

Supplementary Table S10. Significant terms in Ingenuity pathway analysis in human MDS patients for hypomethylated genes.

| Top Networks                                                                              |                     |               |
|-------------------------------------------------------------------------------------------|---------------------|---------------|
| Associated Network Functions                                                              | Score               |               |
| Behavior, Endocrine System Development and Function, Lipid Metabolism                     | 41                  |               |
| Nervous System Development and Function, Cellular Development, Cell Death                 | 40                  |               |
| Cellular Growth and Proliferation, Cell Cycle, Connective Tissue Development and Function | 28                  |               |
| Cardiovascular System Development and Function, Organismal Development, Tissue Morphology | 23                  |               |
| Lipid Metabolism, Molecular Transport, Small Molecule Biochemistry                        | 21                  |               |
| Top Bio Functions                                                                         |                     |               |
| Diseases and Disorders                                                                    |                     |               |
| Name                                                                                      | p-value             | # Molecules   |
| Metabolic Disease                                                                         | 7.68E-06 - 6.27E-03 | 40            |
| Neurological Disease                                                                      | 1.32E-05 - 6.27E-03 | 46            |
| Endocrine System Disorders                                                                | 1.71E-05 - 6.27E-03 | 38            |
| Gastrointestinal Disease                                                                  | 2.02E-05 - 6.27E-03 | 43            |
| Cardiovascular Disease                                                                    | 3.89E-05 - 6.27E-03 | 32            |
| Molecular and Cellular Functions                                                          |                     |               |
| Name                                                                                      | p-value             | # Molecules   |
| Cellular Development                                                                      | 2.58E-09 - 6.27E-03 | 36            |
| Cell-To-Cell Signaling and Interaction                                                    | 1.59E-07 - 6.27E-03 | 18            |
| Cellular Growth and Proliferation                                                         | 3.05E-07 - 6.27E-03 | 30            |
| Cell Death                                                                                | 2.37E-06 - 6.27E-03 | 29            |
| Cellular Compromise                                                                       | 4.17E-06 - 6.27E-03 | 5             |
| Physiological System Development and Function                                             |                     |               |
| Name                                                                                      | p-value             | # Molecules   |
| Nervous System Development and Function                                                   | 4.29E-11 - 6.27E-03 | 45            |
| Embryonic Development                                                                     | 2.26E-08 - 6.27E-03 | 22            |
| Tissue Development                                                                        | 2.26E-08 - 6.27E-03 | 22            |
| Tissue Morphology                                                                         | 2.34E-08 - 6.27E-03 | 22            |
| Behavior                                                                                  | 2.05E-07 - 6.27E-03 | 20            |
| Top Canonical Pathways                                                                    |                     |               |
| Name                                                                                      | p-value             | Ratio         |
| Corticotropin Releasing Hormone Signaling                                                 | 6.13E-04            | 5/134 (0.037) |
| Ephrin Receptor Signaling                                                                 | 7.46E-04            | 6/199 (0.03)  |
| Thyroid Cancer Signaling                                                                  | 2.63E-03            | 3/46 (0.065)  |
| Axonal Guidance Signaling                                                                 | 3.19E-03            | 8/432 (0.019) |
| Wnt/b-catenin Signaling                                                                   | 4.33E-03            | 5/174 (0.029) |