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Bio-Techne Leverages The RNAscope™ Technology To Advance A Multiomic Approach To Antibody Validation

MINNEAPOLIS, Oct. 7, 2019 /PRNewswire/ -- Bio-Techne Corporation (NASDAQ: TECH), a family of brands with a unique and leading portfolio of reagents and instruments for life science and clinical research, has been validating a growing number of immunohistochemistry (IHC) antibodies using the Advanced Cell Diagnostics™-branded RNAscope *in situ* hybridization (ISH) platform to leverage its transcriptomics approach to providing high quality, validated IHC antibodies to researchers.

In recent years, there has been increasing demand for more stringent antibody validation testing and reporting, as demonstrated by the International Working Group for Antibody Validation publishing their proposal for five pillars of antibody validation (Uhlen, M. *et al.* (2016) Nat. Methods **13**:823). Bio-Techne adopted these recommendations including genetic validation via gene editing and knockout cell lines that were created with the two-gene editing technique from B-MoGen Biotechnologies brand. "We have always taken rigorous steps towards validating our antibodies," commented Dave Eansor, President of Bio-Techne's Protein Sciences Segment. "However, we recognize that a critical component of antibody validation must be examining the target using an antibody-independent method. Thus, Bio-Techne is combining the power of the RNAscope ISH technology with the complementary workflow for IHC to validate R&D Systems™- and Novus Biologicals™-branded antibodies."

The RNAscope ISH technology is becoming widely used for detection of RNA transcripts in tissues to confirm antibody specificity. Due to a similar workflow, RNAscope ISH and IHC assays can be performed separately in serial tissue sections or run sequentially on the same section, making the antibody validation process simple and providing a morphological context for RNA and protein expression. Several organizations are using these ISH assays as an orthogonal antibody validation tool. At the 3rd International Antibody Validation Conference, GlaxoSmithKline addressed the utility of RNAscope ISH as an orthogonal method to validate IHC antibodies in drug discovery (Goodman, S.L. (2018) F1000Res. 7:1989). RNAscope was incorporated as a pivotal technology in a high-throughput assay cascade, whereby protein and RNA localization and expression levels were compared in tissues for target identification and validation. Additionally, Johns Hopkins School of Medicine stated that the RNAscope technology was "invaluable in many of our studies, including helping to validate IHC," (Sfanos, K.S. *et al.* (2019) Asian J. Urol. **6**:10). Kim Kelderman, President of Bio-Techne's Diagnostics and Genomics Segment, commented, "We are pleased that institutions recognize the value of using our RNAscope ISH assays to validate their antibodies. In addition, laboratories can utilize the RNAscope ISH technology in combination with IHC to take a multiomics approach in understanding the regulation of RNA and protein expression in normal and disease state tissues."

Chuck Kummeth, President and Chief Executive Officer of Bio-Techne, stated, "Bio-Techne continues to expand its portfolio in order to provide the tools scientists need to accelerate their research. I am excited about the progress we are making to strengthen multiomics solutions for our customers by bringing our product platforms together. The partnership between our teams supporting the R&D Systems, Novus Biologicals, B-MoGen Biotechnologies and Advanced Cell Diagnostics brands is truly impressive."

For more information about the Bio-Techne brands, please visit:www.bio-techne.com.

About Bio-Techne Corporation (NASDAQ: TECH)

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