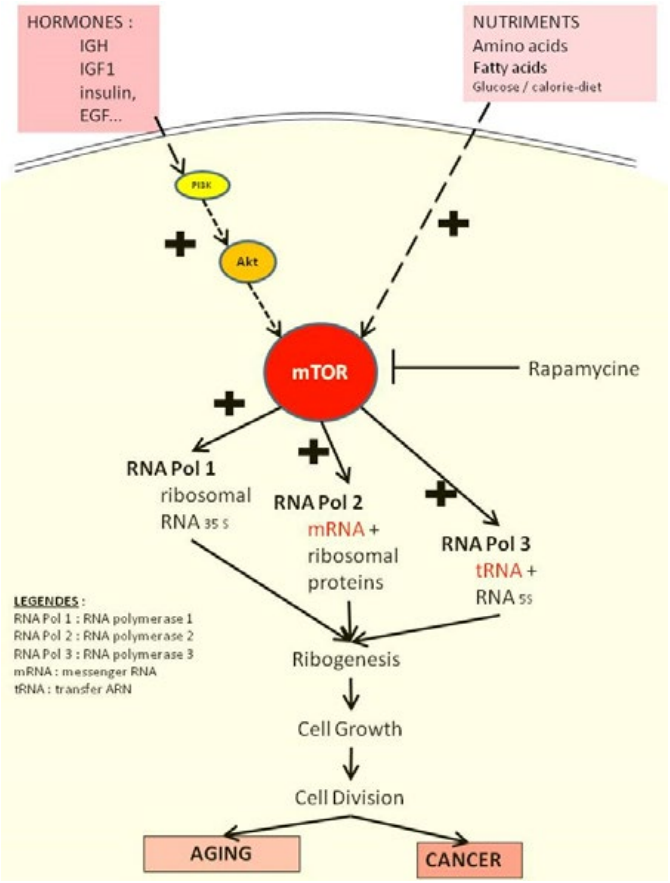
mTOR

masterchief of cell growth, mitosis and aging

Determination of **Urinary Modified Nucleosides** give us informations the about mTOR profile of the patient.

mTor (mammalian Target of Rapamycine) **is a cytoplasmic kinase which integrates hormonal and nutria stimuli and traduces them in cell growth**. mTOR, once activated, induces the constitution and activity of protein synthesis industry of the cell.



Except the period from birth to adult age, growth is not profitable to cells and organisms physiology and longevity, and this for several reasons:

1.Growth of cytoplasmic mass induced transition from G0/G1 phase which the period of prosperity and longevity of the cell, to S phase of duplication of chromosomic material.

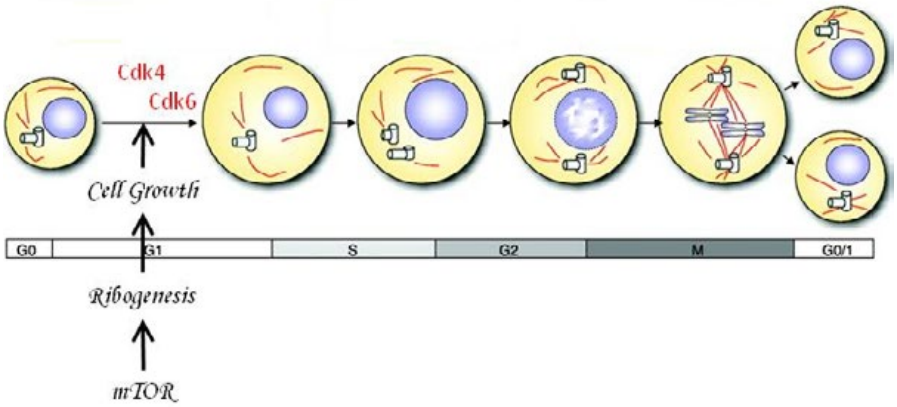
2.Thus, because Mitosis is systematically coupled to cytoplasmic mass expansion, growth leads to shortening telomeres, reduction of replication potential and accelerates replicative senescence.

3.Excessive and uncontrolled growth exhausts our niches of stem cells by accelerating their maturation and leading them to apoptosis before they can express their specific regenerative activity.

4.Cell growth is the hallmark of growth hormone and factors hGH, IGF1/2, insulin, that in addition promote inflammation, oxidative stress, metabolic overload, which in turn enhance proliferative mechanism.

5.In aging cells and organisms prone to cancerous diseases, high degree of growth may contribute to their development.

mTOR induces G0/G1 -> S transition through their activation of protein synthesis and therefore cytoplasmic mass expansion which promote the expression of CDK4 & 6.
CDK 4 & 6 engage the cell in the S phase.



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M. MTOR

Dossier n° B170330001
Résultats de M. MTOR
Né(e) le 01/01/1970 (47 ans)

MAIN PROPRE

Dossier enregistré le : 30/03/2017 à 09:48

Compte-rendu complet
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OXIDATIVE STRESS

Urinary modified nucleosides

LC-MS/MS -SHIMADZU -deuterated standards

Nucleosides en µmoles/gr Creatinin except m6A et m7G in nanomoles / gr Creatinin

↗ Pseudouridine	239	µM/gCr	(130-220)
Methyl-1-guanosine	9.0	µM/gCr	(6.5-13.5)
Methyl-2-guanosine	9.2	µM/gCr	(4.7-9.3)
↑ Methyl-2-O-guanosine	**3.52**	µM/gCr	(0.30-1.70)
Di-methyl-2-guanosine	14.4	µM/gCr	(8.0-20.0)
↓ Tri-methyl-2-guanosine	0.71	µM/gCr	(0.80-1.20)
Methyl-7-guanosine	140.9	nM/gCr	(0.0-400.0)
↗ Methyl-1-adénosine	37.2	µM/gCr	(16.0-36.0)
Methyl-6-adenosine	11	nM/gCr	(0-36)
Acetyl-4-cytidine	4.2	µM/gCr	(2.0-6.0)
Methyl-thio-adenosine	0.77	µM/gCr	(0.30-1.70)
↑ Sum of nucleosides	**454**	µM/gCr	(170-300)

Mildy increased "whole body" profilative index.
Mildy increased protein synthesis / ribogenesis rate.
Midly increased mTOR activity.

Urinary Cratinin	*1000*	*mg/l*	*(1 200-2 000)*
Urate/Crearatio			*(0.42-0.7)*