Functional analysis

Miscellaneous

Quality control

Relative quantification

MS
stats

`artmsQualityControlEvidenceBasic()`

artmsQualityControlEvidenceExtended()

artmsQuantification()

artmsAnalysisQuantifications()

```
artmsEvidenceToSAINTq()
artmsEvidenceToSaintExpress()
artmsPhosfateOutput()
artmsPhotonOutput()
etc
```

~/ ➔

>

```
> artmsQualityControlEvidenceExtended(evidence_file = "evidence.txt",
+                                      keys_file = "keys.txt")
```

keys.txt

```
-------------------------------------------------
artMS: EXTENDED QUALITY CONTROL (-evidence.txt based)
-------------------------------------------------
>> MERGING FILES
>> GENERATING QC PLOTS
--- Plot PSM done
--- Plot IONS done
--- Plot TYPE done
--- Plot PEPTIDES done
--- Plot PEPTIDE OVERLAP done
--- Plot PROTEINS done
--- Plot PROTEIN OVERLAP done
--- Plot Plot Ion Oversampling done
--- Plot Charge State done
--- Plot Mass Error done
--- Plot Mass-over-Charge distribution done
--- Plot Peptide Intensity CV done
--- Plot Peptide Detection (using modified.sequence) done
--- Plot Protein Intensity CV done
--- Plot Protein Detection done
--- Plot ID overlap done
--- Plot PCA and Inter-Correlation (WARNING: it might take a long time.
                                   Please, be patient)
--- Plot Sample Preparation... done
>> QC extended completed
```

artMS

Analytical R Tools
for Mass Spectrometry

http://artms.org

Bioconductor
OPEN SOURCE SOFTWARE FOR BIOINFORMATICS

Input Files

evidence.txt

keys.txt

Quality control

artmsQualityControlEvidenceBasic()

artmsQualityControlEvidenceExtended()
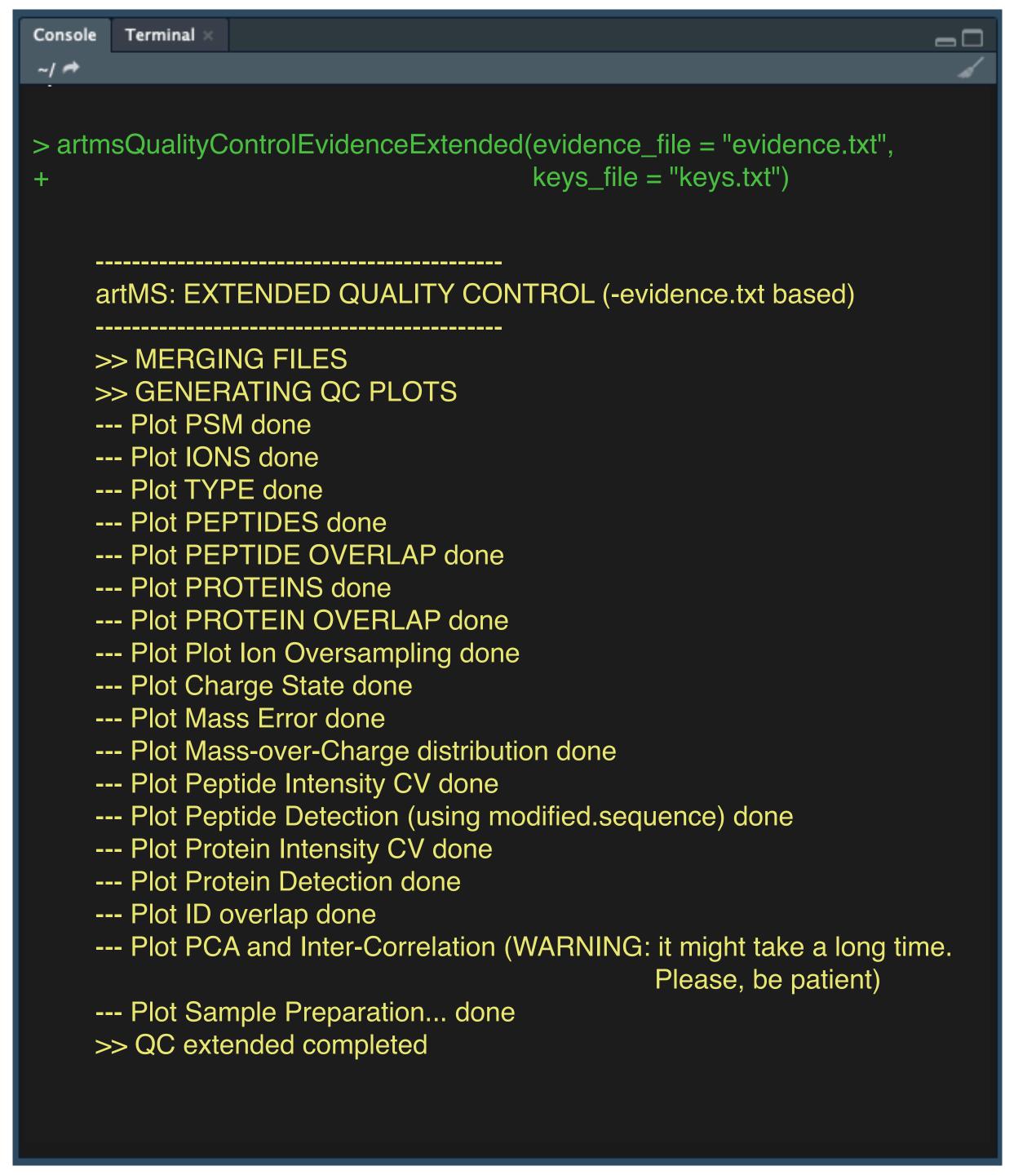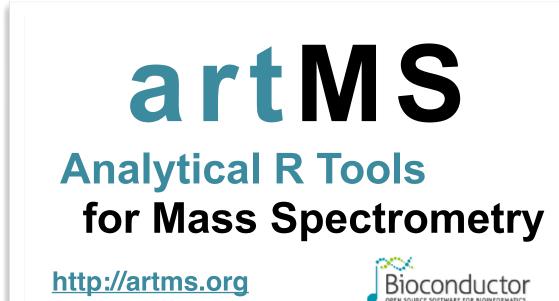
Relative quantification

artmsQuantification()

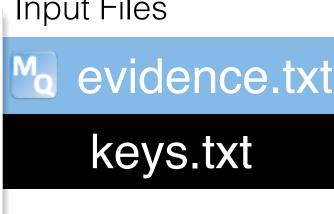Functional analysis
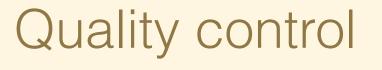
artmsAnalysisQuantifications()

Miscellaneous

artmsEvidenceToSAINTq()
artmsEvidenceToSaintExpress()
artmsPhosfateOutput()
artmsPhotonOutput()
etc

Console | **Terminal** ✕

~/ ➡

```
> artmsQualityControlEvidenceExtended(evidence_file = "evidence.txt",
+                                     keys_file = "keys.txt")


-------------------------------------------
artMS: EXTENDED QUALITY CONTROL (-evidence.txt based)
-------------------------------------------
>> MERGING FILES
>> GENERATING QC PLOTS
--- Plot PSM done
--- Plot IONS done
--- Plot TYPE done
--- Plot PEPTIDES done
--- Plot PEPTIDE OVERLAP done
--- Plot PROTEINS done
--- Plot PROTEIN OVERLAP done
--- Plot Plot Ion Oversampling done
--- Plot Charge State done
--- Plot Mass Error done
--- Plot Mass-over-Charge distribution done
--- Plot Peptide Intensity CV done
--- Plot Peptide Detection (using modified.sequence) done
--- Plot Protein Intensity CV done
--- Plot Protein Detection done
--- Plot ID overlap done
--- Plot PCA and Inter-Correlation (WARNING: it might take a long time.
                                    Please, be patient)

--- Plot Sample Preparation... done
>> QC extended completed
```

artMS
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Input Files

evidence.txt

keys.txt

Quality control

Relative quantification

Functional analysis

Miscellaneous

artmsQualityControlEvidenceBasic()

artmsQualityControlEvidenceExtended()

- Charge State Distribution
- ID overlap
- Peptide Ion Statistics
- Precursor Mass Error
- Precursor m/z error
- Frequency Peptide Detection
- Peptide Intensity CV
- Peptide Statistics
- Peptide Ion oversampling
- Protein detection frequency
- Protein Statistics / CV
- PCA
- Peptide-spectrum matches
- MaxQuant Type statistics

artmsEvidenceToSAINTq()
artmsEvidenceToSaintExpress()

etc