., Santhakumar, J., Thakor, A. S., Yarani, R.
  2021: 1-12
- **Human placental mesenchymal stromal cell-derived exosome-enriched extracellular vesicles for chronic cutaneous graft-versus-host disease: A case report.** *Journal of cellular and molecular medicine*
  Norooznezhad, A. H., Yarani, R., Payandeh, M., Hoseinkhani, Z., Kiani, S., Taghizadeh, E., Thakor, A. S., Mansouri, K.
  2021
- **Diabetes complications and extracellular vesicle therapy.** *Reviews in endocrine & metabolic disorders*
  Soltani, S., Mansouri, K., Parvaneh, S., Thakor, A. S., Pociot, F., Yarani, R.
  2021
- **Endogenous NO-release Carbon Nanodots for Tumor-specific Gas Therapy.** *Acta biomaterialia*
  Liu, X., Liu, Y., Thakor, A. S., Kevadiya, B. D., Cheng, J., Chen, M., Li, Y., Xu, Q., Wu, Q., Wu, Y., Zhang, G.
  2021
- **Imaging cancer cells with nanostructures: Prospects of nanotechnology driven non-invasive cancer diagnosis.** *Advances in colloid and interface science*
  Augustine, R., Mamun, A. A., Hasan, A., Salam, S. A., Chandrasekaran, R., Ahmed, R., Thakor, A. S.
  2021; 294: 102457
- **Human adipose tissue-derived mesenchymal stem cells and their extracellular vesicles modulate lipopolysaccharide activated human microglia.** *Cell death discovery*
  Garcia-Contreras, M., Thakor, A. S.
  2021; 7 (1): 98
- **Artificial intelligence enables whole-body positron emission tomography scans with minimal radiation exposure.** *European journal of nuclear medicine and molecular imaging*
  Wang, Y. J., Baratto, L., Hawk, K. E., Theruvath, A. J., Pribnow, A., Thakor, A. S., Gatidis, S., Lu, R., Gummidipundi, S. E., Garcia-Diaz, J., Rubin, D., Daldrup-Link, H. E.
  2021
- **Enhancing islet transplantation using a biocompatible collagen-PDMS bioscaffold enriched with dexamethasone-microplates.** *Biofabrication*
  Primavera, R., Razavi, M., Kevadiya, B. D., Wang, J., Vykunta, A., Di Mascolo, D., Decuzzi, P., Thakor, A.
  2021
- **Silicone-based bioscaffolds for cellular therapies.** *Materials science & engineering. C, Materials for biological applications*
  Razavi, M. n., Primavera, R. n., Vykunta, A. n., Thakor, A. S.
  2021; 119: 111615
- **Localized drug delivery graphene bioscaffolds for cotransplantation of islets and mesenchymal stem cells.** *Science advances*
  Razavi, M., Wang, J., Thakor, A. S.
  2021; 7 (47): eabf9221
- **Insulin Granule-Loaded MicroPlates for Modulating Blood Glucose Levels in Type-1 Diabetes.** *ACS applied materials & interfaces*
  Primavera, R., Bellotti, E., Di Mascolo, D., Di Francesco, M., Wang, J., Kevadiya, B. D., De Pascale, A., Thakor, A. S., Decuzzi, P.
  2021
- **Cellular uptake and retention of nanoparticles: Insights on particle properties and interaction with cellular components** *MATERIALS TODAY COMMUNICATIONS*
  Augustine, R., Hasan, A., Primavera, R., Wilson, R., Thakor, A. S., Kevadiya, B. D.
  2020; 25
- **Hybrid Polydimethylsiloxane Bioscaffold-Intravascular Catheter for Cellular Therapies.** *ACS applied bio materials*
  Hu, S., Primavera, R., Razavi, M., Avadhani, A., Wang, J., Thakor, A. S.

2020; 3 (10): 6626-6632

- **Altered Cardiovascular Defense to Hypotensive Stress in the Chronically Hypoxic Fetus** *HYPERTENSION*
  Allison, B. J., Brain, K. L., Niu, Y., Kane, A. D., Herrera, E. A., Thakor, A. S., Botting, K. J., Cross, C. M., Itani, N., Shaw, C. J., Skeffington, K. L., Beck, C., Giussani, et al
  2020; 76 (4): 1195–1207

- **Pulsed focused ultrasound enhances the therapeutic effect of mesenchymal stromal cell-derived extracellular vesicles in acute kidney injury.** *Stem cell research & therapy*
  Ullah, M., Liu, D. D., Rai, S., Razavi, M., Concepcion, W., Thakor, A. S.
  2020; 11 (1): 398

- **Loop-Mediated Isothermal Amplification (LAMP): A Rapid, Sensitive, Specific, and Cost-Effective Point-of-Care Test for Coronaviruses in the Context of COVID-19 Pandemic.** *Biology*
  Augustine, R., Hasan, A., Das, S., Ahmed, R., Mori, Y., Notomi, T., Kevadiya, B. D., S Thakor, A.
  2020; 9 (8)

- **HSP70-Mediated NLRP3 Inflammasome Suppression Underlies Reversal of Acute Kidney Injury Following Extracellular Vesicle and Focused Ultrasound Combination Therapy.** *International journal of molecular sciences*
  Ullah, M., Liu, D. D., Rai, S., Concepcion, W., Thakor, A. S.
  2020; 21 (11)

- **Liposomal nanotheranostics for multimode targeted in vivo bioimaging and near-infrared light mediated cancer therapy.** *Communications biology*
  Prasad, R., Jain, N. K., Yadav, A. S., Chauhan, D. S., Devrukhkar, J., Kumawat, M. K., Shinde, S., Gorain, M., Thakor, A. S., Kundu, G. C., Conde, J., Srivastava, R.
  2020; 3 (1): 284

- **Dynamic Hydrodissection for Skin Protection during Cryoablation of Superficial Lesions.** *Journal of vascular and interventional radiology : JVIR*
  Sandberg, J. K., Shoaf, K. R., Lungren, M. P., Young, V. A., Josephs, S., Thakor, A. S.
  2020

- **A Collagen Based Cryogel Bioscaffold that Generates Oxygen for Islet Transplantation.** *Advanced functional materials*
  Razavi, M., Primavera, R., Kevadiya, B. D., Wang, J., Buchwald, P., Thakor, A. S.
  2020; 30 (15)

- **The role of ultrasound in enhancing mesenchymal stromal cell-based therapies.** *Stem cells translational medicine*
  Liu, D. D., Ullah, M., Concepcion, W., Dahl, J. J., Thakor, A. S.
  2020

- **Emerging role of stem cell-derived extravesicular microRNAs in age-associated human diseases and in different therapies of longevity.** *Ageing Research Reviews*
  Ullah, M., Ng, N. N., Concepcion, W., Thakor, A. S.
  2020; 57: 1-14

- **Emerging role of stem cell-derived extravesicular microRNAs in age-associated human diseases and in different therapies of longevity.** *Ageing Research Reviews*
  Ullah, M., Ng, N. N., Concepcion, W., Thakor, A. S.
  2020

- **A Novel Approach to Deliver Therapeutic Extracellular Vesicles Directly into the Mouse Kidney** *Cells*
  Ullah, M., Liu, D. D., Rai, S., Razavi, M., Choi, J., Wang, J., Concepcion, W., Thakor, A. S.
  2020; 9 (4): 937

- **The Paracrine Function of Mesenchymal Stem Cells in Response to Pulsed Focused Ultrasound** *CELL TRANSPLANTATION*
  Razavi, M., Rezaee, M., Telichko, A., Inan, H., Dahl, J., Demirci, U., Thakor, A. S.
  2020; 29: 963689720965478

- **Locoregional delivery of stem cell-based therapies.** *Science translational medicine*
  Ng, N. N., Thakor, A. S.

2020; 12 (547)

- **Rapid Antibody-Based COVID-19 Mass Surveillance: Relevance, Challenges, and Prospects in a Pandemic and Post-Pandemic World.** *Journal of clinical medicine*
  Augustine, R. n., Das, S. n., Hasan, A. n., S, A. n., Abdul Salam, S. n., Augustine, P. n., Dalvi, Y. B., Varghese, R. n., Primavera, R. n., Yassine, H. M., Thakor, A. S., Kevadiya, B. D.
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- **Emerging role of stem cell-derived extravesicular microRNAs in age-associated human diseases and in different therapies of longevity.** *Ageing Research Reviews*
  Ullah, M., Ng, N. N., Concepcion, W., Thakor, A. S.
  2020
- **A Novel Approach to Deliver Therapeutic Extracellular Vesicles Directly into the Mouse Kidney** *Cells*
  Ullah, M., Liu, D. D., Rai, S., Razavi, M., Choi, J., Wang, J., Concepcion, W., Thakor, A. S.
  2020; 9 (4): 937
- **Stem cell-derived extracellular vesicles: role in oncogenic processes, bioengineering potential, and technical challenges.** *Stem cell research & therapy*
  Ullah, M., Qiao, Y., Concepcion, W., Thakor, A. S.
  2019; 10 (1): 347
- **A Study Comparing the Effects of Targeted Intra-Arterial and Systemic Chemotherapy in an Orthotopic Mouse Model of Pancreatic Cancer.** *Scientific reports*
  Rezaee, M., Wang, J., Razavi, M., Ren, G., Zheng, F., Hussein, A., Ullah, M., Thakor, A. S.
  2019; 9 (1): 15929
- **Imaging Tumor Oxidative Stress with Surface Enhanced Raman Scattering Gold Nanoparticles** *JOURNAL OF BIOMEDICAL NANOTECHNOLOGY*
  Razavi, M., Ren, G., Wang, J., Kimura, R., Thakor, A. S.
  2019; 15 (10): 2130–41
- **Improving the Function and Engraftment of Transplanted Pancreatic Islets Using Pulsed Focused Ultrasound Therapy.** *Scientific reports*
  Razavi, M., Zheng, F., Telichko, A., Wang, J., Ren, G., Dahl, J., Thakor, A. S.
  2019; 9 (1): 13416
- **Three-dimensional cryogels for biomedical applications.** *Journal of biomedical materials research. Part A*
  Razavi, M., Qiao, Y., Thakor, A. S.
  2019
- **Adipose tissue-derived mesenchymal stem cells rescue the function of islets transplanted in sub-therapeutic numbers via their angiogenic properties** *CELL AND TISSUE RESEARCH*
  Ren, G., Rezaee, M., Razavi, M., Taysir, A., Wang, J., Thakor, A. S.
  2019; 376 (3): 353–64
- **Adipose tissue-derived mesenchymal stem cells rescue the function of islets transplanted in sub-therapeutic numbers via their angiogenic properties.** *Cell and tissue research*
  Ren, G., Rezaee, M., Razavi, M., Taysir, A., Wang, J., Thakor, A. S.
  2019
- **Ferumoxytol Does Not Impact Standardized Uptake Values on PET/MR Scans.** *Molecular imaging and biology : MIB : the official publication of the Academy of Molecular Imaging*
  Muehe, A. M., Yerneni, K. n., Theruvath, A. J., Thakor, A. S., Pribnow, A. n., Avedian, R. n., Steffner, R. n., Rosenberg, J. n., Hawk, K. E., Daldrup-Link, H. E.
  2019
- **Effect of Pulsed Focused Ultrasound on the Native Pancreas.** *Ultrasound in medicine & biology*
  Razavi, M. n., Zheng, F. n., Telichko, A. n., Ullah, M. n., Dahl, J. n., Thakor, A. S.
  2019
- **Advances in Precision Health and Emerging Diagnostics for Women.** *Journal of clinical medicine*
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