MegaLTR: A web server and standalone pipeline for detecting and annotating LTR-Retrotransposons in plant genomes

**Supplementary File 4**

**The times of the steps indicated by MegaLTR for the 26 genomes examined**

*Arabidopsis lyrata*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Arabidopsis\_lyrata/Arabidopsis\_lyrata.fna -G /Arabidopsis\_lyrata/Arabidopsis\_lyrata.gff -T Arabidopsis\_lyrata\_trna.fa -P Arabidopsis\_lyrata -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 01:09:01 +01 2023 Start time

Sun Jan 29 01:09:08 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 01:13:00 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 01:13:01 +01 2023 LTRdigest Started

Sun Jan 29 01:15:30 +01 2023 LTRdigest Done

Sun Jan 29 01:15:30 +01 2023 TEsorter Started

Sun Jan 29 01:16:47 +01 2023 TEsorter Done

Sun Jan 29 01:16:47 +01 2023 Filtering TEsorter results Started

Sun Jan 29 01:16:47 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 01:17:05 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 01:18:03 +01 2023 Preparing R plots files

Sun Jan 29 01:18:10 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 01:18:10 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 01:18:15 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 01:18:15 +01 2023 LTR-RT near genes started

Sun Jan 29 01:18:23 +01 2023 LTR-RT near genes done

Sun Jan 29 01:18:23 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 01:19:10 +01 2023 MegaLTR Done, The results saved in (Results/Arabidopsis\_lyrata/Collected\_Files)

*Arabidopsis thaliana*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Sun Jan 29 00:46:11 +01 2023 Start time

Parameters: -A 3 -F /Arabidopsis\_thaliana/Arabidopsis\_thaliana.fna -G /Arabidopsis\_thaliana/Arabidopsis\_thaliana.gff -T Arabidopsis\_thaliana\_trna.fa -P Arabidopsis\_thaliana -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 00:46:17 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 00:53:08 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 00:53:09 +01 2023 LTRdigest Started

Sun Jan 29 00:54:03 +01 2023 LTRdigest Done

Sun Jan 29 00:54:03 +01 2023 TEsorter Started

Sun Jan 29 00:54:12 +01 2023 TEsorter Done

Sun Jan 29 00:54:12 +01 2023 Filtering TEsorter results Started

Sun Jan 29 00:54:12 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 00:54:15 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 00:54:24 +01 2023 Preparing R plots files

Sun Jan 29 00:54:30 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 00:54:30 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 00:54:32 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 00:54:32 +01 2023 LTR-RT near genes started

Sun Jan 29 00:54:34 +01 2023 LTR-RT near genes done

Sun Jan 29 00:54:34 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 00:55:10 +01 2023 MegaLTR Done, The results saved in (Results/Arabidopsis\_thaliana/Collected\_Files)

*Brassica rapa*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Brassica\_rapa/Brassica\_rapa.fna -G /Brassica\_rapa/Brassica\_rapa.gff -T Brassica\_rapa\_trna.fa -P Brassica\_rapa -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 01:29:40 +01 2023 Start time

Sun Jan 29 01:29:50 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 02:02:09 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 02:02:10 +01 2023 LTRdigest Started

Sun Jan 29 02:09:10 +01 2023 LTRdigest Done

Sun Jan 29 02:09:10 +01 2023 TEsorter Started

Sun Jan 29 02:11:21 +01 2023 TEsorter Done

Sun Jan 29 02:11:21 +01 2023 Filtering TEsorter results Started

Sun Jan 29 02:11:21 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 02:11:52 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 02:15:22 +01 2023 Preparing R plots files

Sun Jan 29 02:15:28 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 02:15:28 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 02:15:45 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 02:15:45 +01 2023 LTR-RT near genes started

Sun Jan 29 02:16:13 +01 2023 LTR-RT near genes done

Sun Jan 29 02:16:13 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 02:17:05 +01 2023 MegaLTR Done, The results saved in (Results/Brassica\_rapa/Collected\_Files)

*Citrus clementina*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Citrus\_clementina/Citrus\_clementina.fna -G /Citrus\_clementina/Citrus\_clementina.gff -T Citrus\_clementina\_trna.fa -P Citrus\_clementina -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 02:17:06 +01 2023 Start time

Sun Jan 29 02:17:15 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 02:24:01 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 02:24:02 +01 2023 LTRdigest Started

Sun Jan 29 02:27:55 +01 2023 LTRdigest Done

Sun Jan 29 02:27:55 +01 2023 TEsorter Started

Sun Jan 29 02:29:29 +01 2023 TEsorter Done

Sun Jan 29 02:29:29 +01 2023 Filtering TEsorter results Started

Sun Jan 29 02:29:29 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 02:29:57 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 02:31:40 +01 2023 Preparing R plots files

Sun Jan 29 02:31:46 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 02:31:46 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 02:31:52 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 02:31:52 +01 2023 LTR-RT near genes started

Sun Jan 29 02:32:00 +01 2023 LTR-RT near genes done

Sun Jan 29 02:32:00 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 02:32:54 +01 2023 MegaLTR Done, The results saved in (Results/Citrus\_clementina/Collected\_Files)

*Citrus unshiu*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Citrus\_unshiu/Citrus\_unshiu.fna -G /Citrus\_unshiu/Citrus\_unshiu.gff -T Citrus\_unshiu\_trna.fa -P Citrus\_unshiu -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 02:32:54 +01 2023 Start time

Sun Jan 29 02:33:03 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 02:41:55 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 02:41:56 +01 2023 LTRdigest Started

Sun Jan 29 02:47:14 +01 2023 LTRdigest Done

Sun Jan 29 02:47:14 +01 2023 TEsorter Started

Sun Jan 29 02:47:42 +01 2023 TEsorter Done

Sun Jan 29 02:47:42 +01 2023 Filtering TEsorter results Started

Sun Jan 29 02:47:42 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 02:48:12 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 02:48:35 +01 2023 Preparing R plots files

Sun Jan 29 02:48:42 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 02:48:42 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 02:48:44 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 02:48:44 +01 2023 LTR-RT near genes started

Sun Jan 29 02:48:48 +01 2023 LTR-RT near genes done

Sun Jan 29 02:48:48 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 02:49:22 +01 2023 MegaLTR Done, The results saved in (Results/Citrus\_unshiu/Collected\_Files)

*Cucumis sativus*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Cucumis\_sativus/Cucumis\_sativus.fna -G /Cucumis\_sativus/Cucumis\_sativus.gff -T Cucumis\_sativus\_trna.fa -P Cucumis\_sativus -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 03:11:50 +01 2023 Start time

Sun Jan 29 03:11:57 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 03:16:04 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 03:16:05 +01 2023 LTRdigest Started

Sun Jan 29 03:18:24 +01 2023 LTRdigest Done

Sun Jan 29 03:18:24 +01 2023 TEsorter Started

Sun Jan 29 03:18:46 +01 2023 TEsorter Done

Sun Jan 29 03:18:46 +01 2023 Filtering TEsorter results Started

Sun Jan 29 03:18:46 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 03:19:06 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 03:19:30 +01 2023 Preparing R plots files

Sun Jan 29 03:19:36 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 03:19:36 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 03:19:37 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 03:19:37 +01 2023 LTR-RT near genes started

Sun Jan 29 03:19:39 +01 2023 LTR-RT near genes done

Sun Jan 29 03:19:39 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 03:20:17 +01 2023 MegaLTR Done, The results saved in (Results/Cucumis\_sativus/Collected\_Files)

*Glycine max*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Glycine\_max/Glycine\_max.fna -G /Glycine\_max/Glycine\_max.gff -T Glycine\_max\_trna.fa -P Glycine\_max -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 01:09:15 +01 2023 Start time

Sun Jan 29 01:09:40 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 01:31:35 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 01:31:37 +01 2023 LTRdigest Started

Sun Jan 29 01:47:51 +01 2023 LTRdigest Done

Sun Jan 29 01:47:51 +01 2023 TEsorter Started

Sun Jan 29 01:52:02 +01 2023 TEsorter Done

Sun Jan 29 01:52:02 +01 2023 Filtering TEsorter results Started

Sun Jan 29 01:52:02 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 01:53:30 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 01:59:53 +01 2023 Preparing R plots files

Sun Jan 29 02:00:00 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 02:00:00 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 02:00:39 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 02:00:39 +01 2023 LTR-RT near genes started

Sun Jan 29 02:01:38 +01 2023 LTR-RT near genes done

Sun Jan 29 02:01:38 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 02:03:07 +01 2023 MegaLTR Done, The results saved in (Results/Glycine\_max/Collected\_Files)

*Medicago truncatula*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Medicago\_truncatula/Medicago\_truncatula.fna -G /Medicago\_truncatula/Medicago\_truncatula.gff -T Medicago\_truncatula\_trna.fa -P Medicago\_truncatula -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 02:03:07 +01 2023 Start time

Sun Jan 29 02:03:20 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 02:10:22 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 02:10:23 +01 2023 LTRdigest Started

Sun Jan 29 02:16:24 +01 2023 LTRdigest Done

Sun Jan 29 02:16:24 +01 2023 TEsorter Started

Sun Jan 29 02:19:10 +01 2023 TEsorter Done

Sun Jan 29 02:19:10 +01 2023 Filtering TEsorter results Started

Sun Jan 29 02:19:10 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 02:19:49 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 02:27:35 +01 2023 Preparing R plots files

Sun Jan 29 02:27:42 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 02:27:42 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 02:27:53 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 02:27:53 +01 2023 LTR-RT near genes started

Sun Jan 29 02:28:11 +01 2023 LTR-RT near genes done

Sun Jan 29 02:28:11 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 02:29:08 +01 2023 MegaLTR Done, The results saved in (Results/Medicago\_truncatula/Collected\_Files)

*Mikania micrantha*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Mikania\_micrantha/Mikania\_micrantha.fna -G /Mikania\_micrantha/Mikania\_micrantha.gff -T Mikania\_micrantha\_trna.fa -P Mikania\_micrantha -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 02:29:08 +01 2023 Start time

Sun Jan 29 02:30:03 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 03:51:32 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 03:51:33 +01 2023 LTRdigest Started

Sun Jan 29 04:42:56 +01 2023 LTRdigest Done

Sun Jan 29 04:42:56 +01 2023 TEsorter Started

Sun Jan 29 05:09:44 +01 2023 TEsorter Done

Sun Jan 29 05:09:44 +01 2023 Filtering TEsorter results Started

Sun Jan 29 05:09:44 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 05:13:04 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 07:07:49 +01 2023 Preparing R plots files

Sun Jan 29 07:07:56 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 07:07:56 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 07:13:43 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 07:13:43 +01 2023 LTR-RT near genes started

Sun Jan 29 07:17:03 +01 2023 LTR-RT near genes done

Sun Jan 29 07:17:03 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 07:20:33 +01 2023 MegaLTR Done, The results saved in (Results/Mikania\_micrantha/Collected\_Files)

*Oryza sativa Japonica*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Oryza\_sativa\_Japonica/Oryza\_sativa\_Japonica.fna -G /Oryza\_sativa\_Japonica/Oryza\_sativa\_Japonica.gff -T Oryza\_sativa\_Japonica\_trna.fa -P Oryza\_sativa\_Japonica -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000013 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 07:20:33 +01 2023 Start time

Sun Jan 29 07:20:45 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 07:33:45 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 07:33:46 +01 2023 LTRdigest Started

Sun Jan 29 07:38:28 +01 2023 LTRdigest Done

Sun Jan 29 07:38:28 +01 2023 TEsorter Started

Sun Jan 29 07:40:50 +01 2023 TEsorter Done

Sun Jan 29 07:40:50 +01 2023 Filtering TEsorter results Started

Sun Jan 29 07:40:50 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 07:41:23 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 07:47:14 +01 2023 Preparing R plots files

Sun Jan 29 07:47:20 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 07:47:20 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 07:47:29 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 07:47:29 +01 2023 LTR-RT near genes started

Sun Jan 29 07:47:42 +01 2023 LTR-RT near genes done

Sun Jan 29 07:47:42 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 07:48:40 +01 2023 MegaLTR Done, The results saved in (Results/Oryza\_sativa\_Japonica/Collected\_Files)

*Panicum hallii*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Panicum\_hallii/Panicum\_hallii.fna -G /Panicum\_hallii/Panicum\_hallii.gff -T Panicum\_hallii\_trna.fa -P Panicum\_hallii -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000013 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 07:48:40 +01 2023 Start time

Sun Jan 29 07:48:56 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 08:09:07 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 08:09:08 +01 2023 LTRdigest Started

Sun Jan 29 08:17:16 +01 2023 LTRdigest Done

Sun Jan 29 08:17:16 +01 2023 TEsorter Started

Sun Jan 29 08:24:47 +01 2023 TEsorter Done

Sun Jan 29 08:24:47 +01 2023 Filtering TEsorter results Started

Sun Jan 29 08:24:48 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 08:25:37 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 08:49:47 +01 2023 Preparing R plots files

Sun Jan 29 08:49:54 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 08:49:54 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 08:50:16 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 08:50:16 +01 2023 LTR-RT near genes started

Sun Jan 29 08:50:45 +01 2023 LTR-RT near genes done

Sun Jan 29 08:50:45 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 08:51:54 +01 2023 MegaLTR Done, The results saved in (Results/Panicum\_hallii/Collected\_Files)

*Phoenix dactylifera*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Phoenix\_dactylifera/Phoenix\_dactylifera.fna -G /Phoenix\_dactylifera/Phoenix\_dactylifera.gff -T Phoenix\_dactylifera\_trna.fa -P Phoenix\_dactylifera -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 08:51:55 +01 2023 Start time

Sun Jan 29 08:52:12 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 09:14:08 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 09:14:09 +01 2023 LTRdigest Started

Sun Jan 29 09:29:06 +01 2023 LTRdigest Done

Sun Jan 29 09:29:06 +01 2023 TEsorter Started

Sun Jan 29 09:40:20 +01 2023 TEsorter Done

Sun Jan 29 09:40:20 +01 2023 Filtering TEsorter results Started

Sun Jan 29 09:40:20 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 09:41:28 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 10:09:16 +01 2023 Preparing R plots files

Sun Jan 29 10:09:23 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 10:09:23 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 10:10:23 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 10:10:23 +01 2023 LTR-RT near genes started

Sun Jan 29 10:11:27 +01 2023 LTR-RT near genes done

Sun Jan 29 10:11:27 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 10:12:34 +01 2023 MegaLTR Done, The results saved in (Results/Phoenix\_dactylifera/Collected\_Files)

*Physcomitrella patens*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Physcomitrella\_patens/Physcomitrella\_patens.fna -G /Physcomitrella\_patens/Physcomitrella\_patens.gff -T Physcomitrella\_patens\_trna.fa -P Physcomitrella\_patens -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 01:09:28 +01 2023 Start time

Sun Jan 29 01:09:40 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 01:16:20 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 01:16:21 +01 2023 LTRdigest Started

Sun Jan 29 01:22:41 +01 2023 LTRdigest Done

Sun Jan 29 01:22:41 +01 2023 TEsorter Started

Sun Jan 29 01:25:38 +01 2023 TEsorter Done

Sun Jan 29 01:25:38 +01 2023 Filtering TEsorter results Started

Sun Jan 29 01:25:38 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 01:26:18 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 01:28:29 +01 2023 Preparing R plots files

Sun Jan 29 01:28:35 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 01:28:35 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 01:28:47 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 01:28:47 +01 2023 LTR-RT near genes started

Sun Jan 29 01:29:03 +01 2023 LTR-RT near genes done

Sun Jan 29 01:29:03 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 01:30:11 +01 2023 MegaLTR Done, The results saved in (Results/Physcomitrella\_patens/Collected\_Files)

*Populus trichocarpa*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Populus\_trichocarpa/Populus\_trichocarpa.fna -G /Populus\_trichocarpa/Populus\_trichocarpa.gff -T Populus\_trichocarpa\_trna.fa -P Populus\_trichocarpa -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 01:30:12 +01 2023 Start time

Sun Jan 29 01:30:23 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 01:39:52 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 01:39:53 +01 2023 LTRdigest Started

Sun Jan 29 01:44:57 +01 2023 LTRdigest Done

Sun Jan 29 01:44:57 +01 2023 TEsorter Started

Sun Jan 29 01:45:46 +01 2023 TEsorter Done

Sun Jan 29 01:45:46 +01 2023 Filtering TEsorter results Started

Sun Jan 29 01:45:46 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 01:46:22 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 01:47:37 +01 2023 Preparing R plots files

Sun Jan 29 01:47:44 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 01:47:44 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 01:47:48 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 01:47:48 +01 2023 LTR-RT near genes started

Sun Jan 29 01:47:53 +01 2023 LTR-RT near genes done

Sun Jan 29 01:47:53 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 01:48:37 +01 2023 MegaLTR Done, The results saved in (Results/Populus\_trichocarpa/Collected\_Files)

*Prunus persica*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Prunus\_persica/Prunus\_persica.fna -G /Prunus\_persica/Prunus\_persica.gff -T Prunus\_persica\_trna.fa -P Prunus\_persica -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 01:48:37 +01 2023 Start time

Sun Jan 29 01:48:44 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 01:58:20 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 01:58:22 +01 2023 LTRdigest Started

Sun Jan 29 02:01:06 +01 2023 LTRdigest Done

Sun Jan 29 02:01:06 +01 2023 TEsorter Started

Sun Jan 29 02:02:10 +01 2023 TEsorter Done

Sun Jan 29 02:02:10 +01 2023 Filtering TEsorter results Started

Sun Jan 29 02:02:10 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 02:02:31 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 02:03:16 +01 2023 Preparing R plots files

Sun Jan 29 02:03:22 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 02:03:22 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 02:03:25 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 02:03:25 +01 2023 LTR-RT near genes started

Sun Jan 29 02:03:30 +01 2023 LTR-RT near genes done

Sun Jan 29 02:03:30 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 02:04:17 +01 2023 MegaLTR Done, The results saved in (Results/Prunus\_persica/Collected\_Files)

*Rosa chinensis*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Rosa\_chinensis/Rosa\_chinensis.fna -G /Rosa\_chinensis/Rosa\_chinensis.gff -T Rosa\_chinensis\_trna.fa -P Rosa\_chinensis -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 02:36:04 +01 2023 Start time

Sun Jan 29 02:36:19 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 02:53:03 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 02:53:04 +01 2023 LTRdigest Started

Sun Jan 29 03:02:26 +01 2023 LTRdigest Done

Sun Jan 29 03:02:26 +01 2023 TEsorter Started

Sun Jan 29 03:09:09 +01 2023 TEsorter Done

Sun Jan 29 03:09:09 +01 2023 Filtering TEsorter results Started

Sun Jan 29 03:09:09 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 03:09:58 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 03:16:54 +01 2023 Preparing R plots files

Sun Jan 29 03:17:00 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 03:17:00 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 03:17:46 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 03:17:46 +01 2023 LTR-RT near genes started

Sun Jan 29 03:18:52 +01 2023 LTR-RT near genes done

Sun Jan 29 03:18:52 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 03:20:14 +01 2023 MegaLTR Done, The results saved in (Results/Rosa\_chinensis/Collected\_Files)

*Salvia splendens*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Salvia\_splendens/Salvia\_splendens.fna -G /Salvia\_splendens/Salvia\_splendens.gff -T Salvia\_splendens\_trna.fa -P Salvia\_splendens -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 03:20:15 +01 2023 Start time

Sun Jan 29 03:20:37 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 04:39:46 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 04:39:47 +01 2023 LTRdigest Started

Sun Jan 29 05:05:40 +01 2023 LTRdigest Done

Sun Jan 29 05:05:40 +01 2023 TEsorter Started

Sun Jan 29 05:15:33 +01 2023 TEsorter Done

Sun Jan 29 05:15:33 +01 2023 Filtering TEsorter results Started

Sun Jan 29 05:15:33 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 05:16:55 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 05:30:22 +01 2023 Preparing R plots files

Sun Jan 29 05:30:29 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 05:30:29 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 05:32:21 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 05:32:21 +01 2023 LTR-RT near genes started

Sun Jan 29 05:34:51 +01 2023 LTR-RT near genes done

Sun Jan 29 05:34:51 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 05:36:49 +01 2023 MegaLTR Done, The results saved in (Results/Salvia\_splendens/Collected\_Files)

*Selaginella moellendorffii*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Selaginella\_moellendorffii/Selaginella\_moellendorffii.fna -G /Selaginella\_moellendorffii/Selaginella\_moellendorffii.gff -T Selaginella\_moellendorffii\_trna.fa -P Selaginella\_moellendorffii -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 01:09:42 +01 2023 Start time

Sun Jan 29 01:09:48 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 01:14:01 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 01:14:02 +01 2023 LTRdigest Started

Sun Jan 29 01:17:14 +01 2023 LTRdigest Done

Sun Jan 29 01:17:14 +01 2023 TEsorter Started

Sun Jan 29 01:18:00 +01 2023 TEsorter Done

Sun Jan 29 01:18:00 +01 2023 Filtering TEsorter results Started

Sun Jan 29 01:18:00 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 01:18:18 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 01:19:22 +01 2023 Preparing R plots files

Sun Jan 29 01:19:28 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 01:19:28 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 01:19:32 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 01:19:32 +01 2023 LTR-RT near genes started

Sun Jan 29 01:19:37 +01 2023 LTR-RT near genes done

Sun Jan 29 01:19:37 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 01:20:12 +01 2023 MegaLTR Done, The results saved in (Results/Selaginella\_moellendorffii/Collected\_Files)

*Sesamum indicum*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Sesamum\_indicum/Sesamum\_indicum.fna -G /Sesamum\_indicum/Sesamum\_indicum.gff -T Sesamum\_indicum\_trna.fa -P Sesamum\_indicum -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 01:20:12 +01 2023 Start time

Sun Jan 29 01:20:21 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 01:35:19 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 01:35:20 +01 2023 LTRdigest Started

Sun Jan 29 01:39:41 +01 2023 LTRdigest Done

Sun Jan 29 01:39:41 +01 2023 TEsorter Started

Sun Jan 29 01:40:06 +01 2023 TEsorter Done

Sun Jan 29 01:40:06 +01 2023 Filtering TEsorter results Started

Sun Jan 29 01:40:06 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 01:40:32 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 01:40:48 +01 2023 Preparing R plots files

Sun Jan 29 01:40:54 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 01:40:54 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 01:40:56 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 01:40:56 +01 2023 LTR-RT near genes started

Sun Jan 29 01:40:58 +01 2023 LTR-RT near genes done

Sun Jan 29 01:40:58 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 01:41:35 +01 2023 MegaLTR Done, The results saved in (Results/Sesamum\_indicum/Collected\_Files)

*Setaria viridis*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Setaria\_viridis/Setaria\_viridis.fna -G /Setaria\_viridis/Setaria\_viridis.gff -T Setaria\_viridis\_trna.fa -P Setaria\_viridis -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000013 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 01:41:36 +01 2023 Start time

Sun Jan 29 01:41:46 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 01:53:49 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 01:53:50 +01 2023 LTRdigest Started

Sun Jan 29 01:58:00 +01 2023 LTRdigest Done

Sun Jan 29 01:58:00 +01 2023 TEsorter Started

Sun Jan 29 02:00:13 +01 2023 TEsorter Done

Sun Jan 29 02:00:13 +01 2023 Filtering TEsorter results Started

Sun Jan 29 02:00:13 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 02:00:48 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 02:04:56 +01 2023 Preparing R plots files

Sun Jan 29 02:05:02 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 02:05:02 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 02:05:10 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 02:05:10 +01 2023 LTR-RT near genes started

Sun Jan 29 02:05:22 +01 2023 LTR-RT near genes done

Sun Jan 29 02:05:22 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 02:06:15 +01 2023 MegaLTR Done, The results saved in (Results/Setaria\_viridis/Collected\_Files)

*Solanum lycopersicum*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Solanum\_lycopersicum/Solanum\_lycopersicum.fna -G /Solanum\_lycopersicum/Solanum\_lycopersicum.gff -T Solanum\_lycopersicum\_trna.fa -P Solanum\_lycopersicum -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 02:06:16 +01 2023 Start time

Sun Jan 29 02:06:41 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 02:21:32 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 02:21:33 +01 2023 LTRdigest Started

Sun Jan 29 02:31:39 +01 2023 LTRdigest Done

Sun Jan 29 02:31:39 +01 2023 TEsorter Started

Sun Jan 29 02:33:15 +01 2023 TEsorter Done

Sun Jan 29 02:33:15 +01 2023 Filtering TEsorter results Started

Sun Jan 29 02:33:15 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 02:34:28 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 02:37:38 +01 2023 Preparing R plots files

Sun Jan 29 02:37:44 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 02:37:44 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 02:37:50 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 02:37:50 +01 2023 LTR-RT near genes started

Sun Jan 29 02:38:00 +01 2023 LTR-RT near genes done

Sun Jan 29 02:38:00 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 02:38:56 +01 2023 MegaLTR Done, The results saved in (Results/Solanum\_lycopersicum/Collected\_Files)

*Solanum pennellii*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Solanum\_pennellii/Solanum\_pennellii.fna -G /Solanum\_pennellii/Solanum\_pennellii.gff -T Solanum\_pennellii\_trna.fa -P Solanum\_pennellii -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 02:38:56 +01 2023 Start time

Sun Jan 29 02:39:28 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 02:57:55 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 02:57:56 +01 2023 LTRdigest Started

Sun Jan 29 03:08:26 +01 2023 LTRdigest Done

Sun Jan 29 03:08:26 +01 2023 TEsorter Started

Sun Jan 29 03:09:57 +01 2023 TEsorter Done

Sun Jan 29 03:09:57 +01 2023 Filtering TEsorter results Started

Sun Jan 29 03:09:57 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 03:11:19 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 03:13:35 +01 2023 Preparing R plots files

Sun Jan 29 03:13:41 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 03:13:41 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 03:13:52 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 03:13:52 +01 2023 LTR-RT near genes started

Sun Jan 29 03:14:07 +01 2023 LTR-RT near genes done

Sun Jan 29 03:14:07 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 03:15:07 +01 2023 MegaLTR Done, The results saved in (Results/Solanum\_pennellii/Collected\_Files)

Sorghum bicolor

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Sorghum\_bicolor/Sorghum\_bicolor.fna -G /Sorghum\_bicolor/Sorghum\_bicolor.gff -T Sorghum\_bicolor\_trna.fa -P Sorghum\_bicolor -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000013 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 03:15:08 +01 2023 Start time

Sun Jan 29 03:15:30 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 03:50:45 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 03:50:46 +01 2023 LTRdigest Started

Sun Jan 29 04:03:32 +01 2023 LTRdigest Done

Sun Jan 29 04:03:32 +01 2023 TEsorter Started

Sun Jan 29 04:15:53 +01 2023 TEsorter Done

Sun Jan 29 04:15:53 +01 2023 Filtering TEsorter results Started

Sun Jan 29 04:15:53 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 04:17:03 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 04:39:20 +01 2023 Preparing R plots files

Sun Jan 29 04:39:27 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 04:39:27 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 04:40:26 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 04:40:26 +01 2023 LTR-RT near genes started

Sun Jan 29 04:41:30 +01 2023 LTR-RT near genes done

Sun Jan 29 04:41:30 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 04:43:25 +01 2023 MegaLTR Done, The results saved in (Results/Sorghum\_bicolor/Collected\_Files)

*Trifolium pratense*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Trifolium\_pratense/Trifolium\_pratense.fna -G /Trifolium\_pratense/Trifolium\_pratense.gff -T Trifolium\_pratense\_trna.fa -P Trifolium\_pratense -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 05:36:50 +01 2023 Start time

Sun Jan 29 05:37:05 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 05:49:23 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 05:49:24 +01 2023 LTRdigest Started

Sun Jan 29 05:58:24 +01 2023 LTRdigest Done

Sun Jan 29 05:58:24 +01 2023 TEsorter Started

Sun Jan 29 06:03:44 +01 2023 TEsorter Done

Sun Jan 29 06:03:44 +01 2023 Filtering TEsorter results Started

Sun Jan 29 06:03:44 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 06:04:24 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 06:12:00 +01 2023 Preparing R plots files

Sun Jan 29 06:12:06 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 06:12:06 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 06:12:38 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 06:12:38 +01 2023 LTR-RT near genes started

Sun Jan 29 06:13:26 +01 2023 LTR-RT near genes done

Sun Jan 29 06:13:26 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 06:14:47 +01 2023 MegaLTR Done, The results saved in (Results/Trifolium\_pratense/Collected\_Files)

*Vitis vinifera*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Vitis\_vinifera/Vitis\_vinifera.fna -G /Vitis\_vinifera/Vitis\_vinifera.gff -T Vitis\_vinifera\_trna.fa -P Vitis\_vinifera -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000015 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 02:49:22 +01 2023 Start time

Sun Jan 29 02:49:35 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 02:59:39 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 02:59:40 +01 2023 LTRdigest Started

Sun Jan 29 03:05:59 +01 2023 LTRdigest Done

Sun Jan 29 03:05:59 +01 2023 TEsorter Started

Sun Jan 29 03:07:53 +01 2023 TEsorter Done

Sun Jan 29 03:07:53 +01 2023 Filtering TEsorter results Started

Sun Jan 29 03:07:53 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 03:08:34 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 03:10:24 +01 2023 Preparing R plots files

Sun Jan 29 03:10:31 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 03:10:31 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 03:10:38 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 03:10:38 +01 2023 LTR-RT near genes started

Sun Jan 29 03:10:49 +01 2023 LTR-RT near genes done

Sun Jan 29 03:10:49 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 03:11:49 +01 2023 MegaLTR Done, The results saved in (Results/Vitis\_vinifera/Collected\_Files)

*Zea mays*

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############## MegaLTR v2.0 ##############

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Contributors: Morad M Mokhtar, Achraf El Allali

Parameters: -A 3 -F /Zea\_mays/Zea\_mays.fna -G /Zea\_mays/Zea\_mays.gff -T Zea\_mays\_trna.fa -P Zea\_mays -l 100 -L 7000 -d 1000 -D 15000 -S 85 -M 20 -B rexdb -C 20 -V 0.001 -Q 80-80-80 -E rexdb -R 0.000000013 -U 1000 -X 1000 -W 1000000 -N 9 -t 56

Check the FASTA File format.

Sun Jan 29 01:03:05 +01 2023 Start time

Sun Jan 29 01:04:13 +01 2023 LTR\_FINDER & LTR\_HARVEST Started

Sun Jan 29 04:37:12 +01 2023 LTR\_FINDER & LTR\_HARVEST Done

Sun Jan 29 04:37:14 +01 2023 LTRdigest Started

Sun Jan 29 07:11:01 +01 2023 LTRdigest Done

Sun Jan 29 07:11:01 +01 2023 TEsorter Started

Sun Jan 29 08:23:20 +01 2023 TEsorter Done

Sun Jan 29 08:23:21 +01 2023 Filtering TEsorter results Started

Sun Jan 29 08:23:22 +01 2023 Mergeing of LTR\_retriever, LTRdigest, and TEsorter results

Sun Jan 29 08:30:06 +01 2023 Calculation of the LTR-RT insertion time

Sun Jan 29 10:56:54 +01 2023 Preparing R plots files

Sun Jan 29 10:57:04 +01 2023 LTR-RT insertion time plots done

Sun Jan 29 10:57:04 +01 2023 LTR-RT-gene chimeras started

Sun Jan 29 11:02:01 +01 2023 LTR-RT-gene chimeras done

Sun Jan 29 11:02:01 +01 2023 LTR-RT near genes started

Sun Jan 29 11:11:02 +01 2023 LTR-RT near genes done

Sun Jan 29 11:11:02 +01 2023 Visualization of gene density and LTR-RTs across chromosomes

Sun Jan 29 11:19:19 +01 2023 MegaLTR Done, The results saved in (Results/Zea\_mays/Collected\_Files)