

# Sickle Cell Disease - Causal Paths - DIY

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When the following article made reference to HRI kinase as a factor for sickle cell disease (SCD), the molecule was subjected to quantum biology (QB) modeling and bioinformatic search.

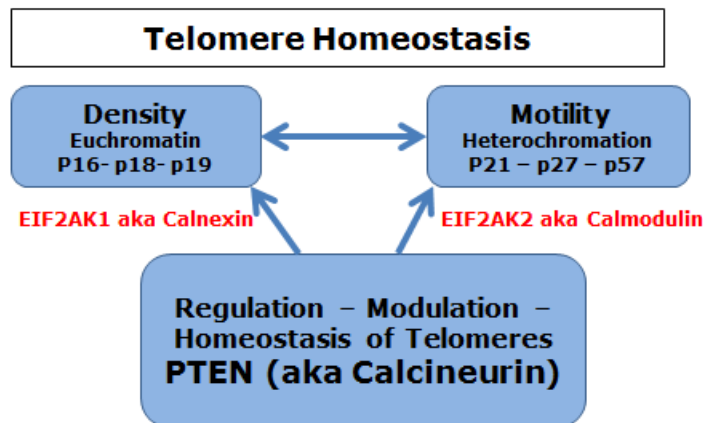
<https://medicalxpress.com/news/2018-07-enzyme-drug-sickle-cell-disease.html>

Bioinformatic search enabled the HRI “gene” to be identified as EIF2AK1.

QB enabled EIF2AK1 to be verified as having a pair; EIFAK2.

Bioinformatic search can identify p16 - p18 and p19 as forms of EIFKA1 with p21 - p27 and p57 being forms of EIFKA2.

Refer to the following for discussions concerning epigenetic telomere mutation as a one of the near certain epigenetically inherited causes of SCD.



Quantum biology modeling provides verifiable facts that establish the PTEN trefoil (i.e. PTEN - ETS1 and ETS2) as being bioidentical to calnexin, calmodulin and calcineurin at the molecular level.

During the fifteen years to develop the algorithm for the primary causes of chronic diseases (aka quantum biology - QB), it became apparent that more than one causal path exists for all chronic diseases. In keeping with

this fact, when the following article made reference to KLM-1 as another possible factor for SCA, it was subjected to QB assessment.

<https://medicalxpress.com/news/2017-07-genome-therapy-treatment-life-threatening-blood.html>

QB identified threonine - serine - cysteine as the amino acids for KLF1 - 3; aka calcineurin.

The following is provided for discussion purposes with a qualified computational biologist.

**Alignment of Molecules: For Explanation and Discussion**

**TNF-Alpha: TGF- Alpha (Calnexin) Density (CD-4)**

Calcium - threonine - magnesium (BRCA1) p16  
Calcium - serine - magnesium (BRCA2) p18  
Calcium - cysteine - magnesium (BRCA3) p19

**TNF-Beta: TGF-Beta (Calmodulin) Motility (CD-8)**

Calcium - phenylalanine - magnesium (HRas) p21  
Calcium - tyrosine - magnesium (KRas) p27  
Calcium - tryptophan - magnesium (NRas) p57

**TNF-Gamma: TGF-Gamma [VEGF] (Calcineurin) Modulatory Enzyme: IFN $\gamma$  and Th17 cells (CD-25)**

Iron - serine - Manganese  
Iron - cysteine - Manganese  
Iron - threonine - Manganese

**For discussion purposes, examples of alternative designations for the IFN $\gamma$  "enzymes" that have evolved include; AKT, mTOR, PTEN, NF-kB, and MYC.**

## Additional Factors

Research has identified AP2 as a potential factor for SCD.

Using QB, AP2 was identified as one of the epigenetic signaling molecules for endocytosis; i.e. AP1 - AP2 and AP3 with near certainty, AP2 is the signaling molecule that activates G protein coupled receptors.

The impact of mutation of endocytosis on SCD and other diseases can be discussed in detail with quantum biology (QB) and computational biology partners of MCFIP.