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HEADLINE: Bodkin Design signs contract to develop hyperspectral endoscope for early cancer detection

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Bodkin Design and Engineering has been contracted by APTI corporation of Washington D.C. to provide engineering and development services for their new hyperspectral imaging endoscope product. Bodkin Design is providing system design and integration, and prototype fabrication for the research instrument. The initial application of the endoscope is to cancer detection in the colon. Clinical testing will be conducted at John Hopkins medical center.

The patent pending endoscope uses an APTI hyperspectral camera and proprietary software to analyze the images of the colon wall. The hyperspectral system, initially developed by Navel Research Labs (NRL) for aerial surveillance, is being applied by APTI to medical research. The endoscope relays images via coherent fiber optic bundle to a grating spectrometer. The spectrometer divides the light from each pixel into its spectrum which is recorded by a highly sensitive, cooled CCD camera. The software analyzes the spectra in real time with a detection algorithm that highlights suspect cells in the computed output image. The entire package is operated by the physician in his office during a routine examination. The display screen is split to shows standard video of the colon inspection on one side, and a parallel image of the colon showing the analyzed image with suspect pre-cancer cells outlined.

About Bodkin Design & Engineering

Bodkin Design and Engineering is headquartered in Needham Massachusetts and provides product development, innovation, and engineering services to the industrial, commercial, military and research communities. Founded in 1988 the firm has developed numerous patented devices, and overseen the successful introduction of a diverse spectrum of products, ranging from miniature infrared cameras, to dental imagers, to spectroscopic instruments for drug discovery. To learn more visit our website at www.bodkindesign.com.