

# Telomeres - Cellular Defenses

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Cellular physiology has evolved to rely upon lysosome-based enzyme defenses for autophagy, mitophagy and SOD2 IFN $\gamma$  transferrins (i.e. lactoferrin - apolactoferrin and hololactoferrin [necroptosis]).

However, the ability to regulate telomere homeostatic cannot be correlated with these enzymatic processes.

Quantum biology modeling has identified, with near certainty, the following activities for cilia and telomere “health.” The following illustration is provided for discussion purposes with qualified bioinformatics professionals.

## Cell Alignment: For Discussion Purposes

### **TNF-Alpha: TGF- Alpha (Calnexin) Density**

Calcium - threonine - magnesium (BRCA1) **p16**

Calcium - serine - magnesium (BRCA2) **p18**

Calcium - cysteine - magnesium (BRCA3) **p19**

For Discussion:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3436948/>

### **TNF-Beta: TGF-Beta (Calmodulin) Motility**

Calcium - phenylalanine - magnesium (HRas) **p21**

Calcium - tyrosine - magnesium (KRas) **p27**

Calcium - tryptophan - magnesium (NRas) **p57**

### **TNF-Gamma: TGF-Gamma [VEGF] (Calcineurin) Modulatory Enzyme**

Calcium - serine - zinc

Calcium - cysteine - zinc

Calcium - threonine - zinc

The following are examples of bioidentical “enzymes” that have evolved with various designations; e.g. AKT, mTOR, PTEN, NF-kB, and MYC.