

Complex molecular mechanisms underlying MYMIV-resistance in *Vigna mungo* revealed by comparative transcriptome profiling

Anirban Kundu^{1,2*}, Pankaj Kumar Singh^{1*}, Avishek Dey¹, Sayak Ganguli³ and Amita Pal^{**1}

¹Division of Plant Biology, Bose Institute, Kolkata-700054, India.

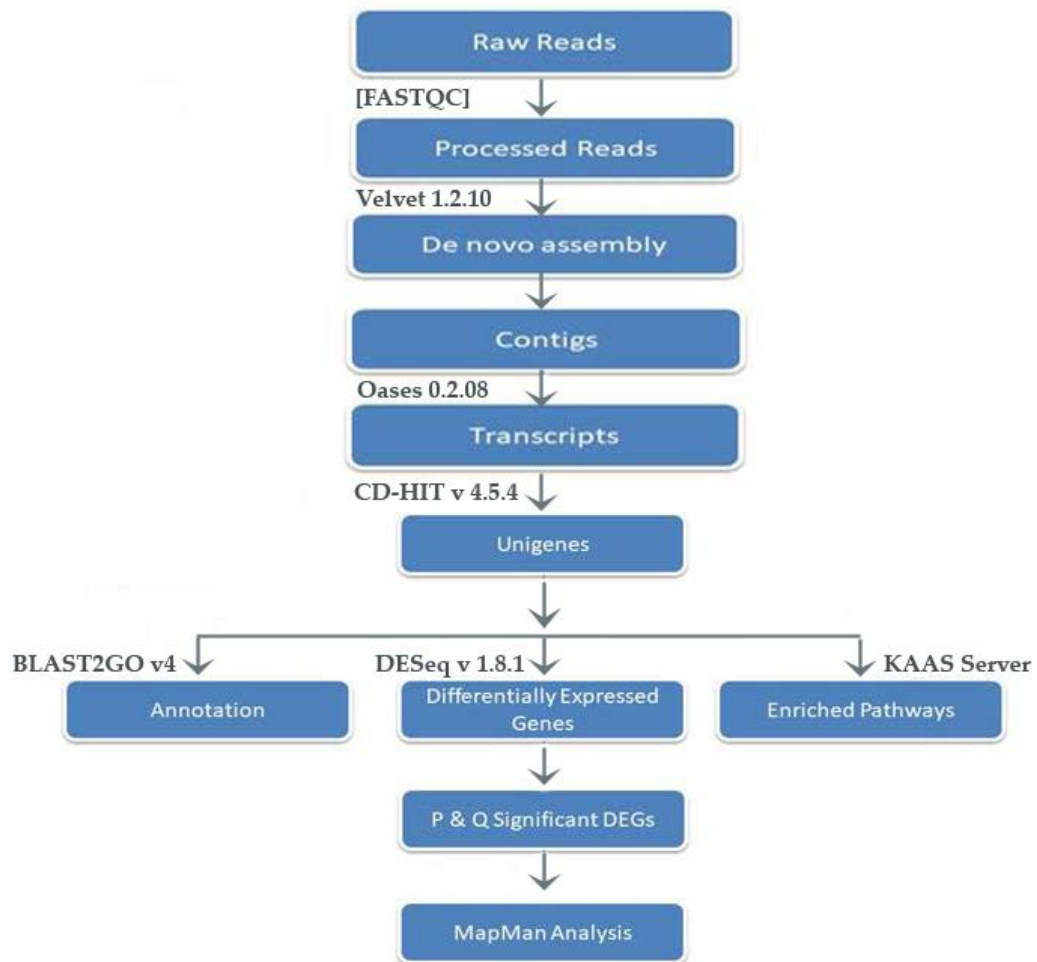
²Ramakrishna Mission Vivekananda Centenary College, Rahara, Kolkata- 7000118, India.

³Theoretical and Computational Biology, AIST, Palta, Kolkata, India.

* Both the authors contributed equally

** Corresponding Author: amita@jcbose.ac.in

Supplementary Figure S1: NGS workflow blueprint for the RNA sequencing data.



Supplementary Table S2: Primers list of transcripts used for qPCR analyses. Sequence information and amplicon characteristics of primers of 15 candidate genes used for qPCR expression analyses.

| Sl. No. | Name | Sequence (5' to 3') | | Amplicon Length (bp) |
|---------|--------------------------------------|---------------------|-------------------------|----------------------|
| 1. | Calmodulin (CAM) | F | CGAAGAATGCCACAACATGA | 237 |
| | | R | CTACTCAGGGCGATTGAAC | |
| 2. | Heat shock protein 70 (HSP70) | F | TTCAAACCCCTCCTTGGGACAC | 203 |
| | | R | GAATGAAAGCTGGCCAGAAG | |
| 3. | ABC transporter (ABC) | F | CAGGCCTATGTGACTCAAG | 180 |
| | | R | ACTCTCCTCTTCTGTCTCTCC | |
| 4. | NAC transcription factor (NAC) | F | GTGGAGGGTGTGAAGGTTATC | 224 |
| | | R | CTCCGTCTCAGGTTCCCATGG | |
| 5. | Defensin (DEF) | F | GTGGCTCTGAGACTCACATG | 166 |
| | | R | CCGGTAAGCCTTCTCCACGC | |
| 6. | Argonaute (AGO) | F | GACGTGTCTCTGCTGGCAG | 250 |
| | | R | ACACCTCCTCTACATCAGC | |
| 7. | Ankyrin (ANK) | F | TACCACCCGTTGCACATAGC | 209 |
| | | R | GCAGGCAAGTACAACCCATC | |
| 8. | E3- Ubiquitin ligase(E3 UBL) | F | GTTTCGATATGCTTCAGGC | 139 |
| | | R | AGAGCTGCCTGAATGAAATG | |
| 9. | R-gene (NB-LRR) | F | CATGGGCTGGAACACCTCC | 236 |
| | | R | GCTCTCTATTTCAGTGTCTTGAC | |
| 10. | Superoxide dismutase (SOD) | F | CCCTTGTCTGGGGAGGTTAT | 209 |
| | | R | GCACATCACACCATCCAAGGT | |
| 11. | WRKY transcription factor (WRKY33) | F | GATCACGAATCTCTCTCAGG | 238 |
| | | R | CGCTGGACCCCTCTAACAC | |
| 12. | Thioredoxin (TRX) | F | GAATCACTCCTCTGCGGTTTC | 168 |
| | | R | TCCATAGCGGGAGAGATGAG | |
| 13. | Peroxidase (PER) | F | CTTGGCACAAAGCCTAGCTC | 164 |
| | | R | GAGCAGCCCAATATACTCGC | |
| 14. | Cysteine protease (CSP) | F | TCCTGCAAATTTGATAAAAAGCA | 190 |
| | | R | ATGGCATGAGACACCACCA | |
| 15. | Pathogenesis related protein 1 (PR1) | F | CTGGCAAAGCCAAGAGTGAT | 248 |
| | | R | AGCTCTCACAATTATGCAGC | |