

### Proteomic Study Published in the Journal *Nature* Paves the Way for New Treatment for Incurable Leukaemia Using an Epigenetic Inhibitor

**Heidelberg, Germany, 2<sup>nd</sup> October 2011** – A study published in *Nature* online today (Dawson et. al. Advanced online Publication, DOI: 10.1038/nature10509) by Cellzome and others has identified that a small molecule inhibitor of BET\* proteins could potentially be used to treat the aggressive and often incurable mixed lineage (MLL-fusion) leukaemia.

The molecular association between BET proteins and factors involved in MLL-fusion leukaemia, which led to the discovery, was unravelled in a collaboration with GSK, the Gurdon Institute of the University of Cambridge, as well as the Departments of Haematology of the Addenbrookes Hospital, the University Hospital Ulm, the Erasmus University Medical Center and the Cardiff University School of Medicine.

Commenting on the results, Dr. David Simmons, CSO of Cellzome said: “This publication shows how our chemoproteomic technology can guide epigenetic drug discovery. This new and exciting field of biology offers great potential for developing novel therapeutic interventions as ‘personalised epigenetic medicines’, and I am pleased that the expertise we have built at Cellzome is making a significant contribution at the forefront of this field.”

\* BET proteins constitute a family of bromodomain-containing proteins which recognize acetyl-lysine modifications on histones. BET proteins are ‘chromatin adaptors’ which can recruit other proteins or entire protein complexes to the site on the chromatin, where genes are being regulated.

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#### About Cellzome

Cellzome is a world leader in chemoproteomics, transforming the sciences of epigenetics and signal transduction into novel drug candidates in inflammatory diseases and oncology. The Company maintains the highest levels of scientific expertise and has active collaborations with the foremost academic laboratories around the world. Cellzome’s technologies work with native proteins in a physiological setting to discover small molecule drugs targeting protein complexes that underlie diseases. The Company has a track record in delivering significant collaborations with top pharmaceutical companies including GlaxoSmithKline, Johnson & Johnson and Novartis. Cellzome is a privately-held, international, company located in Heidelberg, Germany and Cambridge, UK employing about 100 people. For more information please visit: [www.cellzome.com](http://www.cellzome.com)

#### About Epigenetics

The term epigenetics refers to heritable changes in gene expression and phenotype caused by mechanisms other than changes in DNA sequence. One major mechanism is the specific enzymatic modification of histone tails, which affects the packaging of DNA into chromatin and through that controls the transcription of specific genes. Enzymes, such as histone deacetylases (HDACs) or methyltransferases (HMTs) can change the modification of the histone tails and therefore change the ‘histone code’. Dysregulation of these modifications is thought to play a central role in cancer and in chronic degenerative diseases like neurological and autoimmune disease. The enzymes which carry out these histone modifications are part of large multifunctional protein complexes, which represent attractive novel targets for drug discovery.

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