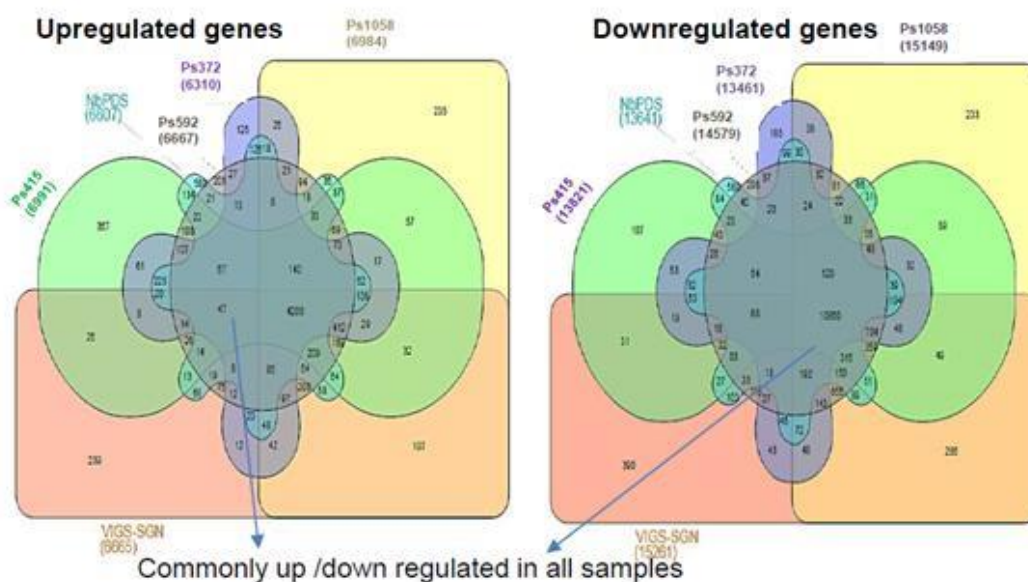


pssRNAit: A web server for designing effective and specific plant siRNAs with genome-wide off-target assessment

At DBT-Regional Centre for Biotechnology (RCB), Faridabad designed an advanced web server named pssRNAit (plant specific small non-coding RNAi tool) that can be used to design functional small interfering RNAs for precise gene silencing in plants and provides a path to study gene functions and phenotypes in plants effectively. In developing this tool, the transcript dataset of plants, several rules governing gene silencing, and a series of computational models of the biological mechanism of the RNA interference (RNAi) pathway were integrated. The designed pool of siRNAs can be used to construct a long double-stranded RNA (long-dsRNA) and expressed through virus-induced gene silencing (VIGS) or synthetic trans-acting siRNA (syn59 tasiRNA) vectors for gene silencing.



Dr. Ramu S. Vemanna, Assistant Professor of RCB, Faridabad co-authored a research article with other collaborators on “pssRNAit-a web server for designing effective and specific plant siRNAs with genome-wide off-target assessment”.

Link: <http://www.plantphysiol.org/content/plantphysiol/early/2020/07/10/pp.20.00293.full.pdf>