Top 10 Best Publications – Dr. AKR

1. Syed Baseeruddin Alvi, PS Rajalakshmi**,...,A.K.Rengan***. In Situ Nanotransformable Hydrogel for Chemo-Photothermal Therapy of Localized Tumors and Targeted Therapy of Highly Metastatic Tumors. **Applied Materials & Interfaces**. 2021, 13 (47), 55862-55878. *(This work involved the development of nanotransformable gel that is capable of reaching deep seated secondary metastatic lung nodules and can be used for the identification and treatment of advanced stage cancers)*

2. Ravichandran, G., Harijan, D., Ganapathy, N., Prabusankar, G., De, A., & **Rengan, A. K*.** (2023). The Multifaceted Role of Degradable Cobalt Nanoparticles: Dual-Target Starvation and Intracellular Acidification Engendering LC3-Associated Whole-Cell Autophagy. **ACS Materials Letters**, 2023 *5*(10), 2726–2738. *(This work involved the development of a biodegradable Cobalt nanosystem for cancer theranostics)*

3. Prajapati, A., Srivastava, A., Sankaranarayanan, S. A., Pebam, M., Buddhiraju, H. S., Patra, P., Yadav, P., Joshi, H., & **Rengan, A. K***. (2023). High-affinity DNA nanomatrix: a platform technology for synergistic drug delivery and photothermal therapy. **ACS Macro Letters**, *12*(2), 255–262. *(This is a platform technology wherein DNA nanomatrix were introduced within the carrier that resulted in enhanced drug loading capacity and effective drug delivery)*

4. Dokkari Nagalaxmi Yadav,Sri Amruthaa, A M Thanekar, **A.K. Rengan*** Bioinspired gold coated phage nanosomes for anti-microbial and anti-cancer theranostics **Materials Today Nano** 23 (2023) 100348. *(This work involved the development of bacteriophage based organo-inorganic nanosystem for cancer and anti microbial theranostics)*

5. Sushma Mudigunda, Sri Amruthaa, Veeresh Bantal, Deepal Pemmaraju, **A.K. Rengan*,** Ethosomal Nanoformulations for Combinational Photothermal Therapy of Fungal Keratitis **Advanced Therapeutics** 6 (2023) 2200331. (*These were novel ethosomal nanosystem that were used for photothermal therapeutics of fungal infections)*

6. Appidi, PS Rajalakshmi, S.A.Chinchulkar, A.Pradhan, H.Begum, V.Bantal, R.Srivastava, G.Prabusankar, **A.K.Rengan***, Plasmon-enhanced fluorescent gold coated novel lipo-polymeric hybrid nanosystem: Synthesis, characterization and application for imaging and photothermal therapy of breast cancer. **Nanoscale,** 2022, 14, 9112-9123. *(Organo inorganic hybrid nanosystems were developed that were monodisperse in size and capable of loading protein -Au nanoclusters for theranostics)*

7. Alvi, S. B., Rajalakshmi, P. S., Jogdand, A. B., Nazia, B., Bantal, V., & **Rengan, A. K***. Chitosan IR806 dye-based polyelectrolyte complex nanoparticles with mitoxantrone combination for effective chemo-photothermal therapy of metastatic triple-negative breast cancer. **International Journal of Biological Macromolecules**, 2022, 216, 558–570.*(This work involved chemo-photothermal therapy using novel nanosystem for the treatment of triple negative breast cancer)*

8. PS R, Alvi SB, Begum N, Veeresh B, **Rengan A. K*.** Self-Assembled Fluorosome–Polydopamine Complex for Efficient Tumor Targeting and Commingled Photodynamic/Photothermal Therapy of Triple-Negative Breast Cancer. **Biomacromolecules**. **2021** Aug 12;22(9):3926-40. *(In this work we had shown the ability of photothermal therapy to activate the immune system for enhancing abscopal phenomenon)*

9. Alvi SB, Rajalakshmi PS, Jogdand A, Sanjay AY, Veeresh B, John R, **Rengan, A. K*.** Iontophoresis mediated localized delivery of liposomal gold nanoparticles for photothermal and photodynamic therapy of acne. **Biomaterials Sciences. 2021**;9(4):1421-30. *(This work involved iontophoresis mediated drug delivery and dual (NIR/blue)light mediated therapeutics)*

10. Appidi T, Pemmaraju DB, Khan RA, Alvi SB, Srivastava R, Pal M, Khan N**, Rengan, A. K*.** Light-triggered selective ROS-dependent autophagy by bioactive nanoliposomes for efficient cancer theranostics. **Nanoscale. 2020**;12(3):2028-39. *(This work involved the development of NIR light mediated localized autophagic cell death using hybrid nanoparticles)*

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