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## Center for Applications of Mass Spectroscopy

The Center for Applications of Mass Spectroscopy (CAMS) is a facility developed and managed by the BioIncubator at Venture Center, NCL Innovation Park, Pune, India as a resource center for foster collaboration between researchers and industrial/ entrepreneurial organizations leveraging mass spectroscopy. CAMS is proposed to be launched on 1 June 2013.



The current instrument at CAMS is: [Agilent Technologies Pvt. Ltd. 6540 Ultra High Definition Accurate Mass Q TOF](#)



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Sub –system	Detailed specifications
<b>MS system</b>	<p><b><u><a href="#">6540 UHD Accurate Mass QTOF</a></u></b></p> <p>Mass Analyzer: Quadrupole Time Of Flight (QTOF) Ionisation Sources: ESI, APCI, APPI , ASAP Detector: Electron multiplier Mass accuracy within 1 ppm; m/z (z=1) less than 500 MS/MS accuracy within 2 ppm S/N ratio of 450:1 Resolution of 42,000 at m/z 2722 High Femtogram level sensitivity, 1 pg at m/z 609 Dynamic range of up to five orders Ability to scan multiple precursor ions ~50 Rapid polarity switching of 1.5 sec Scan rates of 50 Hz Positive and negative ion modes</p>
<b>Ultra high performance LC system</b>	<p><b><u><a href="#">Agilent 1260 Infinity Binary LC system</a></u></b></p> <p>Binary pump with on-line vacuum degasser; high pressure binary mixing Pressure operating range: 600 bar; flow rate range 0.001 to 5.0 ml/min; in 0.001 ml/min increments; flow precision &lt; 0.07% RSD ; flow rate accuracy: ± 1 % Autosampler capacity of 100 vials Injection volume of 0.1-100 µl in 0.1µl increments; ability to inject up to 1800 µl with multiple draw kit. pH range 1.0-12.5 Peltier column cooling range: 10 deg C below ambient to 80 deg C; temp stability of ± 0.15 deg C</p>



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<b>Nano-LC system</b>	<p><a href="#"><u>Agilent 1260 Infinity Nanoflow LC</u></a></p> <p>Flow rate between 0.01 to 4.0 <math>\mu</math>l per min; Flow Precision :&lt; 0.2 % RSD. Autosampler has sample capacity of 2 x well plates (MTP); 100 x 2ml vial plates; 30 x 6-mL vials; 54 Eppendorf tubes (0.5/1.5/2.0 mL); Injection volume of 0.01– 8 <math>\mu</math>l in 0.01 <math>\mu</math>l increments, up to 40 <math>\mu</math>l.</p> <p>Inbuilt temperature-controlled autosampler device with a range of 4-40<math>^{\circ}</math>C</p> <p><b>Columns</b></p> <p>Eclipse XDB-C18 Solv Save 3.5u, 3.0x150mm: Particle size: 3.5 <math>\mu</math>m, inner diameter: 3 mm, pore size: 80 Angstrom units, packing material: C18, RP18, ODS, Octadecyl, length: 150 mm SB-Aq, 3.0x100mm, 1.8<math>\mu</math>m: Particle size: 1.8 <math>\mu</math>m, inner diameter: 3 mm, pore size: 80 Angstrom units, packing material: AQ, length: 100 mm SB-C18, 2.1x100mm, 1.8<math>\mu</math>m: Particle size: 1.8<math>\mu</math>m, inner diameter: 2.1 mm, pore size: 80 Angstrom units, packing material: C18, RP18, ODS, Octadecyl, length: 100 mm</p>
<b>HPLC-CHIP /MS interface</b>	<p><a href="#"><u>Agilent CHIP cube interface</u></a></p> <p>Microfluidic chip-based technology specifically designed for nanospray LC/MS. Ambient operating temperature 5 – 40<math>^{\circ}</math>C Fully integrated enclosed spray chamber and orthogonal dual electrode nanospray ion source. Integrated camera and light source directly in spray chamber. Video output to external monochrome monitor for spray visualization</p> <p><b>CHIPS for use with CHIP-MS</b></p> <p><b>mAB Glyco CHIP</b> :The Chip is designed for on-chip deglycosylation of monoclonal antibodies (mAbs) as well as subsequent on-chip enrichment, separation and MS based detection of cleaved N-glycans with an Agilent HPLC-Chip/MS system. Deglycosylation is based on an integrated immobilized PNGase F enzyme reactor column.</p> <p><b>Phosphochip</b>: Designed for phosphopeptide analysis; <b>Calib CHIP II</b>: Used for MS calibration and Diagnostic CHIP <b>ProtID CHIP 43 II</b>: Used for rapid protein identification</p>



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	<p><b>SmMol CHIP 43 II:</b> Used for rapid analysis <b>FIA CHIP II:</b> Dedicated infusion and flow injection CHIP <b>ProtID CHIP 150 II:</b> Used for better separation of proteins</p>
<b>GC system</b>	<p><b><u>Agilent High Resolution 7890 GC</u></b> Split / Splitless capillary inlet: Split ratio of upto 7,500:1 to avoid column overload. Column oven operating temperature range + 4 to 450°C Temperature set point resolution 0.1°C Supports 20 oven ramps Maximum achievable temperature ramp of 120°C/min Flame Ionisation Detector (FID) ; minimum detectable level &lt;1.5 pg C/s Linear dynamic range &gt;10<sup>7</sup> Data rates upto 500 Hz, accommodate peaks as narrow as 10msec at half height</p>

**Contact us**

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