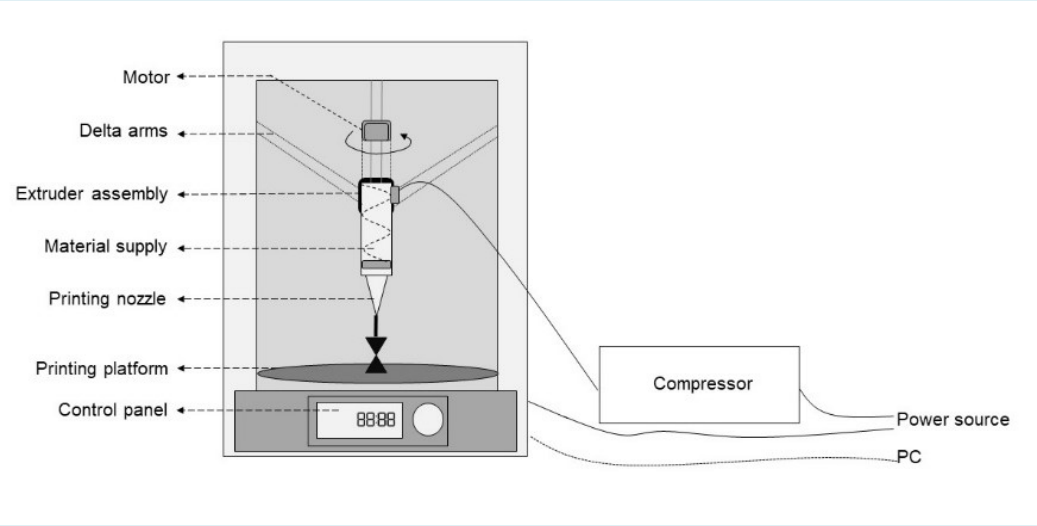
Designing 3D Printed Foods For Personalized Nutrition

Salient features	➢ Identified low-cost nutritious indigenous/ underutilized/ unexplored food sources as base materials for additive manufacturing ➢ Optimization of printing and post-processing conditions ➢ Integration of technologies like electrospinning and microencapsulation
Advantages	✓ High-levels of product customization (appearance and nutrition) ✓ Improved consumer acceptance of several foods ✓ Novel approach to utilize food wastes (waste-to-wealth) ✓ Bio-degradable food casings from food waste
	
Process Technology developed by	Dr. Jeyan Arthur Moses, Assistant Professor and In-Charge, Computational Modeling and Nanoscale Processing Unit Indian Institute of Food Processing Technology (IIFPT), Thanjavur – 613005, Tamil Nadu. Email: moses.ja@iifpt.edu.in
Year	2018-21
Source of funding	MoFPI
More information	**Status of commercialization / Patent / Publication** Nachal, N., Moses, J.A., Karthik, P. and Anandharamakrishnan, C. 2019. Applications of 3D printing in food processing. Food Engineering Reviews, 11(3): 123-141.

Anukiruthika, T., Moses, J. A. and Anandharamakrishnan, C. 2020. 3D printing of egg yolk and white with rice flour blends. Journal of Food Engineering, 265, 109691.

Krishnaraj, P., Anukiruthika, T., Choudhary, P., Moses, J. A. and Anandharamakrishnan, C. 2019. 3D extrusion printing and post-processing of fibre-rich snack from indigenous composite flour. Food and Bioprocess Technology, 12(10): 1776-1786.

Nida, S., Anukiruthika, T., Moses, J. A. and Anandharamakrishnan, C. 2020. 3D printing of grinding and milling fractions of rice husk. Waste and Biomass Valorization, 1-10.

Keerthana, K., Anukiruthika, T., Moses, J. A. and Anandharamakrishnan, C. 2020. Development of fiber-enriched 3D printed snacks from alternative foods: A study on button mushroom. Journal of Food Engineering, 110116.

Theagarajan, R., Moses, J. A. And Anandharamakrishnan, C. 2020. 3D Extrusion Printability of Rice Starch and Optimization of Process Variables. Food and Bioprocess Technology.