# *Media Release*

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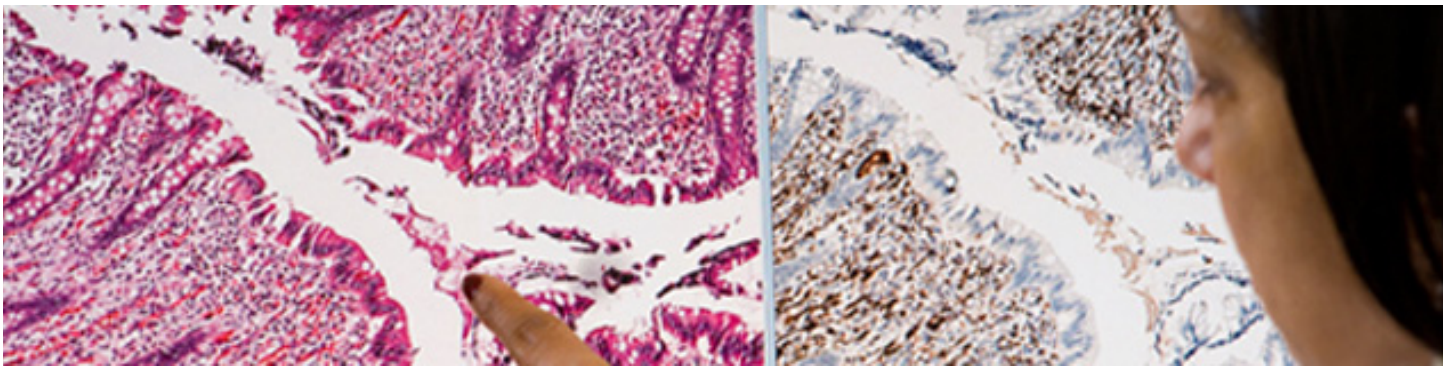
*A Member of the Roche Group*



TUCSON, Ariz., September 6, 2012

## Ventana Medical Systems, Inc. develops first-ever fully automated dual-stain technique for miRNA and protein detection in cancer

*Revolutionary technique may enable new findings in what drives tumor cell growth and new targeted treatment options for patients*[1]

Ventana Medical Systems, Inc. (Ventana), a member of the Roche Group, is introducing a first-of-its-kind fully-automated staining technique that will allow researchers to examine miRNAs and proteins related to cancer in the same section of tumor tissue. Detecting miRNAs and proteins together, in the context of the tumor microenvironment, allows researchers to visualize the association of oncogenic protein expression to those miRNAs involved in the regulation of the mRNA species responsible for protein production. This is exciting news for researchers who have been studying how this relationship plays a role in driving tumor cell growth in many tumor types including breast, lung, prostate and colorectal cancers.

Dr. Thomas Grogan, M.D., pioneering pathologist and founder of Ventana Medical Systems, Inc., is highly optimistic about the promise of this technique. "With this exciting technical breakthrough, we can now judge with a standard light

The DISCOVERY ULTRA System


Dr. Welsh's testimonial

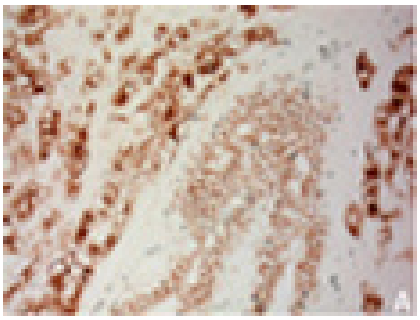
microscope the link between miRNA and associated proteins in full cellular context. It will now reveal matters like message/protein dysfunction and heterogeneity. This then will add greatly to our understanding of the mechanisms of cancer biology and help direct new better informed targeted therapies."

James W. Welsh, M.D., assistant professor in the Department of Radiology at The University of Texas MD Anderson Cancer Center, believes this new technology could eventually work as a companion diagnostic tool for future miRNA pathway targeting drugs. "For the first time, using this technique, researchers will be able to observe the relationships between specific miRNAs and their known oncogenic protein targets," says Dr. Welsh. "In lung cancer, we've begun to identify pairs of miRNAs and proteins that we believe play a role in treatment resistance and metastasis; utilizing this new protocol will hopefully allow us to better understand the correlation between the two." In the future, Dr. Welsh adds, miRNAs could be utilized as biomarkers or therapeutics for lung cancer as well as other solid tumors.

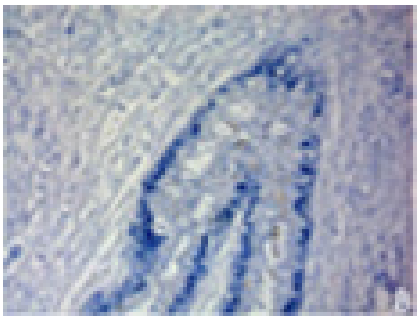
Watch the video of Dr. Welsh's full comments.

Unlike traditional enzymatic retrieval, which is the current industry standard for miRNA in situ hybridization (ISH), the new technique from Ventana uses non-enzymatic pre-treatments, enabling the detection of both targets while preserving tissue morphology. Developed for use on the DISCOVERY ULTRA instrument, the application is fully automated, allowing for greater reproducibility of target detection.

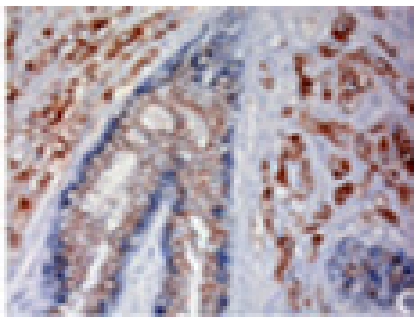
The DISCOVERY ULTRA immunohistochemistry (IHC) and in situ hybridization (ISH) systems from Ventana offer full automation, along with unsurpassed freedom and flexibility. For scientists and research professionals who require more than conventional IHC and ISH research methods can offer, the DISCOVERY ULTRA system provides exceptional, reproducible results to help scientific inventions become medical innovations.



Breast cancer stained independently for HER3



Breast cancer stained independently for miR205



Breast cancer stained with the optimized dual stain assay

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**[1]The Ventana miRNA and protein dual-stain technique and the DISCOVERY ULTRA System are for Research Use Only. Not for use in diagnostic procedures.**

**About Ventana Medical Systems, Inc.**

Ventana Medical Systems, Inc. ("VMSI") (SIX: RO, ROG; OTCQX: RHHBY), a member of the Roche Group, innovates and manufactures instruments and reagents that automate tissue processing and slide staining for cancer diagnostics. VENTANA solutions are used in clinical histology and drug development research laboratories worldwide. The company's intuitive, integrated staining, workflow management platforms, and digital pathology solutions optimize laboratory efficiencies to reduce errors, support diagnosis and inform treatment decisions for anatomic pathology professionals. Together with Roche, VMSI is driving Personalized Healthcare through accelerated drug discovery and the development of "companion diagnostics" to identify the patients most likely to respond favorably to specific therapies.

Visit www.ventana.com to learn more.



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