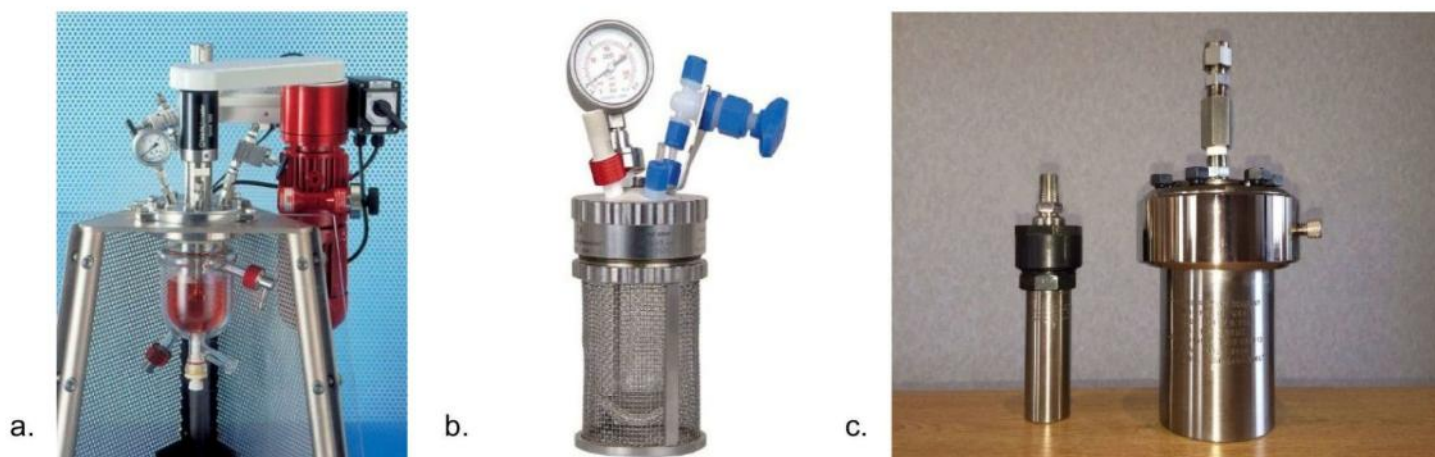


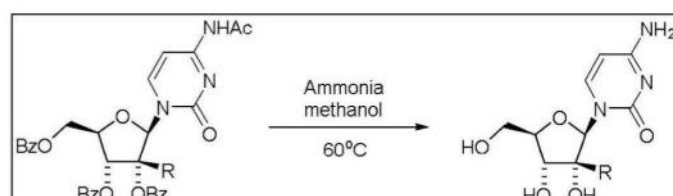
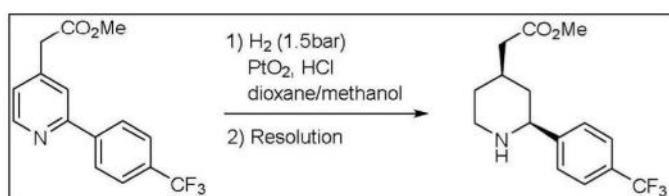
Specialised Reactors: "Ensuring It's Only The Reaction That's Under Pressure In Your Search For Diversity"

Access to Derivatisable Building Blocks for Medicinal Chemistry Programs

Off-the-shelf access to a selection of autoclaves and pressure vessels such as a-cⁱ, covering a variety of scales, allows our chemists to more easily incorporate transformations, which are difficult to achieve by conventional methods, into the preparation of customised building blocks and final project compounds.



The range of synthetic steps successfully pursued using this equipment includes hydrogenations, dehydrogenations, carbonylations, reductive aminations, ammonolyses, hydroformylations and hydrations. The conditions provided are generally transformation specific and allow other functionalities to be tolerated, as shown by the syntheses of functionalised arylpiperidineⁱⁱ and nucleoside building blocks.



Charnwood Molecular can provide high pressure chemistry services to our clients as part of our offering to enhance and accelerate their Drug Discovery projects, either through the preparation of key reference compounds or the provision of key project compounds from collaborative R&D programs.

i. The pictures show several of our current range of reactors, including: **a) Buchi BEP 280 autoclave**, which consists of a 1.5L jacketed vessel, allowing pressures up to 10 bar and temperatures of -20 to 100 °C and the use of hydrogen, carbon monoxide or ammonia gases; **b) Ken Kimble miniclave**, for 100 - 300 mL scale reactions, under conditions where no metal contact can be tolerated. Hydrogen or carbon monoxide gases can be employed & **c) Parr vessels** (45 mL & 300 mL), which allow pressures up to 150 bar and temperatures up to 200 °C.

ii. Stanton, M. G. *et al Bioorg. Med. Chem. Lett.*, **2010**, 20 (2), 755.

Charnwood Molecular Ltd

The Heritage Building, 7 Beaumont Court,
Prince William Road, Loughborough, UK, LE11 5DA.

 www.charnwood-molecular.com

 +44 (0) 1509 232007  info@charnwood-molecular.com

 #charnwoodmol  charnwood-molecular