



Cytomedix Files Application with FDA for AutoloGel™ System in Orthopedics

ROCKVILLE, Md. (August 7, 2009) – Cytomedix, Inc. (NYSE Amex: GTF) (the “Company”) announces the filing of a 510(k) premarket notification with the U.S. Food and Drug Administration (“FDA”) for clearance to market its AutoloGel™ Platelet Separation System for use in orthopedics. The application includes the option of mixing of platelet-rich plasma (“PRP”) derived by the AutoloGel™ System with autograft and/or allograft bone, intra-operatively, prior to application to an orthopedic site as deemed necessary by clinical use requirements.

Martin P. Rosendale, Chief Executive Officer of Cytomedix, said, “This filing of our Platelet Separation System for orthopedic applications provides further enhancements to our existing AutoloGel™ System and streamlines the process to produce the gel, thereby making the clinical process more efficient. Upon clearance, we will look forward to bringing these advances to our growing customer base, with opportunities for expanded indications of use.”

About Cytomedix

Cytomedix develops, sells and licenses regenerative biological therapies including the AutoloGel™ System, a device for the production of PRP gel derived from the patient’s own blood. The AutoloGel™ System is cleared by the FDA for use on a variety of exuding wounds. The Company is pursuing a multi-faceted strategy to penetrate the chronic wound market with its AutoloGel™ System. The Company is also moving forward with the development of other product candidates in its pipeline. Most notably is its CT-112 product, an anti-inflammatory peptide, that has shown promise in preclinical testing. Additional information regarding Cytomedix is available at: <http://www.cytomedix.com>

Forward-Looking Information

Statements contained in this press release not relating to historical facts are forward-looking statements that are intended to fall within the safe harbor rule for such statements under the Private Securities Litigation Reform Act of 1995. The information contained in the forward-looking statements is inherently uncertain, and Cytomedix’s actual results may differ materially due to a number of factors, many of which are beyond Cytomedix’s ability to predict or control, including among others, the outcome of development or regulatory review of CT-112 or of the Company’s premarket notification, commercial success or acceptance by the medical community, the Company’s ability to market and capitalize on the AutoloGel opportunities in orthopedics, competitive responses and the Company’s ability to execute in a timely fashion or at all upon the plan of compliance approved by the NYSE Amex. There is also no assurance that the Company’s current capitalization will be sufficient to attain its goals, that future funding will be available to the Company on acceptable terms, or that the Company will ever be able to sustain itself from ongoing operations. These forward-looking statements are subject to known and unknown risks and uncertainties that could cause actual events to differ from the forward-

looking statements. More information about some of these risks and uncertainties may be found in the reports filed with the Securities and Exchange Commission by Cytomedix, Inc. Cytomedix operates in a highly competitive and rapidly changing business and regulatory environment, thus new or unforeseen risks may arise. Accordingly, investors should not place any reliance on forward-looking statements as a prediction of actual results. Except as is expressly required by the federal securities laws, Cytomedix undertakes no obligation to update or revise any forward-looking statements, whether as a result of new information, changed circumstances or future events or for any other reason.

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