

**Perturbation of adhesion-contractility crosstalk leads to impaired wound healing in diabetes****Iffat Jahan, Shamik Sen**

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**D**iabetes is a chronic disorder that leads to multiple complications including impaired wound healing. Altered fibroblast function is one of the major causes which impair wound healing in diabetic patients. However, alterations in mechanics of diabetic fibroblasts has not been adequately probed. Here we have performed a detailed biophysical characterization of normal and diabetic fibroblasts to understand the biophysical alterations associated with diabetes. We show that compared to normal primary fibroblasts, diabetic fibroblasts are more elongated, less contractile, softer, and less motile. Lesser motility of diabetic fibroblasts can be partly attributed to formation of prominent focal adhesions in these cells. This decoupling of contractile mechanics from adhesion dynamics may partly explain reduced wound healing in diabetic patients. Re-establishment of this crosstalk may pave ways for new strategies for rescuing impaired wound healing in diabetic patients.