

# Nobel Medicine Prize Addendum - 2019

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In the same manner that MCFIP has applied its quantum biology model to the Nobel Prizes for 2015 - 2018 to add enhancements to hasten application for their clinical use<sup>1</sup>, the following information is provided for verification by computational biologists.

“The Nobel Prize in Physiology or Medicine for 2019 is awarded to William Kaelin, Jr., Sir Peter Ratcliffe, and Gregg Semenza. The need for oxygen to sustain life has been understood since the onset of modern biology; but the molecular mechanisms underlying how cells adapt to variations in oxygen supply were unknown until the prize-winning work described here. Animal cells undergo fundamental shifts in gene expression when there are changes in the oxygen levels around them. These changes in gene expression alter cell metabolism, tissue remodeling, and even organismal responses such as increases in heart rate and ventilation. In studies during the early 1990’s, Gregg Semenza identified, and then in 1995 purified and cloned, a transcription factor that regulates these oxygen-dependent responses. He named this factor HIF, for Hypoxia Inducible Factor, and showed that it consists of two components: one a novel and oxygen-sensitive moiety, HIF-1 $\alpha$ , and a second, previously identified and constitutively expressed and non-oxygen-regulated protein known as ARNT.” <https://www.nobelprize.org/prizes/medicine/2019/advanced-information/>



Supported by quantum biology and a large volume of existing studies, epigenetic modeling has identified the hypoxia inducible factors HIF1A - C are configured as depicted in the following illustration.

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<sup>1</sup> <https://www.mcfip.net/upload/Quantum%20Biology%20Nobel%20Prizes.pdf>

Albeit tedious, computational biologists using bioinformatic search can correlate all of the biomarker identified by MCFIP bas being correct; i.e. HIF1A is calcineurin, HIF1B is calnexin and HIF1C is calmodulin. Careful review will identify the fact that many “markers” are applicable.

**Cell Alignment: 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**

For Discussion:

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

**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 (CD-25)**

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

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

It should be noted to bioinformatic search will also verify the fact the ARNT is already known as an alternative for HIF1B.