



Development of Microsatellite Markers for Dalmatian Pyrethrum Using Next-Generation Sequencing

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1. Introduction

- Dalmatian pyrethrum (*Tanacetum cinerariifolium* /Trevir./ Sch. Bip.)
- perennial, outcrossing plant species, Asteraceae
- endemic to the Eastern coast of the Adriatic Sea
- Source of PYRETHRIN
- Large and highly repetitive genome



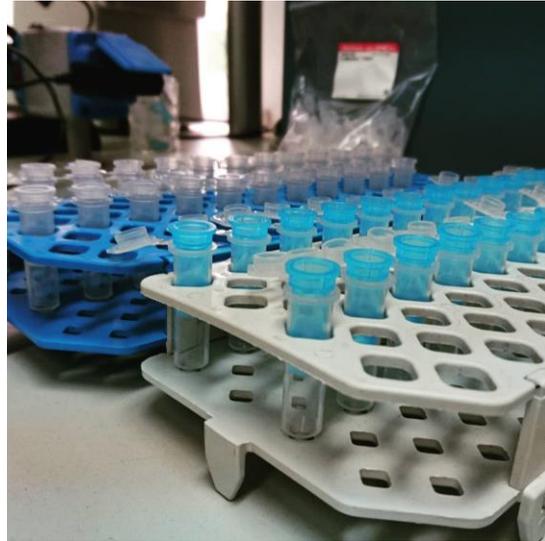
2. Objective

- Development of microsatellite markers (SSR) for Dalmatian pyrethrum using Next-Generation Sequencing (NGS)

3. Materials and methods



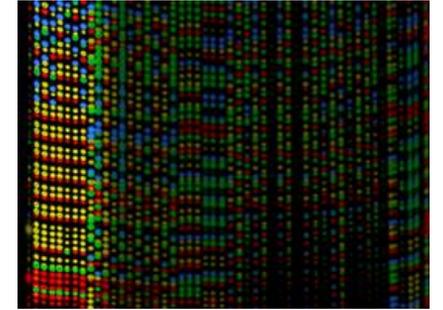
Tissue sampling



DNA isolation for NGS
(OmniPrep™ for Plant kit)



NGS
(Illumina NovaSeq
6000)



- MISA tool script
- BLAST 2.10.1+
- Primer3

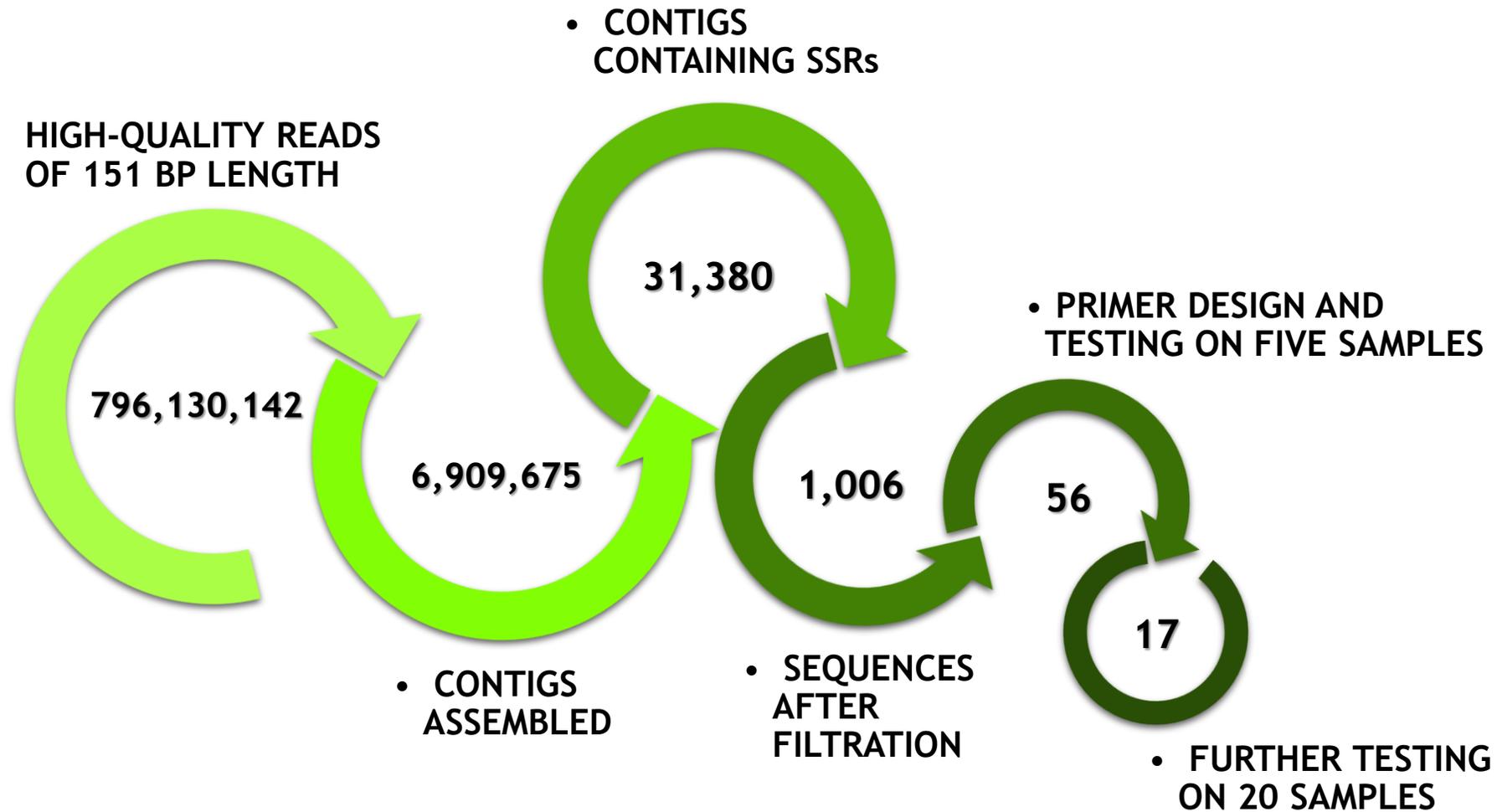
Primer design



- N_a , H_E , H_O , FIS
(GENEPOP v. 4.4)
- F_{null} (Microchecker v.
2.2.3)
- PIC (Cervus v 3.0.7)

Primer testing and
statistics

4. Results



4. Results

- no evidence of scoring errors due to stuttering or large allele dropout
- 94 alleles detected
- 8 markers moderately polymorphic ($PIC > 0.44$)
- 2 markers highly polymorphic ($PIC > 0.70$)

5. Conclusion

**First set of SSR markers for Dalmatian pyrethrum
Utilization in population studies of the species**

THANK YOU FOR YOUR ATTENTION

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Web page: pyrdiv.agr.hr

