Course on identification of protein-based materials in art objects using the Enzyme-linked Immunosorbent Assay (ELISA) technique

Art Gallery of New South Wales, Sydney, Australia

9 -11 September 2014

Expression of interest is required for participation in the course on identification of protein-based materials in art objects using the **Enzyme-linked Immunosorbent Assay (ELISA) technique**, which will be organised at the **Art Gallery of New South Wales in Sydney, 9 -11 September 2014**. The course is an event of the ***ICOM-CC Wood, Furniture, & Lacquer Working Group***, complimenting, but not a part of the ICOM-CC 17th Triennial Conference in Melbourne, 15 -19 September 2014. The course is open to all conservators, conservation scientists, and MA conservation students, particularly to members of ICOM-CC and AICCM.

About the course:

The three-day workshop will explore newly developed immunological procedures for the identification of proteins and gums in works of art. By different antibody-based techniques complex mixtures of several proteins and gums can be distinguished, down to a species level and can be localized on cross sections. During the workshop, conservators and conservation scientists will work together in research teams to run experiments on replica samples. Upon prior arrangement participants are allowed to run their own samples (replica or real) if desired.

The participants will have an opportunity to discuss the challenges of protein analysis in the relevance to conservation and an interpretation of proteinaceous binding media in works of art.

Course objectives:

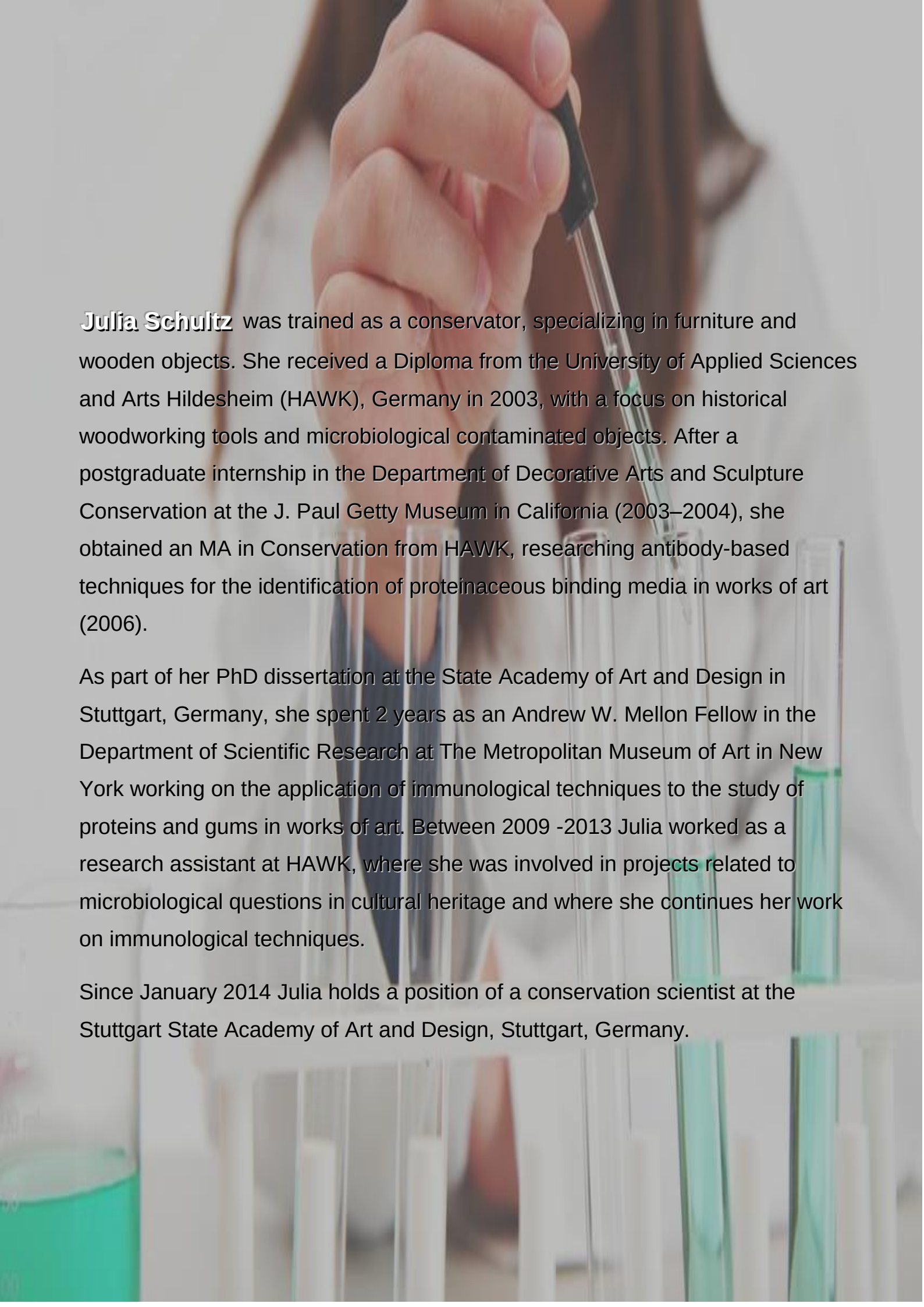
- to demonstrate and learn particular immunological protocols and the level of information that can be gathered using these methods
- to provide participants with the basic understanding of immunological techniques and refresh the knowledge about the preparation and history of proteinaceous binding media
- to highlight the benefits that collaboration between scientists and conservators can provide
- to identify pressing analytical and conservation issues in the field and priorities for future research

The workshop provides instruction in the following procedures with the aim of identifying proteins and gums in works of art:

- Visible and fluorescent light microscopic examination of chemically-stained cross-sections which can provide visual, layer-specific information for proteins.
- Precision sample collection and preparation prior ELISA permits layer-specific compositional information to be obtained
- Fourier transform infrared spectroscopy (FTIR) analysis for general classification of sample composition
- Enzyme-linked Immunosorbent assay (ELISA) to simultaneously screen for ovalbumin, casein, collagen and gums, and further differentiate into fish collagen, collagen specific to sturgeon and gum tragacanth.
- Immunofluorescence microscopy (IFM) on selected cross sections for localization of the proteins in the layer stratigraphy

The course at the AGNSW will be conducted by **Dr Julia Schultz**, conservation scientist at the Stuttgart State Academy of Art and Design, Stuttgart, Germany (see Julia's short biography below).

A number of places are limited and should not exceed 15. If you are interested in participation in this course please contact **Dr Malgorzata Sawicki, Coordinator, ICOM-CC Wood, Furniture, & Lacquer Working Group** via e-mail: margaret.sawicki@ag.nsw.gov.au, by the **28th of March 2014**



Julia Schultz was trained as a conservator, specializing in furniture and wooden objects. She received a Diploma from the University of Applied Sciences and Arts Hildesheim (HAWK), Germany in 2003, with a focus on historical woodworking tools and microbiological contaminated objects. After a postgraduate internship in the Department of Decorative Arts and Sculpture Conservation at the J. Paul Getty Museum in California (2003–2004), she obtained an MA in Conservation from HAWK, researching antibody-based techniques for the identification of proteinaceous binding media in works of art (2006).

As part of her PhD dissertation at the State Academy of Art and Design in Stuttgart, Germany, she spent 2 years as an Andrew W. Mellon Fellow in the Department of Scientific Research at The Metropolitan Museum of Art in New York working on the application of immunological techniques to the study of proteins and gums in works of art. Between 2009 -2013 Julia worked as a research assistant at HAWK, where she was involved in projects related to microbiological questions in cultural heritage and where she continues her work on immunological techniques.

Since January 2014 Julia holds a position of a conservation scientist at the Stuttgart State Academy of Art and Design, Stuttgart, Germany.