



Poster Presentation Guidelines

Version 1.0 - 28 October 2013

POSTER SUBMISSION

Poster submissions are accepted until Monday 10 February 2014

An **electronic version** of your poster must be forwarded to Anthony Kachenko, Nursery & Garden Industry Australia (NGIA) before this date by email or using DROPBOX.

NGIA will print and freight all posters to the conference venue. Contact details are as follows:

Anthony Kachenko
Environmental & Technical Policy Manager
Nursery & Garden Industry Australia
PO Box 7129
Baulkham Hills BC 2153
Email: anthony.kachenko@ngia.com.au Phone: 02 8861 5160 or Fax: 02 9659 3446

THE POSTER SESSION FORMAT

Posters will be displayed for the duration of the conference. Viewing times will occur during morning tea, lunch and afternoon tea breaks. Please refer to the on-line program at <http://www.ngia2014.com/program.html> for viewing times. Poster setup will occur on Tuesday 11 March at 7am and tear down will occur following afternoon tea on Thursday 13 March. Posters not removed by this time will be disposed of by the event coordinators. If you will not be attending the conference, please notify Anthony Kachenko should you wish for your poster to be returned.

POSTER FORMAT

Posters should be prepared using Microsoft PowerPoint. If you require assistance with this, please contact Anthony Kachenko on (02)5561 5106 or anthony.kachenko@ngia.com.au. In order to efficiently communicate the results of your research to conference delegates, you are kindly requested to devote considerable effort in the design of your poster. Providing A4 takeaway versions of your poster is also encouraged.

POSTER SIZING

Your poster will be printed onto a 'pull up banner' and should be no larger than a 850 mm wide x 2150 mm high in **portrait (vertical)** orientation. A bleed (white space) of 10 mm should be included as a border.

FORMATTING GUIDELINES/SUGGESTIONS

Title

- Place the title at the top centre of the poster. Use a minimum of 72 point letters.
- Please include on your poster all contact details including name(s), organisation name, job title and email address(es). You may want to add your mobile phone number and provide some business cards to leave at your poster.
- Do not use all capital letters in the title.

Introduction

- Size 35 point letters or above should be used as the text for the main body of the poster.
- The introduction should contain 3 to 5 sentences outlining essential information necessary to understand the study and why it was done.

Objectives/purpose/aim

- The objectives/purpose/aim of the study should be clearly stated in as few words as possible.

Methods

- Outline your methods briefly – less is more.

Discussion/conclusion

- The discussion (if necessary) and conclusions should be succinctly stated on large type. Many viewers read this first and hence it should be easy to understand.

General comments

- Avoid hand drawn materials.
- Keep it simple. Posters should be brief and concise with text kept to a minimum.
- Make sure it has a logical flow.
- Use colour, graphics, charts, and photos. Use high resolution photographs (web images often will not work).
- Emphasize graphics, and make sure every item included in your poster is necessary.
- Key points should be in large type.
- Do not try to tell the entire story on the panel.
- Be consistent – margins, shading and line spacing should be consistent and keep the colour, style, and thickness of borders the same. Pick no more than 2–3 fonts and colours and test readability.

An example poster follows.



Nuclear microprobe studies of metal(loid)s distribution in hyperaccumulating plants

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Introduction

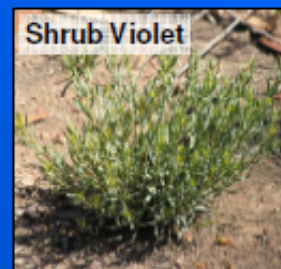
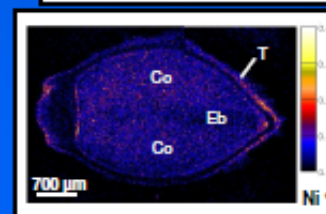
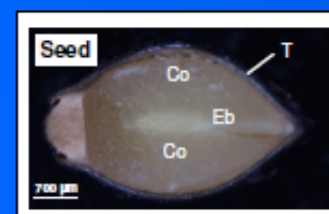
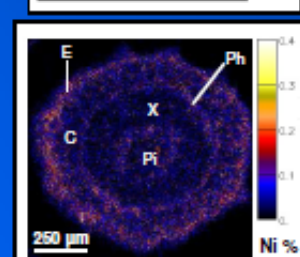
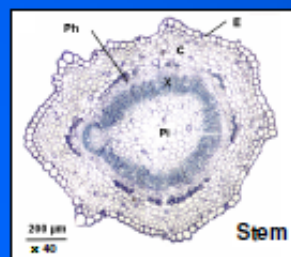
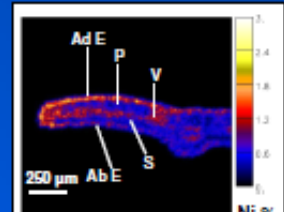
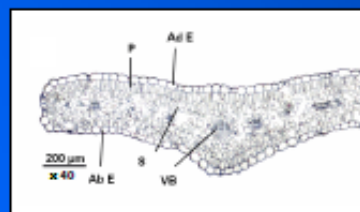
- Micro-proton-induced X-ray emission (μ -PIXE) spectroscopy provides pertinent quantitative information on the spatial distribution of elements in metal(loid) hyperaccumulating plants.
- A nickel (Ni) and arsenic (As) hyperaccumulator is any plant species exceeding 1000 mg Ni/As kg⁻¹ dry weight (DW) in any above-ground tissue.
- *Hybanthus floribundus* subsp. *floribundus* (Shrub Violet) is a native Australian Ni-hyperaccumulating shrub - ca. 13 500 mg Ni kg⁻¹ DW.
- *Pityrogramma calomelanos* var. *austramericana* (Gold Fern) is a perennial As-hyperaccumulating fern native to South America - ca. 3330 mg As kg⁻¹ DW.
- Localisation of metal(loid)s within hyperaccumulating tissues is paramount to comprehend the processes underlying metal tolerance and hyperaccumulation.

Aim

The aim of this study was to quantify the spatial distribution of Ni in leaf, stem and seed tissues of Shrub Violet and As in pinnule (leaf) and stipe (stem) tissues of Gold Fern using μ -PIXE spectroscopy.

μ -PIXE Results – Shrub Violet

Light micrographs and quantitative elemental maps showing the distribution of Ni in a Shrub Violet leaf, stem and seed cross-section.



Where: Ad/Ab E, Adaxial/Abaxial epidermis; P, palisade mesophyll; V, vascular tissue; S, spongy mesophyll; X, xylem; C, collenchyma; Pi, pith; Ph, phloem; Co, cotyledon; T, testa and Eb, embryonic stem

Methods

- Plants were exposed to high levels of Ni and As for 20 weeks under controlled glasshouse conditions.
- Plant material was prepared as described below.

Hand sectioned 50-200 µm Immediately plunged into liquid nitrogen Freeze dried (24-48h)



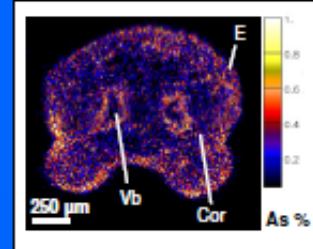
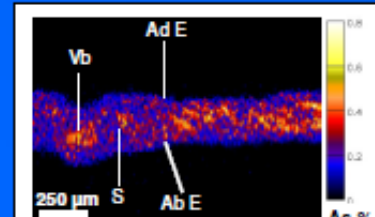
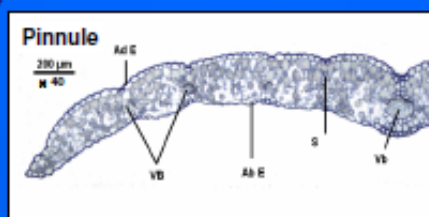
Seed were transversely sectioned Mounted onto sample holders

Analysed using ANSTO 10 MV Tandem Accelerator (Insert; Experimental station)



μ -PIXE Results – Gold Fern

Light micrographs and quantitative elemental maps showing the distribution of As in a Gold Fern pinnule and stipe cross-section.



Where: Ad/Ab E, Adaxial/Abaxial epidermis; S, spongy mesophyll; Vb, vascular bundle and Cor, cortex

Conclusions

- In Shrub Violet leaf and stem tissues, Ni was sequestered into epidermal tissues and may contribute to plant defence against insect, pathogen or fungal attack. In seeds, Ni was relatively uniform across cellular regions and the degree of accumulation may inhibit seed viability and germination.
- In Gold Fern pinnule and stipe tissues, As was relatively uniform across tissue types and there was no clear pattern of localisation.
- The results from this study suggest that there is no consistent pattern of cellular metal(loid) localisation in hyperaccumulating plants and may be specific for heavy metal(loid) or genotype.