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**NovAliX Turns to High-Resolution Cryo-Transmission Electron Microscopy
for Pre-Clinical Drug Discovery Research**

Thermo Fisher Scientific's Cryo-TEM provides critical information for small molecule and biologic drug discovery

HILLSBORO, ORE – (February 27, 2017) – A new contract research laboratory operated by France-based [NovAliX](#) will provide pharmaceutical companies with access to high-resolution cryo-transmission electron microscopy ([cryo-TEM](#)) by Thermo Fisher Scientific for facilitating small molecule and biologic drug discovery. NovAliX's new laboratory will use the cryo-TEM to provide two-dimensional (2D) and three-dimensional (3D) characterization of small molecule and biological samples. NovAliX has completed its first program with a Japanese pharmaceutical customer. It has multiple projects planned with additional customers, including some of the top pharmaceutical companies.

"Cryo-TEM has great potential in drug discovery applications; it is highly complementary to traditional methods, such as x-ray crystallography and nuclear magnetic resonance," said Denis Zeyer, CEO, NovAliX. "For small molecules research, cryo-TEM provides structural information about multi-protein complexes or membrane proteins. For biologics, cryo-TEM can deliver critical information about antibody selection, epitope mapping and formulation. This information helps the drug discovery process to become more consistent and reproducible, which may ultimately result in better therapeutic candidates."

"As pharmaceutical companies continue to accelerate drug discovery, cryo-TEM can play a key role across many aspects of this process," said Peter Fruhstorfer, vice president and general manager, Life Sciences, Materials and Structural Analysis, Thermo Fisher. "Cryo-TEM helps researchers examine a broader range of biological structures, and provides the ability to visualize complicated biologics."

NovAliX's new laboratory also includes x-ray diffraction (XRD), nuclear magnetic resonance (NMR), micro-array surface plasmon resonance (SPR) and other technologies. The addition of cryo-TEM enables NovAliX to resolve features in biological molecules as small as a few Ångströms (roughly a few atoms), sufficient to reveal tertiary and quaternary protein structure and, in some cases, to identify individual amino acid side chains. It can look at molecules and molecular complexes of any size, without crystallization. Equally important, cryo-TEM samples, which are frozen in vitreous (non-crystalline) ice, can be examined in a near-native, fully-hydrated state. Cryo-TEM has proven to be complementary to

NMR and XRD as researchers have used computational techniques to fit their atomic-scale information into cryo-TEM 3D models.

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