Systemic Complexity for human development in the 21st century
Systemic Complexity : new prospects to complex system theory
7th Congress of the UES Systems Science European Union Lisbon, Dec. 17-19, 2008

Associations for the Reciprocal and Mutual Sharing of Advantages and Disadvantages: Applicative Insights in Prevention or Cure of AIDS, Cancer and Leprous Diseases.

UPPA PAU, France, Europa

Pierre BRICAGE

Cancer is a Breaking of the Cell's Association for the Reciprocal and Mutual Sharing of Advantages and Disadvantages Through an Aggression that Results in a Lack of Non-Autonomy.

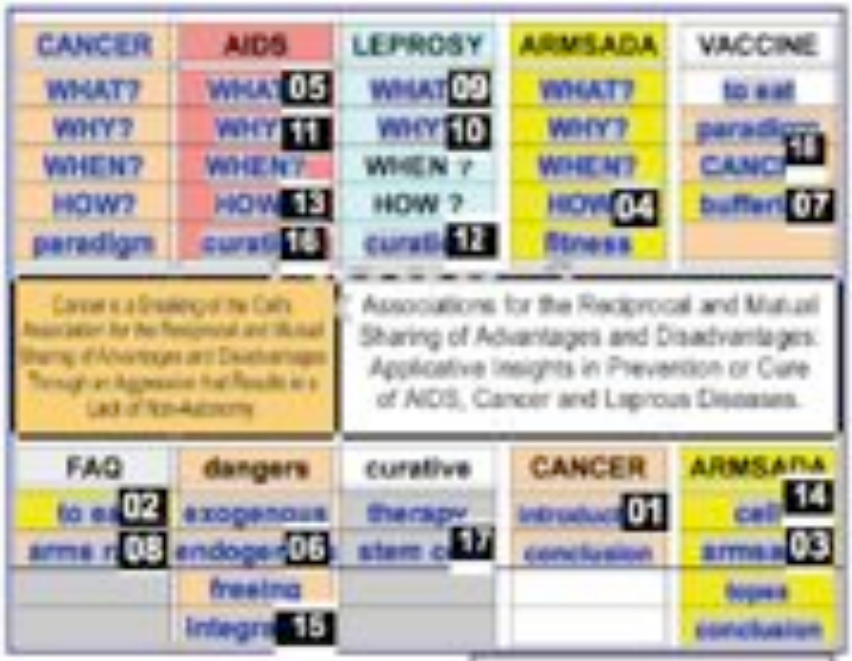
GOOD AFTERNOON

THANK YOU FOR YOUR ATTENDANCE

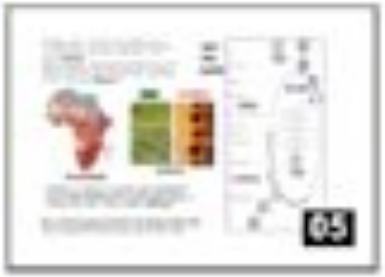
PREVIOUSLY I HAVE SHOWN WHAT CANCER IS AND HOW TO TREAT IT.

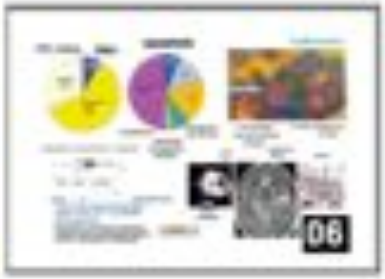
NOW, I WILL TO POINT ON THE FACT THAT "CANCER, AIDS AND LEPROSY ANYHOW RESULT OF A DIS-FUNCTIONING OF AN ASSOCIATION FOR THE RECIPROCAL AND MUTUAL SHARING OF ADVANTAGES AND DISADVANTAGES (IN BRIEF ARMSADA)."

THEN, I WILL SHOW HOW THAT PARADIGM OF ARMSADA IS SO USEFUL TO DESIGN BOTH A CANCER CURATIVE VACCINE AND A HIV CURATIVE VACCINE.



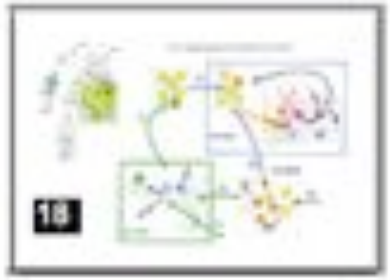
AIDS CANCER

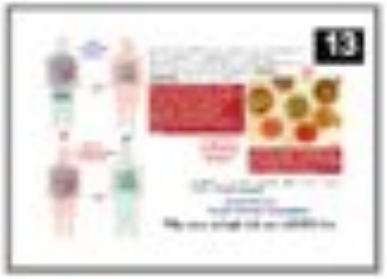




AIDS LEPROSY

ARMSADA CURATIVE

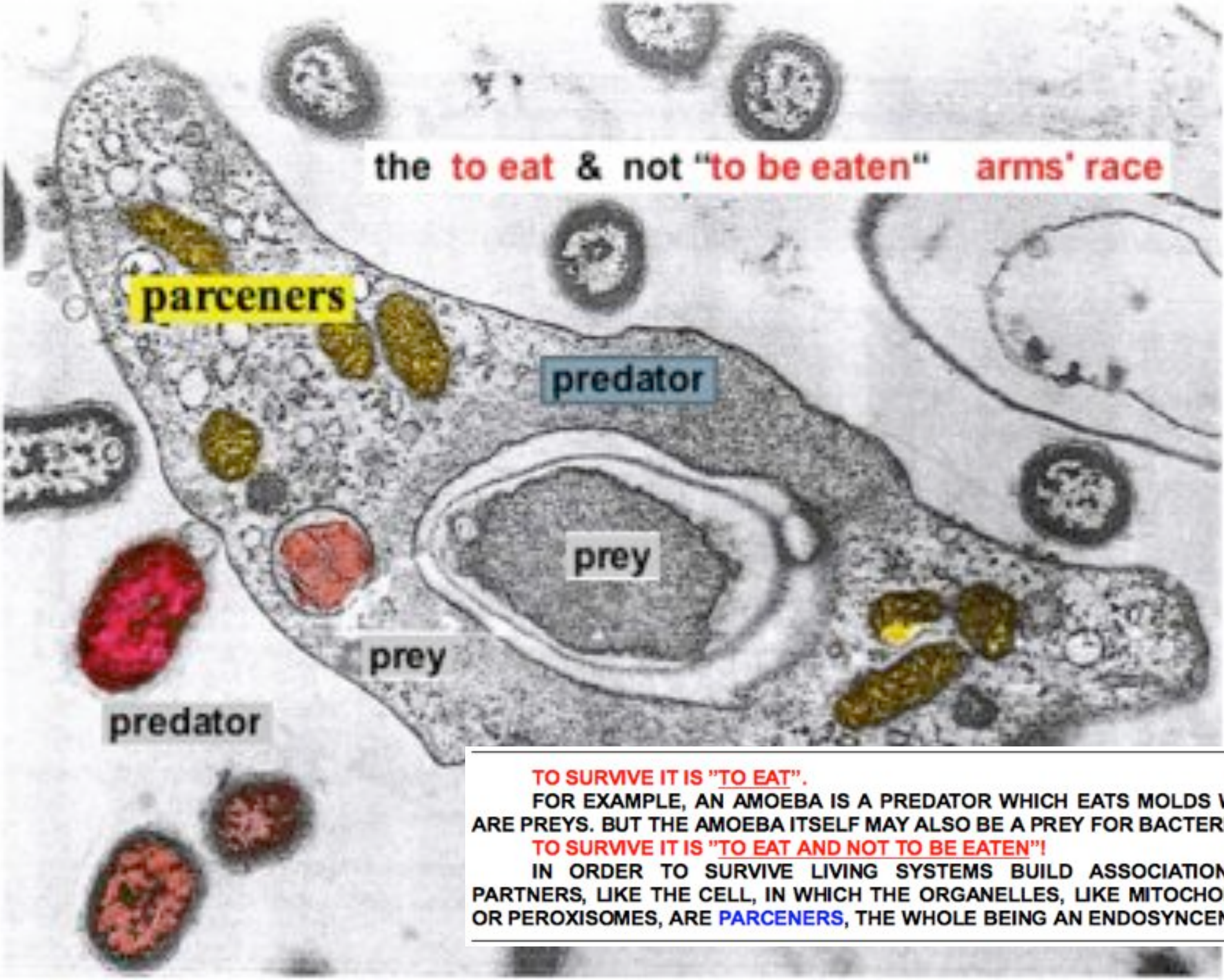




Associations for the Reciprocal and Mutual Sharing of Advantages and Disadvantages: Applicative Insights in Prevention or Cure of AIDS, Cancer and Leprous Diseases.

PREVIOUSLY I HAVE SHOWN WHAT IS AN ARMSADA AND HOW IT MERGES.
HOW & WHY AIDS AND CANCER ARE SIMILAR DIS-FUNCTIONMENTS?
HOW & WHY AIDS AND LEPROSY ARE SIMILAR AGGRESSIONS?
HOW TO CURE AIDS OR CANCER? OR ANY VIRAL DISEASE?

ARMSADA



TO SURVIVE IT IS "TO EAT".

FOR EXAMPLE, AN AMOEBA IS A PREDATOR WHICH EATS MOLDS WHICH ARE PREYS. BUT THE AMOEBA ITSELF MAY ALSO BE A PREY FOR BACTERIA.

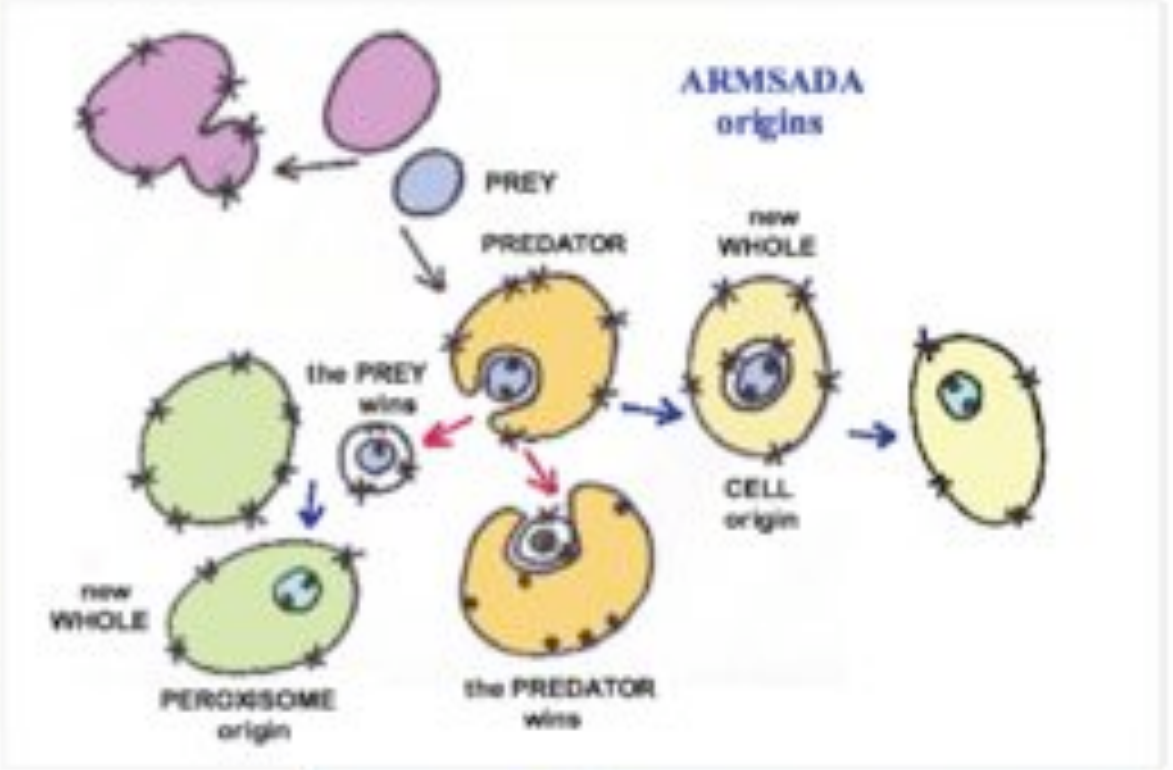
TO SURVIVE IT IS "TO EAT AND NOT TO BE EATEN"!

IN ORDER TO SURVIVE LIVING SYSTEMS BUILD ASSOCIATIONS OF PARTNERS, LIKE THE CELL, IN WHICH THE ORGANELLES, LIKE MITOCHONDRIA OR PEROXISOMES, ARE PARCENERS, THE WHOLE BEING AN ENDOSYNCENOSIS.

+	Parasitism	Commensalism	Mutualism
0		Neutralism	Commensalism
-	Competition		Parasitism
	-	0	+

Mutualism – both species benefit
Commensalism – one species benefits, the other is unaffected
Parasitism – one species benefits, the other is harmed
Competition – neither species benefits
Neutralism – both species are unaffected

ARMSADA – only benefits (=advantages) for the Whole
but - there are no advantages without disadvantages
Association for the RECIPROCAL (both Predator/Prey) and MUTUAL (Mutualism) SHARING of Advantages & DisAdvantages

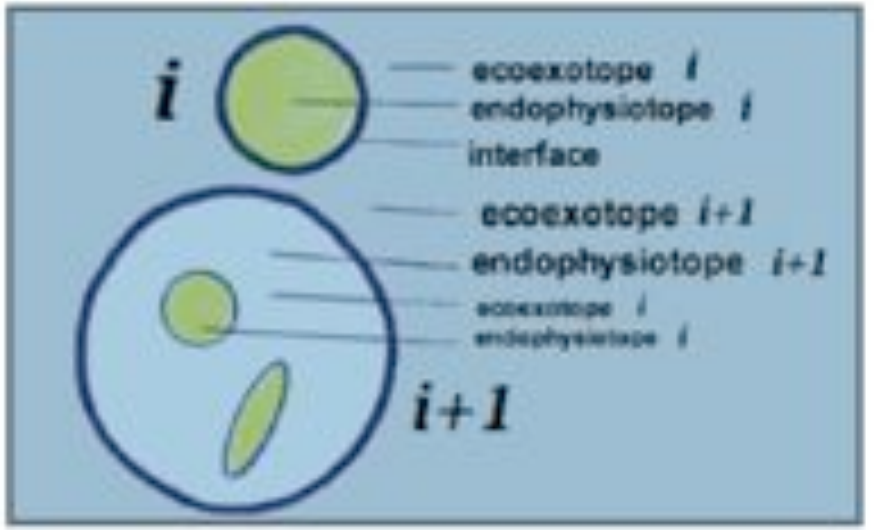


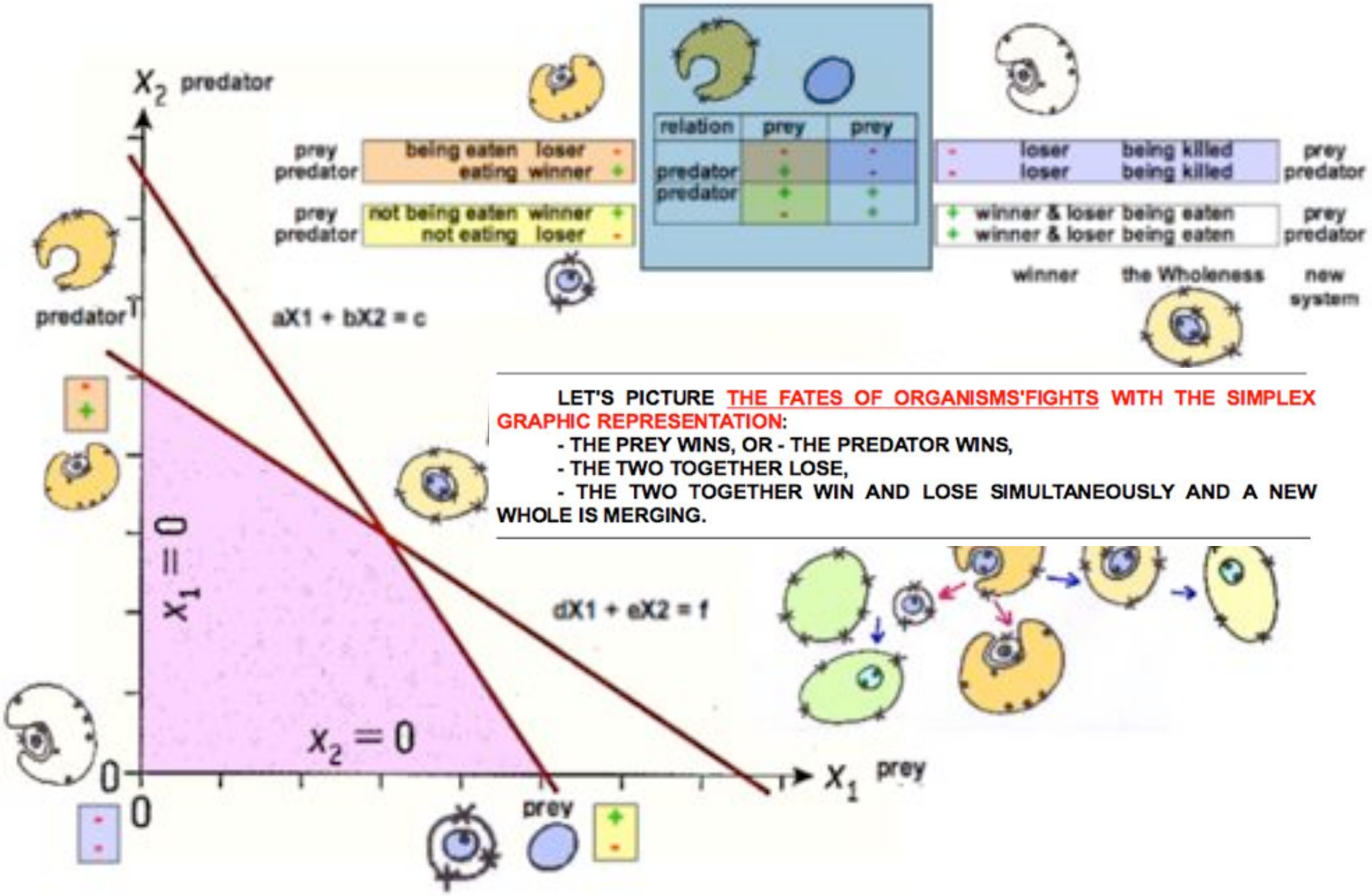
USUALLY THE RELATIONSHIP BETWEEN ORGANISMS ARE DESCRIBED AS PARASITISM, COMMENSALISM, MUTUALISM, COMPETITION OR NEUTRALISM.

IN THE CASE OF A PREDATOR/PREY FIGHT, 2 SITUATIONS ARE EVIDENCED: THE PREDATOR WINS AND EATS THE PREY OR THE PREDATOR LOSES AND THE PREY WINS. BUT THERE ARE 2 MORE SITUATIONS: THE TWO LOSE TOGETHER OR THE TWO WIN TOGETHER. ARMSADA IS THE RESULT OF THE FACT THAT THE TWO SIMULTANEOUSLY WIN AND LOSE, MERGING INTO A NEW WHOLE.

HOW DOES THAT HAPPEN?

AN ALIVE SYSTEM MAY BE DESCRIBED WITH ITS ENDOPHYSIOTOPE (ENDO: INTERNAL, TOPE: SPACE, PHYSIO: OF FUNCTIONING) WHICH IS INTEGRATED INTO AN ECOEXOTOPE OF SURVIVAL (EXO: EXTERNAL, TOPE: SPACE, OF ECO: INHABITATION). EVERY LIVING SYSTEM IS SIMULTANEOUSLY A GUEST OF AN ECOEXOTOPE OF HOSTING AND MAY BE THE HOST OF OTHER ENDOPHYSIOTOPES FOR WHICH ITS ENDOPHYSIOTOPE IS AN ECOEXOTOPE.





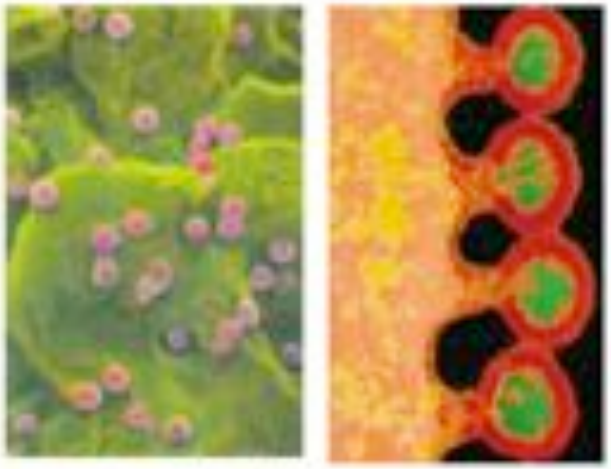
LET'S PICTURE THE FATES OF ORGANISMS'FIGHTS WITH THE SIMPLEX GRAPHIC REPRESENTATION:

- THE PREY WINS, OR - THE PREDATOR WINS,
- THE TWO TOGETHER LOSE,
- THE TWO TOGETHER WIN AND LOSE SIMULTANEOUSLY AND A NEW WHOLE IS MERGING.

Gregson, S. *et al* . Sexual mixing patterns and sex-differentials in teenage exposure to HIV infection in rural Zimbabwe. *The Lancet* **359,** 1896 - 1903 (2002). |Article|
Glynn, J. R. *et al* . Why do young women have a much higher prevalence of HIV than young men? A study in Kisumu, Kenya and Ndola, Zambia. *AIDS* **15,** (Suppl 4) S51 - S60 (2001). |Article|

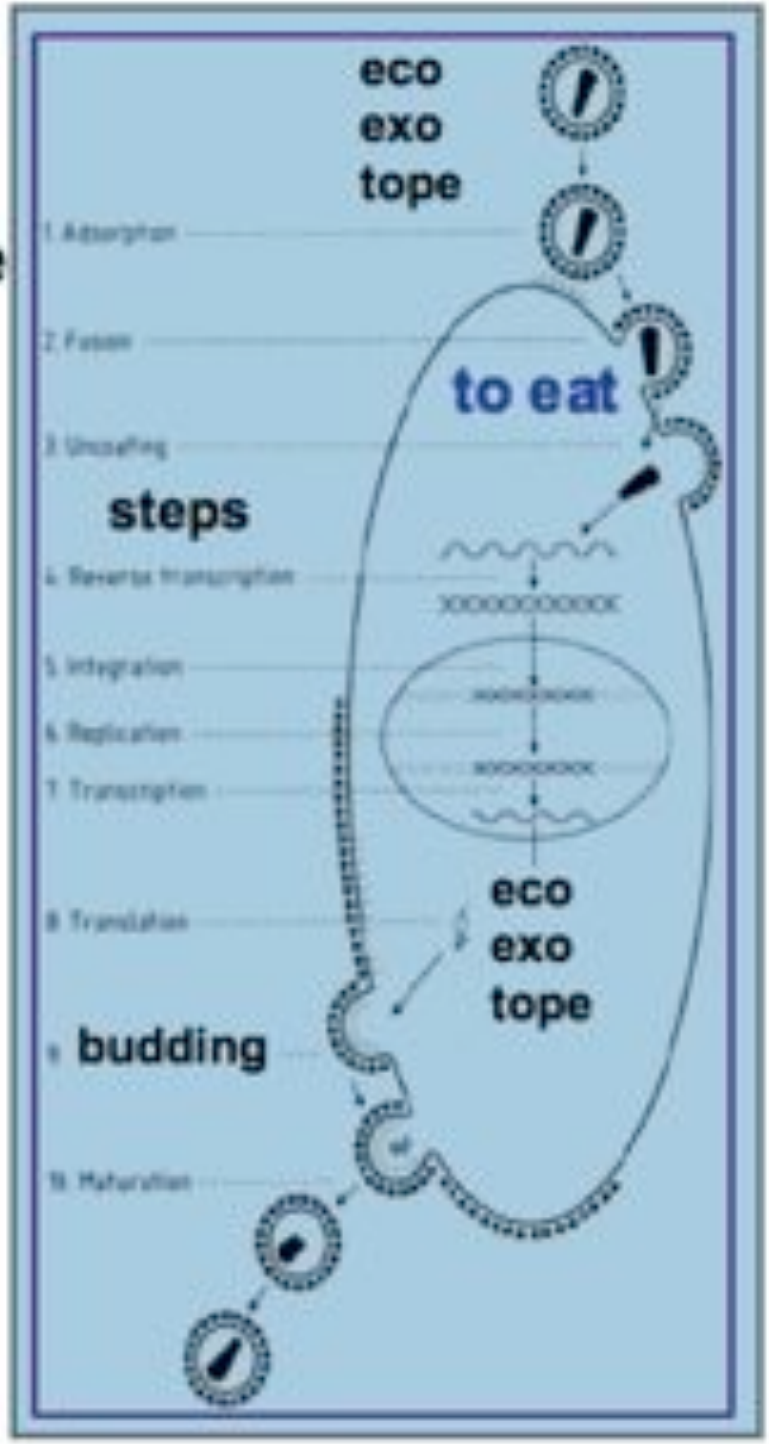
ecoexotope

prey predator



budding

HIV life cycle



AIDS IS THE RESULT OF A PREDATOR/PREY RELATIONSHIP IN WHICH THE PREYS ARE OUR CELLS AND THE PREDATOR IS THE HIV.

THE WHOLE LIFE CYCLE OF THE VIRUS IS PERFECTLY KNOWN AND WE HAVE DRUGS FOR STOPPING OR DAMAGING EACH OF THE 10 STEPS OF ITS CYCLE. BUT WE CAN USE ONLY 3 DRUGS SIMULTANEOUSLY BECAUSE THE DRUGS MORE EASILY KILL THE SICK INDIVIDUAL THAN THE VIRUS!

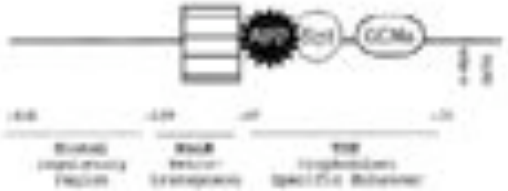
into humans, perhaps when they ate infected meat. One strain, called HIV-1, then spread all over the world.

THE HIV LIKE OTHER VIRUSES IS CARCINOGENIC AND LINKED TO MULTIPLE SCLEROSIS BECAUSE IT ALLOWS THE EVASION OF OTHER ENDOGENOUS CONSTRAINED VIRUSES WHICH ARE HOSTED BY THE HUMAN GENOME.

HOW ARE THESE ENDOGENOUS VIRUSES FREED?

controlled
constrained
dangers

Upstream Regulatory Element



TYPE C-LIKE HUMAN RETROVIRUS
LINKED TO MULTIPLE SCLEROSIS
(WO/1993/007259)

ENDOGENETIC RETROVIRAL SEQUENCES, ASSOCIATED WITH AUTOIMMUNE DISEASES OR WITH PREGNANCY DISORDERS

Papillomavirus

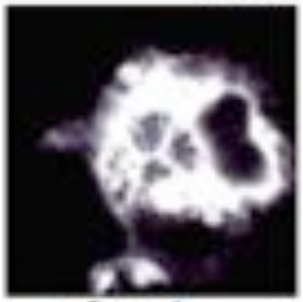
uncontrolled
not-constrained
dangers

human exogenous
viruses

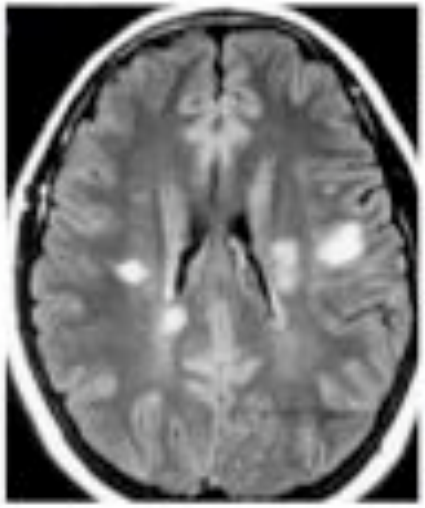
cell
level

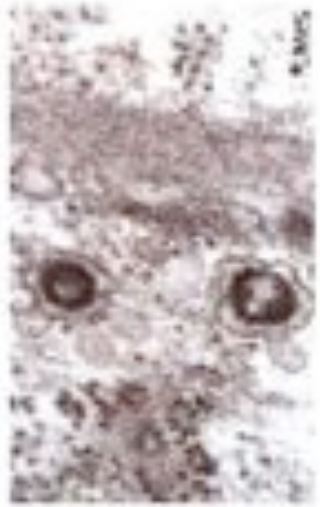
organism
level

virus



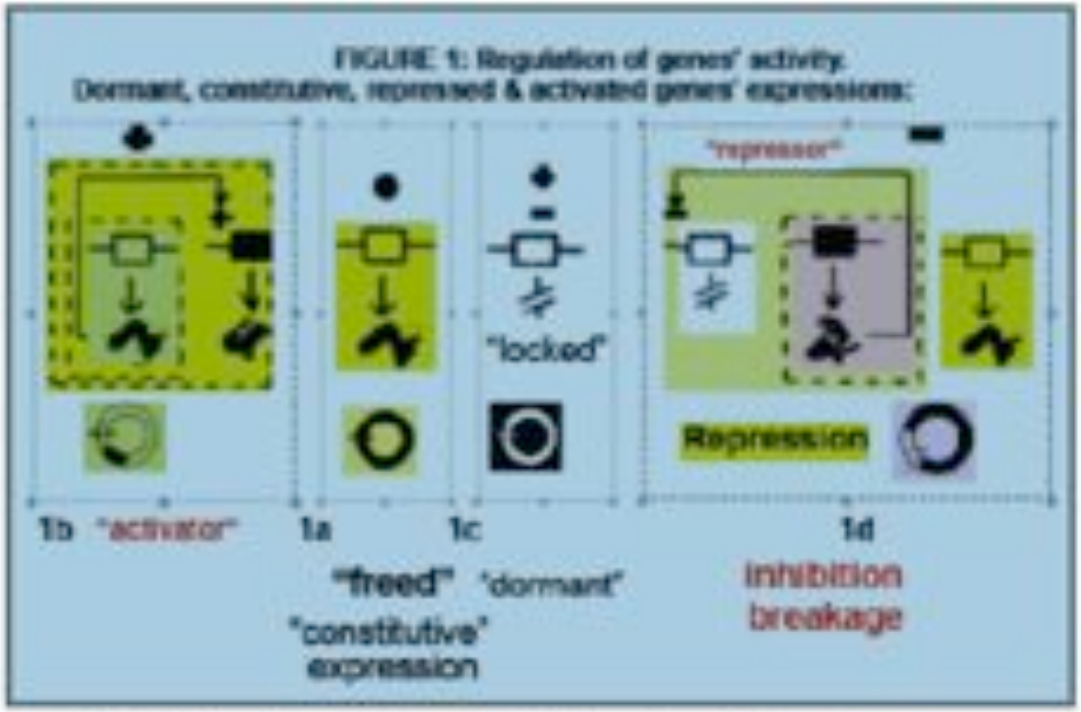
freed
dangers

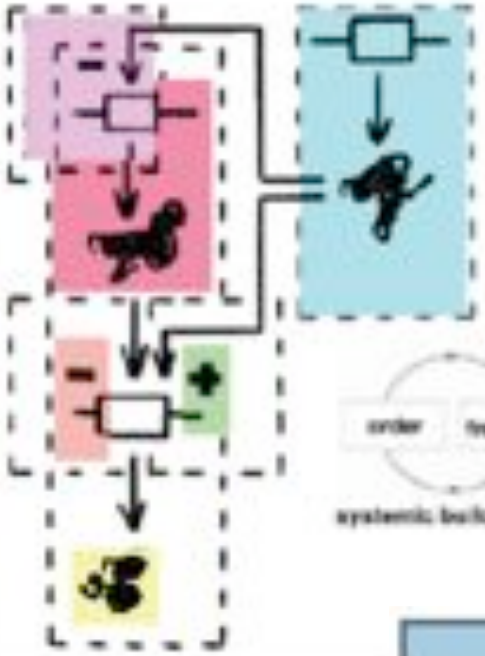


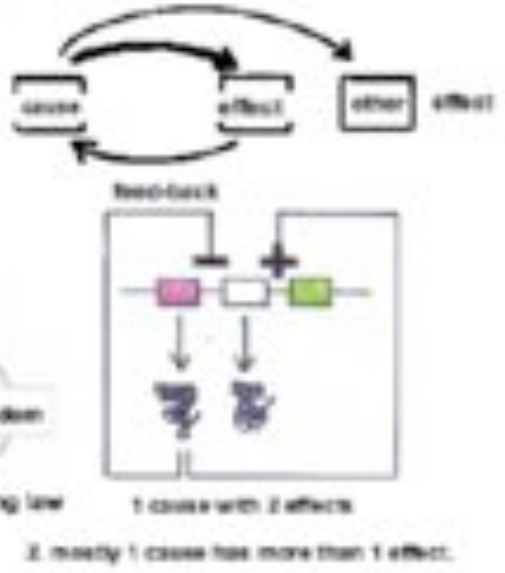


The costs for each type of genes' regulation: the regulation load.
The robustness of the control elements of genes' governance.

How is an ARMSADA "buffered" ?







types of control	gene sequences	protein synthesis	lag duration
never expressed	1	0	infinite

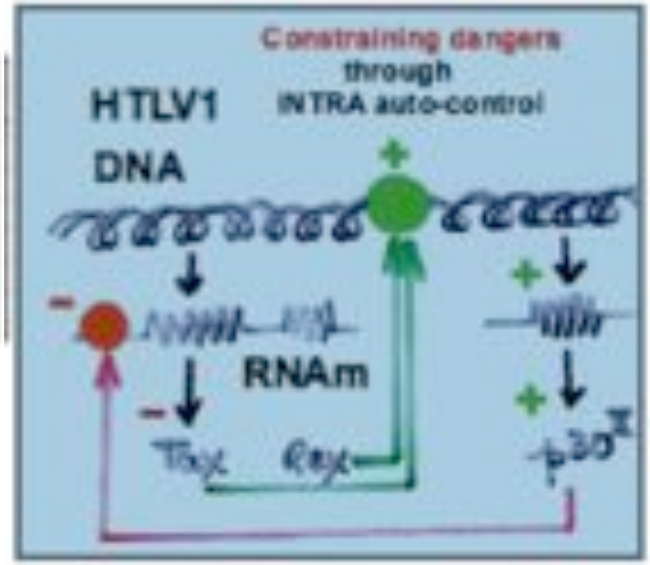
THERE ARE 4 TYPES OF GENES EXPRESSION:
- GENES THAT ARE EXPRESSED ONLY AFTER ACTIVATION,
- GENES THAT ARE EXPRESSED ONLY AFTER AN INHIBITION BREAKAGE,
- GENES THAT ARE EVER EXPRESSED, FREED, CONSTITUTIVE, AND
- GENES THAT ARE NEVER EXPRESSED (LOCKED, DORMANT).

IN FACT, GENES GOVERNANCE IS A MIXING OF ALL OF THAT 4 REGULATION TYPES, WHICH ALLOWS FEED-BACK MECHANISMS.

IN TERM OF COSTS, INHIBITION BREAKAGE IS THE MOST POWERFUL TYPE OF CONSTRAINING AND THE CHEAPER.

EVEN THE HTLV1 AUTOCONTROLS ITSELF IN THAT WAY.

AN EXAMPLE OF EVASION IS THE LOST OF AN INHIBITION WHICH FREES PREVIOUSLY LOCKED DANGERS OR REPRESSED ONES.



to survive it is:

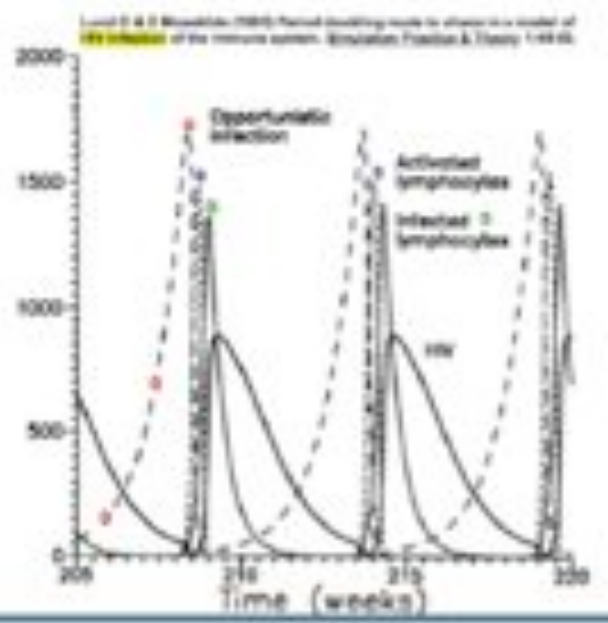
"to eat" and not "to be eaten"

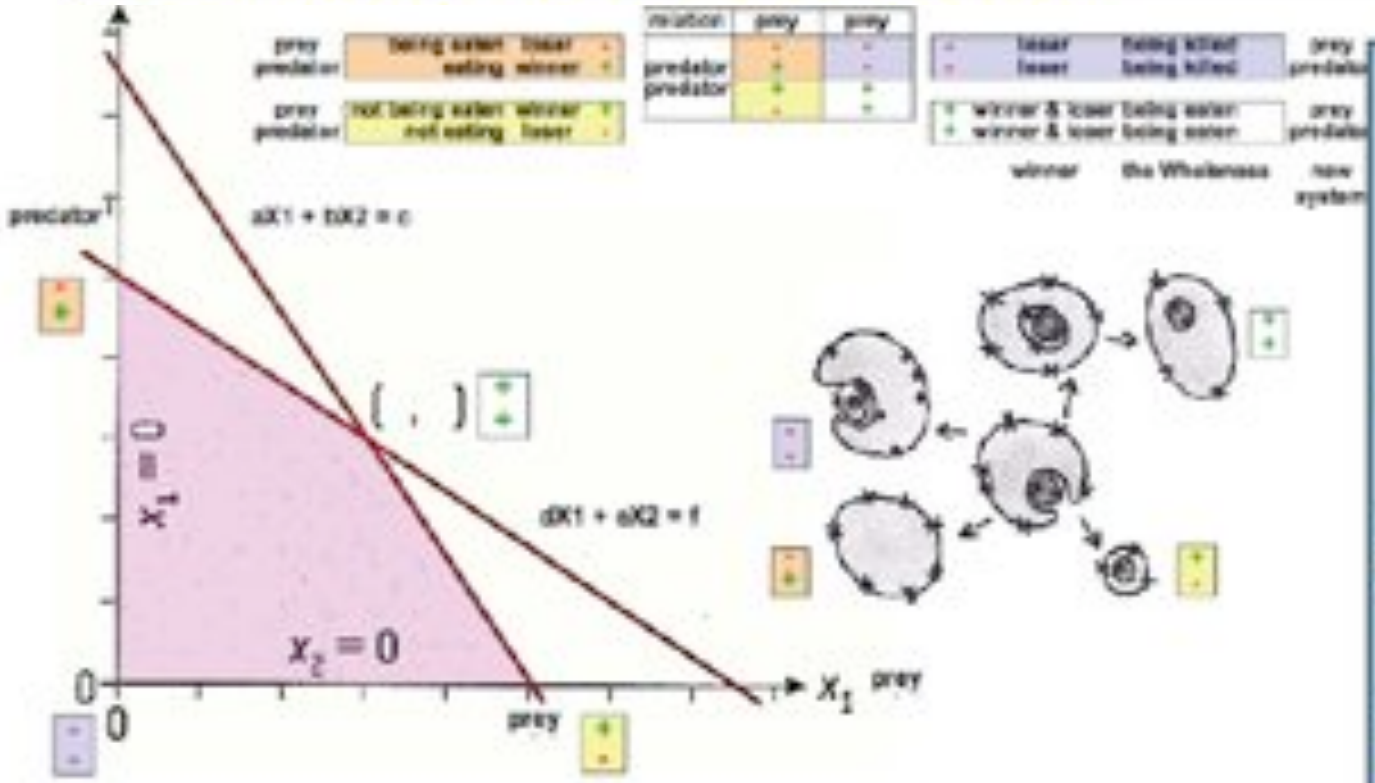
TO SURVIVE IT IS "TO EAT AND NOT TO BE EATEN".

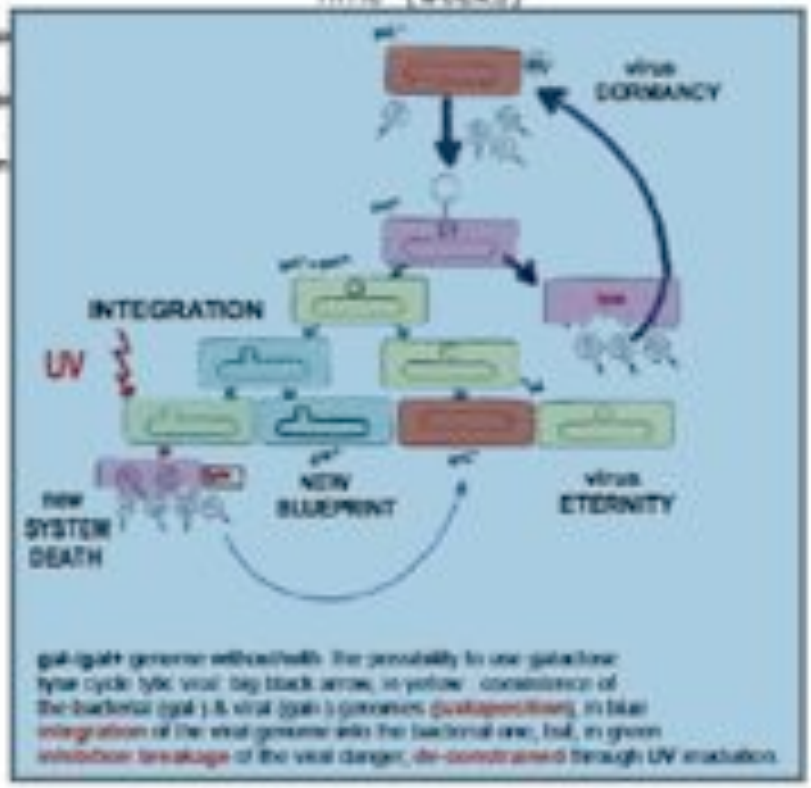
THE RELATIONSHIP BETWEEN HIV AND CELLS ARE THE SAME THAT THE ONES BETWEEN A PREDATOR AND ITS PREYS. HIV POPULATIONS EVOLVE AS DO OTHER BLOOD CELLS PREDATORS (LIKE IN TRYPANOSOMES DISEASES), WITH THE 4 FATES:

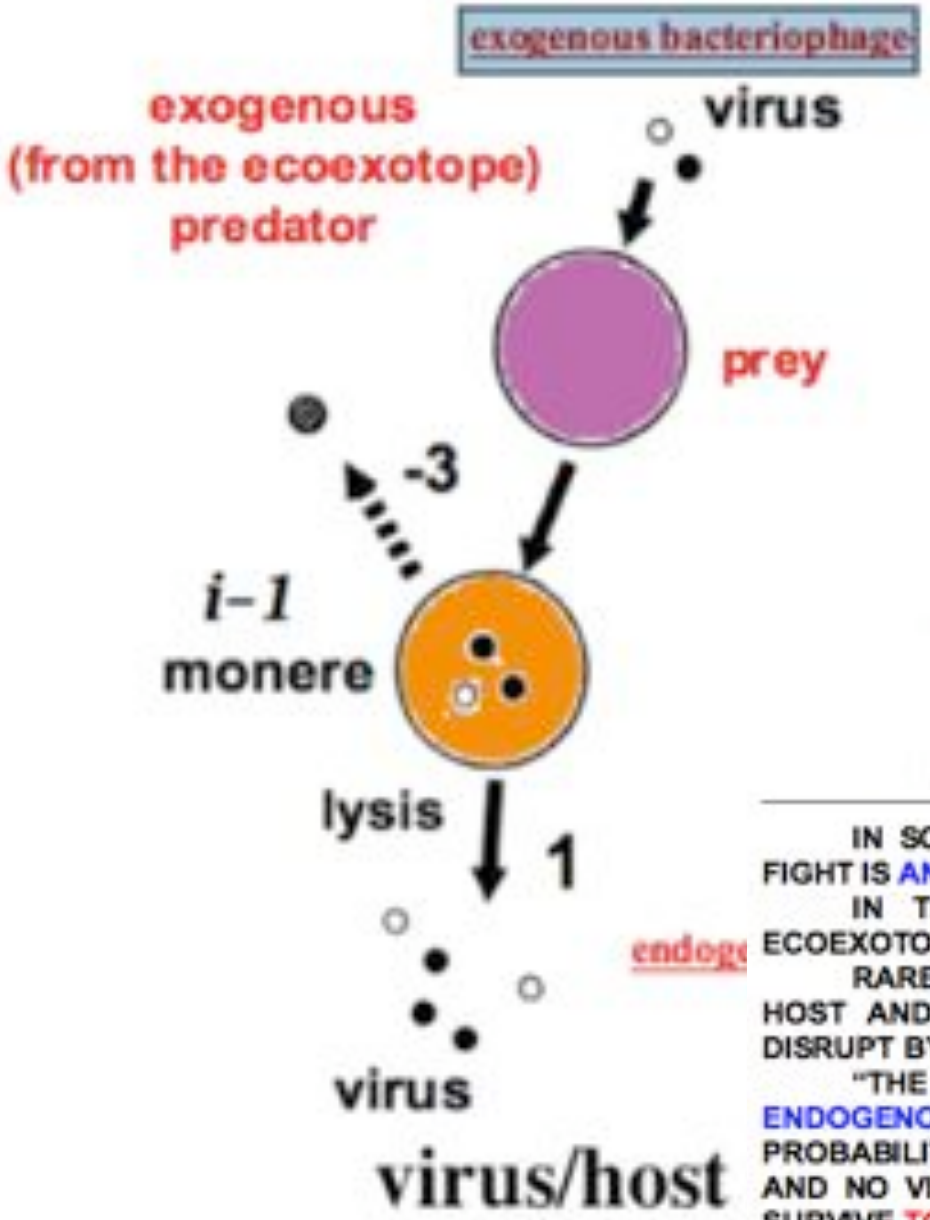
- THE PREY WINS, - THE PREDATOR WINS, - THE 2 LOSE, - NO ONE WINS OR LOSES AND THE 2 TOGETHER WIN AND LOSE.

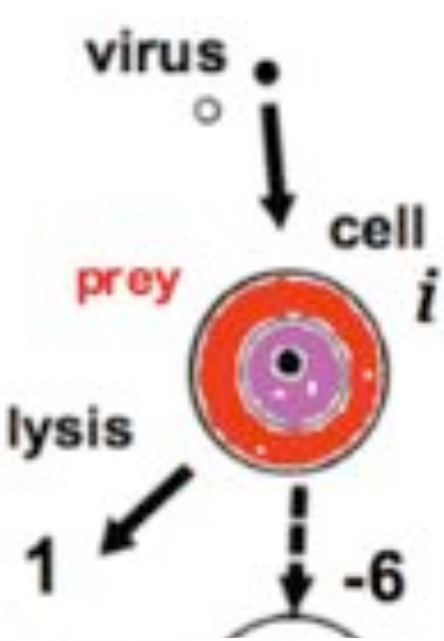
A STEADY-STATE MUST INSTALL BETWEEN THE PREDATOR AND ITS PREY, LIKE IT HAPPENS BETWEEN A BACTERIOPHAGE AND ITS BACTERIAL HOST, FOR THE MERGING OF AN ARMSADA, WHICH IS A NEW BLUEPRINT.

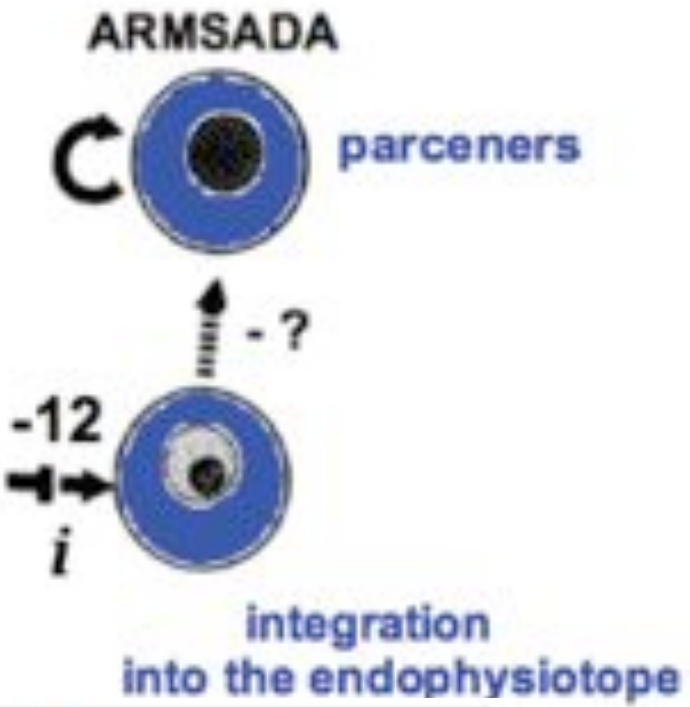












IN SOME ASPECTS AIDS AND CANCER ARE SIMILAR: THE VIRUS/HOST FIGHT IS AN ARMS RACE.

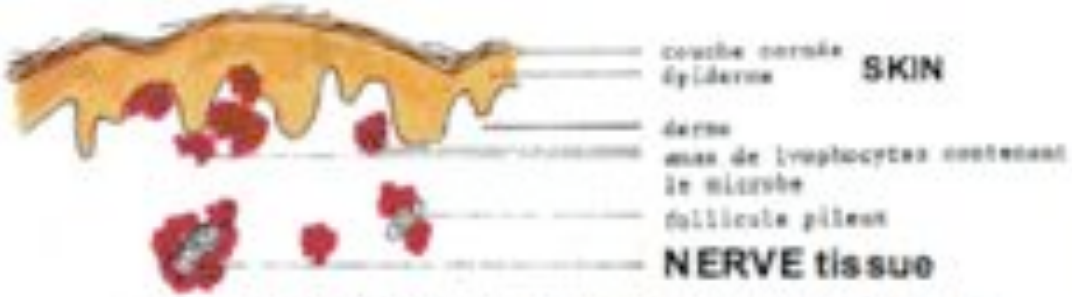
IN THE CASE OF BACTERIOPHAGES, USUALLY VIRUSES OF THE ECOEXOTOPE KILL THE BACTERIAL HOST: PROBABILITY 1.

RARELY (PROBABILITY 10exponent-3), THE PHAGE DOES NOT KILL ITS HOST AND THE 2 SURVIVE TOGETHER. BUT THEIR ASSOCIATION MAY BE DISRUPT BY THERMAL, RADIATIVE OR CHEMICAL STRESSES, LIKE IN CANCER.

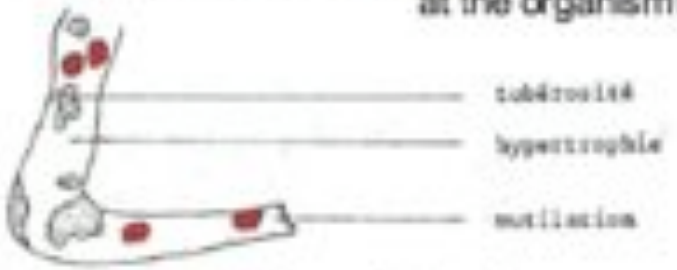
"THE SAME" WHEN AN EXOGENOUS VIRUS ENTERS A CELL, OR WHEN AN ENDOGENOUS ONE EVADES INTO THE CELL. THE CELL USUALLY IS KILLED: PROBABILITY 1. BUT, VERY RARELY, PROBABILITY 10exponent-6, IT SURVIVES AND NO VIRUS IS PRODUCED, BECAUSE, THE 2, THE CELL AND THE VIRUS, SURVIVE TOGETHER GIVING RISE TO A CANCER CELL.

EXCEPTIONNALLY, THE VIRUS AND THE CELL GIVE RISE TO A NEW WHOLE, AN ARMSADA IN WHICH THE VIRUS IS DEFINITELY INTEGRATED INTO THE CELL'S ENDOPHYSIOTOPE: PROBABILITY SUPPOSED TO BE 10exponent-12. NO VIRUS IS PRODUCED, NO MORE CANCER CELL.

THAT IS THE PARADIGM OF ARMSADA MERGING, EVEN IF THIS EVENT IS AN EXCEPTION, SOON OR LATE IT BURSTS.



1. The lepromatous form of the disease, at the organism's level

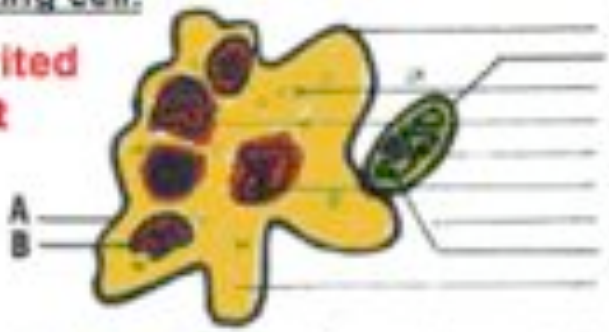


2. The tuberculoid form of the disease.

3. The bacilli.

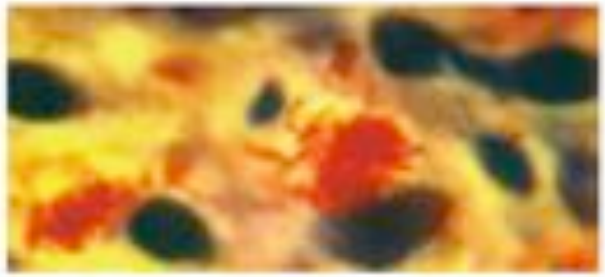
4. A hosting cell.

non-invited guest



Mycobacterium leprae within the human cells: The predator/prey association

guest/host arms race escalation



5. The sequestration of the invading danger & the predator/prey relationship

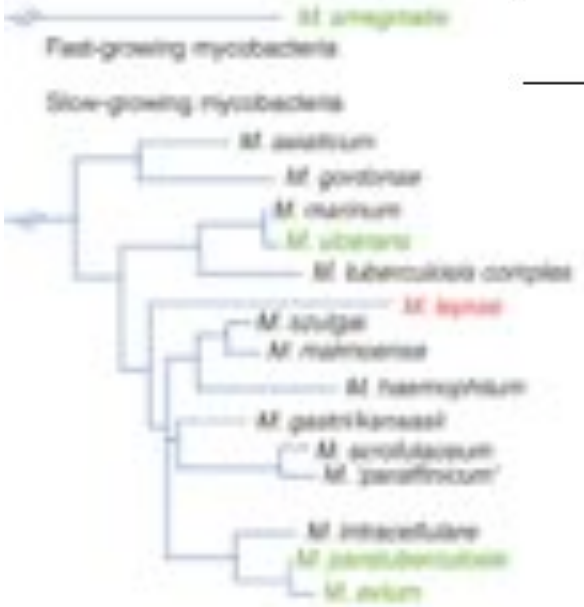
DO COMPARE NOW AIDS AND LEPROSY. THERE ARE 2 FORMS OF THE LEPROUS DISEASE: THE LEPROMATOUS ONE, WITH ULCERATIONS, AND THE TUBERCULOID ONE, WITH MUTILATIONS. WHY SUCH A DIFFERENCE?

AS PREVIOUSLY SHOWN IT IS THE RESULT OF A GUEST/HOST ARMS RACE ESCALATION.

LIKE THE VIRUS IN AIDS, THE BACILLI ARE SEQUESTERED INTO THE LYMPHOCYTES WHERE THEY ARE "NON-INVITED GUESTS".

HOW DO THAT KIND OF PREDATOR/PREY RELATIONSHIP MAY EVOLVE?

Phylogenetic tree of mycobacteria, based on 16S rRNA sequences



Nature Genetics 36, 195 - 197 (2004)
doi:10.1038/ng1918

THE LEPROUS BACILLI LIKE CELLS ARE HOSTING VIRAL DANGERS.

Department of Molecular and Medical Genetics, University of Toronto, Toronto, Canada.

Mycobacterium leprae sequence revealed that the gene order in the genome is more rearranged.

hidden guests

Treating leprosy: an Erb-al remedy?
LA Noon, AC Lloyd
The leprosy pathogen Mycobacterium leprae attacks Schwann cells in the peripheral nervous system, causing them to demyelinate. Recent work by Tapinos et al. shows that a direct mechanism of demyelination induced by M. leprae depends on the binding of the b...
Trends in pharmacological sciences. 2007 Mar

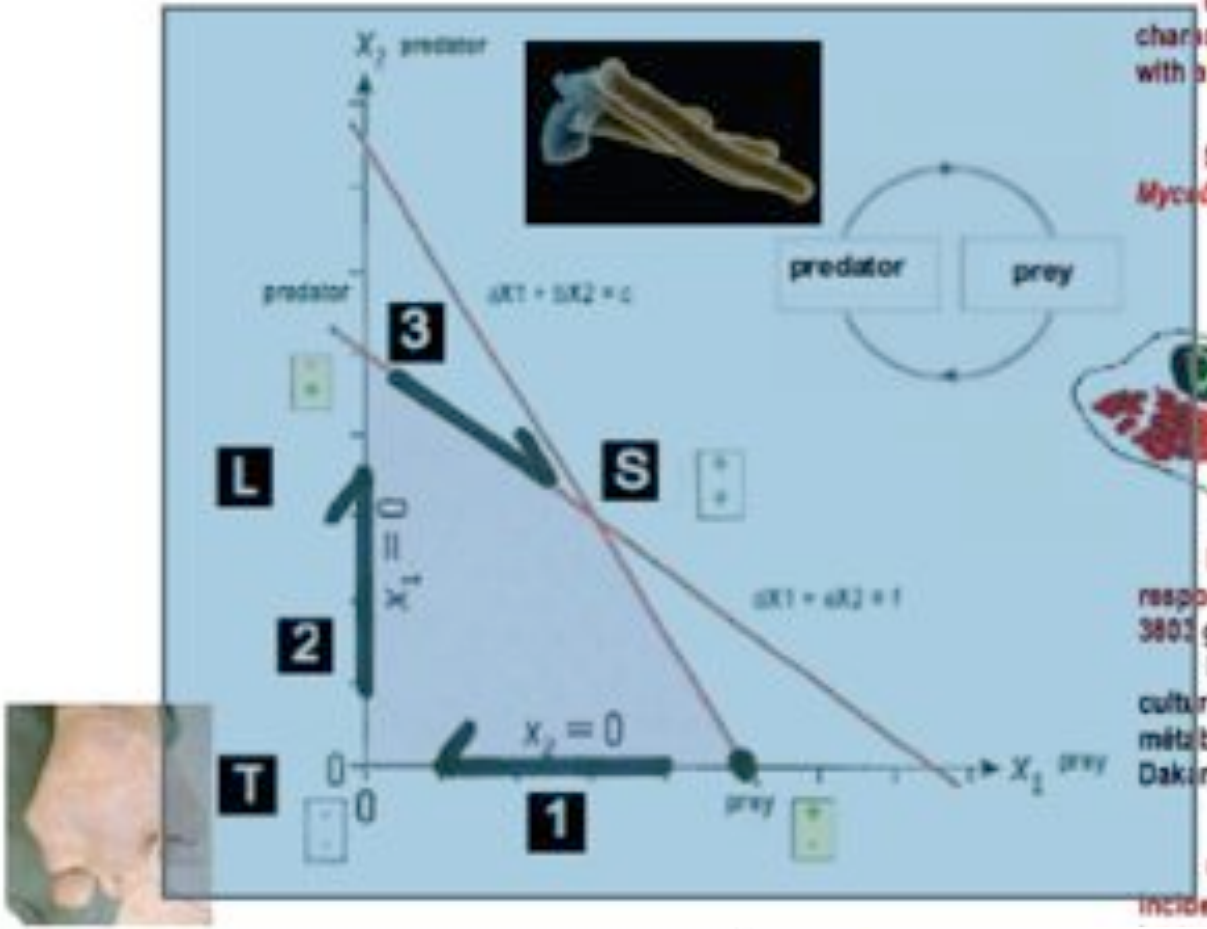
Susceptibility to leprosy is associated with PARK2 and PACRG.
MT Mira, A Alcais, VT Nguyen, MO Moraes, C Di Flumeri, HT Vu, CP Mai, TH Nguyen, NB Nguyen, XK Pham, ...
Leprosy is caused by Mycobacterium leprae and affects about 700,000 individuals each year. It has long been thought that leprosy has a strong genetic component, and recently we mapped a leprosy susceptibility locus to chromosome 6 region q25-q26 (ref. 3). ...
Nature. 2004 Feb 12

"Chromosome 6q25 is linked to susceptibility to leprosy in a Vietnamese population"
Nature Genetics, vol.33, mars 2003

endogenous risks

LEPROSY (file: UESlisboaPBlepraeRef.pdf) http://minilien.com/?iUZluv4lpL

FIGURE 3: "Like with viruses"...
a dynamic war is running in between the bacterial and cell compartments.



Nikolayevskyy V.V. (2007) Molecular epidemiology and prevalence of mutations conferring rifampicin and isoniazid resistance in *Mycobacterium tuberculosis* strains from the southern Ukraine. Clinical Microbiology and Infection 13(2): 129-138.

In the states of the former Soviet Union, the last 15 years have been characterised by a dramatic rise in the incidence of TB associated mortality with a converging human immunodeficiency virus (HIV)/AIDS epidemic.

Suzuki K. & al. (2006) High-level expression of pseudogenes in *Mycobacterium leprae*. FEMS Microbiology Letters 259(2): 208-214.

Ro Y.T. & al. (2003) Purification, characterization, and physiological response of a catalase-peroxidase in *Mycobacterium sp.* strain JC1 DSM 3803 grown on methanol. FEMS Microbiology Letters 226(2): 397-403.

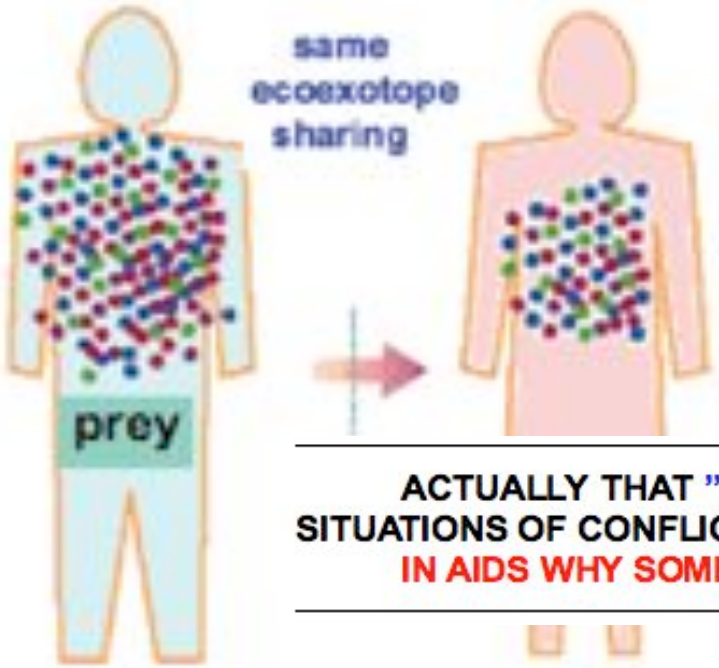
Bricage P. (1979) Recherche d'activateurs de croissance pour une culture in vitro de Mycobactéries d'origine lépreuse. I. Les alcools, métabolites ou facteurs de croissance. Ann. Ctr Rech. Biol. sur la Lèpre, Dakar, 1: 5-12.

Grant I.R. & al. (2001) *Mycobacterium avium ssp. paratuberculosis*: its incidence, heat resistance and detection in milk and dairy products.

IN THE LEPROUS DISEASE, LIKE WITH VIRUSES, A DYNAMIC WAR IS RUNNING BETWEEN THE BACTERIAL AND CELLULAR COMPARTMENTS.

THE TUBERCULOID FORM T IS THE RESULT OF THE DEFEAT OF THE 2 FIGHTERS, EACH ONE DESTRUCTING THE OTHER ONE. THE LEPROMATOUS FORM L IS THE RESULT OF THE VICTORY OF THE PREDATOR BACILLI.

A NO-WINNER AND NO-LOSER STEADY-STATE IS PREDICTIBLE LIKE THE ONE THAT REALLY MERGED WHEN THE MITOCHONDRION DID INTEGRATE THE EUKARYOTIC CELL.



Long, E. M., Martin, H. L., Kreiss, J. K., Rainwater, S. M. J., Lavreys, L., Jackson, D. J., Rakwar, J., Mandaliya, K. & Overbaugh, J. Gender differences in HIV-1 diversity at time of infection ***Nature Medicine*** **6**, 71 - 75 (2000).

Sexual transmission of HIV from man to woman results in

predator

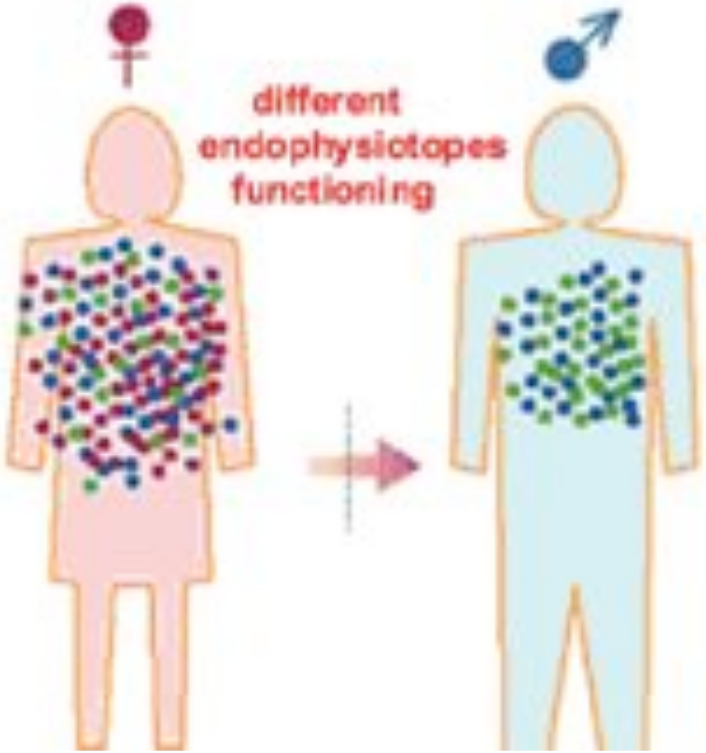
ACTUALLY THAT "NO-WINNER AND NO-LOSER" STATE MUST EXIST IN ALL SITUATIONS OF CONFLICT.

IN AIDS WHY SOME AT HIGH RISKS ARE STILL FREE OF VIRUSES?

transmission from woman to man.

exogenous ecoexotope dangers

The HIV virus changes its outer protein coat (shown in orange above) to evade the immune system.



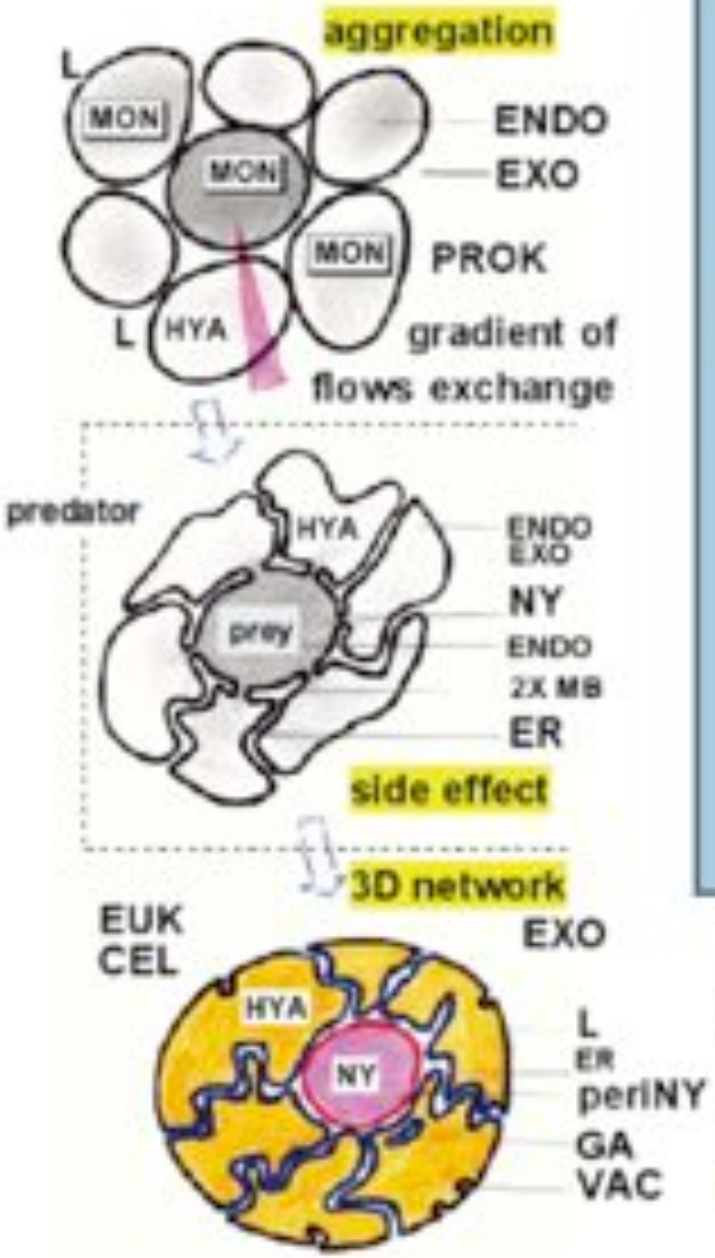
Derdeyn, C. A. *et al. Science*, **303**, 2019 - 2022, (2004). **|Homepage|**

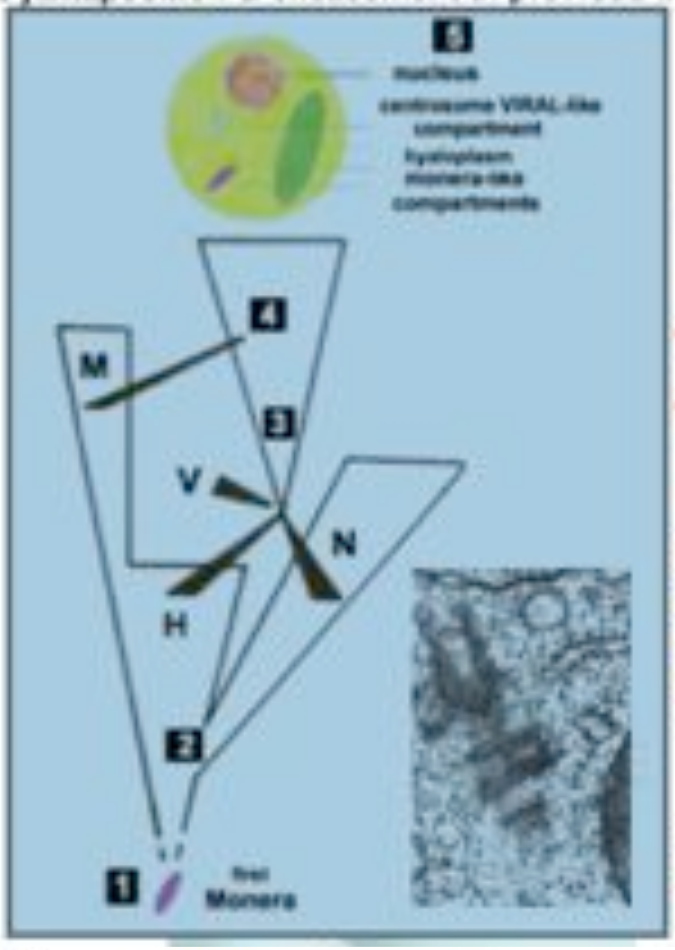
to survive it is:

"to eat" and not "to be eaten"

Why some at high risk are still HIV-free

FIGURE 4: The structural & functional ergodicity of the living systems runs through the juxtaposition & encasement of previous living organisations.





To survive it is "to eat & not to be eaten".

Autophagy is Essential for Preimplantation Development of Mouse Embryos.
Tsukamoto S. & al. (2008) Science 5885: 117-120.

1a: for every living system, to survive it is **"to eat" & "not to be eaten".**
1b: but, it is impossible "not to be eaten"... **everyone, soon or late, is eaten!**

4: The increase of the "hosting" capacity of an **ecoexotope** is always merging from an increase in the capacity of "to be hosted" of the **endophysiotope.**
5a: The ecoexotope of integration **temporarily** "updates" **long-lasting choices** of organization.

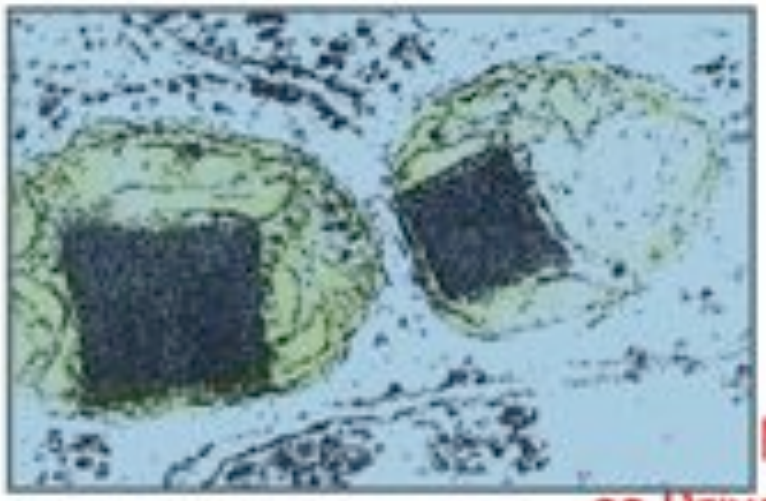
An environmental heritage (the EcoExoTope) allows "to eat". But it can not allow "not to be eaten". It is transformed along the way life goes through. There are different versions of that heritage and all have [illegible]

3a: Every living system can not be "extracted"

DURING THE FIRST STEPS OF THE LIFE ON EARTH THERE WERE ONLY BACTERIA THAT SHARED A COMMON ECOEXOTOPE. BUT SUDDENLY A NEW BLUEPRINT MERGED: THE CELL. WHY?

THIS WAS THE RESULT OF JUXTAPOSITIONS AND ENCASEMENTS OF PREVIOUSLY FREE ANTAGONISTIC MONERA, TO MAKE A NEW WHOLE. SURELY, THE PROCESS WAS TRIGGERED BY A RNA VIRUS, WHICH IS STILL PRESENT IN OUR CELLS AS THE CENTROSOME,

"A RELIC OF A VIRUS" WHICH IS STILL DIVIDING WHEN A CELL DIVIDES.



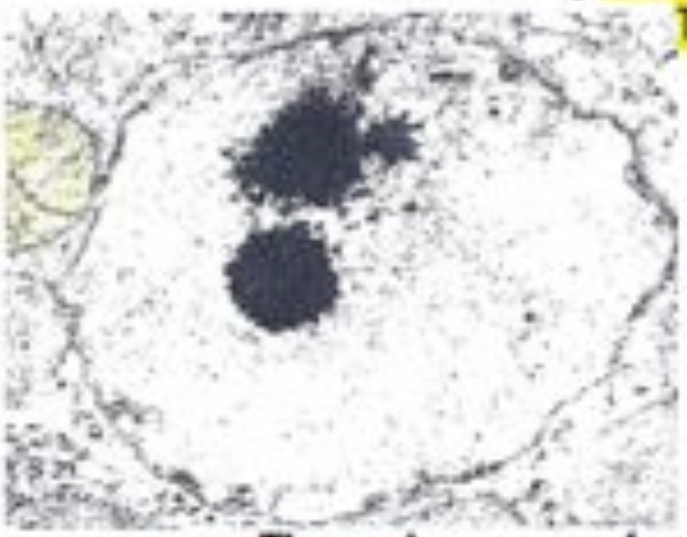
Mitochondria as Drivers of Metastasis

We used cytoplasmic hybrid technology to replace the endogenous mitochondrial DNA in a mouse tumor cell line that was poorly metastatic with mitochondrial DNA from a cell line that was highly metastatic, and vice versa.

The recipient tumor cells acquired the metastatic potential of the transferred mitochondrial DNA.

In one tumor cell line, the mitochondrial DNA conferring high metastatic potential was found to harbor mutations that led to up-regulation of nuclear genes involved in metastasis.

Ishikawa K. & al. (2008) Science 5876: 661-664. ROS-Generating Mitochondrial DNA Mutations Can Regulate Tumor Cell Metastasis.



The carboxysome is a bacterial

OTHER VIRAL-LIKE CONSTRAINED DANGERS ARE STILL PRESENT IN CELLS, LIKE THE PROTEIN CRISTALS THAT BURST IN MITOCHONDRIA OR IN PEROXISOMES AT CERTAIN STEPS OF DEVELOPMENT.

---

pentameric building blocks such as those found in certain viral capsids.

4 abundant shell proteins from 2 known types of carboxysomes are known to form hexamers.

The carboxysome functions as a simple organelle by sequestering enzymes involved in carbon fixation.

Tanaka S. & al. (2008) Atomic-Level Models of the Bacterial Carboxysome Shell. Science 319(5866): 1083-1086.

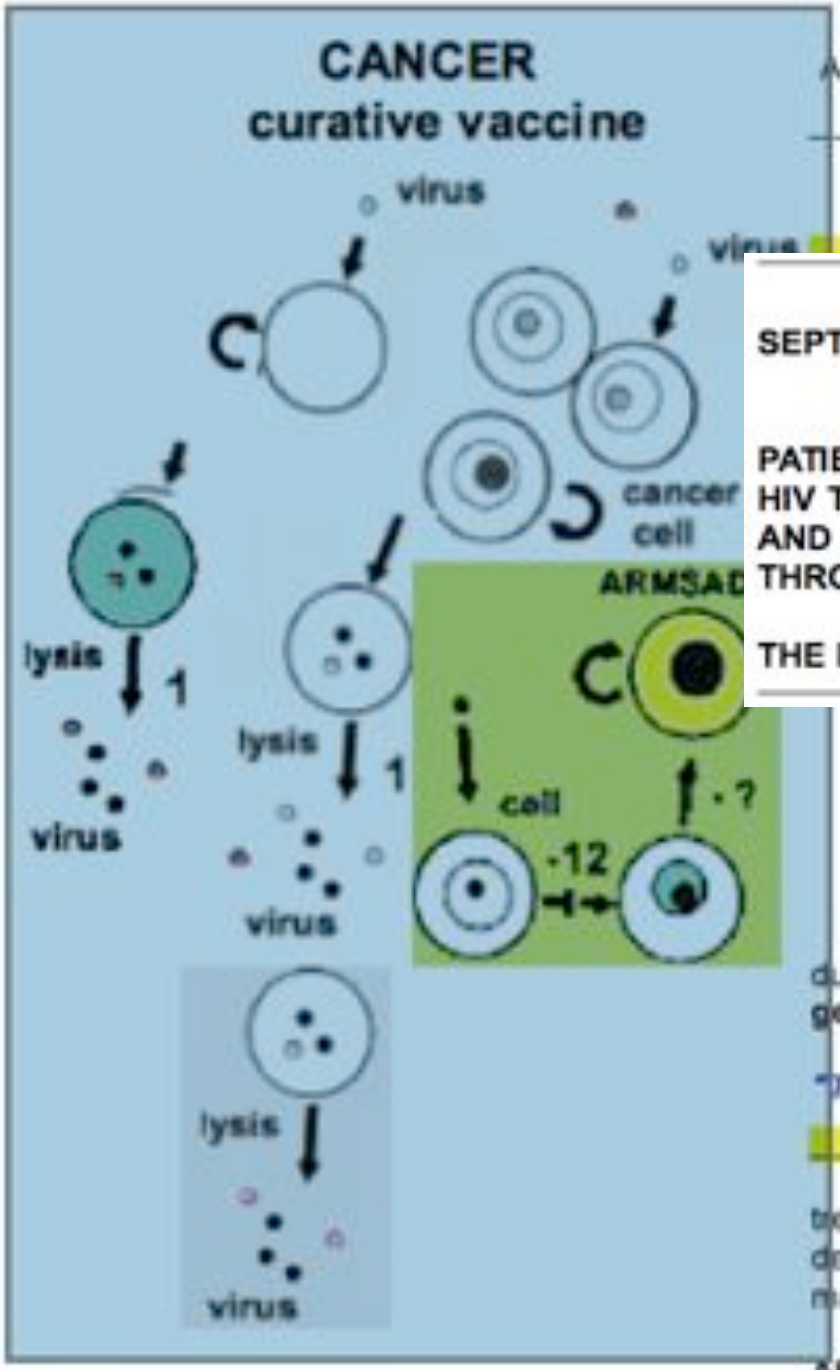


TABLE 7: The *ex-vivo* curative vaccine technology.

A therapy of the HIV with the HIV.

A "technologically created natural" phenotype of resistance to the AIDS virus.

The paradigm:

The constrained hosted dangers are advantages.

The dangers, if de-constrained or lost, become disadvantages.

The technology: http://mipilion.com/?L=UeZbdeNCW

THE EX-VIVO HIV CURATIVE VACCINE TECHNOLOGY I PROPOSED IN SEPTEMBER 2005 IS THE APPLICATION OF THAT ARMSADA PARADIGM.

THE PARADIGM: THE CONSTRAINED DANGERS ARE ADVANTAGES;

THE PROCEDURE: AFTER IN VIVO TAKING UP OF STEM CELLS INTO A SICK PATIENT AND THEIR IN VITRO CULTURE, THEIR PROGENY IS CONFRONTED WITH HIV TO ALLOW THE SELECTION OF CELLS THAT ARE STILL ALIVE, VIRUS FREE AND RESISTANT TO HIV KILLING, BECAUSE OF THEIR METAMORPHOSIS THROUGH HIV INTEGRATION.

AFTER THE TEST OF THEIR NON-CANCEROUS STATE, ENGRAFTED INTO THE DONOR THEY WILL CURE THE DISEASE.

The principle is the same than that of the vaccination against the rabies.

- Only the contaminated individual is treated.
- **Drugs are used only as *in vivo* "retardants"**, giving the delay for taking *in vitro* an advance on the virus.
- The clone is **grafted to the same** individual with no risk of rejection.
- It is a gene therapy of AIDS with HIV (not with an other viral vector).

That allows **to by-pass the epidemiological differences** which are due to the sex phenotypes and **to avoid the risks of intergeneration genetic restoration** (cytoplasmic heredity).

We can hope a clonal advantage in favour of the transformed cells *"The virus can even pass several times."*

Inconveniences and risks ?

- the technology is **expensive** but less than the usual multi-annual treatments, with very heavy undesired effects, and which succeed only to delay the death of the individual, and to select drug-resistant viral variants, maybe more virulent ones!
- **The risk of mutation is lowered** if the virus is integrated **into an ARMSADA**. Because the mutation rate of the "naturally integrated non-expressed" DNA is several orders of magnitude lower than that of RNA or DNA free templates.

Google

Web Images Groupes Actualités Maps plus »

SIDA HIV AIDS "curative vaccine" Rechercher Recherche avancée Préférences

Rechercher sur le Web Rechercher les pages en français

Web

Is there another approach than that of a preventative vaccine?
That of a CURATIVE one…Please do Look at :
The Metamorphoses of the Living Systems
http://hal.archives-ouvertes.fr/hal-00130685

Résultats 1 - 4 sur 4 pour SIDA HIV AIDS "curative vaccine".

Mise au point d'un **vaccin curatif** anti-**SIDA**
Bricage P. (2005)

HAL : hal-00130685, version 1

© CCSd Centre pour la communication scientifique directe - http://ccsd.cnrs.fr

Fiche détaillée

(2005)

The Metamorphoses of the Living Systems: The Associations for the Reciprocal and Mutual Sharing of Advantages and of Disadvantages.

Pierre Bricage [1]

(19/09/2005)

LESS THAN 3 YEARS LATER, GERMAN SCIENTISTS HAVE ACHIEVED THE FIRST STEP OF THAT HIV CURATIVE VACCINE WAY WITH ADULT STEM CELL TRANSPLANT AIDS CURATION.

AND NOWADAYS WE CAN EASILY OBTAIN A LOT OF BLOOD STEM CELLS.

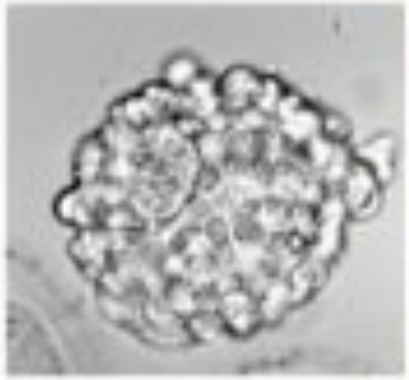
The emergence of a new org… sum of its parts. It merges through the simultan… partner is allowed through the maintenance of i… d of the whole into the ecoexotope of its survival… are allowed. Each partner owns its place, throu… mutual sharing of advantages and of disadvar… the whole. If the endophysiotopes or the ecoexotopes are changing, it is the way to make a new networking mode or integration. The association merges through the interactive fitness between the "welcome" capacity of the ecoexotope and the "to be welcomed" capacity of the endophysiotope of each partener. This is allowed through the simultaneous losses by all partners of the capacity to kill the other ones. http://minilien.com/?R9E2rFXJIc & http://www.minilien.com/?LUeZbdsNCH

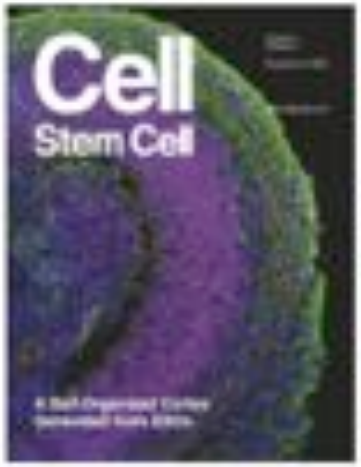
1 : Systems Evolution Workshop (SEW)
AFSCET

http://minilien.com/?R9E2rFXJIc

Domaine : **Sciences du Vivant/Ecologie, Environnement/Interactions entre organismes**

Mots Clés : **advantage – association – cell – curative – disadvantage – HIV – metamorphosis – tumour – vaccine – virus**





Stem Cells on Demand

Infection of adult mouse cells with viruses expressing genes of transcription factors generates pluripotent stem cells that resemble embryonic stem cells.

Viruses commonly used for this procedure permanently alter the cells' genome and can cause tumors in animals, and thus these cells cannot be used directly for cell therapy.

Stadtfeld M. & al. (2008) Induced Pluripotent Stem Cells Generated Without Viral Integration. Science 322(5903): 945-949.

produced mouse iPS cells by transiently exposing adult skin and liver cells to these transcription factor genes using adenoviruses (that generally do not integrate into the genome).

Friday, November 14, 2008

Adult stem cell transplant cures AIDS

New York Times

Doctors in Berlin are reporting that they cured a man of AIDS by giving him transplanted blood stem cells from a person naturally resistant to the virus.

Scientists Create Blood From Stem Cells

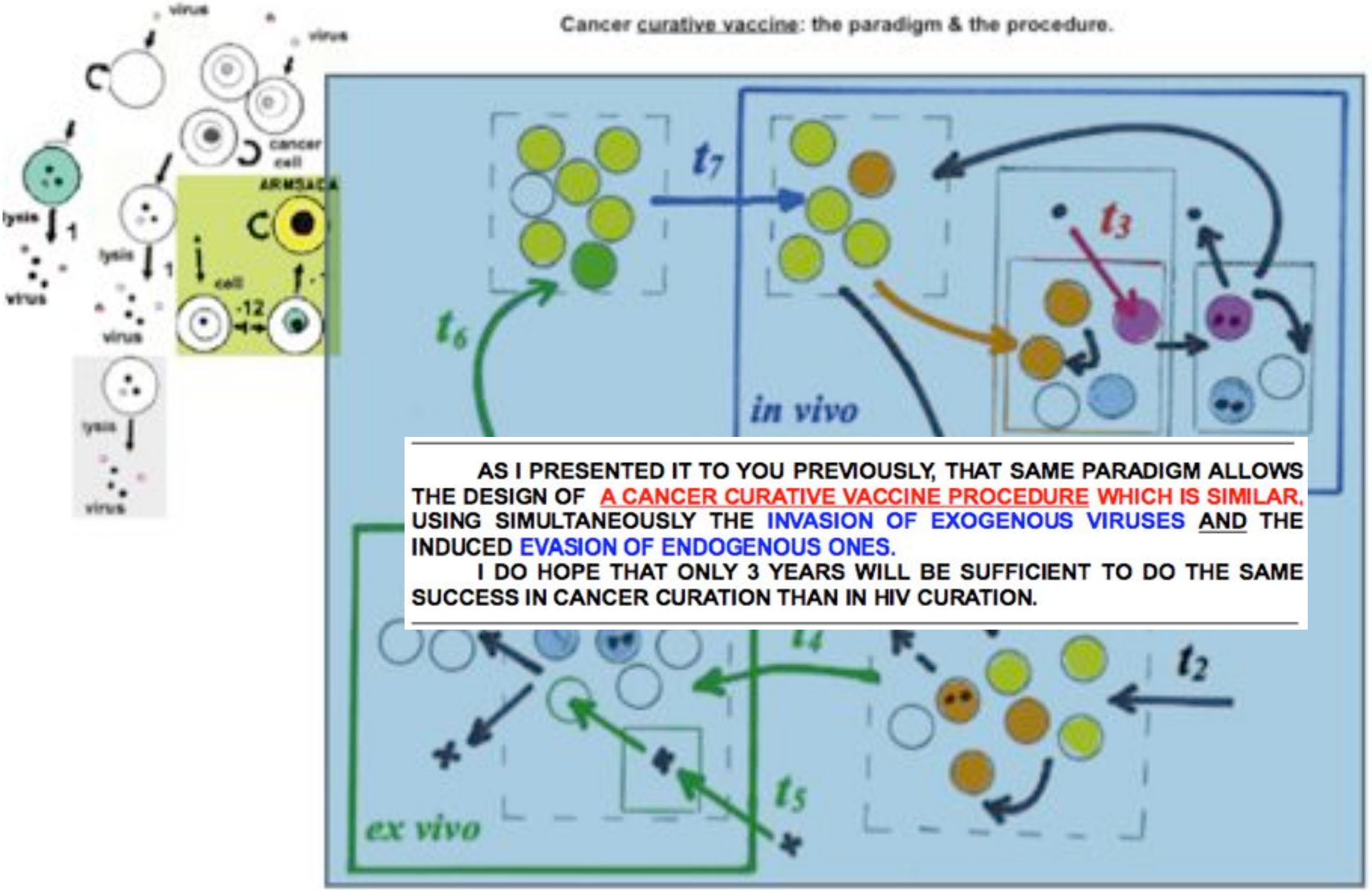
August 19, 2008 | 11:36:04 AM

More Stem Cells on Demand

Okita K. & al. (2008) Generation of Mouse Induced Pluripotent Stem Cells Without Viral Vectors. Science 322(5903): 949-953.

Induced pluripotent stem (iPS) cells have been generated from human somatic cells by using retroviruses or lentiviruses. To rule out any risk of viral vectors integrating into the host genome and causing tumors, do use a plasmid translection procedure to introduce transcription factor genes into embryonic fibroblasts to make pluripotent cells. there was no evidence of plasmid integration and, although less efficient than other methods, this method looks like it will offer a safer way of inducing pluripotent stem cells.

Cancer curative vaccine: the paradigm & the procedure.



AS I PRESENTED IT TO YOU PREVIOUSLY, THAT SAME PARADIGM ALLOWS THE DESIGN OF A CANCER CURATIVE VACCINE PROCEDURE WHICH IS SIMILAR, USING SIMULTANEOUSLY THE INVASION OF EXOGENOUS VIRUSES AND THE INDUCED EVASION OF ENDOGENOUS ONES.

I DO HOPE THAT ONLY 3 YEARS WILL BE SUFFICIENT TO DO THE SAME SUCCESS IN CANCER CURATION THAN IN HIV CURATION.

ALL THE DATA RELATED TO THE PREVIOUS PROTOCOL OF THE HIV CURATIVE VACCINE AND TO THIS NEW CANCER CURATIVE VACCINE ARE AVAILABLE FREE (CREATIVE COMMON LICENCE) ON THE NET AT THE FOLLOWING ADRESSES...

ARMSADA UESlisboaPBsymbiosisRef.pdf

http://minilien.com/?gEHtVdd60o

sept. 2005 PARIS

HIV induced AIDS CURATIVE VACCINE UESlisboaPBaidsRef.pdf

http://minilien.com/?USaw1HHJ4Z

dec. 2008 LISBOA

CANCER CURATIVE VACCINE UESlisboaPBcancerRef.pdf

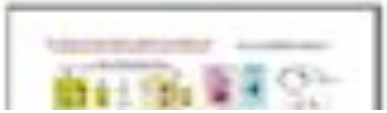
http://www.minilien.com/?oUtHBBpz46

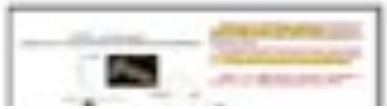
LEPROSY UESlisboaPBlepraeRef.pdf

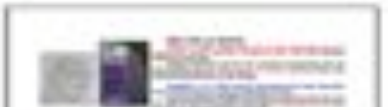
http://minilien.com/?iUZluv4lpL

THANK YOU FOR YOUR LISTENING.

I AM NOW WAITING FOR YOUR QUESTIONS ABOUT CANCER, HIV, LEPROSY OR ARMSADA OR THE CURATIVE VACCINE PROCEDURES.







Associations for the Reciprocal and Mutual Sharing of Advantages and Disadvantages: Applicative Insights in Prevention or Cure of AIDS, Cancer and Leprous Diseases.

ALL THE DATA RELATED TO THE PREVIOUS PROTOCOL OF THE HIV CURATIVE VACCINE AND TO THIS NEW CANCER CURATIVE VACCINE ARE AVAILABLE FREE (CREATIVE COMMON LICENCE) ON THE NET AT THE FOLLOWING ADRESSES:

ARMSADA Oct. 2002, HERAKLION (file: UESlisboaPBsymbiosisRef.pdf)
http://minilien.com/?gEHtVdd60o

AIDS CURATIVE VACCINE Sept. 2005, PARIS (file: UESlisboaPBaidsRef.pdf)
http://minilien.com/?USaw1HHJ4Z

CANCER CURATIVE VACCINE Dec. 2008, LISBOA (file: UESlisboaPBcancerRef.pdf)
http://www.minilien.com/?oUtHBBpz46