Executive Summary

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1. **Title of the Project:** Autologous Platelet-rich Plasma (PRP) Loaded Personalized Wound Care Patch at Patient Bedside for Effective Burn Wound Care
2. **Date of Start of the Project:** 1st Oct, 2022
3. **Aims and Objectives:** Development of novel effective treatment modalities for large asymmetric burn wound which capable to regenerate lost skin tissue, protect from the burn wound infection and most importantly affordable for common Indian population. We will develop portable wound care air-brushing device and personalized burn care kits for patient specific degree-of-burn as an effective and affordable burn wound care modalities at low resources medical setting.
4. **Significant achievements (not more than 500 words to include List of patents, publications, prototype, deployment etc)**

1. Ruby Singh, Purandhi Roopmani, Meenakshi Chauhan, Suparna Mercy Basu, Waghela Deeksha, MD Kazem, Sarbani Hazra, Eerappa Rajakumara, Jyotsnendu Giri, Silver sulfadiazine loaded core-shell airbrushed nanofibers for burn wound healing application, International Journal of Pharmaceutics, 2022
2. Sarviya, N.; Basu, S. M.; Mani, R.; Chauhan, M.; Kingshott, P.; Giri, J. Biomimicking nanofibrous gelatin microspheres recreating the stem cell niche for their ex-vivo expansion and in vivo like differentiation for injectable stem cell transplantation. Biomaterials Advances 2022, 139, 212981. DOI: https://doi.org/10.1016/j.bioadv.2022.212981.
3. Sarviya, N.; Basu, S. M.;Induvahi V.; Giri, J. Laponite-Gelatin Nanofibrous Microsphere Promoting Human Dental Follicle Stem Cells Attachment and Osteogenic Differentiation for Non-invasive Stem Cell TransplantationMacromolecular Bioscience 2022 (Accepted). DOI: 10.1002/mabi.202200347

5. **Concluding remarks:** Successfully completion of the project will provide a portable wound care device with disposable degree-of-burn specific material kit for personalized (autologous PRP) effective and affordable burn wound care.