



The possibility of establishing mullein (*Verbascum phlomoides* L.) in tissue culture

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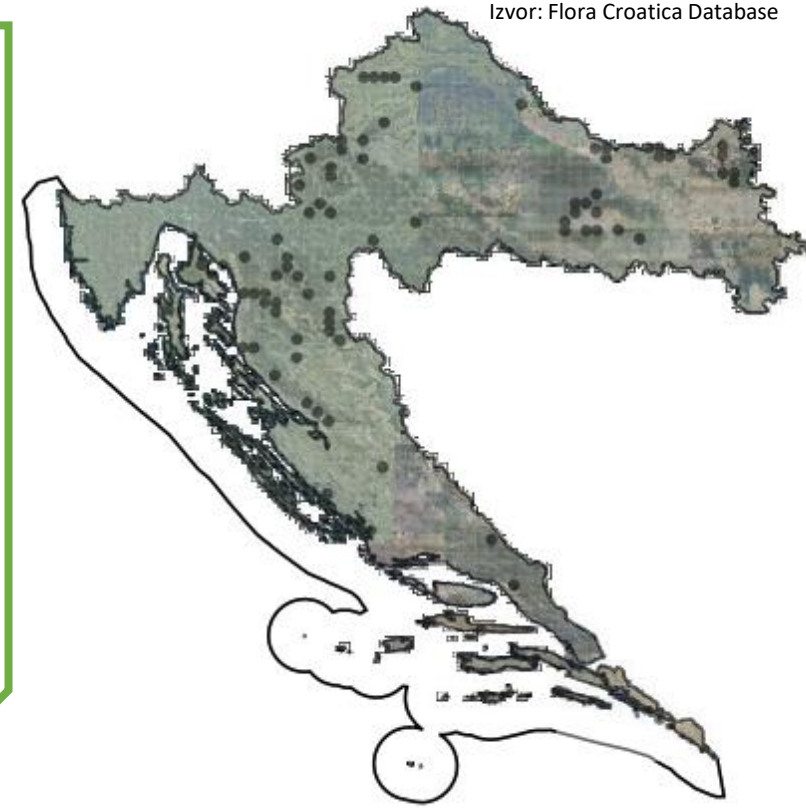
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introduction

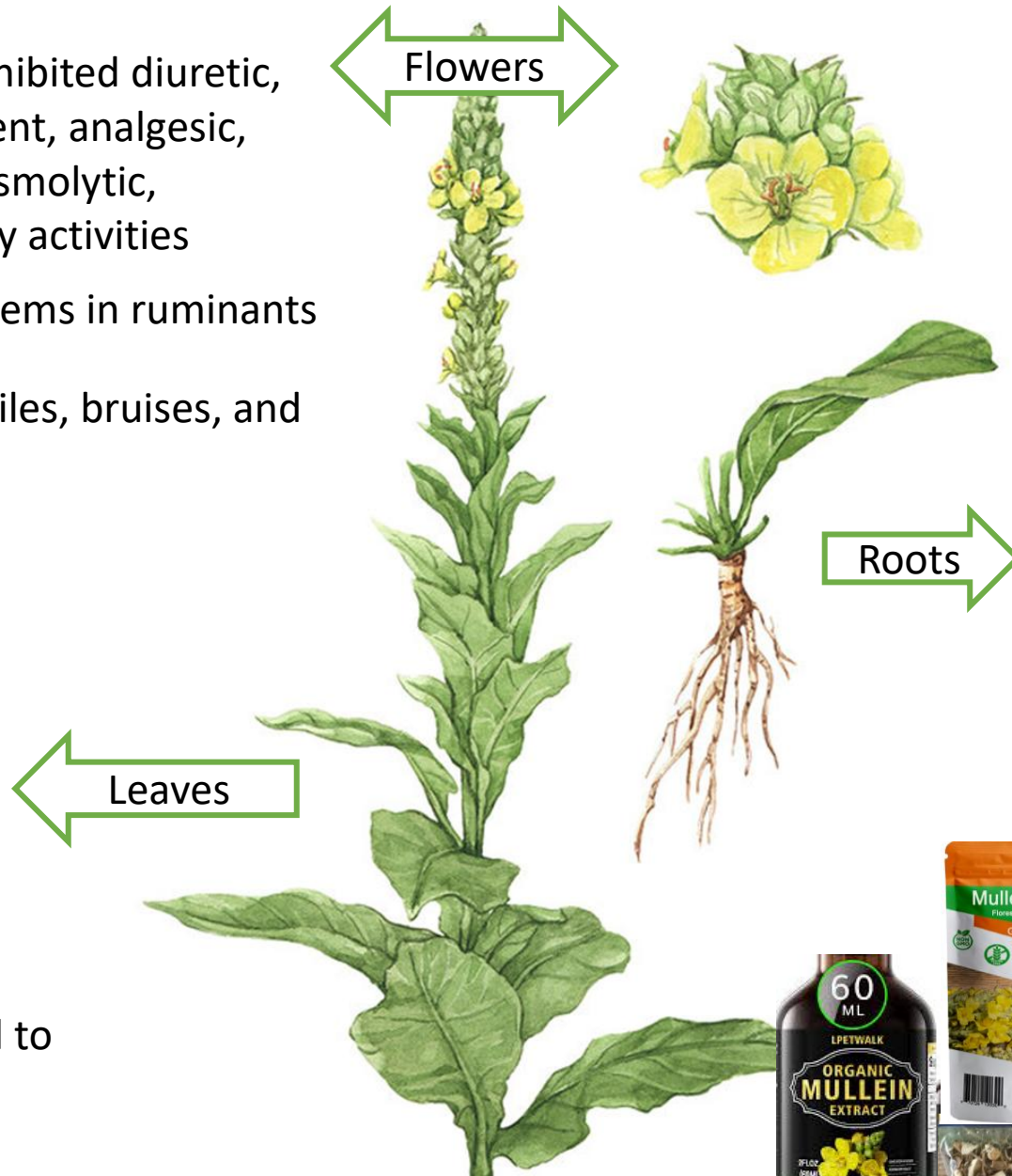


- The leaf is green, lanceolate, reaches a height of 2 m or more.
- The flower consists of petals, sepals (hairy green), stamens, and a pistil.
- The stem is solid and occasionally branched just below the inflorescence.
- Each fruit is an ovoid capsule that splits into two chambers at maturity and releases thousands of seeds
- The root system consists of taproots that grow deep into the ground.



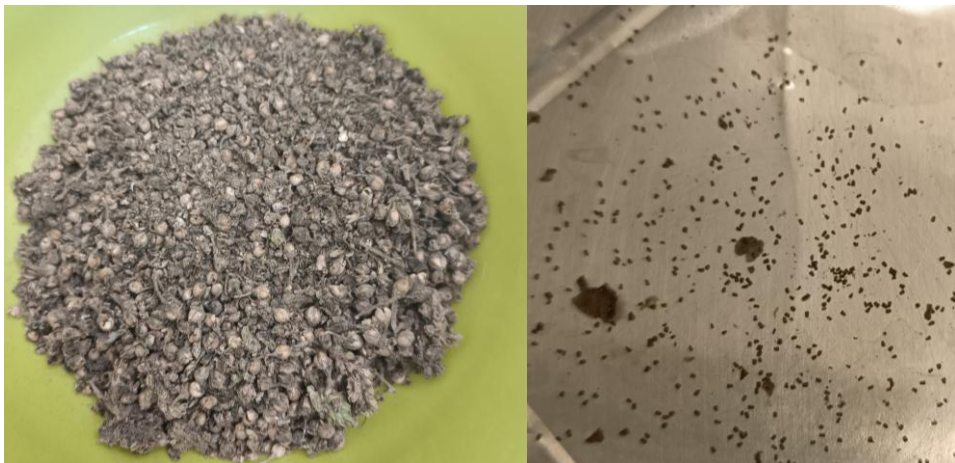
- *Verbascum phlomoides* L. is one of 21 species of the *Verbascum* genus recorded in the flora of Croatia
- Biannual plant from *Scrophulariaceae* family
- **Flowers** – july to september
 - a natural remedy to deal with respiratory problems

- The leaves and flowers exhibited diuretic, anti-inflammatory, emollient, analgesic, antiseptic, astringent, spasmolytic, expectorant, and vulnerary activities
- Tonic for respiratory problems in ruminants
- Flower oil -Treatment of piles, bruises, and frostbite
- Leaf ointments are valuable in burns and earache disorders
- wound healing ability and were also used in piles, ulcers
- A bandage prepared from leaves and seeds is helpful to draw out splinters



- Olive oil extract of flowers provides relief in earache due to strong antibacterial potential
- The extract from the seeds can treat inflammation and dry skin
- The plant juice and dried roots powder is reported to eliminate rough warts rapidly. A decoction of roots provides relief in toothache and cramps and alleviates convulsions





25 % of commercial bleach +
2 drops of Tween 20 detergent



A



B



Seeds were rinsed four
times with autoclaved
distilled water



Nutrient medium
(Murashige & Skoog,
Duchefa Biochemie)
without added hormones



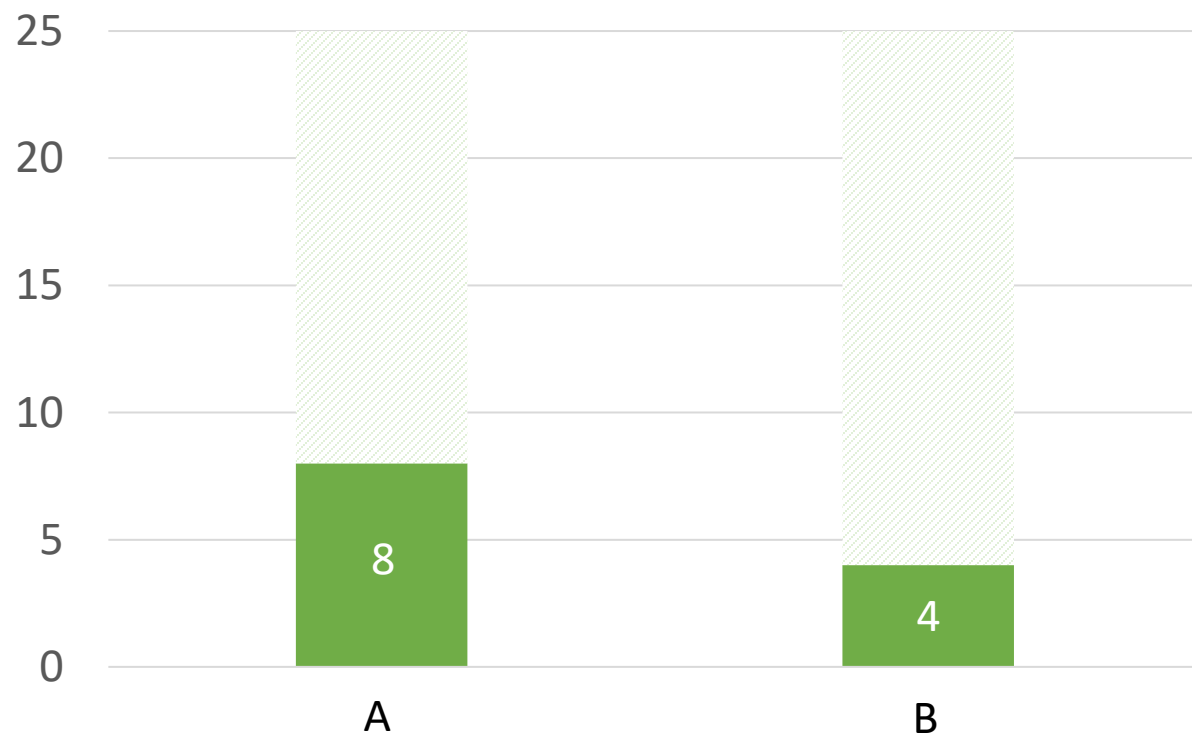
25 of each treatment

16h 22°C



8h

Germinated plants



! No contamination

Germination rate

79,25 % (Tkalec i sur. (2021.))

A - 40 %

B - 20 %

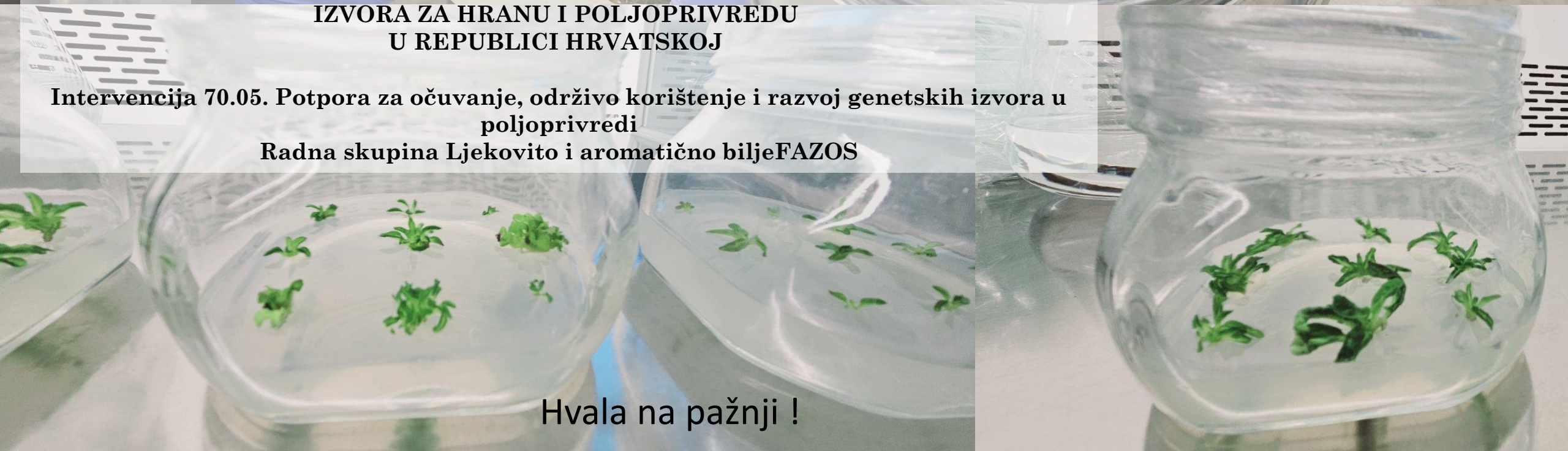




**NACIONALNI PROGRAM OČUVANJA I ODRŽIVE UPORABE BILJNIH GENETSKIH
IZVORA ZA HRANU I POLJOPRIVREDU
U REPUBLICI HRVATSKOJ**

**Intervencija 70.05. Potpora za očuvanje, održivo korištenje i razvoj genetskih izvora u
poljoprivredi**

Radna skupina Ljekovito i aromatično biljeFAZOS



Hvala na pažnji !



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Fakultet agrobiotehničkih
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Hvala na pozornosti

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