

## RETRACTION

### High-Frequency Invasion of Epithelial Cells by *Streptococcus pyogenes* Can Be Activated by Fibrinogen and Peptides Containing the Sequence RGD

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Volume 65, no. 7, p. 2759–2764: In this study, human fibrinogen was reported to activate intracellular invasion by *Streptococcus pyogenes*. The fibrinogen preparation used was determined to be >98% pure by sodium dodecyl sulfate-polyacrylamide gel electrophoresis. Equally pure preparations of commercially acquired human serum fibronectin failed to activate invasion. Subsequent work revealed that fibronectin represented approximately 1.6% of the total protein in the fibrinogen preparation. Fibronectin was purified away from fibrinogen by chromatography on gelatin-Sepharose and found to be a potent activator of invasion. The fibronectin-depleted fibrinogen was inactive. Several preparations of human and bovine serum fibronectin obtained from another commercial source (Life Technologies, Inc., Gaithersburg, Md.) were also found to activate invasion. Since the activities attributed to fibrinogen in this study were in fact due to fibronectin, we retract the article.