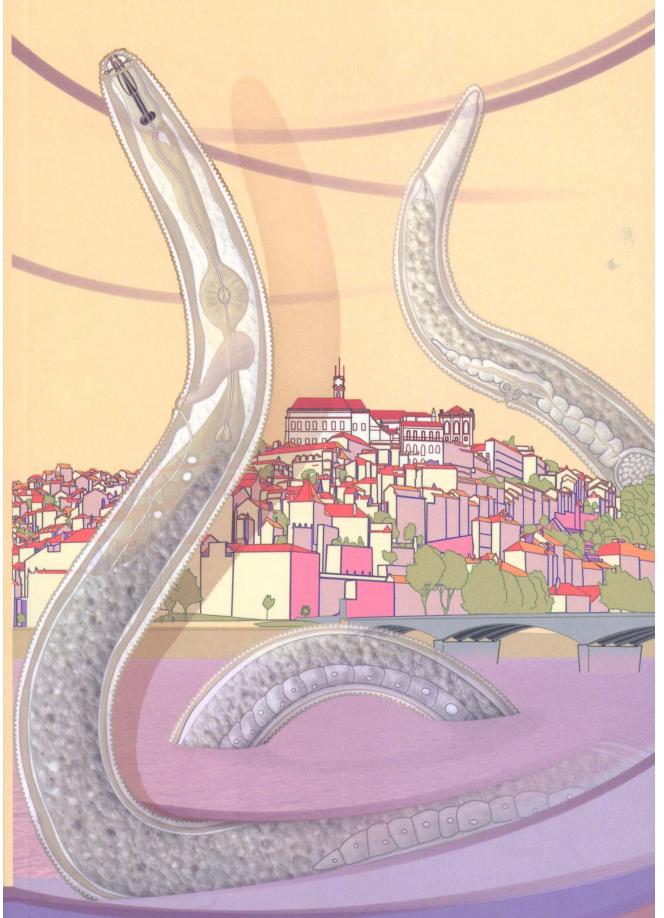
VI ONTA Annual Meeting LIIABSTRACT BOOK



Nematicidal activity of essential oil-bearing plants, from Portuguese flora, against the pinewood nematode *Bursaphelenchus xylophilus*

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Most synthetic chemicals used to control phytoparasites are toxic to humans and animals, and can accumulate in the soil and in food plants. The bioactive potential of essential oils (EOs) has been recognized, albeit empirically, for centuries. In the present work, the nematicidal potential of EOs extracted from 16 Eucalyptus spp., six Thymus spp. and four Mentha spp., from the Portuguese flora, were assessed. EOs were extracted by hydrodistillation and identified by GC and GC-MS. EO/methanol stock-solutions were added to 50-100 mixed-stage B. xylophilus suspensions to attain 2 and 1µl EO/ml of suspension final concentration. After 24h in darkness, dead and live nematodes were counted. Assays were repeated, at least, 10 times in 2 series. Of all Eucalyptus spp. EOs, only the citronellal-rich (36%) E. citriodora EO showed 97% mortality, at 2µl/ml. Thymus zygis, T. vulgaris and one chemotype of *T. caespititius* EOs revealed 100% mortality at 2 and 1µl/ml. T. zygis and T. vulgaris EOs were thymol-rich (\approx 50%) and T. caespititius EO was carvacrol-rich (58%). Mentha arvensis EO, dominated by piperitone oxide (56%), also revealed to be an effective nematicide, showing 100% mortality in both concentrations. Additional studies are being carried out to identify the most effective components from each oil. Acknowledgement: Jorge Faria is grateful to the Fundação para a Ciência e a Tecnologia (FCT) for the PhD grant SFRH/BD/43738/2008.

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