



Supplementary Information

Periodic Exposure of Nonthermal Plasma Activated Medium Impairs Fibroblast Cellular Homoeostasis

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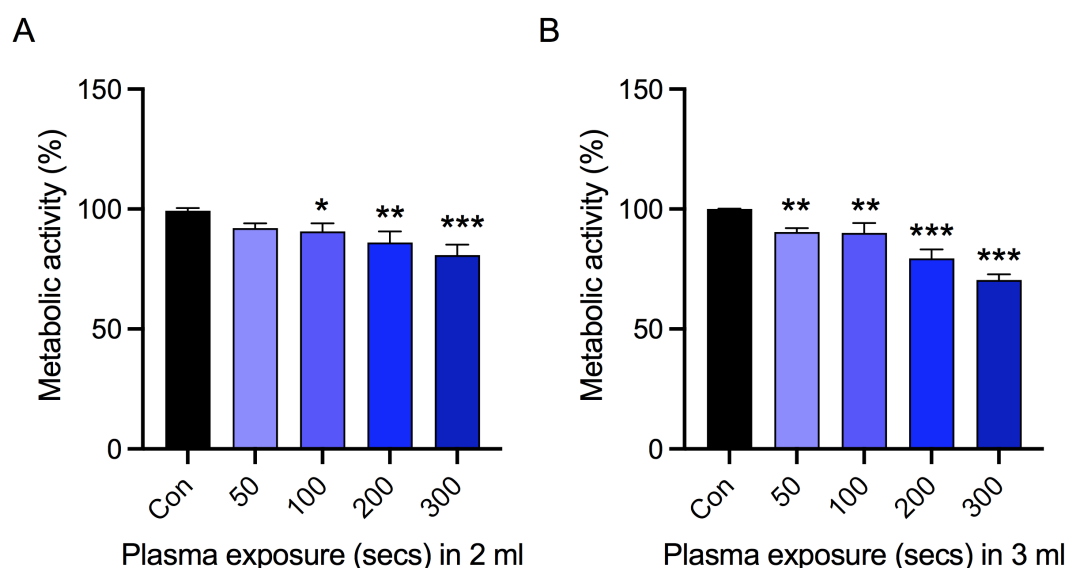


Figure S1. Standardization of plasma exposure time. Measurement of metabolic activity (percentage) in GM cells after exposure to nonthermal plasma for indicated exposure times in (A) 2 ml and (B) 3 ml of complete MEM medium. Statistical significance was evaluated using one-way ANOVA using Dunnett's multiple comparison test and is indicated as * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

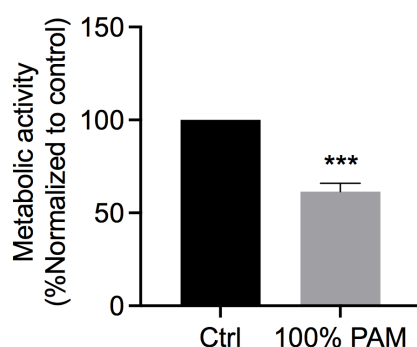


Figure S2. Evaluation of cytotoxicity in fibroblast cells after PAM treatment. Representative graph showing metabolic activity levels in GM cells after PAM treatment. Statistical significance was evaluated using Two-tailed unpaired parametric t-test and denoted as *** $p < 0.001$.

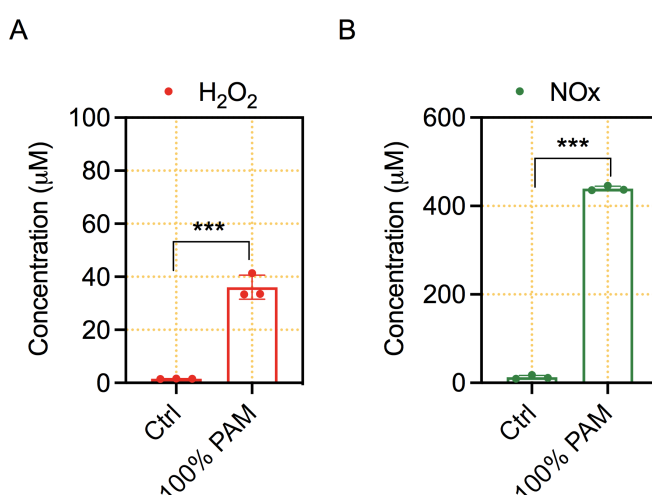


Figure S3. Measurement of reactive species in PAM which was used to treat fibroblast cells. Representative graphs indicating levels of (A) H_2O_2 and (B) NO_x in PAM. Significance was evaluated using Two-tailed unpaired parametric t-test and indicated as *** $p < 0.001$.

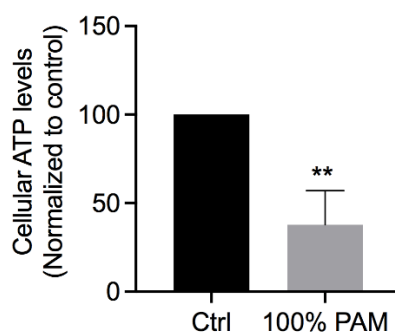


Figure S4. Evaluation of ATP levels in fibroblast cells. Representative graph indicating changes in ATP levels in control and PAM treated GM cells. Statistical significance was evaluated using Two-tailed unpaired parametric t-test and is denoted as ** $p < 0.01$.

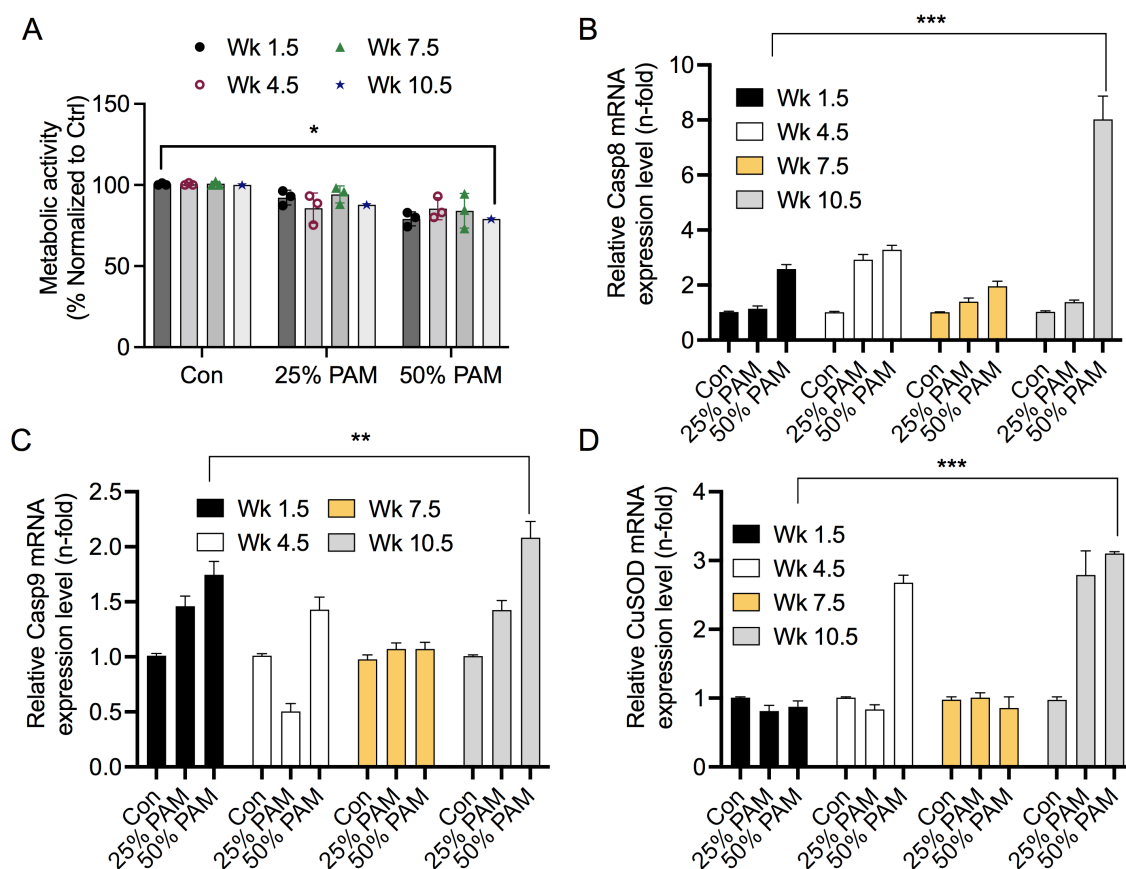


Figure S5. Effect of periodic exposure at intermediate weeks on fibroblast cells. **(A)** Bar graph representing metabolic activity of fibroblasts after periodic PAM exposure for intermediate weeks (Wks). Evaluation of cell death markers **(B)** Casp8 and **(C)** Casp9 in fibroblasts after periodic stress at intermediate Wk. **(D)** Graph indicating mRNA expression levels of CuSOD after periodic exposure for intermediate week timepoints. Statistical significance was evaluated using two-way ANOVA using Tukey's multiple comparison test and is indicated as * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$.