

# Press Release

## Powerful 'Finger-Printing' Technology Identifies Novel Targets For Gleevec®

### Potential New Disease Indication Discovered

**Heidelberg and Cambridge, 26th August 2007** - An article published in Nature Biotechnology today describes how Cellzome scientists, using a new technology called *Kinobeads*<sup>™</sup>, have assessed the molecular action of two approved Chronic Myeloid Leukemia (CML) drugs – Gleevec® and Sprycel® and one which is currently undergoing clinical testing, SKI-606. The team discovered novel targets for all three drugs, including two new targets for Gleevec, suggesting a potential new disease indication for the billion \$ cancer drug.

The article is entitled 'Quantitative chemical proteomics reveals mechanisms of action of clinical ABL kinase inhibitors'.

Cellzome's technology, *Kinobeads*<sup>™</sup>, quantitatively measures the interaction of compounds or drugs with kinases in cells and tissues. *Kinobeads*<sup>™</sup> is so effective that compounds can be uniquely 'finger-printed' for their interactions with natural kinases and related target proteins. The resulting information can not only demonstrate a compounds' mode of action and indicate which diseases it might be used against, but also point to potential side effects.

Gerard Drewes, VP Target Discovery and senior author of the publication, said:

*"With the Kinobeads<sup>™</sup> technology, we can fully understand how kinase drugs work at the molecular level at the site of action inside cells and tissues. Not only can we measure the direct interaction of the drug with its native targets, but also how this affects signalling events in the cell."*

In this study, the new Gleevec targets discovered were the Discoidin Domain Receptor Kinase1 (DDR1) and NQO2, an oxidoreductase (a non-kinase target). Interestingly, these targets were even more potently inhibited by Gleevec than BCR-ABL, the leukemia target the drug was designed for. DDR1 is implicated in fibrosis of the lung, liver and kidney, diseases which are poorly served by existing medication. Gleevec's inhibition of DDR1 suggests fibrosis as a potential new indication.

David Simmons, Chief Scientific Officer added:

*"Kinobeads<sup>™</sup> offers the potential to measure the effect of a drug directly in blood or biopsy samples from patients and therefore could contribute to a personalized medicine approach in the future."*

Kinases are important enzymes because they are responsible for either activating or inhibiting proteins within cell signalling pathways. As a result of their importance, approximately 30% of current discovery and development spending (approx. \$20bn) focuses on kinases, especially in the fields of oncology, inflammation and metabolic diseases. The ABL kinase attracts significant interest as a target for drug development because

chromosomal abnormalities lead to a continually active form of the enzyme which causes chronic myelogenous leukemia (CML).

On *Kinobeads*<sup>™</sup> applications, Tim Edwards, CEO of Cellzome said:

*“This world-class technology is driving our own pipeline by helping us identify a new generation of kinase-targeted drugs for patients with inflammatory disease. The detailed kinase finger-prints we generate may also offer significant advantages to pharma companies, who want to know as much as possible about the mode of action and safety profile of their products.”*

- Ends -

### **About Cellzome Inc.**

Cellzome is a privately-owned drug discovery company identifying a new generation of kinase-targeted drugs to treat inflammatory diseases. Its pipeline of small-molecule therapeutics is driven by *Kinobeads*<sup>™</sup>, a proprietary technology for screening and profiling of kinases in relevant cells and tissues.

Cellzome’s emerging pipeline includes a small molecule Histamine H4 receptor antagonist, initially for asthma and allergic rhinitis, which is planned to begin clinical studies in 2008. Cellzome is applying its distinctive *Kinobeads*<sup>™</sup> technology to the discovery and development of novel, selective kinase inhibitors targeting key inflammatory mediators in immune receptor signaling and chemotaxis, including PI3Kgamma and ZAP70.

The Company has collaborations with Novartis on the discovery of target-lead pairs in a variety of disease areas, and with Johnson & Johnson for the discovery of novel medicines for the treatment of Alzheimer’s disease.

Cellzome’s holding company is domiciled in the US and it employs about 80 people at its two operating subsidiaries in Cambridge, UK and Heidelberg, Germany. To learn more about Cellzome, please visit the website: [www.cellzome.com](http://www.cellzome.com).

### **For further information please contact:**

#### **Cellzome**

Tim Edwards, Chief Executive Officer  
Gerard Drewes, VP Target Discovery  
Tel: +49 (0) 6221-137 57-100  
[press@cellzome.com](mailto:press@cellzome.com)

#### **Media Contact**

#### **Hogarth Partnership**

Melanie Toyne-Sewell/John Olsen  
Tel: +44 (0) 207 357 9477  
[mtoyne-sewell@hogarthpr.co.uk](mailto:mtoyne-sewell@hogarthpr.co.uk)