Immagine che contiene testo, schermata, Policromia, cerchio

Descrizione generata automaticamente

**Supplementary Figure 1**. Altered protein classes in vEDS cells according to the PANTHER protein classification database

Immagine che contiene testo, schermata, diagramma, Disegno tecnico

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**Supplementary Figure 2**. Optimization of transfection conditions was performed in patient and control fibroblasts, which were transfected for 48 and 72 hours with 15 and 150 pmol of the hsa-miR-1-3p and the corresponding control microRNA inhibitor (negative control). qPCR confirmed a dose-dependent increase in miRNA expression in both vEDS and control cells (**A**). The efficiency of miR-1-3p overexpression was evaluated by analyzing the relative mRNA levels of its target gene, *HDAC4*. qPCR showed a dose-dependent decrease in *HDAC4* expression compared to the control (**B**). Expression levels of miR-1-3p and *HDAC4* were quantified using the 2^(-ΔΔCt) method. For miR-1-3p, the reference miRNAs *SNORD48*, *U6 snRNA*, *SNORA66*, *SNORD44*, and *SNORD38B* were used as endogenous controls for template normalization. For *HDAC4*, the geometric mean of the reference genes *ATP5B*, *CYC1*, *RPLP0*, and *YWHAZ* was used for cDNA input normalization. Statistical significance between groups were determined using an unpaired Student’s t-test and data are expressed as mean ± SEM (\*\* p < 0.01, \*\*\*\*p < 0.0001).

Immagine che contiene testo, schermata, diagramma, Rettangolo

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**Supplementary Figure 3**. Validation of the inhibition of miR-29b-3p: Patient cells were transfected with 150 pmol of a specific miR-29b-3p inhibitor or corresponding negative controls (scramble) for 48 and 72 hours. The efficiency of miR-29b-3p inhibition was assessed by measuring a time-dependent decrease in expression. miR-29b-3p expression levels were quantified using qPCR with the 2^-(ΔΔCt) method. *SNORD48*, *U6 snRNA*, *SNORA66*, *SNORD44*, and *SNORD38B* were used as endogenous controls for template normalization. The bars represent the mean expression ratios from pooled RNA samples of three vEDS cells transfected with either the specific miR-29b-3p inhibitor or the corresponding negative controls. Statistical significance was determined using the Student’s t-test (\*\*\*\* p < 0.0001).