

Press Release, 1<sup>st</sup> of March 2005

## **A Novel Class of Ionic Liquids for Biocatalysis**

Scionix Ltd in association with Leicester University and C-Tech innovations has developed a user-friendly pack of Deep Eutectic Solvents applicable for biocatalytic reactions. The work was supported by the DTI Basic Technologies for Industrial Applications Programme.

Deep Eutectic Solvents can be used like any other non-aqueous solvent for biocatalysis. Potential benefits of carrying out biocatalytic processes in these liquids include extended enzyme stability, potential for product selectivity and high substrate solubility.

The pack, developed by Scionix, contains four Deep Eutectic Solvents with different properties and information about performance of biocatalytic reactions in these liquids. It is designed to give researchers the opportunity to become familiar in handling these novel solvents and to identify the benefits of Deep Eutectic Solvents for biocatalysis. For further information on the trial pack please contact either Dr Khalid Shukri at Scionix, 298 Regents Park Road, Finchley, London, N3 2UA, Tel: +44 (0) 20 8371 3905, email: [khalid@genacys.co.uk](mailto:khalid@genacys.co.uk) or Dr Wolfgang Skibar at C-Tech Innovation Limited, Capenhurst, Chester, CH1 6EH, Tel: +44 (0) 151 347 2900 email: [wolfgang.skibar@ctechinnovation.com](mailto:wolfgang.skibar@ctechinnovation.com).

Note to editors:

Ionic liquids are a novel class of solvents, which are non-volatile and easy separable, thus offering a very promising "green" alternative to organic solvents. They are salts that are liquid below 100°C. Ionic liquids are of interest because they have negligible vapour pressure, are non-flammable and have unusual solvent properties. A novel approach to making ionic liquid analogues is to take a simple organic halide salt and complex the anion with something that will form a hydrogen bond. The complexing agent will decrease the interaction between the anion and the cation and decrease the freezing point of the mixture. This approach is not only cheaper and easier to make, but many of the formulations are non-toxic and even biodegradable. A wide variety of salts can be used with an even wider range of hydrogen bond donors.