THE RHODOEXPLORER PLATFORM FOR RED ALGAL GENOMICS AND WHOLE GENOME ASSEMBLIES FOR SEVERAL GRACILARIA SPECIES

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*SUPPLEMENTARY MATERIAL*

Supplementary Table S1: Available red algal genomic resources.

Supplementary Table S2: Species used in this study.

**Supplementary Table S1:** Available red algal wholes genome sequences. M=multicellular, U=unicellular.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Species** | **Order** | **N50** | **U/M** | **Citation** |
| *Chondrus crispus* | Gigartinales | 250kb | M | https://doi.org/10.1073/pnas.1221259110 |
| *Galdieria sulphuraria* | Cyanidiales | 230kb | U | https://doi.org/10.7554/eLife.45017 |
| *Galdieria phlegrea* | Cyanidiales | 201kb | U | https://doi.org/10.7554/eLife.45017 |
| *Gracilaria changii* | Gracilariales | 17kb | M | https://doi.org/10.1016/j.ygeno.2017.09.003 |
| *Gracilaria domingensis* | Gracilariales | 189kb | M | https://doi.org/10.1111/jpy.13238 |
| *Gracilaria vermiculophylla* | Gracilariales | 2Mb | M | https://doi.org/10.1111/mec.15854 |
| *Gracilariopsis chorda* | Gracilariales | 220kb | M | https://doi.org/10.1093/molbev/msy081 |
| *Gracilariopsis lemaneiformis* | Gracilariales | 35kb | M | https://doi.org/10.1186/s12870-018-1309-2 |
| *Calliarthron tuberculosum* | Corallinales | n/a | M | https://doi.org/10.1016/j.cub.2011.01.037 |
| *Porphyridium purpureum* | Porphyridiales | 20kb | U | https://doi.org/10.1038/ncomms2931 |
| *Porphyra umbilicalis* | Bangiales | 202kb | M | https://doi.org/10.1073/pnas.1703088114 |
| *Neoporphyra haitanensis* | Bangiales | 650kb | M | https://doi.org/10.1093/molbev/msab315 |
| *Neopyropia yezoensis* | Bangiales | 34Mb | M | https://doi.org/10.1038/s41467-020-17689-1 |
| *Kappaphycus alvarezii* | Gigartinales | 849kb | M | https://doi.org/10.1101/2020.02.15.950402 |
| *Asparagopsis taxiformis* | Bonnemaisoniales | 2kb | M | https://doi.org/10.1021/acschembio.0c00299 |
| *Cyanidium caldarium* | Cyanidiales | 13kb | U | https://www.ncbi.nlm.nih.gov/genome/7354\* |
| *Cyanidiococcus yangmingshanensis* | Cyanidiales | 653kb | U | https://doi.org/10.1111/jpy.13056 |
| *Cyanidioschyzon merolae* | Cyanidioschyzonales | 846kb | U | https://doi.org/[10.1186/1741-7007-5-28](https://doi.org/10.1186/1741-7007-5-28)  https://doi.org/[10.1038/nature02398](https://doi.org/10.1038/nature02398) |

\* no publication associated  
n/a data no longer accessible

**Supplementary Table S2:** Species used in this study

| Species | Strain name | Isolation location | Sex | Type of data | **Accession numbers** |
| --- | --- | --- | --- | --- | --- |
| *Gracilaria chilensis* | NLEC103-F17 | Lenca, Region of Puerto Montt, Chile (-41.607, -72.692) | Female | RNAseq | SRR23519128 |
| NLEC103-F17 | Female | DNAseq | SRR23519124 |
| NLEC103-F20 | Female | RNAseq | SRR23519127 |
| NLEC103-F20 | Female | DNAseq | SRR23519123 |
| NLEC103-M9 | Male | RNAseq | SRR23519129 |
| NLEC103-M9 | Male | DNAseq | SRR23519122, SRR23519125 |
| NLEC103-M1 | Male | RNAseq | SRR23519130 |
| NLEC103-M2 | Male | DNAseq | SRR23519126 |
| *Gracilaria gracilis* | GNS1m | Cap-Gris-Nez Northen France (50.872, 1.584) | Male | DNAseq | SRR23565662, SRR23565669 |
| GNS1m | Male | RNAseq | SRR23565661 , SRR23565660, SRR23565659, SRR23565670 |
| GNS1f | Female | DNAseq | SRR23565672, SRR23565663 |
| GNS1f | Female | RNAseq | SRR23565671, SRR23565666 , SRR23565665 , SRR23565664 |
| GNH218m | Male | DNAseq | SRR23565667 |
| GNH47aAf | Female | DNAseq | SRR23565668 |
| *Gracilaria caudata* | 172F | Pedra Rachada beach, Paracuru, Ceará, Brazil (-3.399, -39.012) | Female | DNAseq | SRR23610505 |
| 172F | Female | RNAseq | SRR23610508 |
| 174F | Female | DNAseq | SRR23610506 |
| 174F | Female | RNAseq | SRR23610509 |
| 176M | Male | DNAseq | SRR23610514 |
| 176M | Male | RNAseq | SRR23610511 |
| 178M | Male | DNAseq | SRR23610513 |
| 178M | Male | RNAseq | SRR23610515 |
| 179M | Male | RNAseq | SRR23610516 |
| 177M | Male | RNAseq | SRR23610512 |
| 175F | Female | RNAseq | SRR23610510 |
| 171F | Female | RNAseq | SRR23610507 |
| *Gracilaria vermiculophylla* | Gver\_F | Charleston, SC, USA (32.752, -79.900) | Female | DNAseq | SRR23609120 |
| fjs03mal | Male | RNAseq | SRR23609119 |
| fjs33mal | Male | RNAseq | SRR23609118 |
| fjs36mal-New | Male | RNAseq | SRR23609117 |
| Fjs50mal-New | Male | RNAseq | SRR23609116 |
| fjs34fem | Female | RNAseq | SRR23609115 |
| fjs39fem | Female | RNAseq | SRR23609114 |
| fjs40fem | Female | RNAseq | SRR23609113 |
| fjsfem | Female | RNAseq | SRR23609112 |