

**Table 1. Complex elastic modulus parameters**

	WT			HGPS		
	B	$\alpha$	$n$	B	$\alpha$	$n$
DNA condensed (chromatin)	$2.1 \pm 0.4$	$0.19 \pm 0.05$	4	$2.0 \pm 1.0$	$0.16 \pm 0.02$	4
DNA decondensed (lamina)	$3.7 \pm 1.2$	$0.38 \pm 0.14$	6	$4.2 \pm 2.0$	$0.16 \pm 0.08$	7

To quantitatively evaluate the altered mechanical properties of the lamina in HGPS cells, we used a previously established viscoelastic model (1). The data from MPA creep experiments were used to calculate a complex elastic modulus  $E$  (see *Supporting Text*) and was fit to the power-law form:

$$E = B \left( \frac{\text{time}}{\text{sec}} \right)^{-\alpha} . \quad [1]$$

The prefactor,  $B$ , reflects the overall stiffness of the system and the power-law exponent  $\alpha$  represents the ability of the elasticity to change with time.

Confirming our qualitative observations, in the condensed-chromatin state, there was little difference in either elastic or viscous properties between WT and HGPS nuclei. In the decondensed-chromatin state, the overall stiffness  $B$  of the HGPS lamina was similar to the WT value (Student  $t$  test,  $P = 0.57$ ). However, the power-law exponent  $\alpha$  was >2-fold higher in control nuclei than in HGPS nuclei (0.38 versus 0.16), suggesting the WT nuclear lamina softened more quickly with time of applied force.

1. Dahl, K. N., Engler, A. J., Pajerowski, J. D. & Discher, D. E. (2005) *Biophys. J.* **89**, 2855-2864.