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

UPPA PAU, France, Europa

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

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

NOW I WILL SPEAK ABOUT "HOW CANCER IS A BREAKING OF THE CELL'S ASSOCIATION FOR THE RECIPROCAL AND MUTUAL SHARING OF ADVANTAGES AND DISADVANTAGES (IN BRIEF ARMSADA) THROUGH AN AGGRESSION THAT RESULTS IN A LACK OF NON-AUTONOMY."

THEN, I WILL SHOW YOU HOW THAT PARADIGM OF ARMSADA HAS ALSO BEEN USEFUL TO INVENT SIMULTANEOUSLY A CANCER CURATIVE VACCINE AND A HIV CURATIVE VACCINE.

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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.

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Abstract

Cancer (malignant neoplasm) may affect people at all ages, even foetuses, and risk tends to increase with age. **A group** of cells displays the traits of "uncontrolled growth and division **beyond the normal limits**", "invasion and destruction of adjacent tissues", and "spreading to other locations via lymph or blood". These properties differentiate cancers from benign tumours, which are **self-limited and stay under control**.

1. Cancer is the result of **the failure of the capacity of to be hosted, of the endophysiotope of our cells, in response to the failure of the hosting capacity of their ecoexotope, the organism.**

There is only one rule of survival : **"to transform disadvantages into advantages" and "to prevent advantages turning to disadvantages".** When the ecoexotope is changing, a disadvantage can turn to an advantage and conversely (Dolberg & al. 1985). For stressed endangered cells, cancer is the way not to die.

Cancer is a response for best survival of damaged cells ! How does that work ?

The first cancerous agents that were found were viruses. Viruses appear to be **the second most important risk factor** for cancer development in humans, exceeded only by tobacco usage. The amount of cancers linked to AIDS or other viral sources is continuously increasing (Routes & al. 2000).

The genome of all organisms is inhabited by viral genomes. The presence of these controlled risks is usually an advantage for the survival of both the inhabited cells and their inhabitant viruses (Feng & al. 2008) : **the genetic material of a cancer virus is inserted into the host cell genome without any production of virus particles and with no cell death**

2. **Cancer is a disease of disfunctioning cellular genes due to unwanted viral gene expressior.**

How, when and why do these silenced killing dangers reborn ?

3. **Cancer is induced by agents of cellular provirus lysis : radiations & chemicals altering DNA.**

The same ones are used in chemotherapy and radiotherapy. Some dose-dependence effects and threshold concentration dependencies may impaired or reversed the activity of protective or curative agents.

The stability of a cancerous cell is in the key fact that *the virus does not kill the cell* and *reciprocally the cell does protect the virus of the killing by other cells*. The result is the merging of a new spatial and temporal network, a new mode of integration, into a transformed **Association for the Mutual and Reciprocal Sharing of Advantages and of Disadvantages,** within the cell… an advantage for the "new" cell but a dis-advantage for the organism inside which the new re-autonomy of the cancer cells disrupts the previous steady-state's controls.

4. **In order that one survives, it is necessary that the others survive first, and reciprocally.**

Like that of a bacterium infected with a phage, the fate of a cancer cell is depending on the interactive percolation with its invading virus (Bricage 2005B). That indeed explains the heterogeneity of a disease (cancer or AIDS), its evolutions and the diversity of the potential hosts:

"the way is, both, the cause and the consequence of the history."

5. **The cancer is a disease of the breakage of the Association between the "parceners".**

Usually the breakage of the Association for the Reciprocal and Mutual Sharing of Advantages and Dis-Advantages (ARMSADA) leads to apoptosis (Bricage 2005B), but sometimes to cancer (Ishikawa & al. 2008).

La semi-autonomie du vivant, la stratégie du choc et le collège invisible : l'origine du cancer.

Résumé

1. **Les cellules d'un organisme sont semi-autonomes**.

Leur survie contribue à celle de l'organisme, qu'elles constituent et qui en retour les héberge.

L'endophysiotope de l'organisme est l'écoexotope de survie de l'endophysiotope des cellules.

Cette **structure ergodique** est apparue au cours de l'évolution du vivant **par la mise en place d'associations à avantages et inconvénients réciproques et partagés** entre partenaires (Bricage 2001).

La cellule eucaryote a ainsi émergé de la fusion, de monères et de virus, **juxtaposés et emboîtés** en un nouveau Tout (Bricage 2005B).

2. **Toute cellule contient dans son génome des génomes viraux juxtaposés et emboîtés**.

Ces dangers contenus, intégrés, sont indispensables au bon fonctionnement cellulaire.

3. **À la suite d'une violence ces dangers contenus peuvent être libérés.** (Bricage 2004)

Habituellement la cellule meurt par apoptose. Mais, qu'il soit physique, chimique, physiologique ou psychologique, **le choc peut donner naissance à** une cellule cancéreuse. Quand la capacité d'accueil de son écoexotope de survie ne peut plus assurer durablement sa survie, **la seule issue** de la cellule pour survivre est de changer la capacité d'être accueilli de son endophysiotope. Elle devient cancéreuse. Elle **récupère une autonomie**, de survie et de reproduction, **incontrôlée** et incontrôlable.

4. **Le cancer résulte d'un dysfonctionnement de l'expression d'un "collège invisible".**

De nombreux acteurs de la cancérisation sont des virus. Or, les mêmes chocs qui sont responsables de la libération de virus endogènes sont utilisés pour tenter de détruire les cellules cancéreuses transformées par des gènes viraux exogènes, … qui y ont déjà résisté, alors que les cellules normales y sont sensibles.

Survivre c'est transformer des inconvénients en avantages
et éviter que des avantages deviennent des inconvénients.

5. **Pour que l'un survive, il faut d'abord que l'autre survive et réciproquement.**

Au cours de l'évolution, seules se survivent les associations à avantages et inconvénients réciproques et partagés qui rendent les partenaires **plus dépendants** les uns des autres mais **plus indépendants** de leur écoexotope de survie (Bricage 2005A). Elles émergent par **la perte simultanée par tous** les partenaires de la capacité de détruire tous les autres.

À tous les niveaux d'organisation, le cancer résulte d'une déstructuration, spatiale ou temporelle, d'une Association à Avantages et Inconvénients Réciproques et Partagés, **contrat synallagmatique, établi entre partenaires de niveaux d'organisation différents, pour le meilleur et pour le pire.**

References

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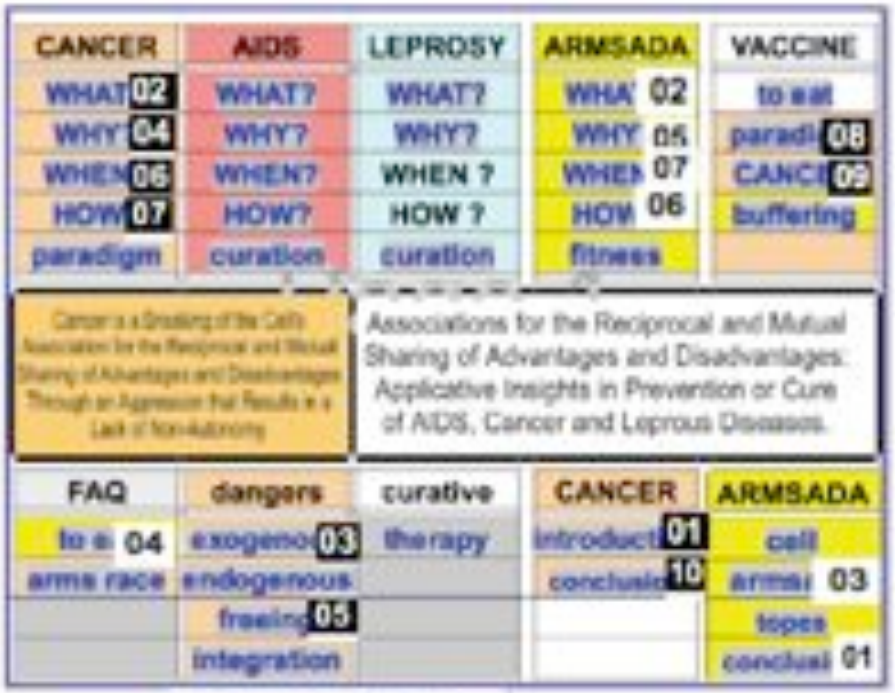
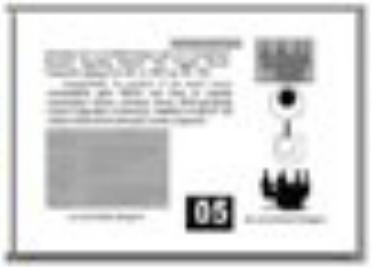
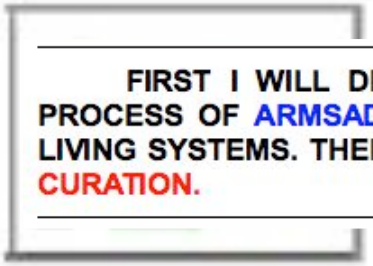
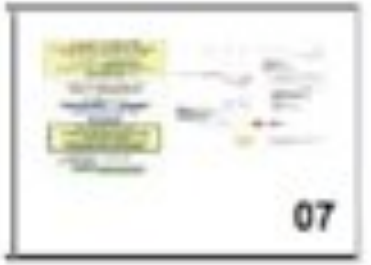
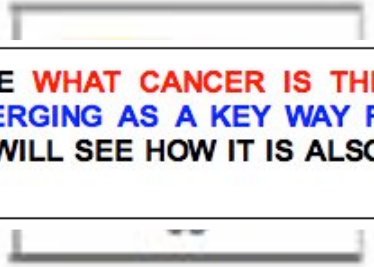




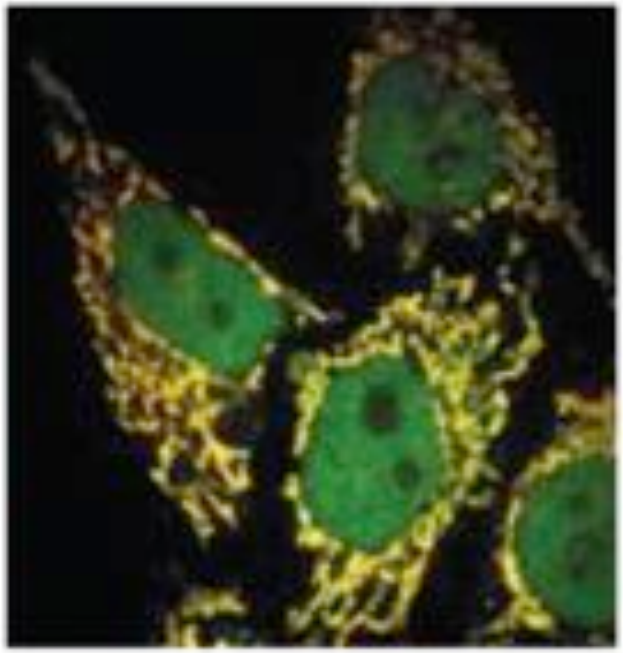


ARMSADA



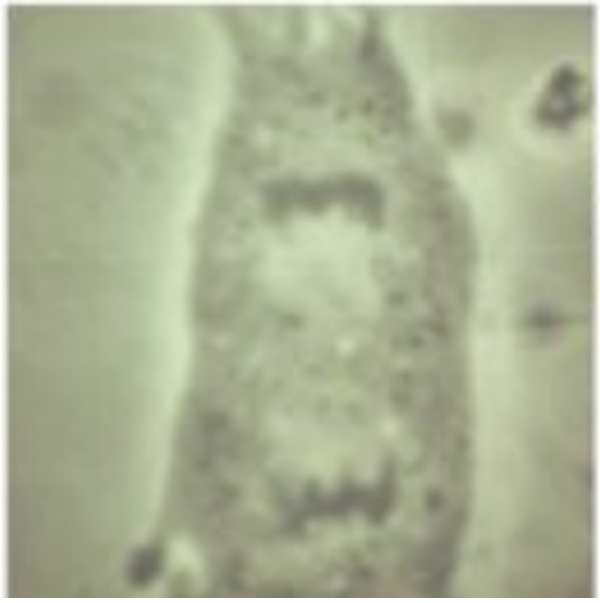


FIRST I WILL DESCRIBE WHAT CANCER IS THE RESULT OF AND THE PROCESS OF ARMSADA'S MERGING AS A KEY WAY FOR THE EVOLUTION OF LIVING SYSTEMS. THEN YOU WILL SEE HOW IT IS ALSO THE WAY FOR CANCER CURATION.



abnormal
cell
compartments

virus



cell
uncontrolled
proliferation

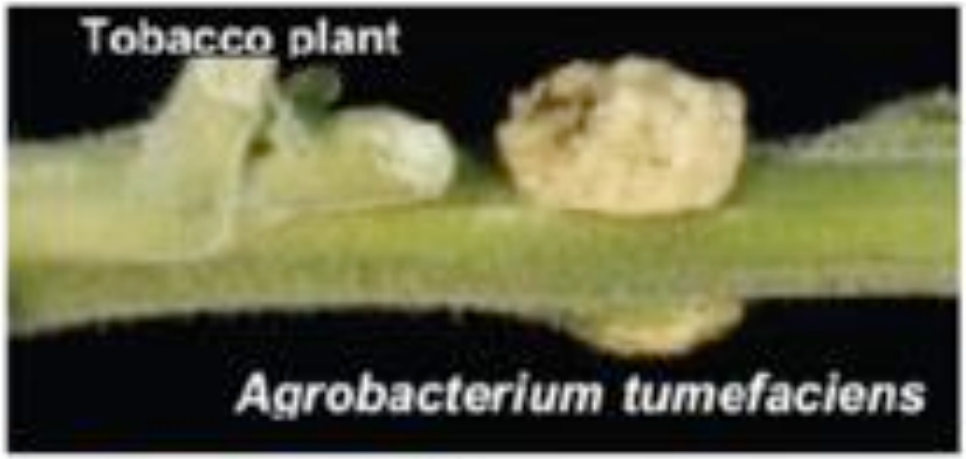
A Viral Culprit in Cancer

Feng H. & al. (2008) Clonal Integration of a Polyoma-virus in Human Merkel Cell Carcinoma. Science Vol. 319, n° 5866, p. 1096-1100.

The full viral DNA genome was integrated within the tumor genome in a clonal pattern, suggesting that infection and integration preceded clonal expansion of the tumor cells.

WHAT IS CANCER?

CANCER IS THE RESULT OF AN UNCONTROLLED PROLIFERATION OF ABNORMAL STRUCTURED CELLS THAT GIVES RISE TO TUMOR, DUE TO UNWANTED VIRAL GENES EXPRESSION.



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Lapuk A. & al. (1999) A human endogenous retrovirus-like (HERV) LTR formed more than 10 million years ago due to an insertion of HERV-H LTR into the 5' LTR of HERV-K is situated on human chromosomes 10, 19 and Y. J. Gen. Virol. 80(4): 835-839.

THE CULPRIT VIRUSES MAY BE INVADING ONES, OF EXOGENOUS ORIGIN, AS IN HUMAN BREAST CANCER, OR, MAY BE MORE FREQUENTLY, THEY ARE EVADING ENDOGENOUS ONES, THAT WERE FREED OF CONSTRAINTS.

IN PLANTS, INHERITABLE ENDOGENOUS CONSTRAINED VIRUSES ARE CONTRIBUTING TO VIRUSES RESISTANCE.

WHY ARE VIRUSES CONSTRAINED? AND HOW DO THEY HELP TO RESIST TO OTHER VIRUSES? AND WHY, HOW AND WHEN, ARE THEY FREED IN CANCER?

h for DNA of exogenous
ed virus in human breast
806-1809.
Transcriptional Activity of
man Breast CANCER. J.

Breastfeeding protects against cancer

Lindbo J.A. & al. (1993) Induction of a Highly Specific Antiviral State in Transgenic Plants: Implications for Regulation of Gene Expression and Virus Resistance. Plant Cell 5(12): 1749-1759.

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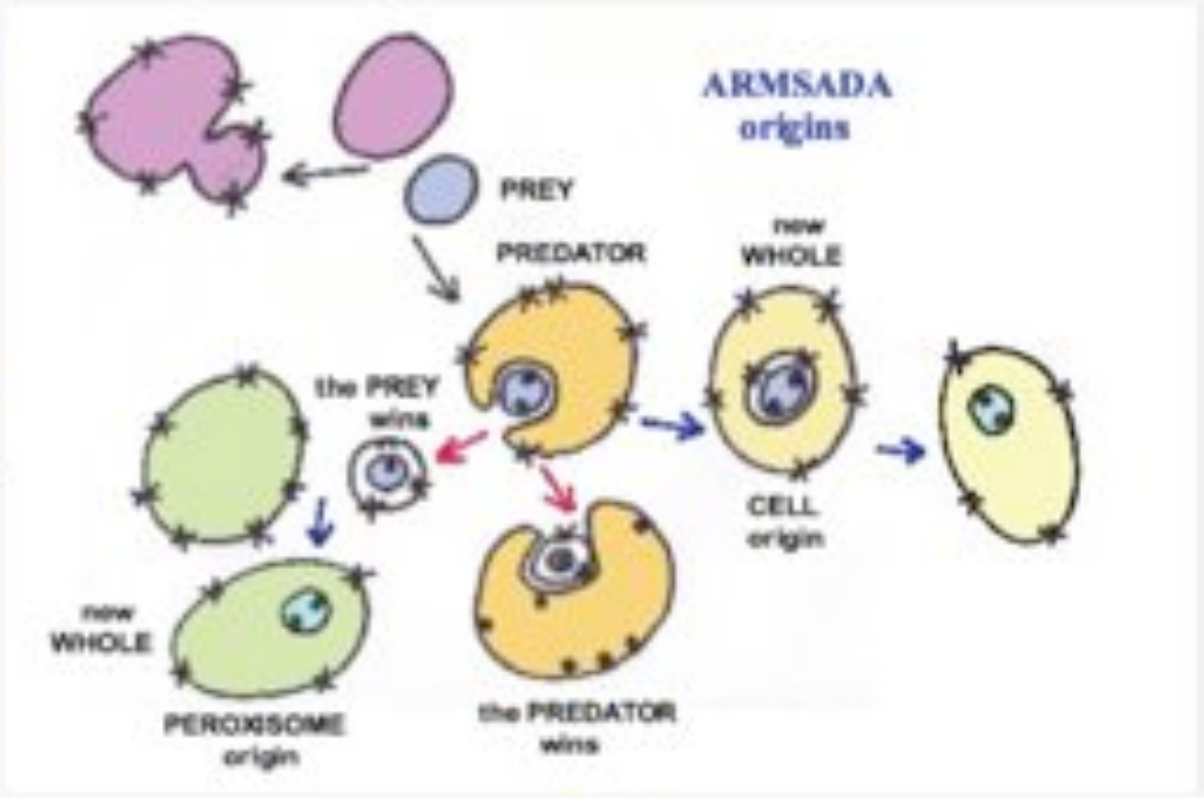
	-	0	+
+	Parasitism	Commensalism	Mutualism
0	Competition	Neutralism	Commensalism
-			Parasitism

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



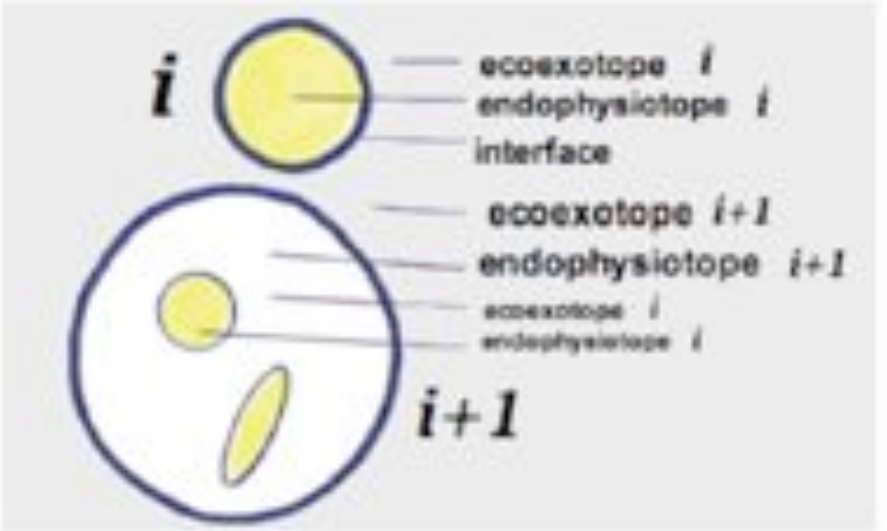
ARMSADA – only benefits (=advantages) for the Whole
but - there are no advantages without disadvantages
Association for the RECIPROCAL (both Predator/Prey)
and MUTUAL (Mutualism)
SHARING of Advantages & DisAdvantages

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

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 "FIGHTERS" TOGETHER, 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 ITS ECOEXOTOPE OF SURVIVAL (EXO: EXTERNAL, TOPE: SPACE, OF ECO: INHABITATION). EVERY LIVING SYSTEM BOTH IS A GUEST OF AN ECOEXOTOPE OF HOSTING AND MAY BE THE HOST OF OTHER ENDOPHYSIOTOPES FOR WHICH ITS ENDOPHYSIOTOPE IS AN ECOEXOTOPE.

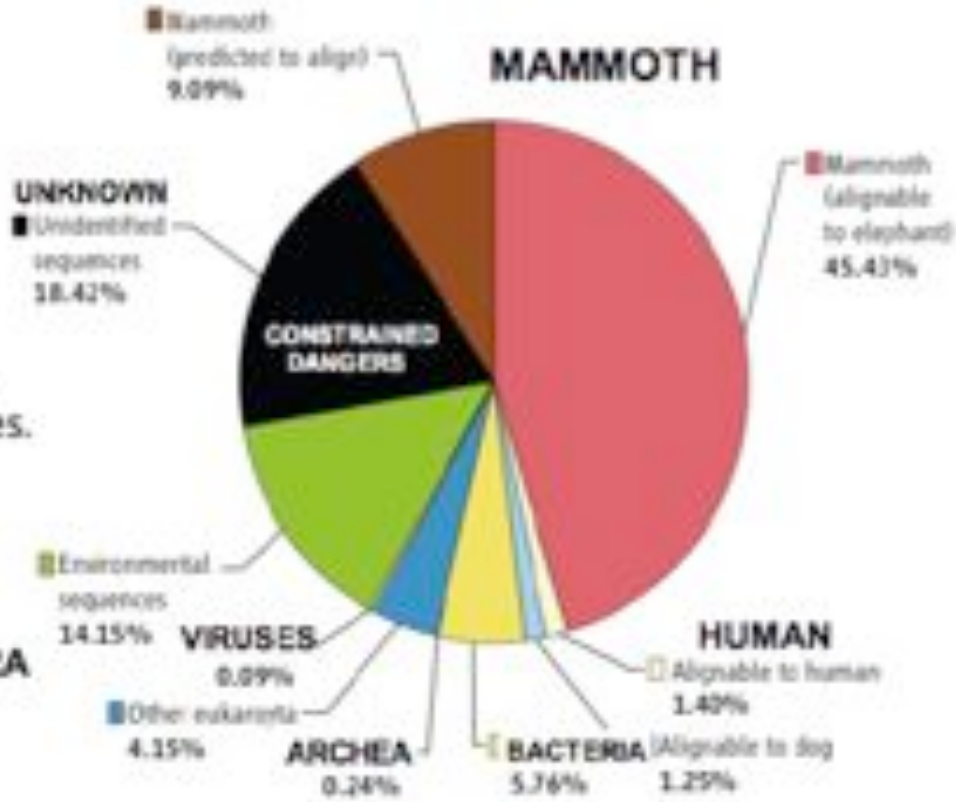


New-Generation Sequencing Technologies: Faster Results and New Applications

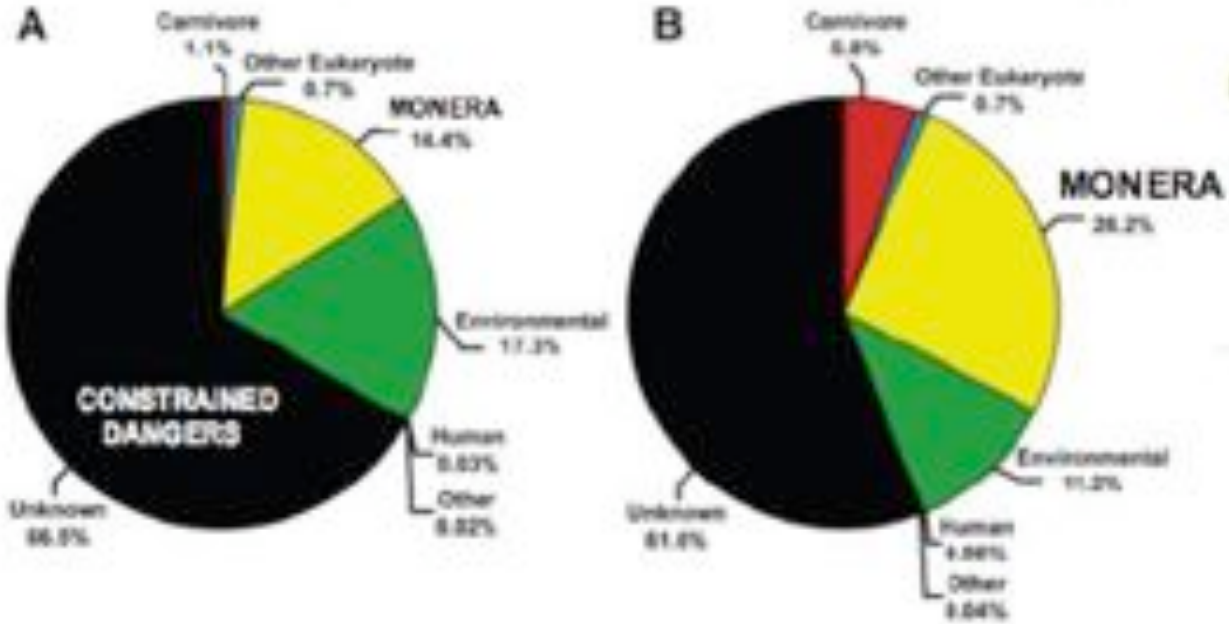
T. Hoffkins

ancient integrated endophysiotope dangers

Fig. 1. Characterization of the mammoth metagenomic library, including percentage of read distributions to various taxa. Host organism prediction based on BLASTZ comparison against GenBank and environmental sequences database.



Characterization of two independent cave bear genomic libraries.



Class	VIRUSES Members
DNA viruses	
Papovavirus	Polyomavirus, SV40 virus, human papillomaviruses (eg. HPV-16)
Adenovirus	Adenoviruses 12, 18, and 31
Herpesvirus	Epstein-Barr virus
Hepadnavirus	Hepatitis B virus
RNA viruses	
Retrovirus type C	Murine sarcoma and leukemia viruses, avian sarcoma and leukemia viruses, human T cell leukemia viruses I and II
Retrovirus type B	Mouse mammary tumor virus

ALL LIVING SYSTEMS ARE INHABITED BY VIRUS-LIKE CONSTRAINED DANGERS. FOR EXAMPLE THE RECONSTITUTED GENOME OF THE MAMMOTH WAS HOSTING NOT ONLY ANCIENT GENES OF TODAY HUMAN, BACTERIAL AND VIRAL SPECIES BUT ALSO A HUGE AMOUNT OF VIRUS-LIKE CONSTRAINED SEQUENCES, "CONSTRAINED DANGERS" WHICH ARE IN BLACK.

THE SAME FOR EXTINCT CAVE BEARS SPECIES, WITH DIFFERENT AMOUNTS OF CONSTRAINED DANGERS, DEPENDING ON THE ECOEXOTOPE OF THEIR SURVIVAL. MANY OF THESE SEQUENCES ARE SIMILAR TO DNA AND RNA CARCINOGENIC VIRUSES.

constrained dangers

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CANCER IS THE RESULT OF A DECONSTRAINING OF THE VIRAL DANGERS THAT ARE HOSTED INTO THE ENDOPHYSIOTOPE. WHEN CONSTRAINED THEY ARE ADVANTAGES FOR THE SURVIVAL BECAUSE THEY GIVE RESISTANCES AGAINST EXTERNAL VIRUSES. BUT THEY ARE RISKS. IF DECONSTRAINED THEY ARE DISADVANTAGES GIVING RISE TO CANCER.

NEVER THERE IS ADVANTAGES WITHOUT DISADVANTAGES.

Class	Members
DNA viruses	
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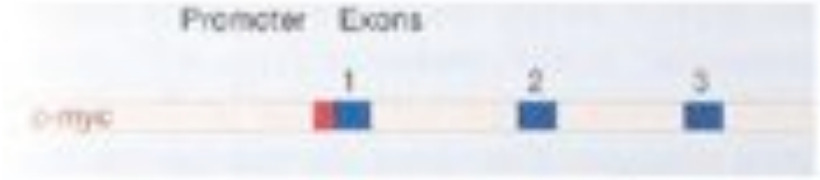
Retrovirus type B	Mouse mammary tumor virus

un-controlled dangers

de-constrained dangers



ecoexotope dangers

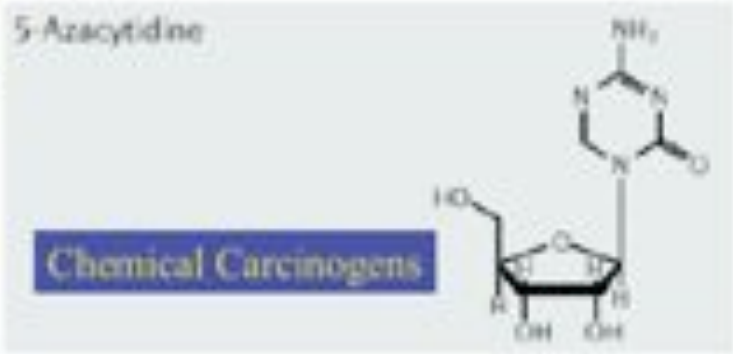
Agents causing cancer

Ultraviolet rays, x-rays,

radiations

are mutagenic

and carcinogenic



A TRANSMISSIBLE AVIAN NEOPLASM.*
(SARCOMA OF THE COMMON FOWL.)

By PEYTON ROUS, M.D.

Class	Members
DNA viruses	
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RNA viruses	
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Retrovirus type B	Mouse mammary tumor virus

DNA & RNA VIRUSES

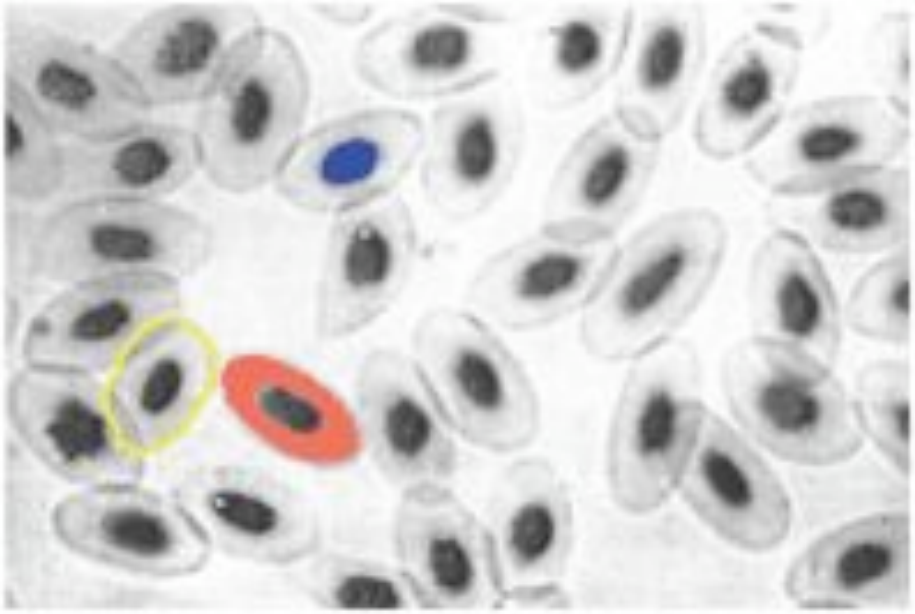
endophysiotope dangers

CANCERS ARE THE RESULTS EITHER OF THE INVASION OF THE ENDOPHYSIOTOPE WITH FREE VIRAL DANGERS (OF THE ECOEXOTOPE) OR OF THE EVASION OF CONSTRAINED VIRUSES (OF THE ENDOPHYSIOTOPE) THAT ARE FREED.

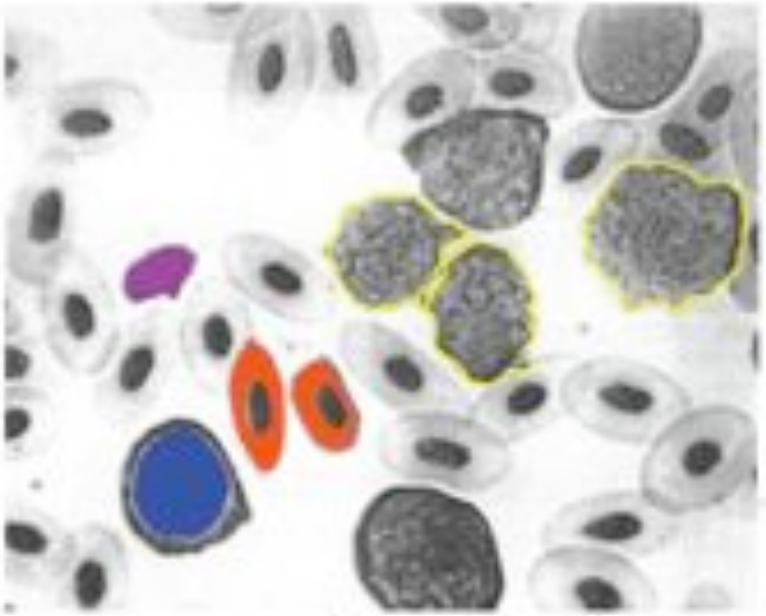
THESE UNCONTROLLED DANGERS MAY RESULT OF ANTI-CANCEROUS TREATMENTS. CHEMICALS THAT ARE USED FOR TREATMENTS ARE NOT ONLY CYTOTOXIC BUT ALSO CARCINOGENIC. AND RADIATIONS ARE BOTH MUTAGENIC AND CARCINOGENIC TOO. CANCER TREATMENTS HAVE NO ADVANTAGES WITHOUT DISADVANTAGES.

un-controlled dangers

are Carcinogenic



frog healthy blood cells



frog cancer cells

de-controlled proliferation

uncontrolled migration

THE DECONTROLLED PROLIFERATION OF CANCER CELLS IS THE RESULT OF THEIR LACK OF NON-AUTONOMY. HEALTHY CELLS CANNOT SURVIVE IF THEY ARE FREED. CANCER CELLS CANNOT SURVIVE IF THEY ARE NOT FREE.

AUTONOMOUS CANCER CELLS MIGRATE AND INVADE ALL THE ORGANISM WHICH IS THEIR ECOEXOTOPE OF SURVIVAL.

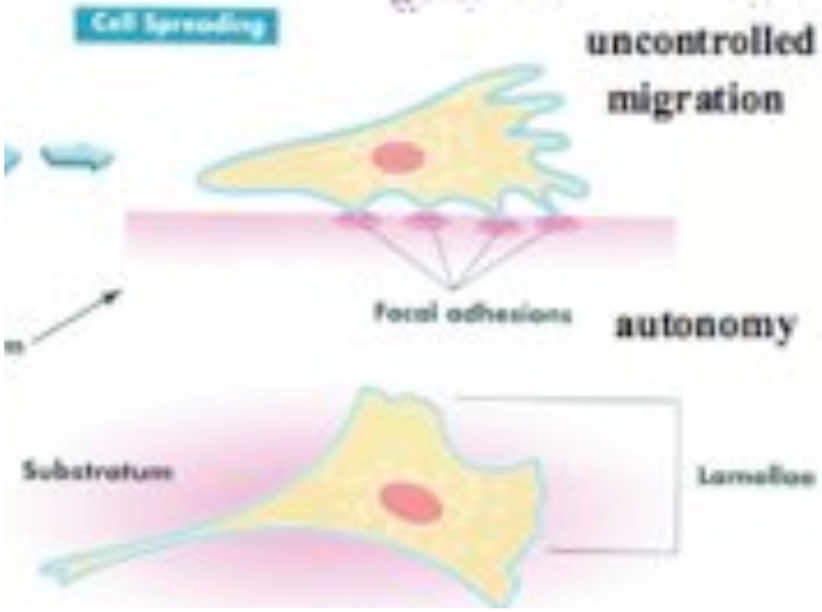
WHAT ARE CANCER CELLS?

THEY ARE CELLS THAT SHOULD HAVE DIE BUT THAT DID NOT. AND THE ONLY WAY FOR THEM TO SURVIVE WAS TO BECOME CANCER CELLS THROUGH A RETROGRESSION PROCESS.

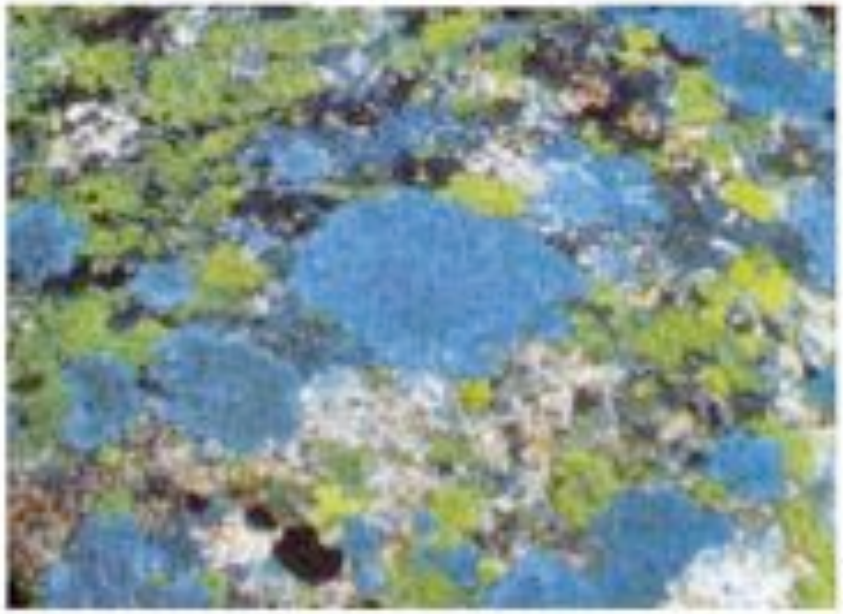
WHAT IS THAT RETROGRESSION PROCESS?

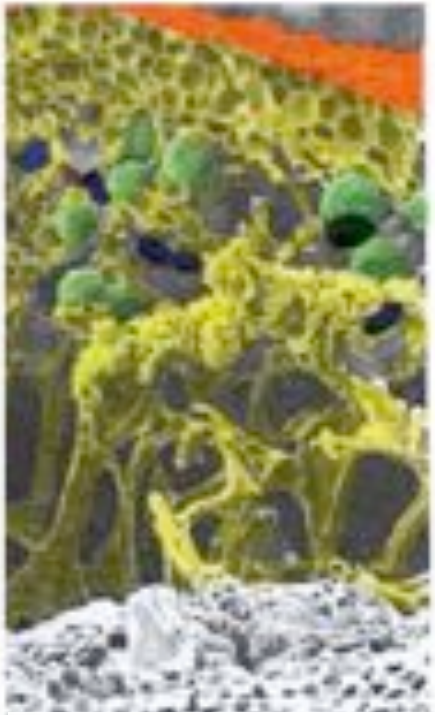
WHAT IS AN ARMSADA?

WHEN AND HOW DOES IT MERGE?

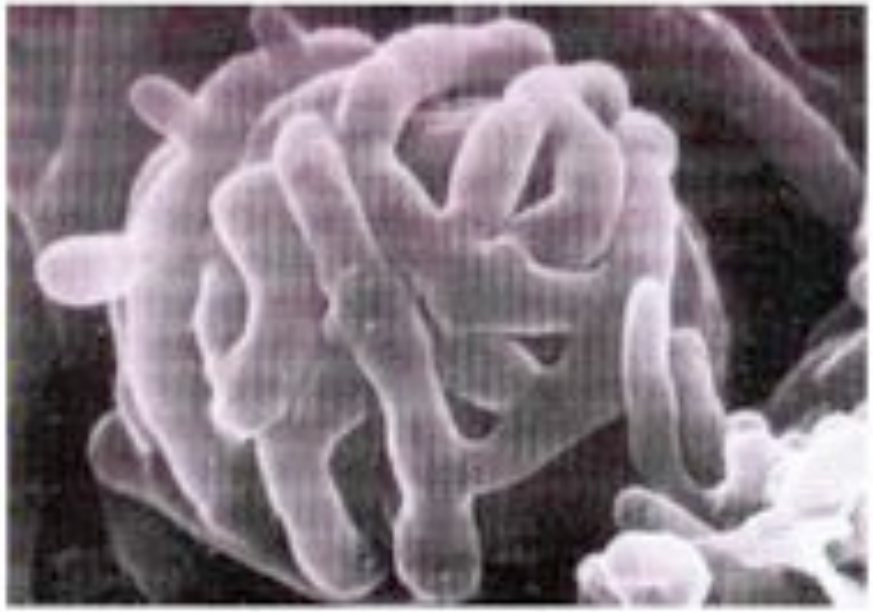


LICHENS





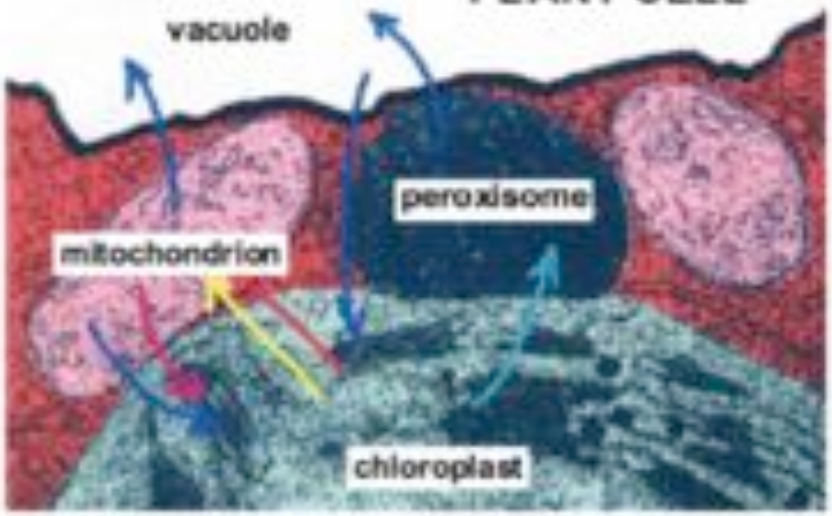
to eat



"From predation/prey relationships to

Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages

PLANT CELL



A LICHEN IS AN ORGANISM WHICH MERGED FROM THE FUSION OF 2 ONES, AN ALGAL ONE AND A FUNGAL ONE. THE FUNGAL ENDOPHYSIOTOPE IS A BOX WHICH IS THE ECOEXOTOPE OF HOSTING OF THE ALGAL ENDOPHYSIOTOPE.

ALL THAT IS AN ADVANTAGE FOR ONE OF THE 2 PARTNERS IS A DISADVANTAGE FOR THE OTHER ONE AND RECIPROCALLY.

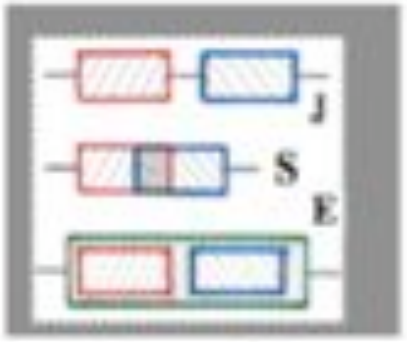
IN ORDER TO SURVIVE, THE FUNGAL PARTNER MUST FIRST ALLOW THE SURVIVAL OF THE ALGAL ONE. IT NURISHES AND PROTECTS IT, THAT IS A GREAT ADVANTAGE FOR THE ALGAL ONE, BUT A DISADVANTAGE FOR THE FUNGAL ONE, WHICH GROWTH IS REDUCED. CONVERSELY, THE ALGAL PARTNER PAYS A HUGE COST TO BENEFIT OF THE FUNGAL HOSTING. THE ALGAL PARTNER IS A PREY FOR THE FUNGAL ONE, WHAT IS A GREAT DISADVANTAGE.

THE FUNGAL PART IS BOTH A "CULTIVATOR" AND A "PREDATOR" OF THE ALGAL PART. BUT SIMULTANEOUSLY IT IS IN SOMEWAY EATEN BY IT. BOTH PARTNERS ARE SIMULTANEOUSLY EATEN AND PROTECTED BY THE OTHER ONE!

NO ONE IS A WINNER AND BOTH ARE WINNER AND LOSER, THE GAIN IS ONLY FOR THEIR WHOLE.

THE CELL MERGED FROM A SUCH CONFLICTING SITUATION. IN ORDER THAT THE CELL SURVIVES, ALL ITS ORGANELLES MUST SURVIVE FIRST.

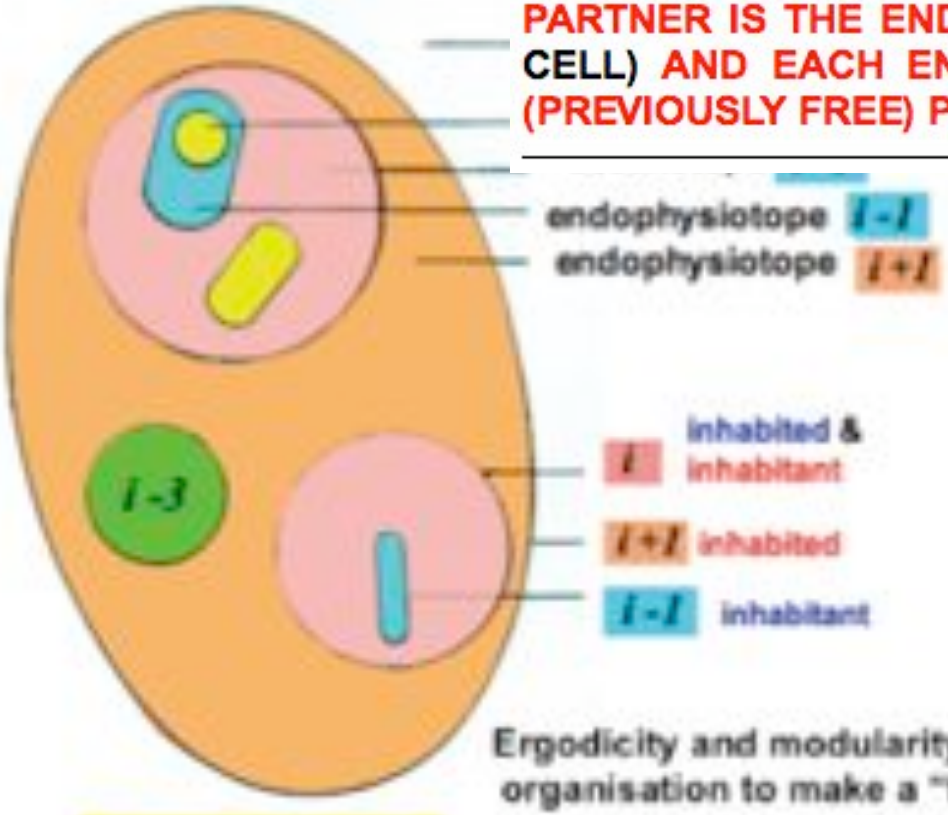
THE SAME FOR THE SURVIVAL OF VIRUSES, LIKE HTLV1, AND THEIR HOST.

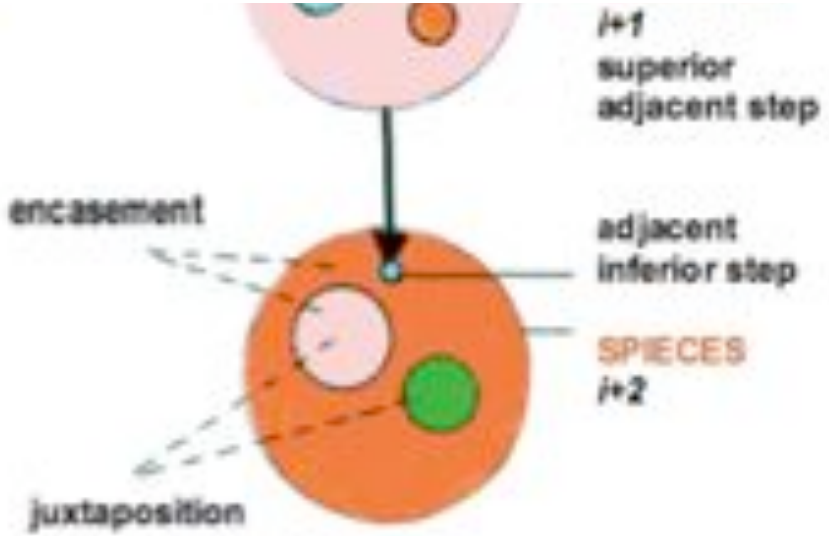


1. The law of fitness

4. The functioning

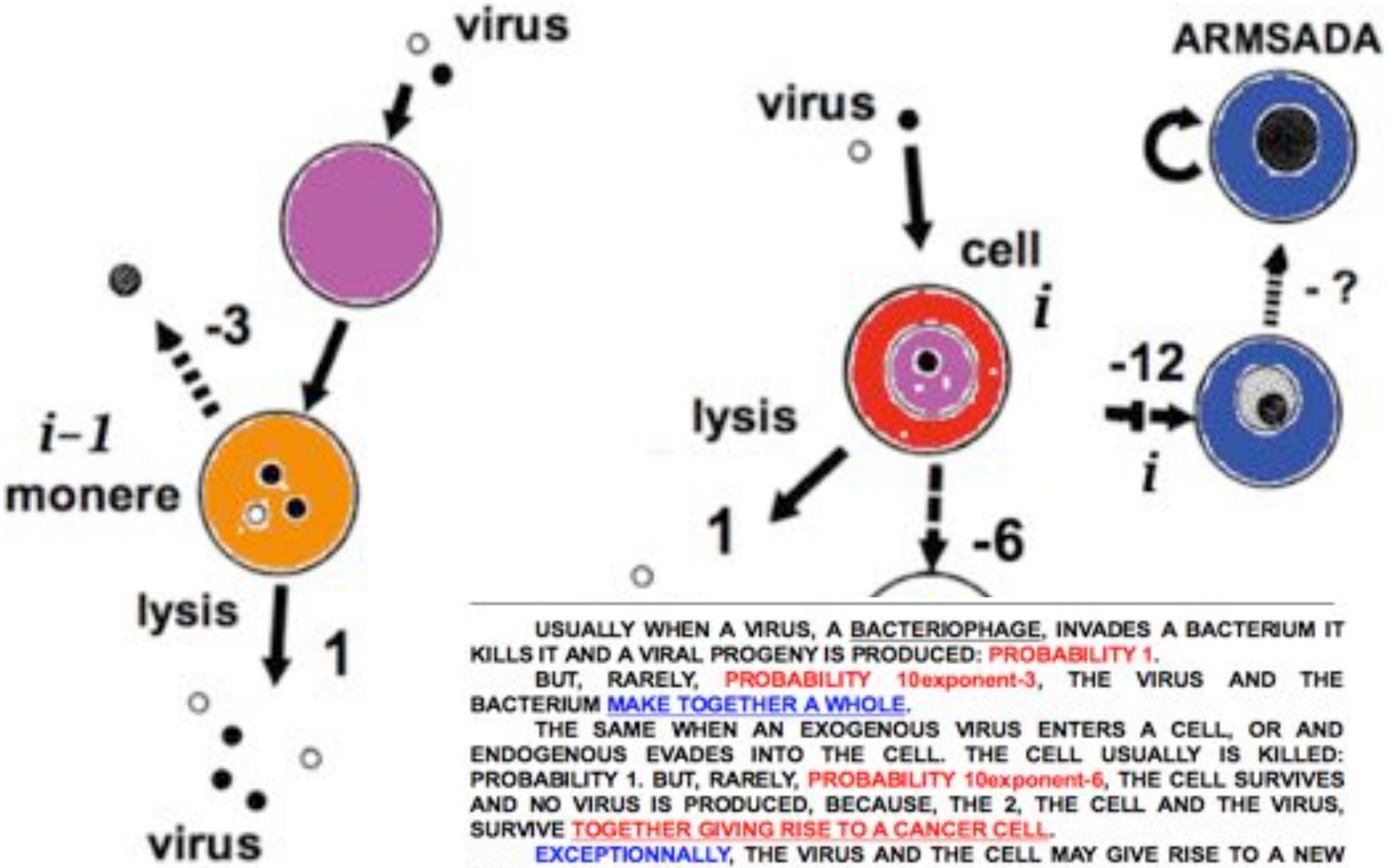
ARMSADAS ARE MERGING FROM JUXTAPOSITIONS AND ENCASEMENTS OF PARTNERS THAT PREVIOUSLY WERE FREE. THE NEW ECOEXOTOPE OF EACH PARTNER IS THE ENDOPHYSIOTOPE OF A PREVIOUS ONE (LIKE IN LICHEN OR CELL) AND EACH ENDOPHYSIOTOPE MAY BE AN ECOEXOTOPE FOR OTHER (PREVIOUSLY FREE) PARTNERS.





Ergodicity and modularity : juxtaposition, superposition & encasement of all levels of organisation to make a "fitted" Association for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages

ARMSADA



USUALLY WHEN A VIRUS, A BACTERIOPHAGE, INVADES A BACTERIUM IT KILLS IT AND A VIRAL PROGENY IS PRODUCED: PROBABILITY 1.

BUT, RARELY, PROBABILITY 10exponent-3, THE VIRUS AND THE BACTERIUM MAKE TOGETHER A WHOLE.

THE SAME WHEN AN EXOGENOUS VIRUS ENTERS A CELL, OR AND ENDOGENOUS EVADES INTO THE CELL. THE CELL USUALLY IS KILLED: PROBABILITY 1. BUT, RARELY, PROBABILITY 10exponent-6, THE CELL 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 MAY 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.

CURATIVE VACCINES

2 NEW WORDS: ECOEXOTOPE & ENDOPHYSIOTOPE

2 "TRIVIAL" CONCEPTS:

* TO SURVIVE IT IS "TO EAT" & "NOT TO BE EATEN"
* THERE ARE NEVER ADVANTAGES WITHOUT DISADVANTAGES

1 NEW PARADIGM:

ALL THE LIVING SYSTEMS MERGED FROM AN ARMSADA ASSOCIATION for the RECIPROCAL and MUTUAL SHARING OF ADVANTAGES and DISADVANTAGES

2 "EVIDENT" FACTS: MODULARITY & ERGODICITY

2 NEW IDEAS:

* DANGERS HOSTED IN CELLS, ARE NECESSARY FOR THE SURVIVAL
* VIRUSES ARE REGULATORS & PROTECTORS OF LIFE THROUGH THEIR CONTROL OF THE CAPACITY OF HOSTING OF THE ECOEXOTOPES & OF THE CAPACITY OF TO BE HOSTED OF THE ENDOPHYSIOTOPES.

Bricage P. (2005b1) The Metamorphoses of the Living Systems: The Associations for the Reciprocal and Mutual Sharing of Advantages and of Disadvantages. 12 p.
http://minilien.com/?R9E2rFXJlc

Bricage P. (2005b2) Les Métamorphoses du Vivant : Les Associations à Avantages et Inconvénients Réciproques et Partagés. 9 p. http://minilien.com/?LUeZbdsNCH

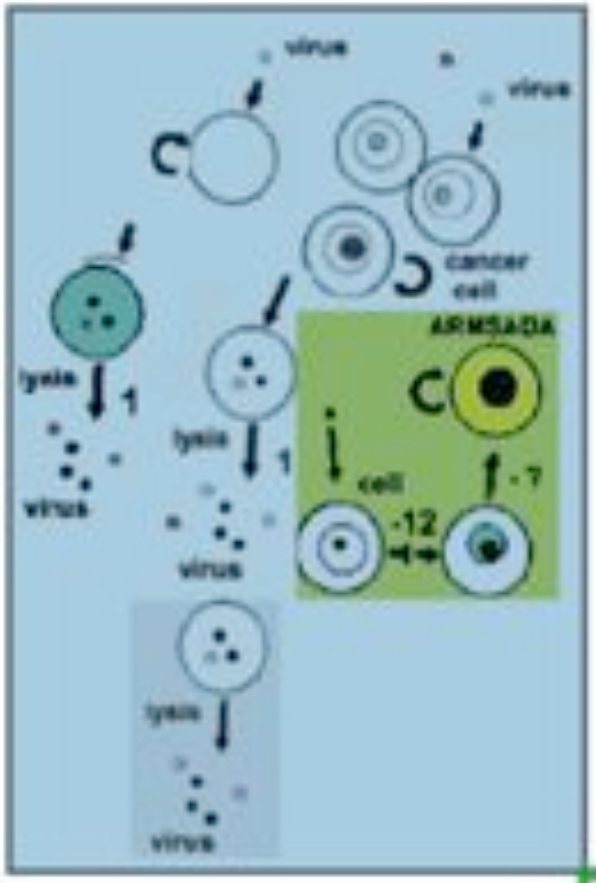
***In* 6th European Systems Science Congress Proceedings : workshop 4 BioSystemics.**

[PDF] team building & networking into groupwares
Format de fichier: PDF/Adobe Acrobat
homologues simiens des 3 groupes (M, N, O) du virus du **SIDA** (**VIH**) viennent ..... Mise au point d'un **vaccin curatif** anti-**SIDA** : Ibid **Bricage** P. (2005) The **...**
www.afscet.asso.fr/Ande07pb.pdf - Pages similaires

Stem Cells - News - HIGH HOPES FOR AIDS THERAPY / Experimental ... - [Traduire]
7 Apr 2006 ... **Stem cell HIV** treatment 1 Aphoresis Blood is removed from the body, filtered to remove stem cells and returned to the body. ...
www.**stemcell**news.com/articles/**stem-cell**s-aids-virus.htm - 15k -

Stem Cells: Progress Towards "the **Cure**"? - The Body - [Traduire cette page]
These tests remain negative out to nearly 300 days (285 days as of CROI), despite the absence of any **HIV** drug treatment since the **stem cell** transplant. ...
www.thebody.com/content/art45633.html - 29k - En cache - Pages similaires

Stem-cell 'cure' for **HIV** patient - The Irish Times - Mon, Nov 24, 2008 - [Traduire cette page]
24 Nov 2008 ... Madam, — It is immensely exciting to read of an Aids patient in Berlin who appears to be **HIV**-free after a **stem-cell** transplant procedure ...
www.irishtimes.com/newspaper/letters/2008/1124/1227293466313.html - 37k -



Cancer curative vaccine: the paradigm & the procedure.

ASSUMING THAT PARADIGM WE CAN PROPOSE A CANCER CURATIVE VACCINE PROCEDURE WHICH IS SIMILAR TO THAT PREVIOUSLY PROPOSED, 3 YEARS AGO, DURING THE LAST EUROPEAN SYSTEMS SCIENCE CONGRESS, FOR THE CURATION OF AIDS.

time 1 FIRST LET'S PICK UP STEM AND CANCER CELLS FROM A PATIENT

time 2 THEN, IN VITRO, USING CHEMICALS OR PHYSICAL STRESSES LET'S INDUCE THE LIBERATION OF ENDOGENOUS VIRUSES THAT EVENTUALLY MAY KILL CANCER CELLS BUT NOT HEALTHY ONES.

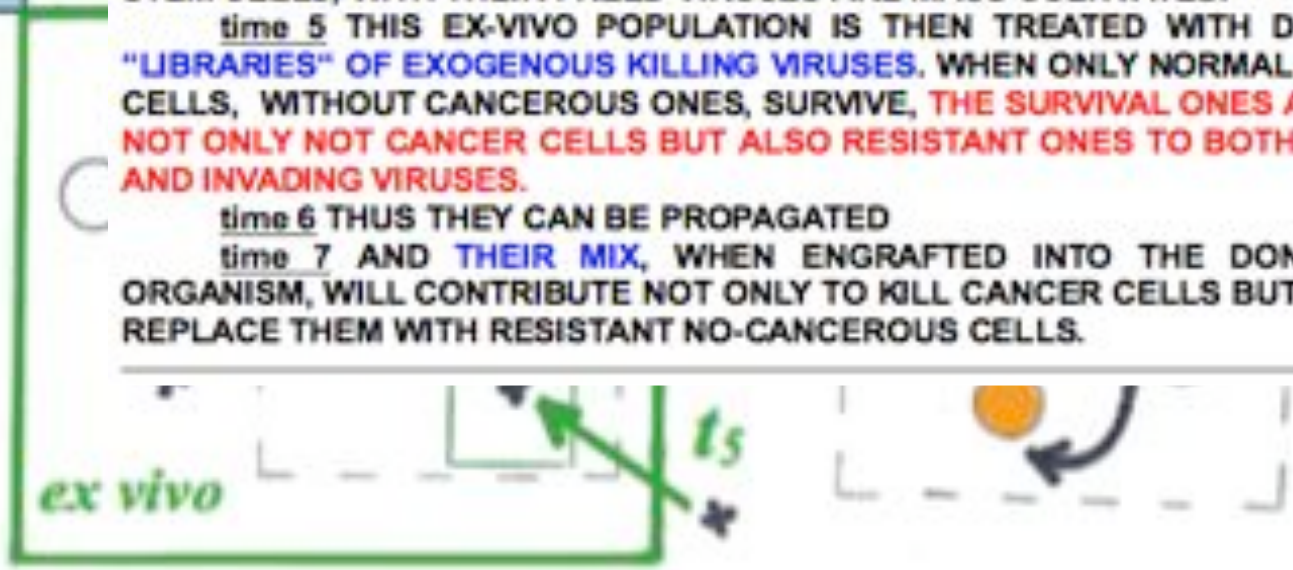
time 3 IF THEY DO EXIST, THESE FREED ENDOGENOUS CANCER CELLS KILLING VIRUSES ARE THEN ENGRAFTED INTO THE CANCER PARTS OF THE DONOR WHERE THEY WILL SPECIFICALLY ONLY KILL THE CANCER CELLS.

time 4 THEN THE MIX OF THE SURVIVING, HEALTHY AND CANCEROUS STEM CELLS, WITH THEIR FREED VIRUSES ARE MASS CULTIVATED.

time 5 THIS EX-VIVO POPULATION IS THEN TREATED WITH DIFFERENT "LIBRARIES" OF EXOGENOUS KILLING VIRUSES. WHEN ONLY NORMAL HEALTHY CELLS, WITHOUT CANCEROUS ONES, SURVIVE, THE SURVIVAL ONES ARE BOTH NOT ONLY NOT CANCER CELLS BUT ALSO RESISTANT ONES TO BOTH EVADING AND INVADING VIRUSES.

time 6 THUS THEY CAN BE PROPAGATED

time 7 AND THEIR MIX, WHEN ENGRAFTED INTO THE DONOR SICK ORGANISM, WILL CONTRIBUTE NOT ONLY TO KILL CANCER CELLS BUT ALSO TO REPLACE THEM WITH RESISTANT NO-CANCEROUS CELLS.



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

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.

CANCER
Curative Vaccine

the origin/la source :
http://www.minilien.com/?oUtHBBpz46 (file: UESlisboaPBcancerRef.pdf)

the title/le titre : ***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. Complementary Data, Figures & References.***
the author/l'auteur : **Pierre BRICAGE**
the pages/la pagination : **26 p.**
the year/l'année : **2008**
& the book/la publication: 7th Systems Science European Union Congress Proceedings. *Human Autonomy and Systemics* Workshop, Lisboa, Portugal.

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

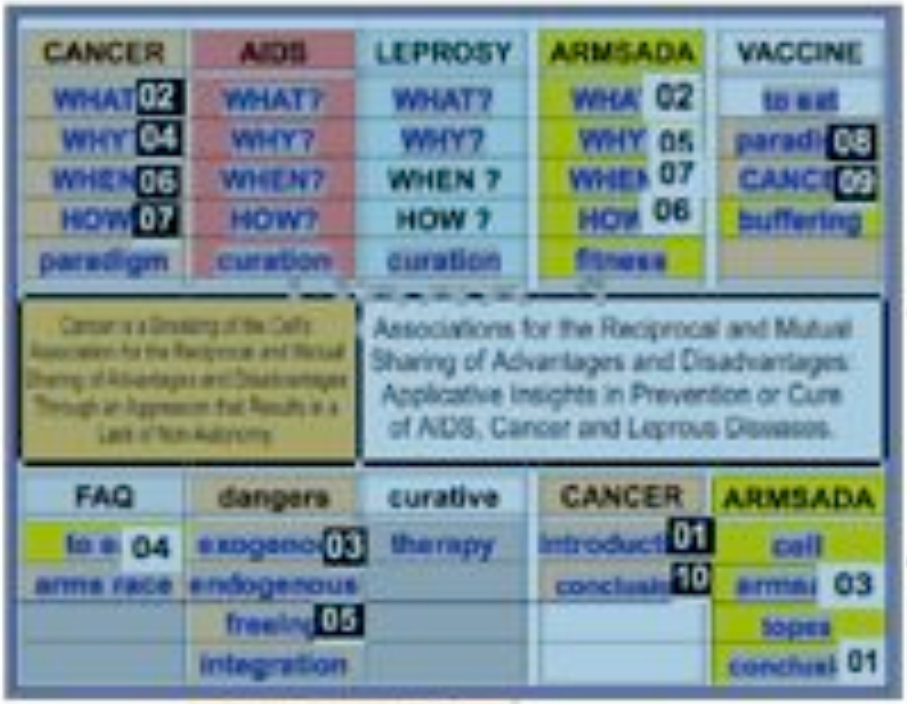
Associations for the Reciprocal and M
Sharing of Advantages and Disadvan
Applicative Insights in Prevention or
of AIDS, Cancer and Leprous Disea

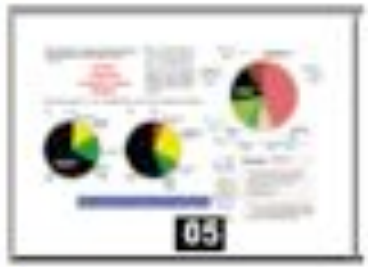
HIV induced AIDS
Curative Vaccine

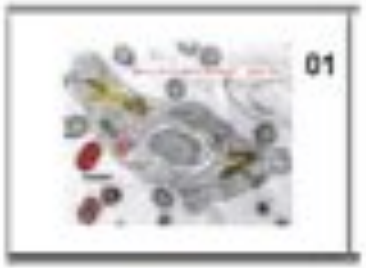
FIND ME ONLINE.

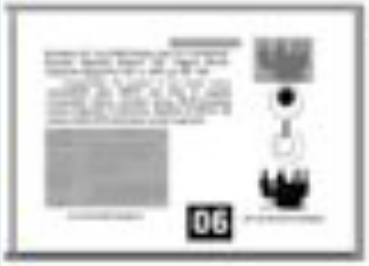
the author/l'auteur : **Pierre BRICAGE**
the pages/la pagination : **12 p.**
the year/l'année : **2008**
& the book/la publication: 7th Systems Science European Union Congress Proceedings. communication # 9, Lisboa, Portugal.

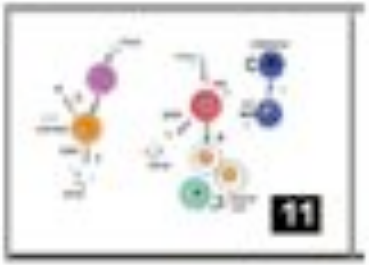
the origin/la source :
http://www.minilien.com/?gEHtVdd60o (file: UESlisboaPBsymbiosisRef.pdf)
the title/le titre : ***Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages. Complementary Data, Figures & References. ARMSADA."From predation/prey relationships to SYMBIOSIS into a new Whole".***
the author/l'auteur : **Pierre BRICAGE**
the pages/la pagination : **25 p.**
the year/l'année : **2008**
& the book/la publication: 7th Systems Science European Union Congress Proceedings. communication # 9, Lisboa, Portugal.

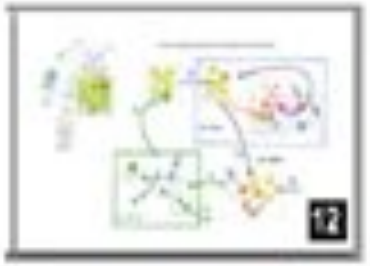












THANK YOU FOR YOUR LISTENING.
I AM NOW WAITING FOR YOUR QUESTIONS ABOUT CANCER OR ARMSADA.