**A protocol for epitranscriptome analysis from m6A-seq data**

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|  |  | MarkDown |  | Yes | Yes | Yes | Yes | Yes | Yes |
| **Software** | **Function** |  | M0. Checking Existing Databases | M1. Data Preprocessing | M2. Differential Expression | M3. Site Detection - Host | M4. Site Detection - Virus | M5. Differential Methylation | M6. Reference based analysis |
| m6A-Atlas | m6A database |  | R |  |  | O |  | O |  |
| RMDisease | SNP disease database |  | R |  |  | O |  | O |  |
| Whistle Server | Site prediction | Less Reliable | O |  |  | O |  | O |  |
| SRA toolkit | Obtaining GEO data |  |  | O |  |  |  |  |  |
| FASTQC | Quality evaluation |  |  | O |  |  |  |  |  |
| Trim Galore | Reads trimming |  |  | O |  |  |  |  |  |
| Hisat2 | Reads alignment |  |  | R |  |  |  |  |  |
| Ballgown | Differential expression |  |  |  | R |  |  |  |  |
| exomePeak2 | m6A-seq data analysis |  |  |  |  | R | R | R | R |
| Homer | Motif finding | Strand Specific |  |  |  | R |  | N |  |
| MetaTX | Distribution of m6A sites | Isoform ambiguity |  |  |  | R |  | O |  |
| IGV | Visualization of reads |  |  |  |  | R | R | N |  |
| DAVID | GO enrichment analysis | hyper/hypo vs both |  |  |  | N |  | R |  |
| RNAmod | Annotation web server |  |  |  |  | O |  | O |  |
|  |  | **Key Points** |  |  | Input control samples of m6A-seq data | Strand-specificity GC correction | Strand-specificity  GC correction  M level problem | GC correction  Absolute vs relative DM | Differential analysis  M level quantification (reasonable) |

**Note  
Team:** Di Zhen, Zhen Wei\*, Jingxian Zhou and Jia Meng **Abbreviation:** Required (R), Optional (O) and Not Recommended (N)  
**Expectation**: a GitHub MarkDown file with the source codes for all the analysis & a research paper of top quality  
**Additional information**: Jingxian Zhou will help check everything by reproducing the results with your source codes.  
**MarkDown example**: <https://github.com/scottzijiezhang/m6A-seq_analysis_workflow>   
**Paper example**: <https://www.sciencedirect.com/science/article/abs/pii/S1046202314002308>