Viscoelasticity of multicellular system represents a product of energy storage and dissipation during cell rearrangement under various stress or strain conditions and should be considered in the context of cellular ability to relax obtained at various time scales.Because of its viscoelastic nature, the stress response at any instant of time depends not only on the tissue strain at that time, but also on the history of the deformation.The basic concept of viscoelasticity in the context of linear models for (1) viscoelastic liquids such as the Maxwell model and the Jeffreys model and (2) viscoelastic solids such as the Kelvin–Voigt model, The Zener model, and The Four–parameter model, and (3) the model for describing jamming state were discussed.Soft tissues also exhibit considerable hysteresis under a cyclic load, i.e. the stress–strain curve shows two distinct paths during the loading and unloading cycle .Time domain corresponds to stress and strain change versus time while the frequency domain corresponds to interrelation between storage and loss moduli versus angular velocity.General characteristics of viscoelastic solids and viscoelastic liquids were extracted from this analysis and considered on various in vitro experimental systems.Various scenarios of relaxation are described by various constitutive models and can be considered in the time domain and frequency domain.When a tissue is stretched to a certain strain level and kept constant, the stress gradually decreases with time .Alternatively, when the tissue is stretched to a certain stress level and then kept constant, its strain increases with time .o Viscoelasticity describes time–dependent mechanical properties.Soft tissues consist of both solid and fluid, and behave as viscoelastic material.It is necessary to consider and specify the strain rate or load rate when conducting tests and reporting the results.The mechanical properties are strain–rate–dependent.With increasing strain rate, the material becomes stiffer and stronger.Skin tissues show stress relaxation under constant strain and creep under constant stress.This phenomenon is called stress relaxation.This .phenomenon is called creep