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Raman confocal microscopic imaging – a powerful label-free tool for life sciences research

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Raman confocal microscopic imaging is a powerful label-free analytical technique that can simultaneously delineate the chemical and morphological information of biological samples. A complete chemical profile can be generated by exciting Raman scattering with a laser light, and recording the Raman scattered frequencies. By collecting a Raman spectrum at each point, chemical images can be generated, which reveal the biomolecules present and their spatial information. Since the intrinsic information is collected, there is no need for using dyes or genetic modification, minimising artefacts associated with labelling.

Renishaw's inVia Raman microscope is a highly flexible research grade confocal microscope. It can be used for imaging a wide range of biological samples, including algae, plants, microorganisms, single cells, 3D cell cultures, tissue sections, and whole animals. The chemical and spatial information obtained from the Raman images is useful for a host of life sciences research disciplines.

At our workshop, you can expect to learn about the principles of Raman imaging, and its applications to life sciences research. There will be an overview of the different imaging modes offered by inVia, and you will see live demonstrations. After the workshop, you will have the opportunities to speak to our specialists about applying Raman imaging to your research.