

Radiciaux libres.

I. Espèces Radicalaires

1. Définitions
2. Radicaux libres "Bio"

II - Métabolisme des RLO

1. Origine.
2. autres sources.
- 3 - effets des RLO
 - protéines
 - A.G.
 - DNA
 - autres.
- 4 - Systèmes antiradicalaires

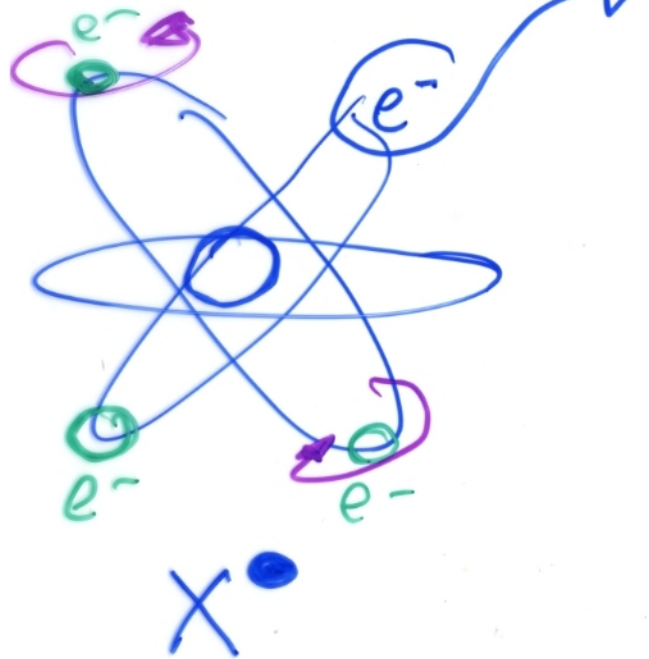
III - Approches Expérimentales

1. détection des RLO.
2. outils expérimentaux

IV - RLO, Santé et Maladies

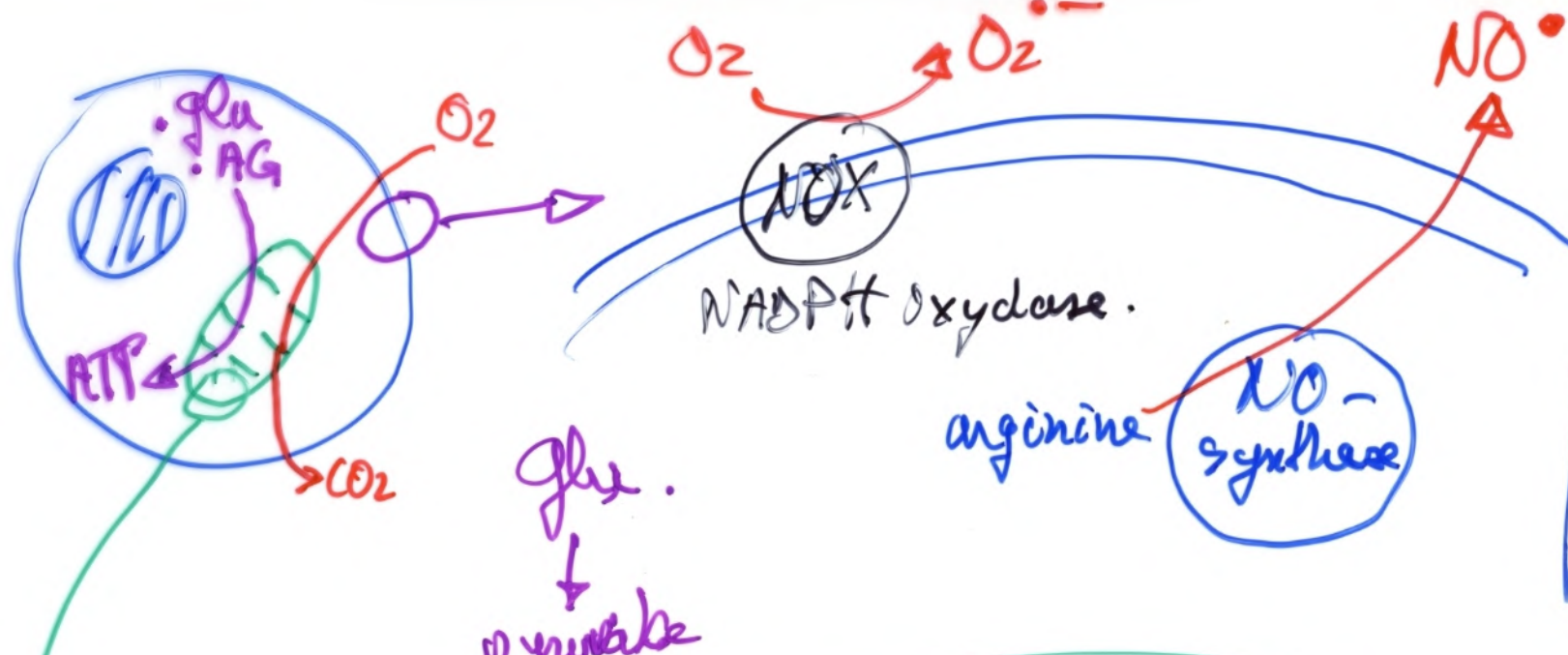
- 1 - Base des paradoxes des RLO
- 2 - études cliniques

Spin.

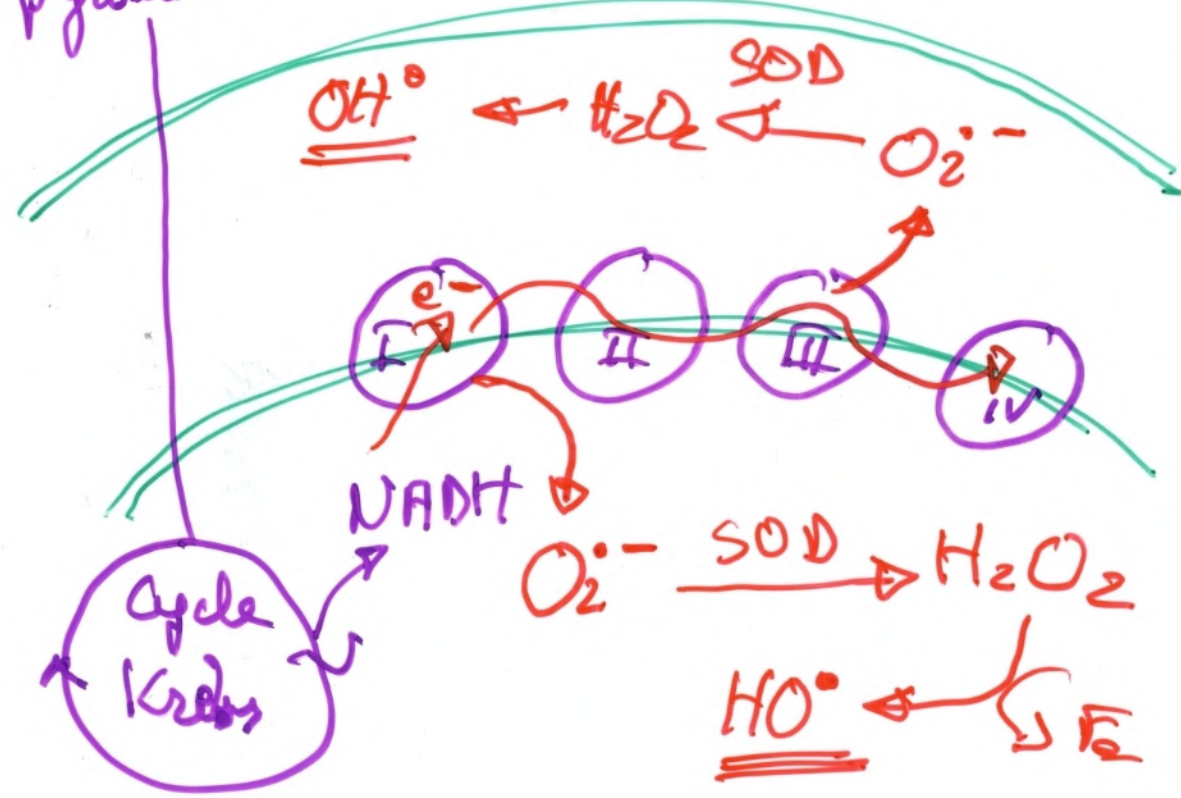


RLO

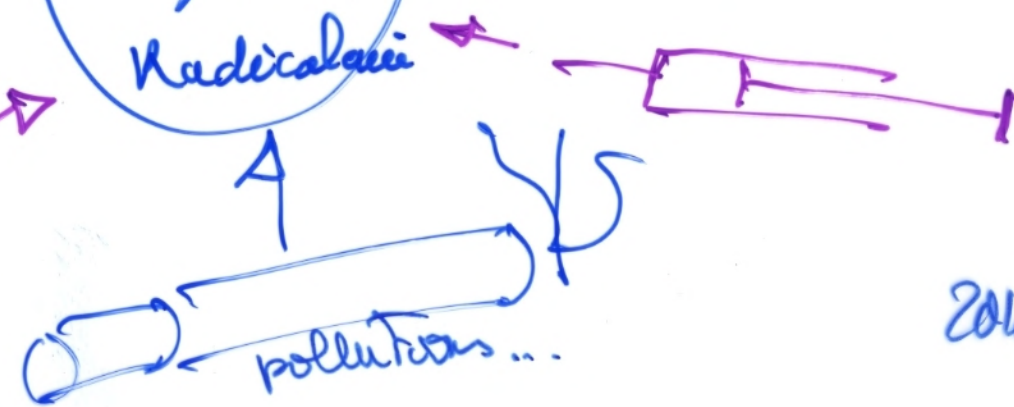
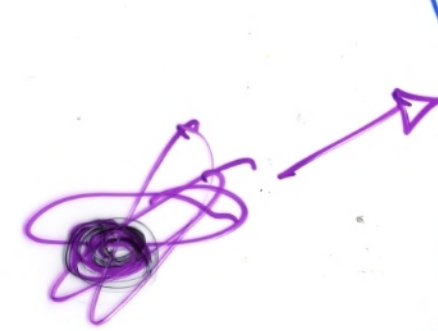
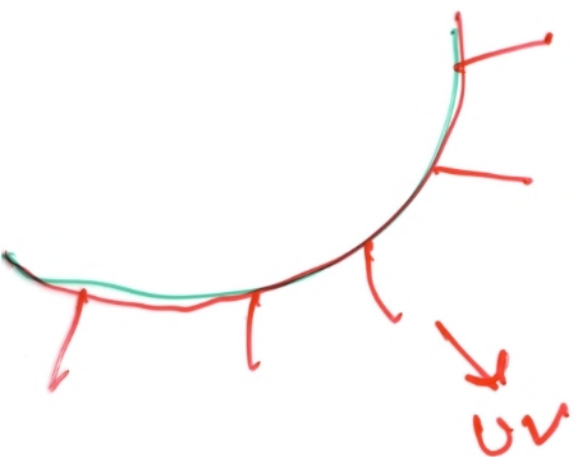




Origine des Radicaux Libres

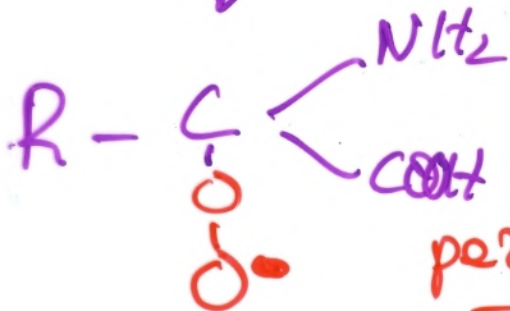
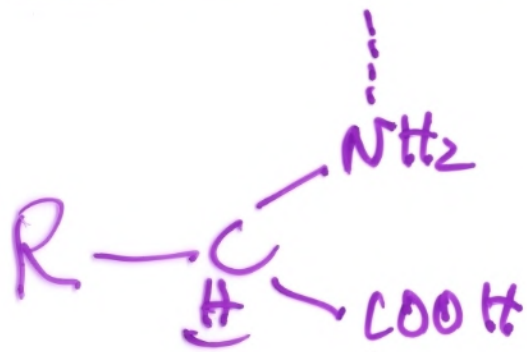


nicotinaamide
 Adénine
 dinucléotide
 Superoxyde
 desmutase.



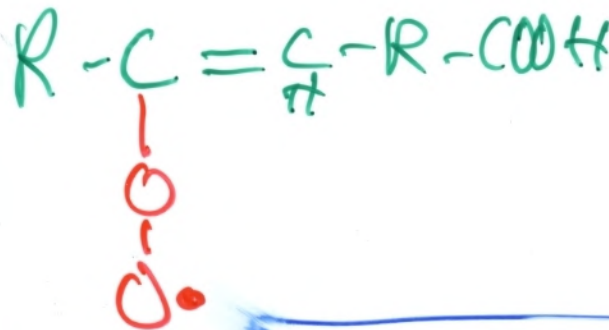
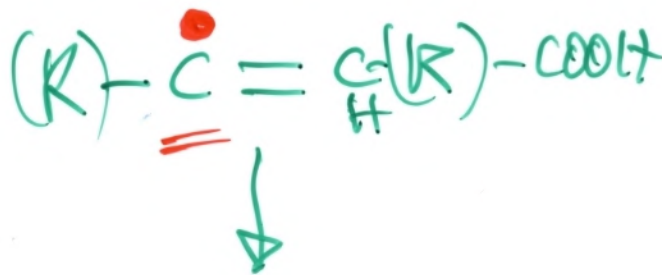
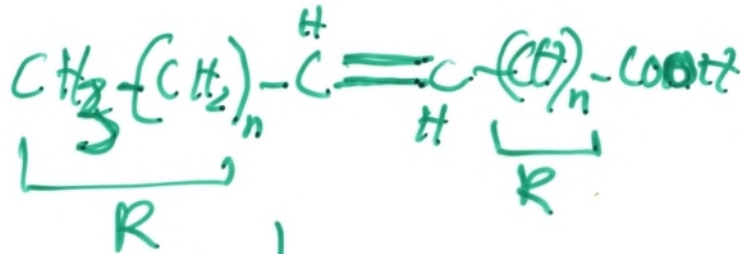
2012-04

Protamines



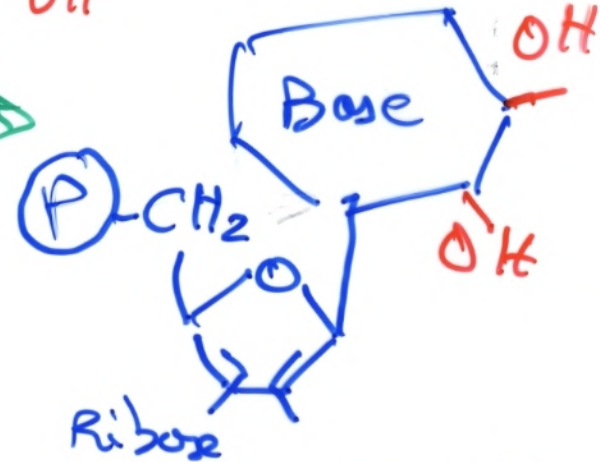
peroxyde

AG



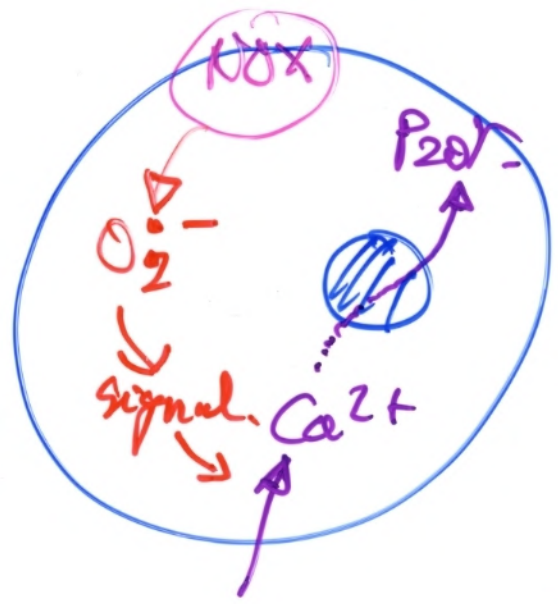
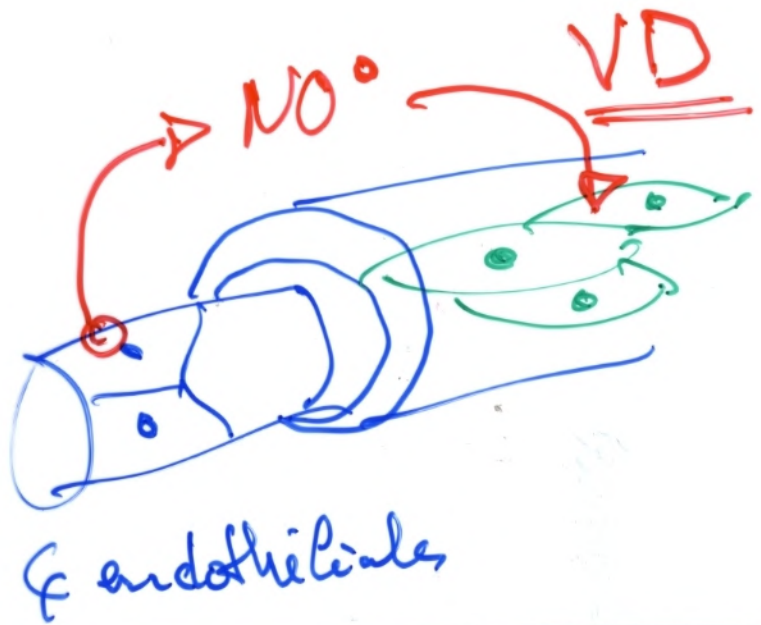
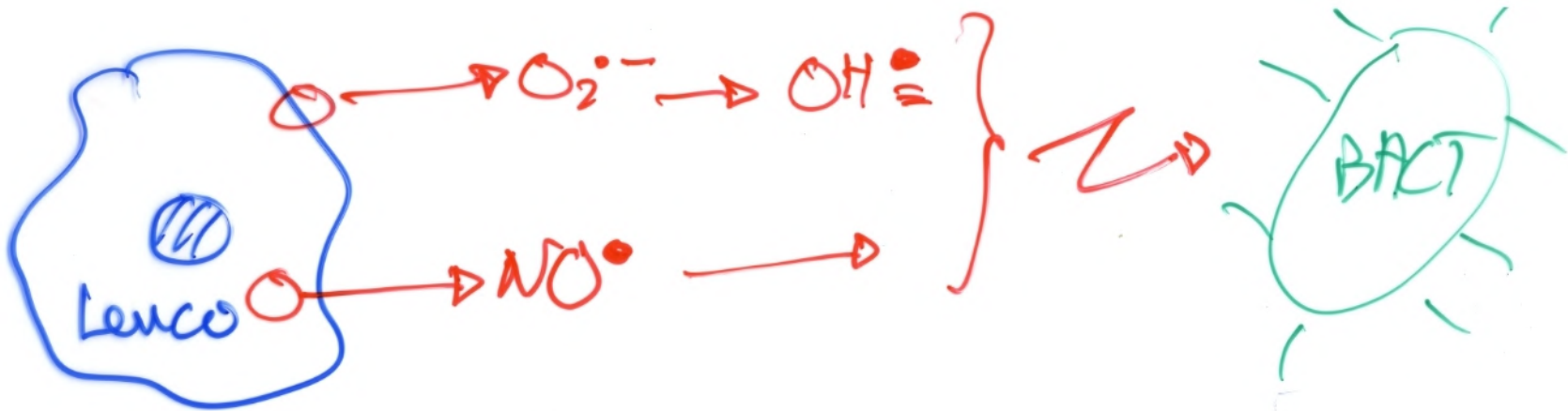
Effets des RLO

DNA

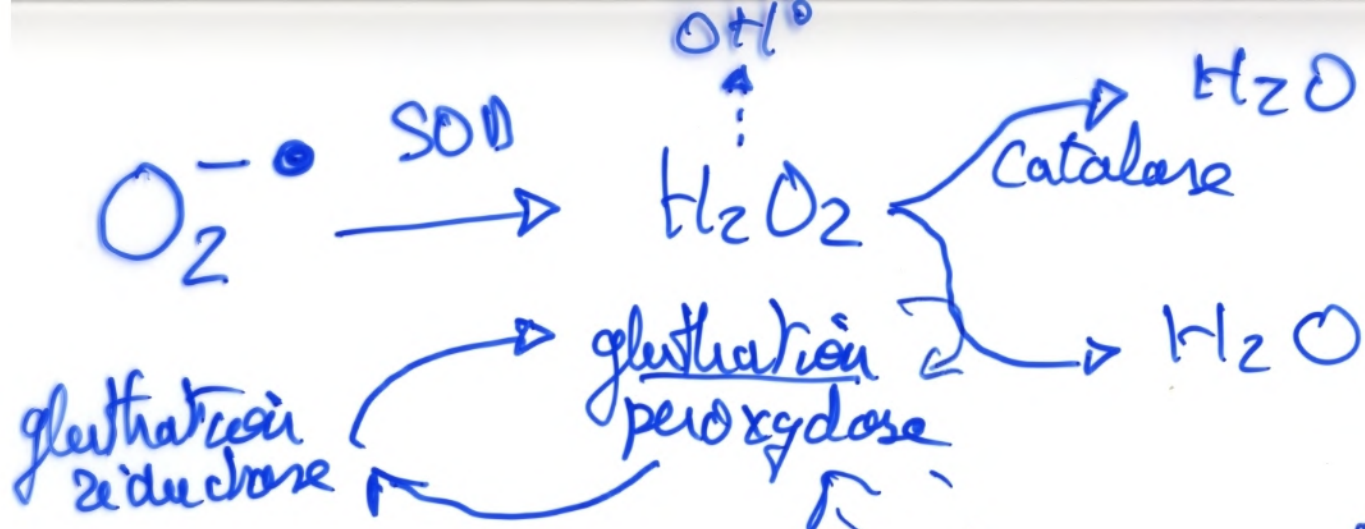


Ribose

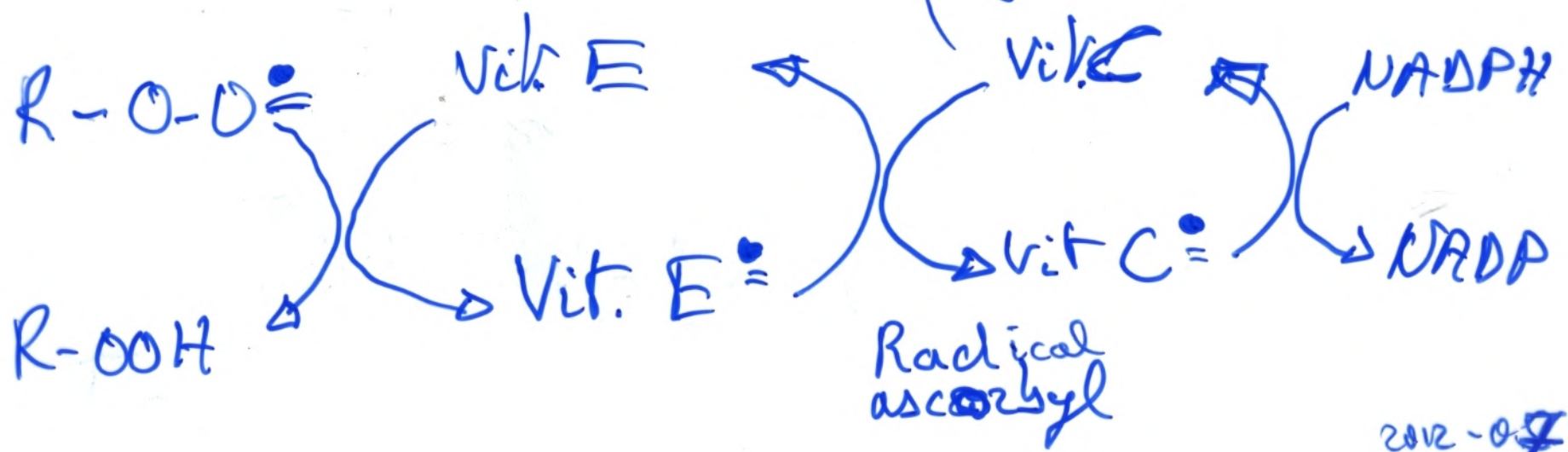
2002-05



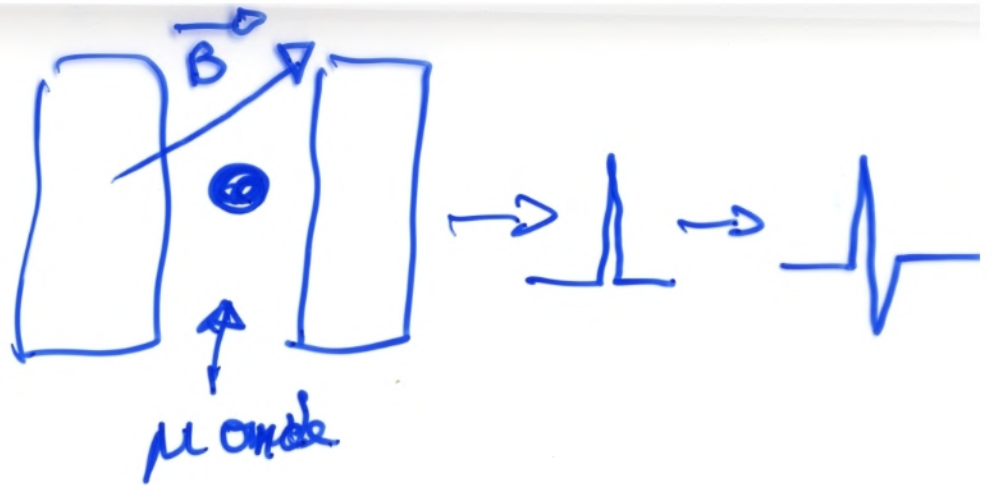
Effets bénéfiques de RLO



~~Systeme anti-radicalaire~~
 Systeme anti-radicalaire Naturels



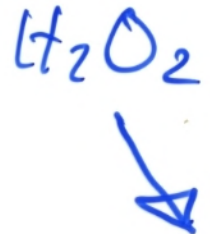
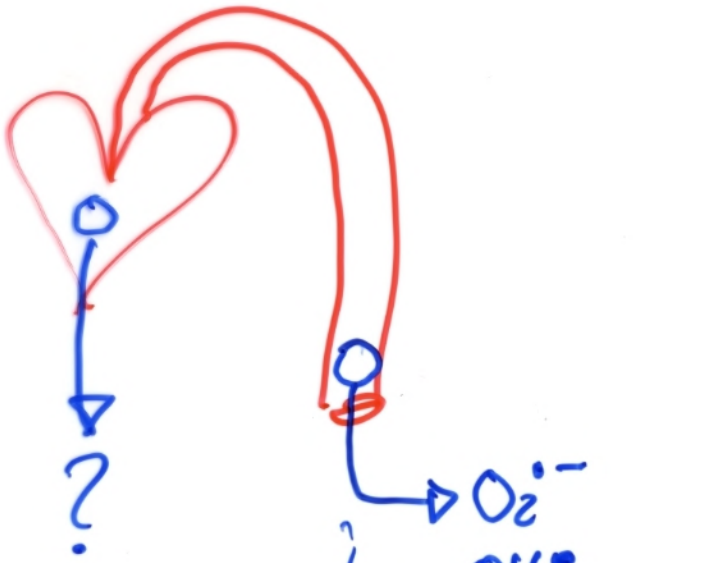
Résonance
paramagnétique de l'e⁻



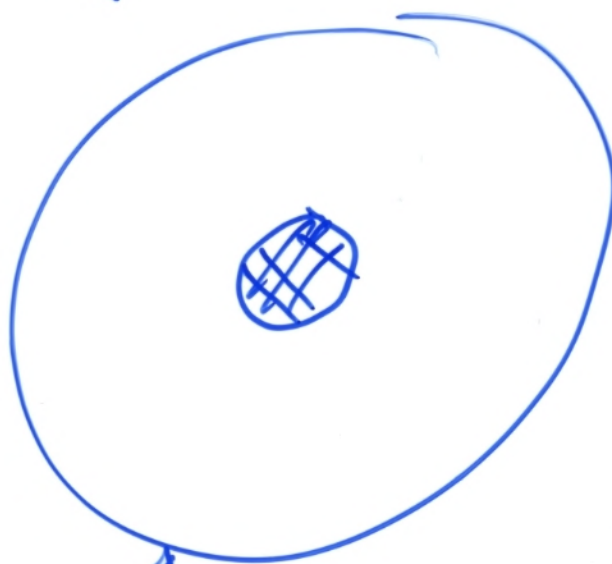
Fluorescence : Dihydroéthidium (DHE)

R-O-O[•] → acide thiobenzoylperoxy
TBA

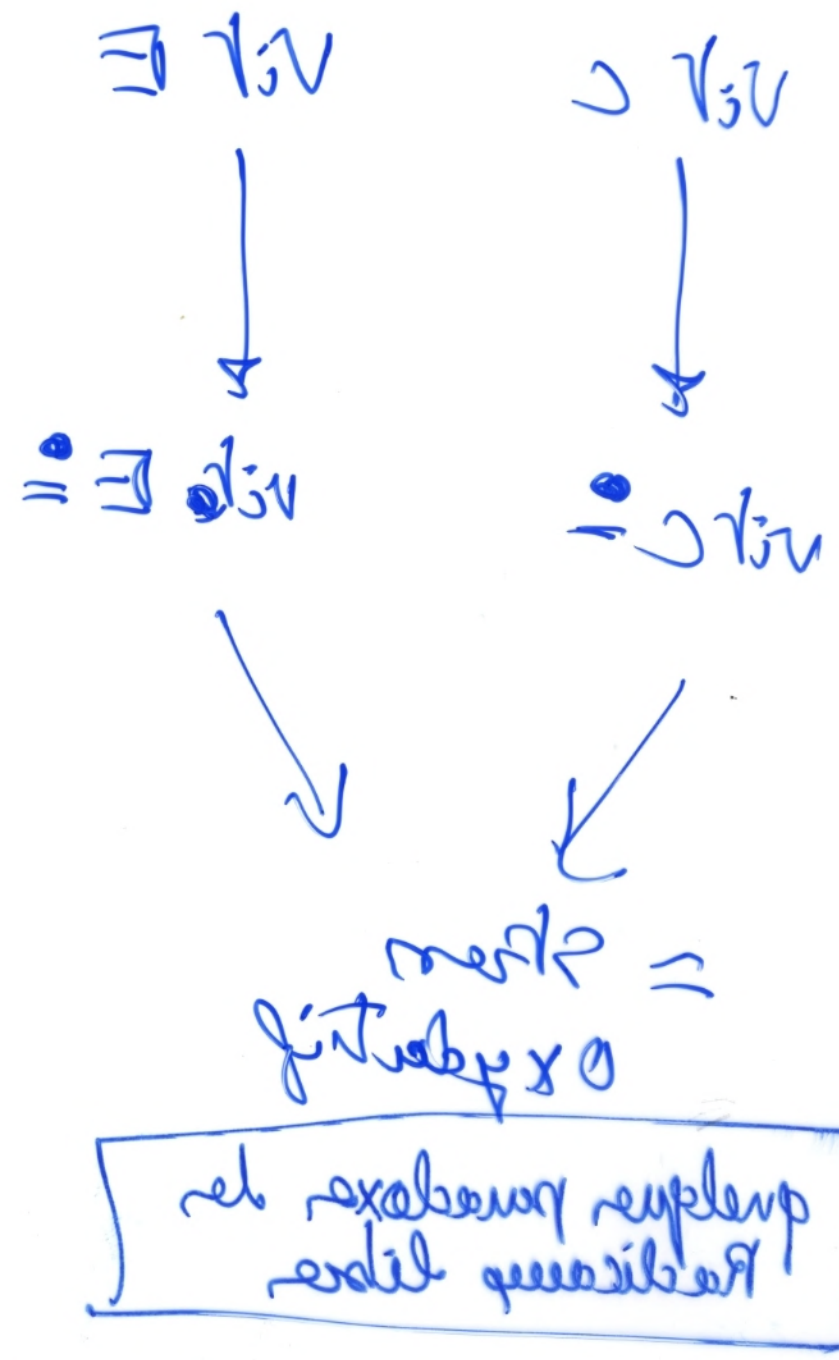
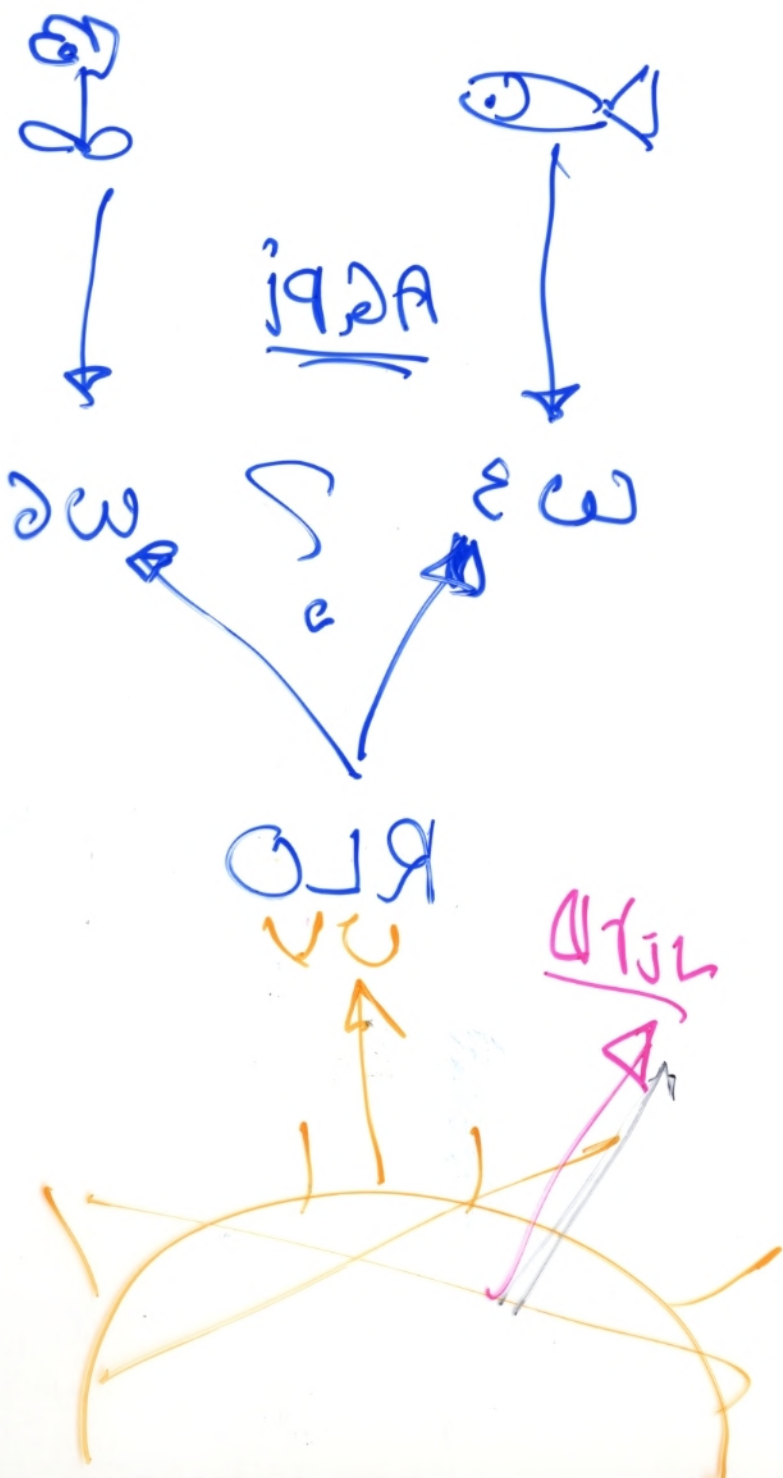
Détection des Radicaux libres



Rose Bengal



model
experimentaux
du stress
Radicalaire



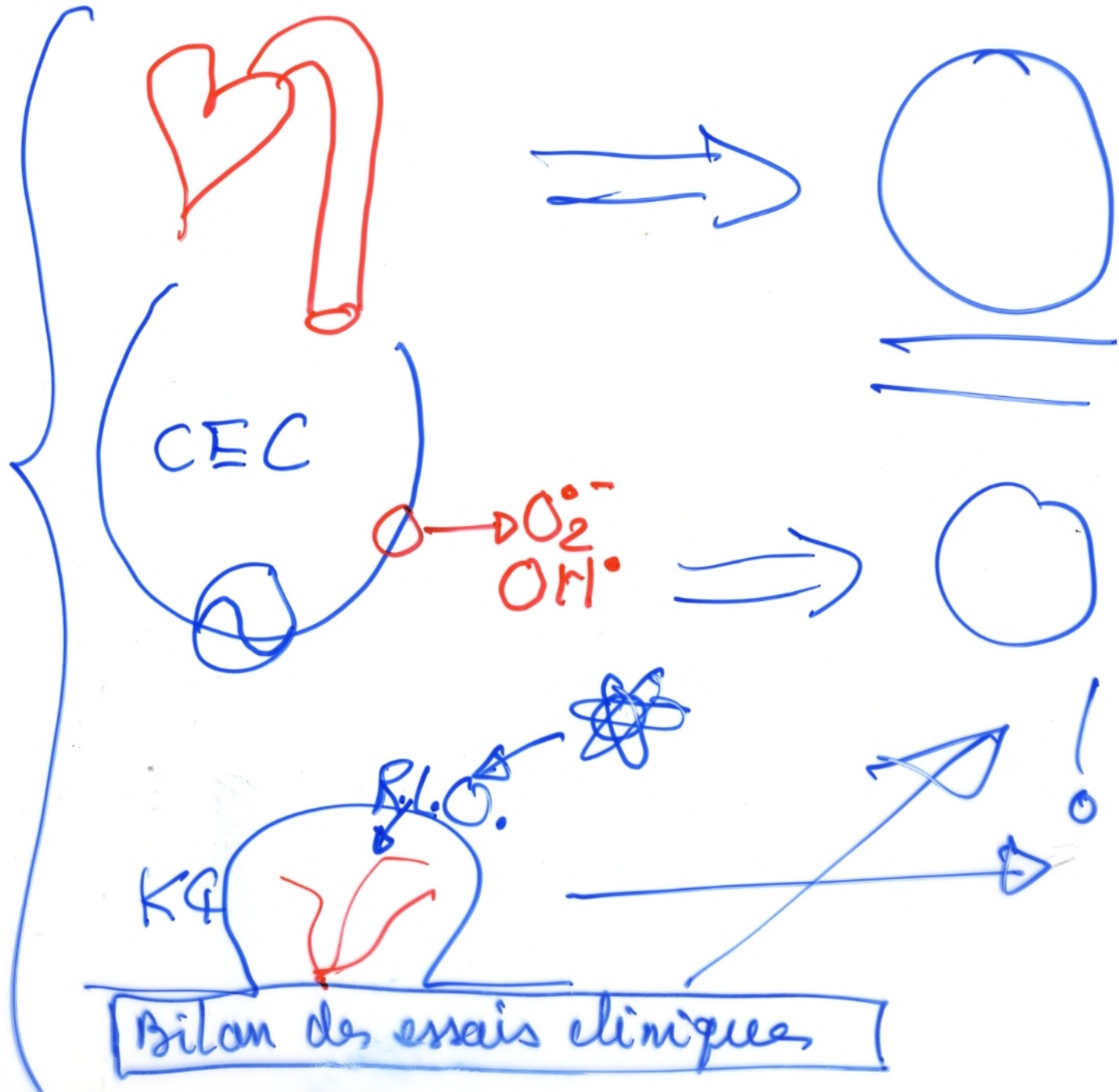
Antiox

Vit. C

Vit E.

Vit. A.

Selenium

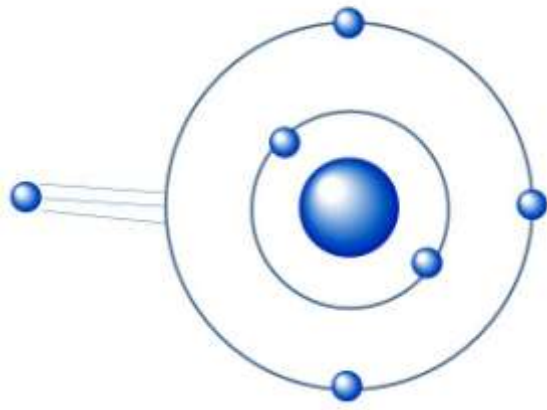




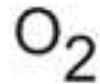
Pierre
ATHIAS

Composés Radicalaires

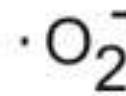
Free Radical



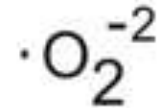
Oxygen



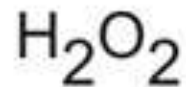
Superoxide anion



Peroxide



Hydrogen Peroxide



Hydroxyl radical

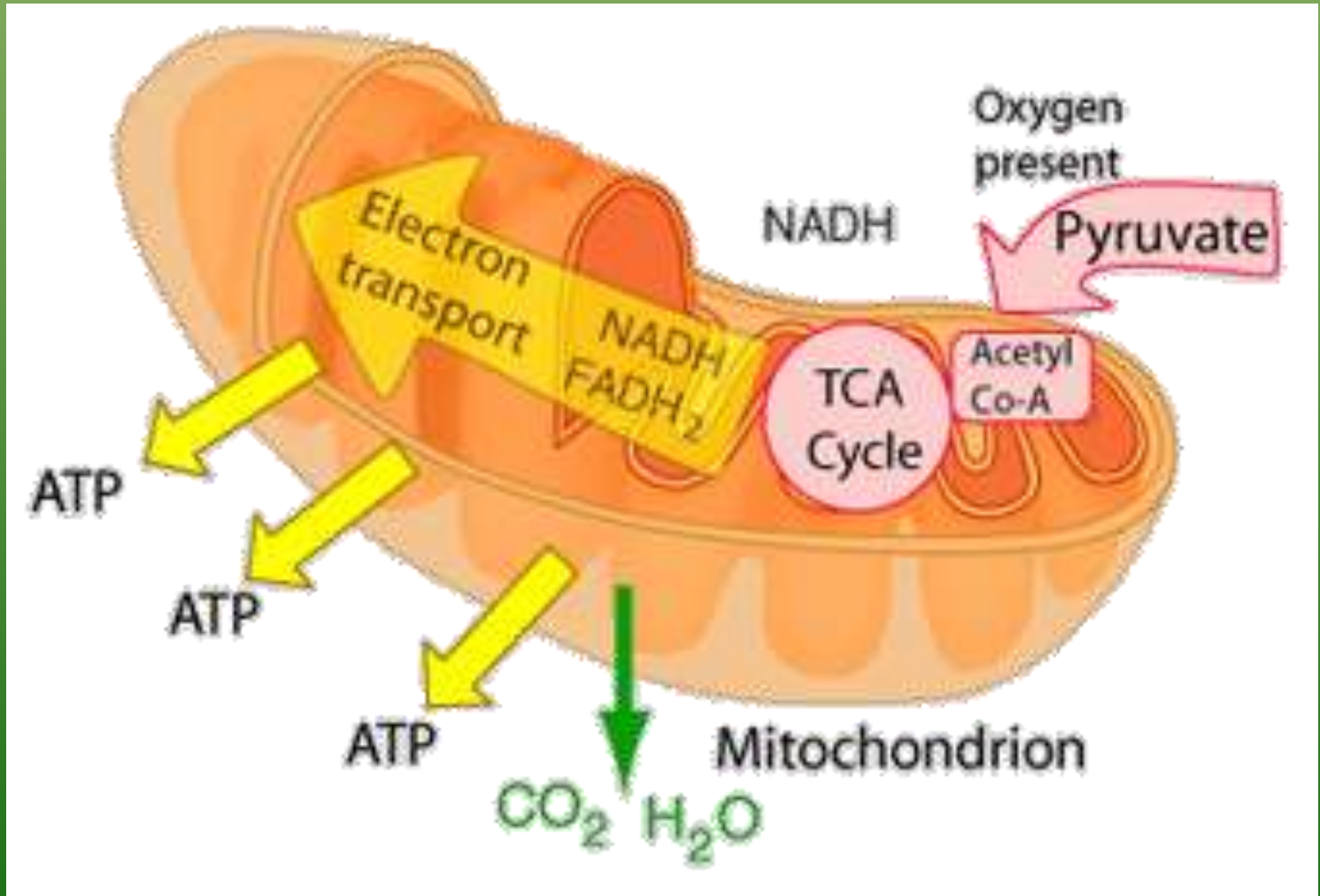


Hydroxyl ion



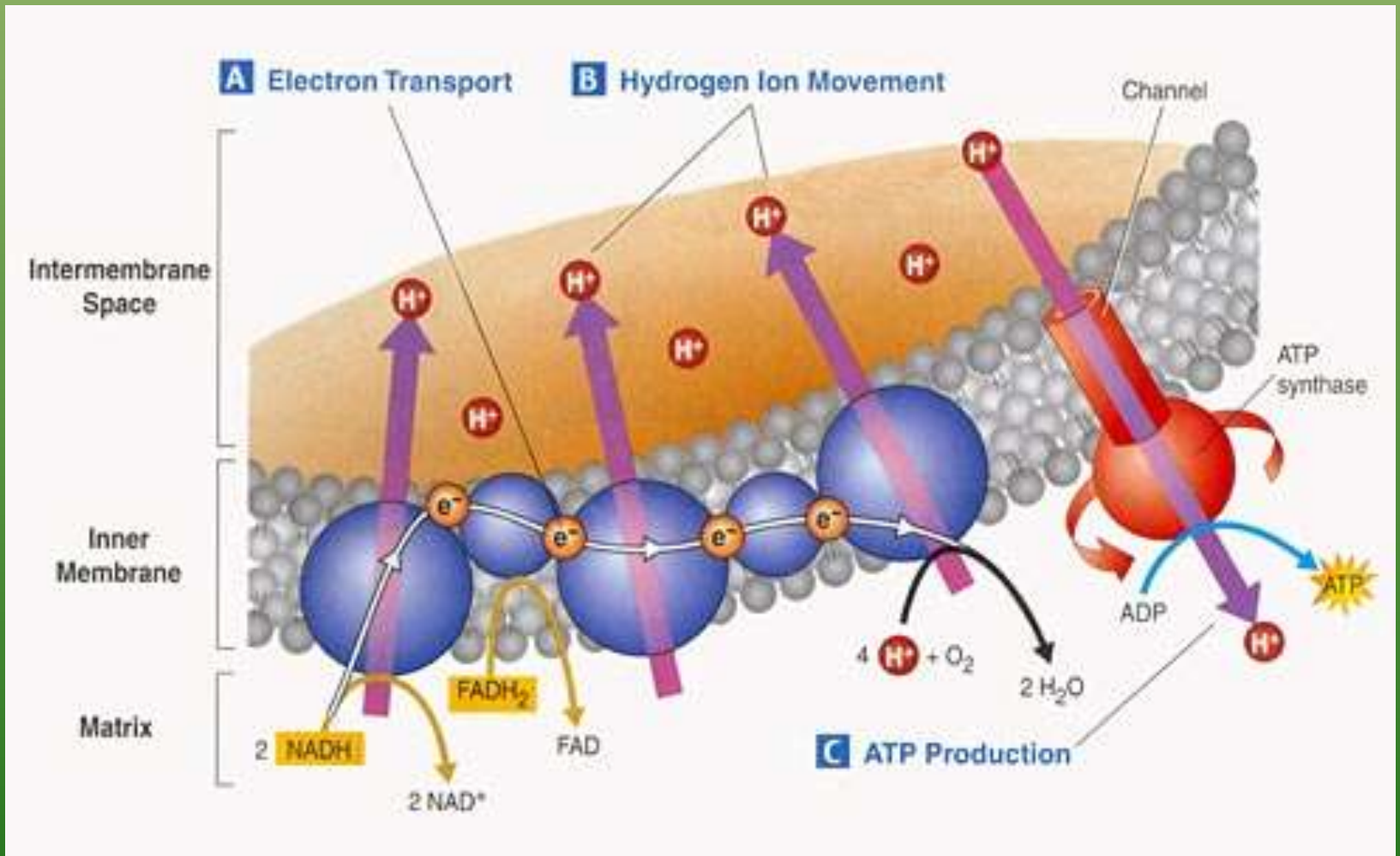


Métabolisme Mitochondrial



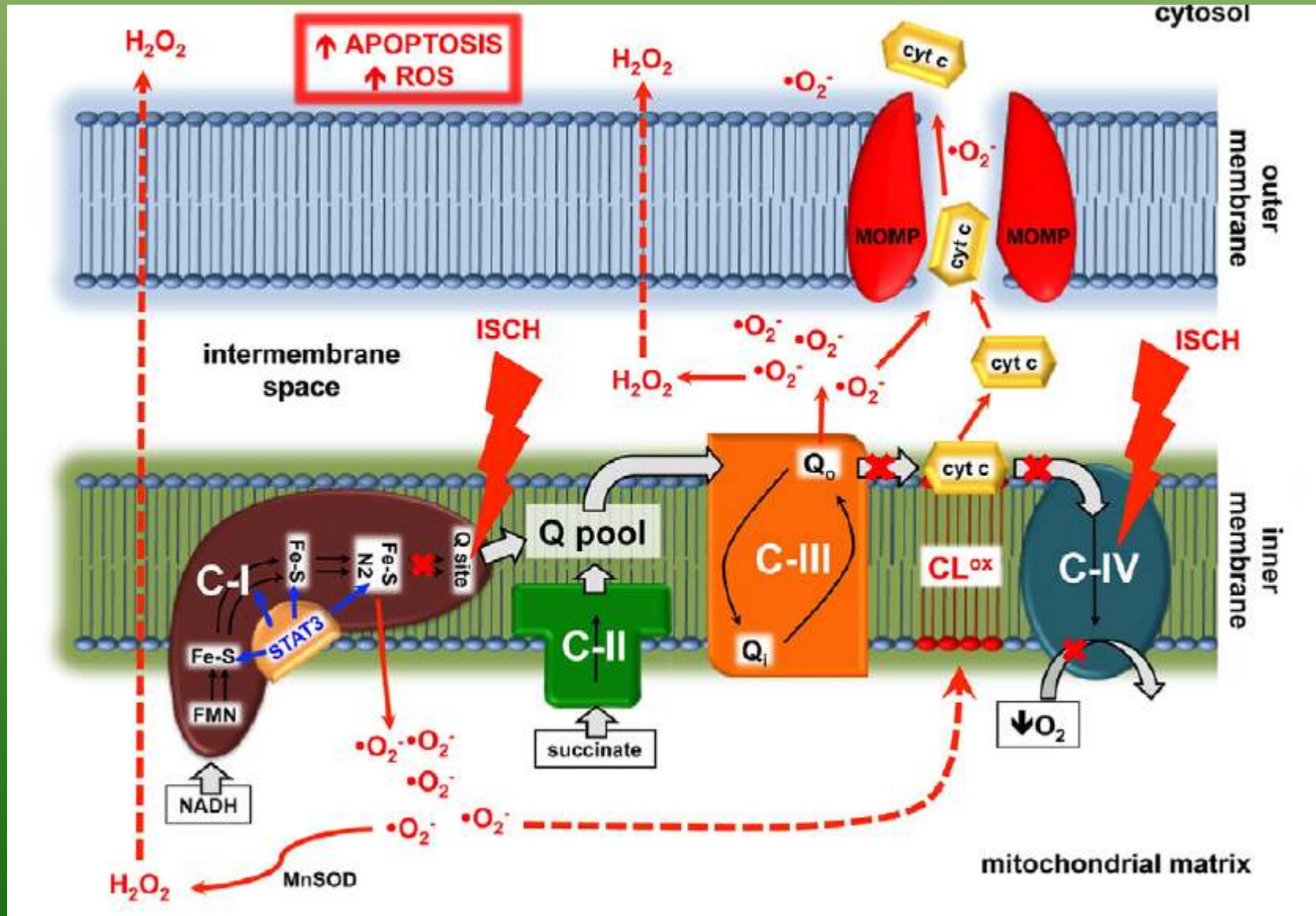


Transport d'Electrons





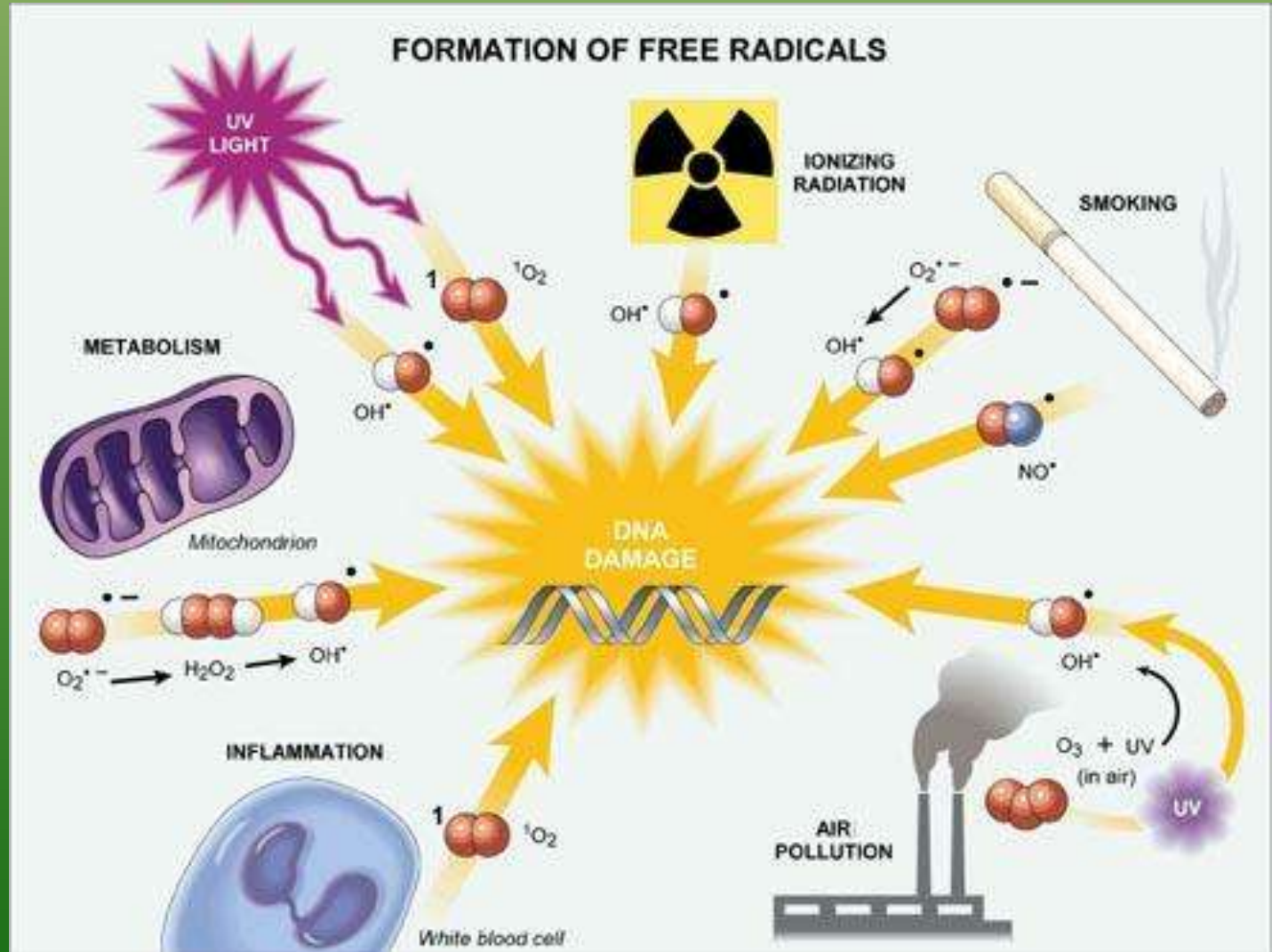
Formation des Radicaux libres





Autres Causes de Stress Radicalaire

Pierre
ATHIAS

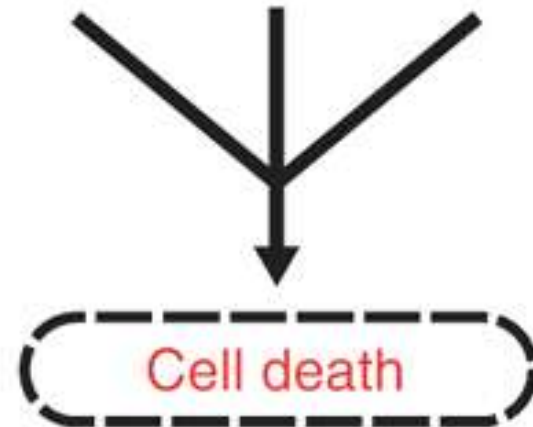
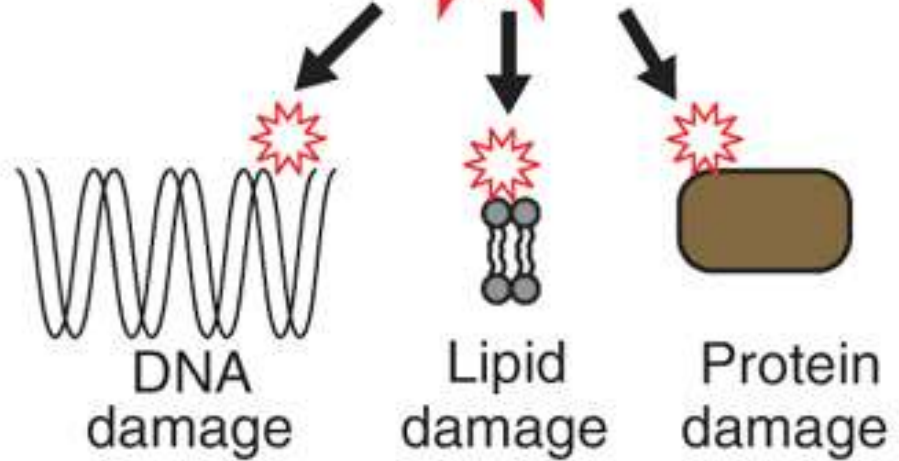




**Pierre
ATHIAS**

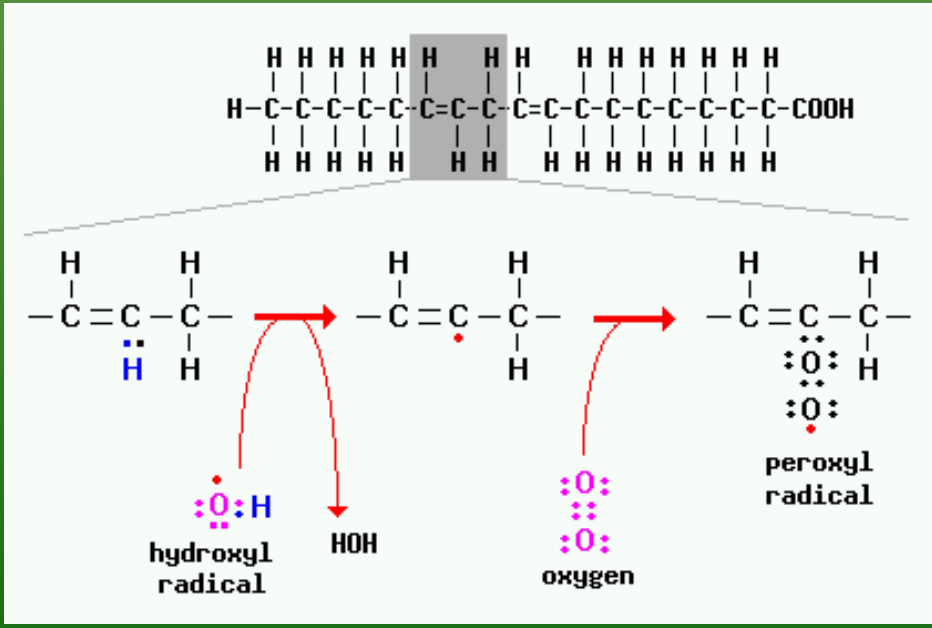
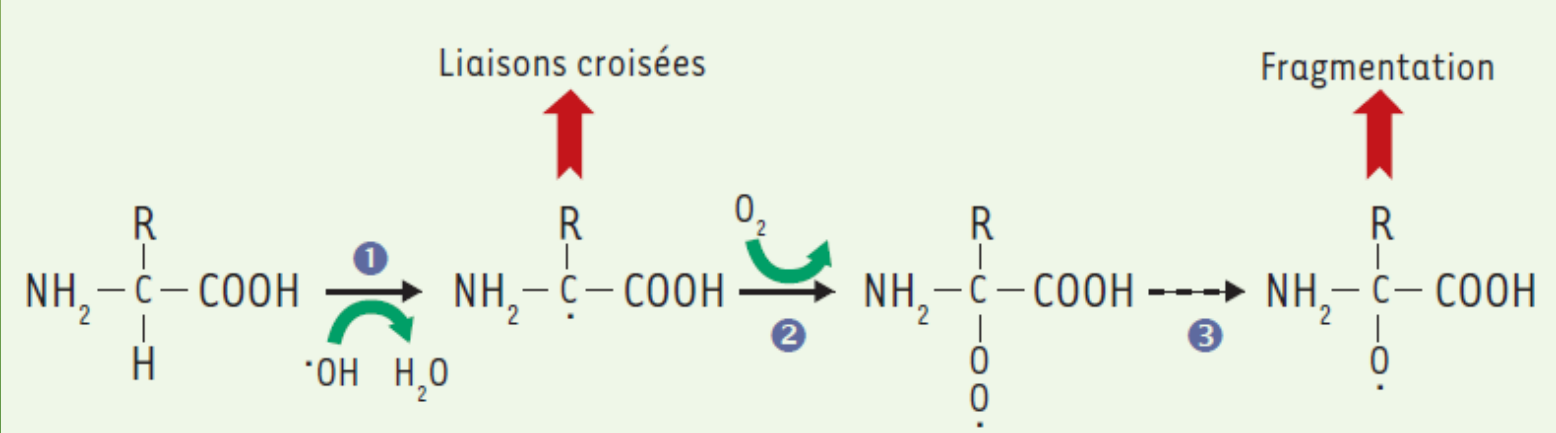
Stress Radicalaires

Hydroxyl radical
damage





Altération des Protéines



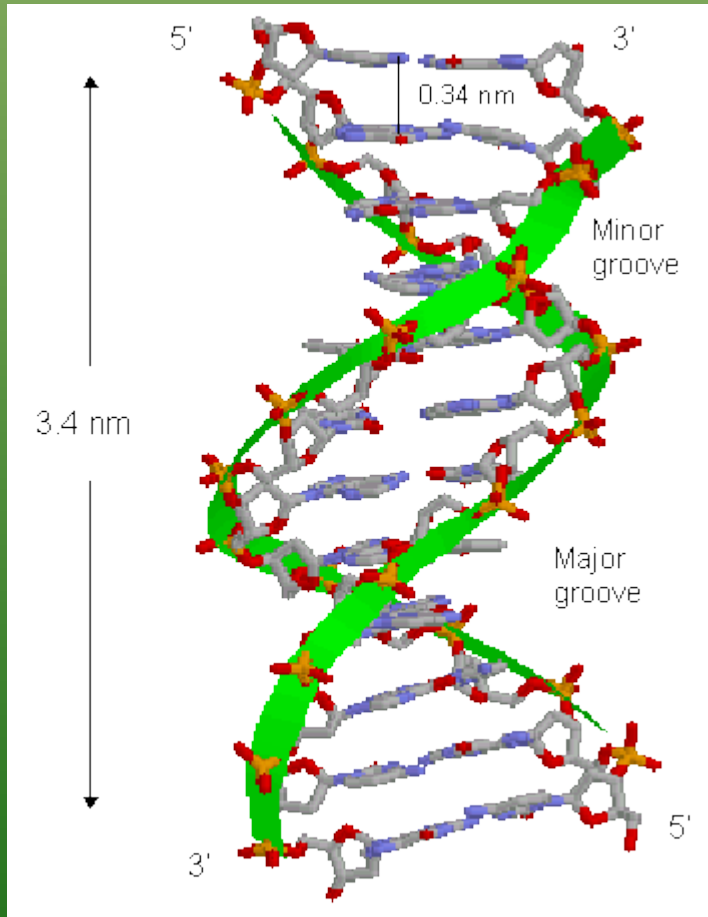
Altération des Acides Gras



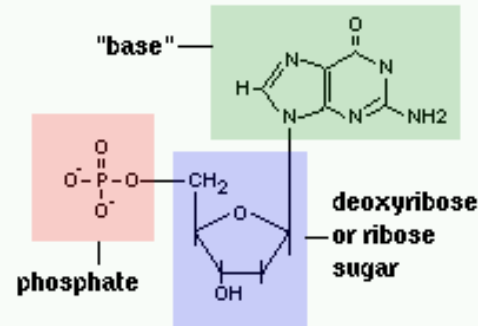


**Pierre
ATHIAS**

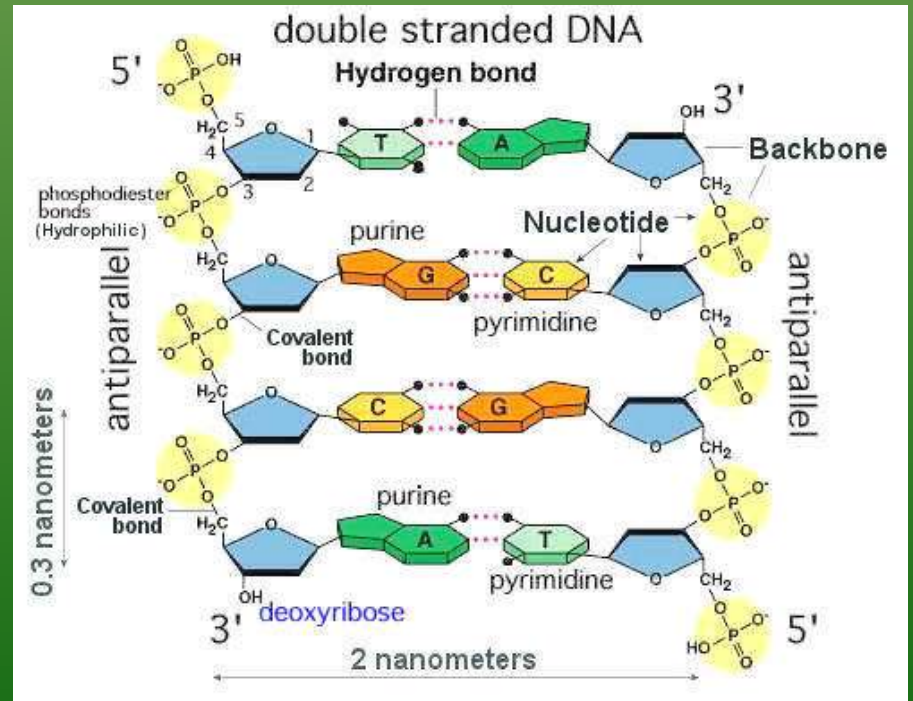
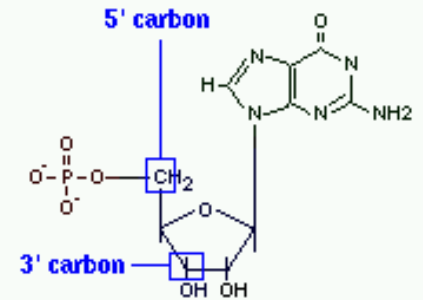
Structure du DNA



Deoxyguanosine monophosphate

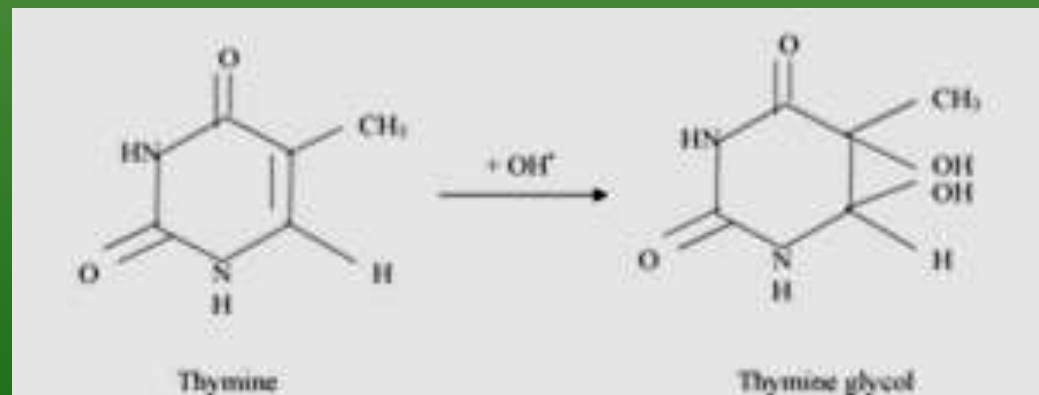
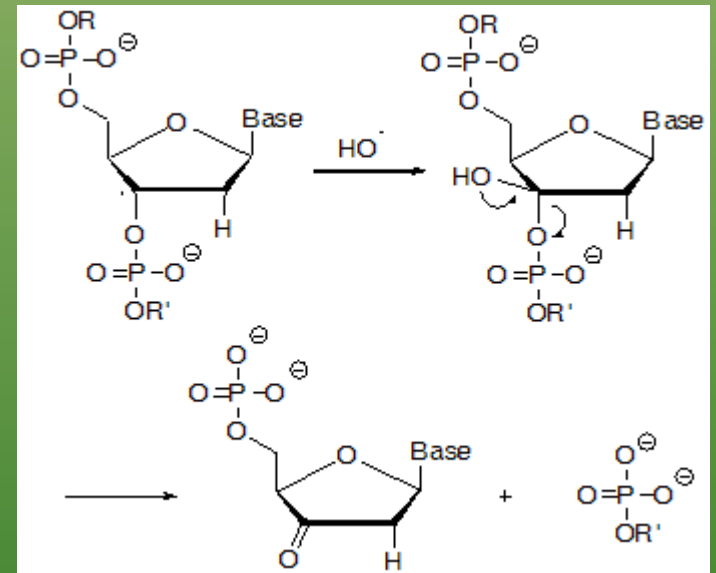
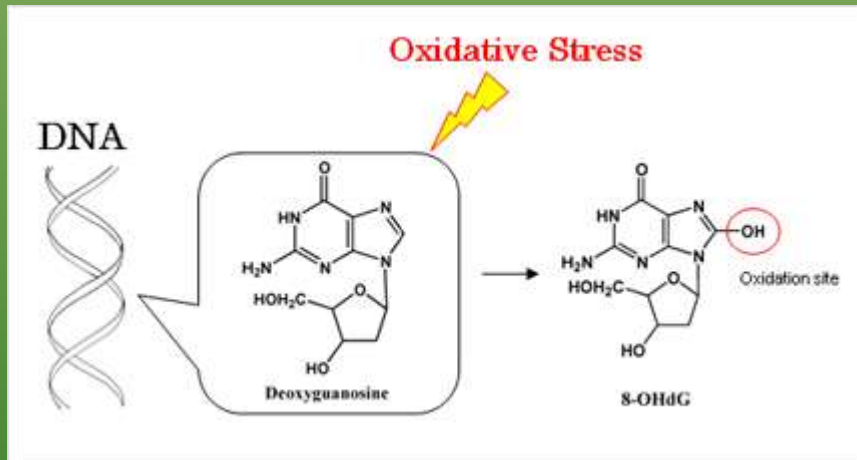


(ribo) guanosine monophosphate



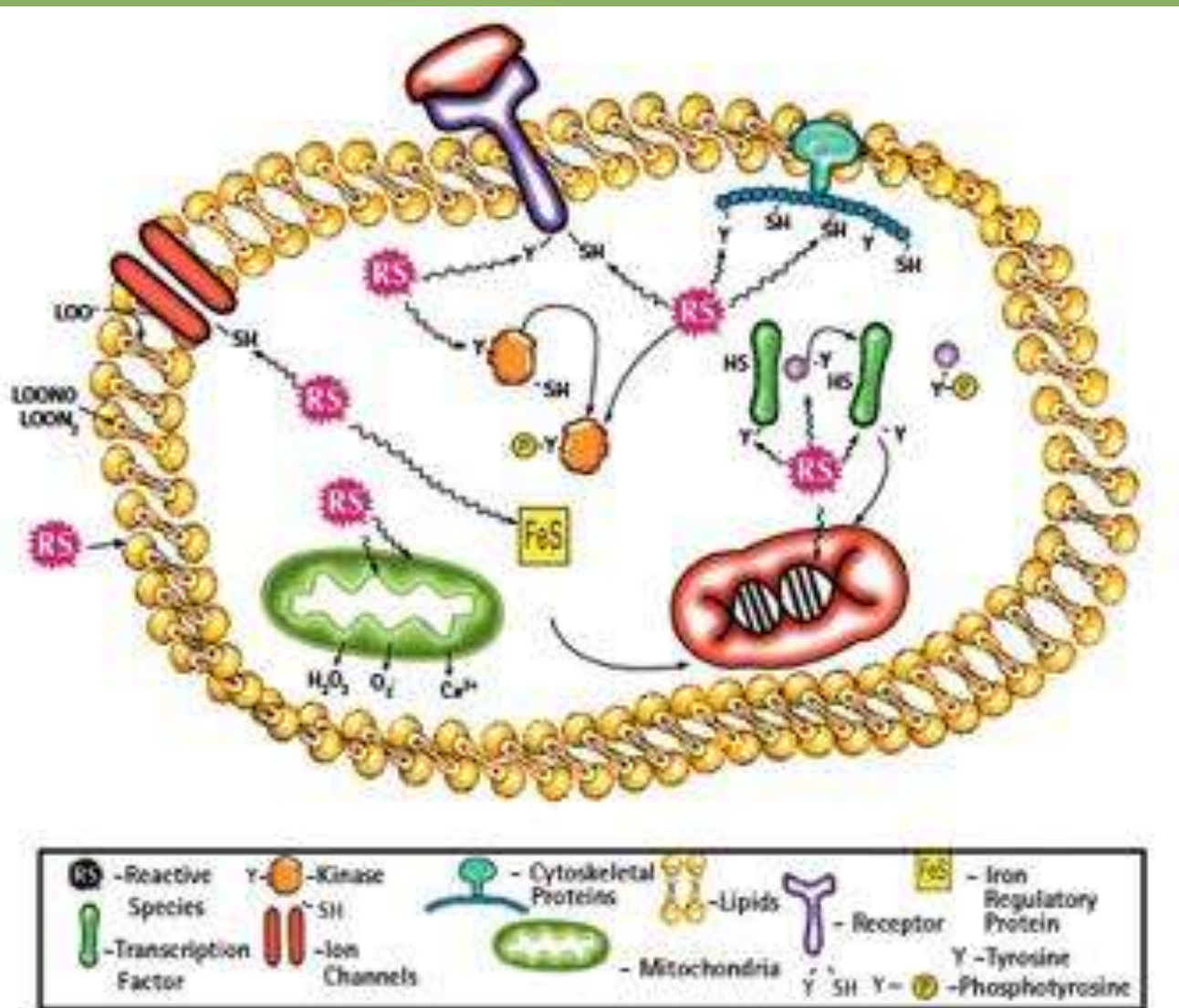


Altérations du DNA



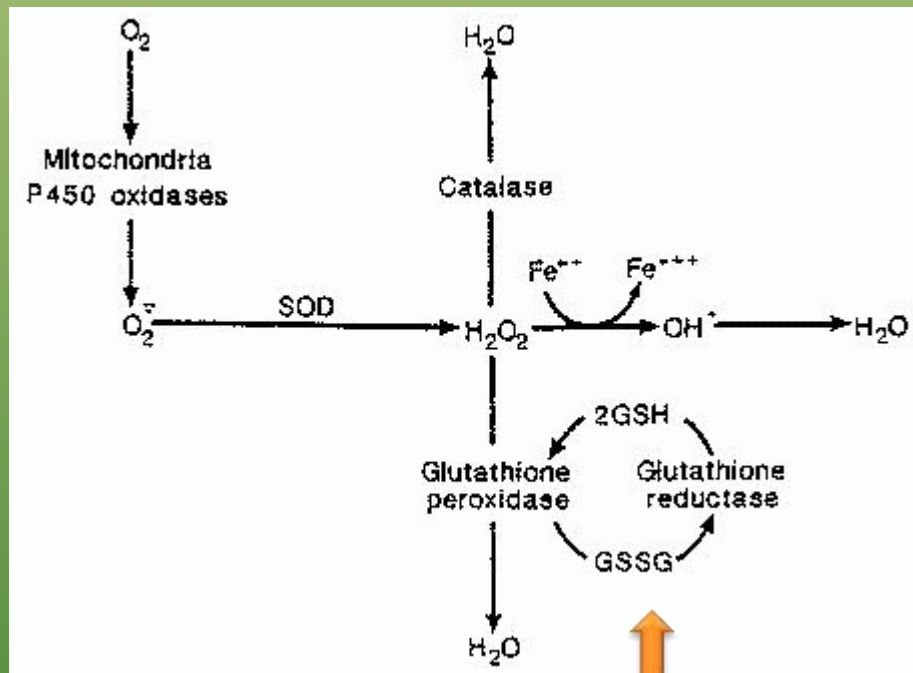


Pierre ATHIAS

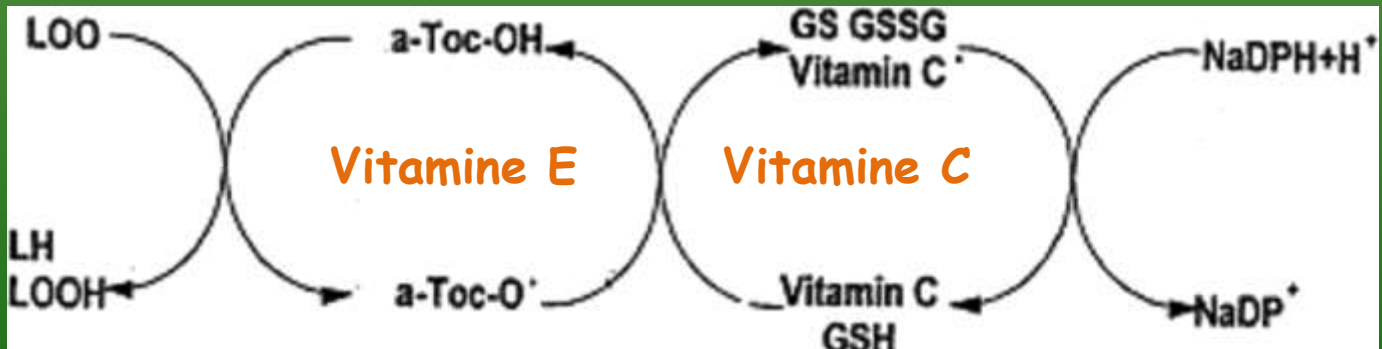




**Pierre
ATHIAS**

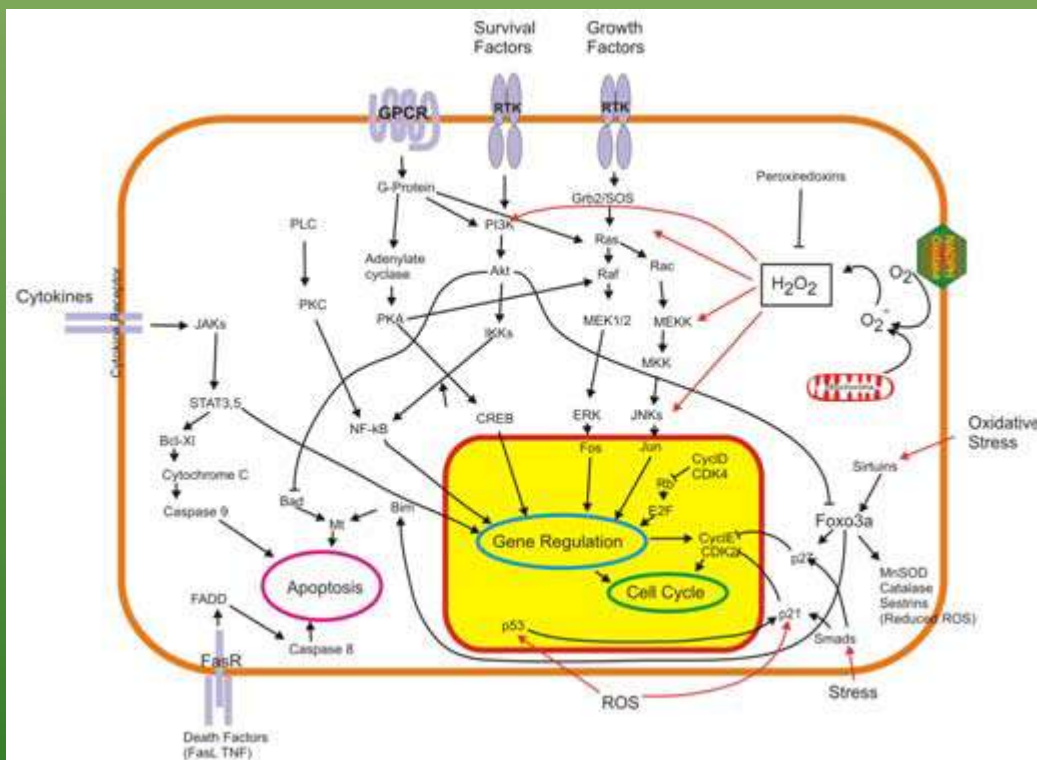


Systemes Antioxydants





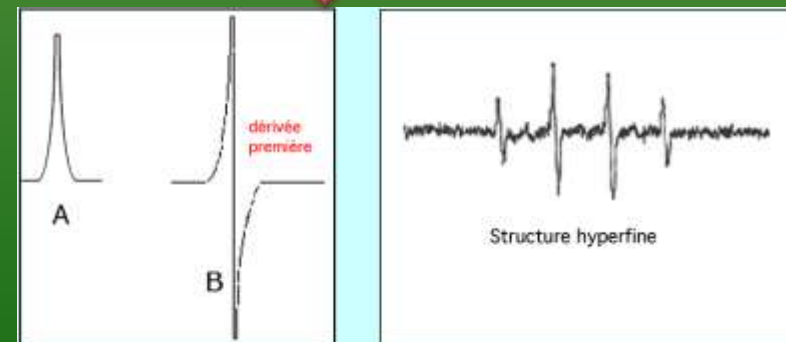
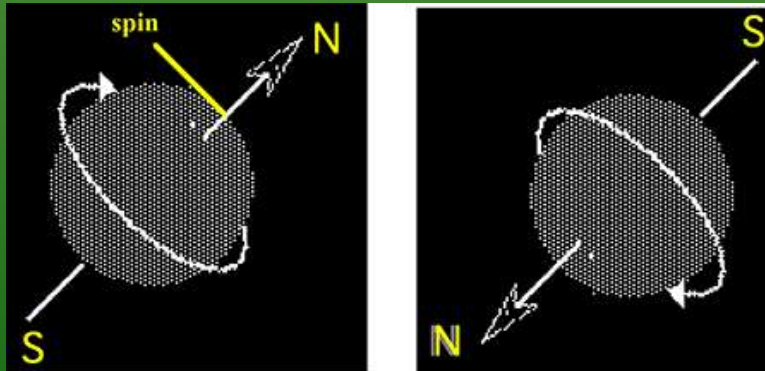
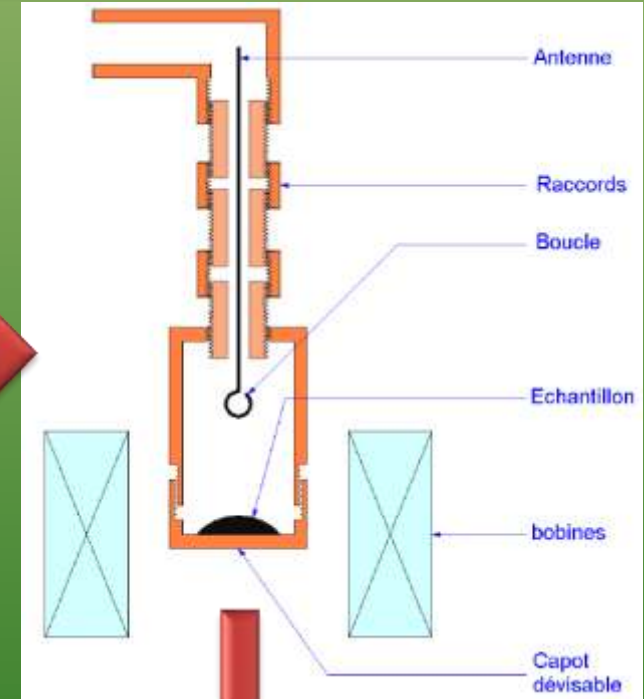
**Pierre
ATHIAS**





Pierre
ATHIAS

Résonance Paramagnétique de l'électron (RPE)





Spectres de RPE (1)

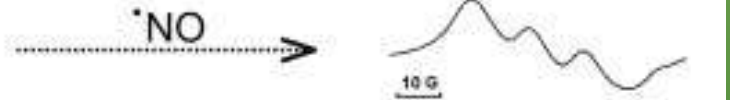
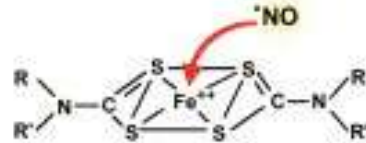
- Freeze trapping



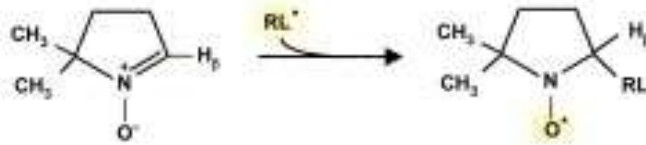
- Spin trapping :



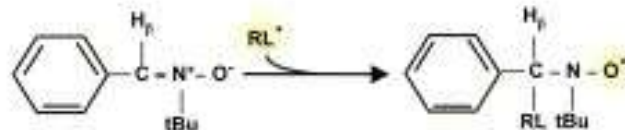
- Fe-MGD



- DMPO



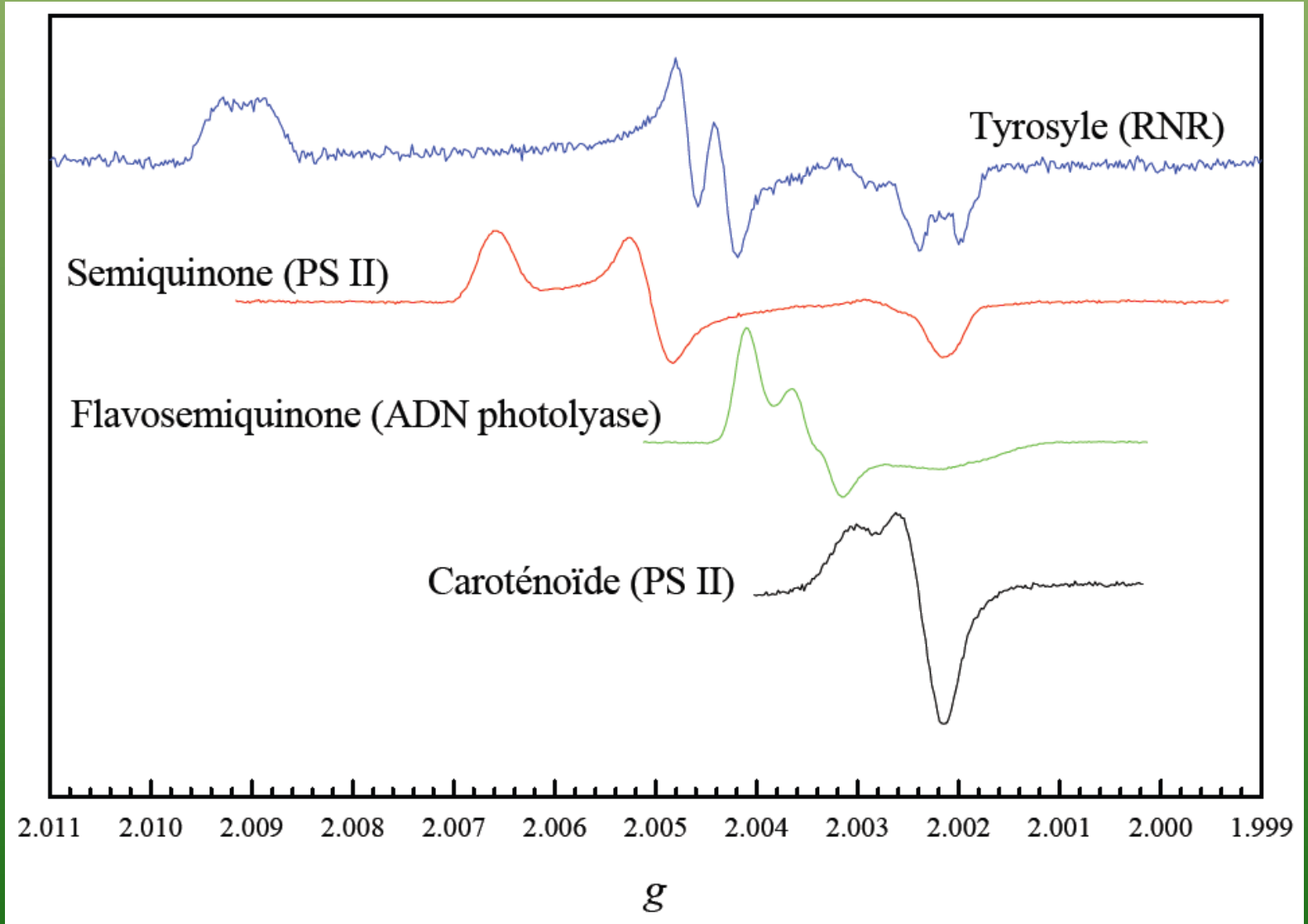
- PBN





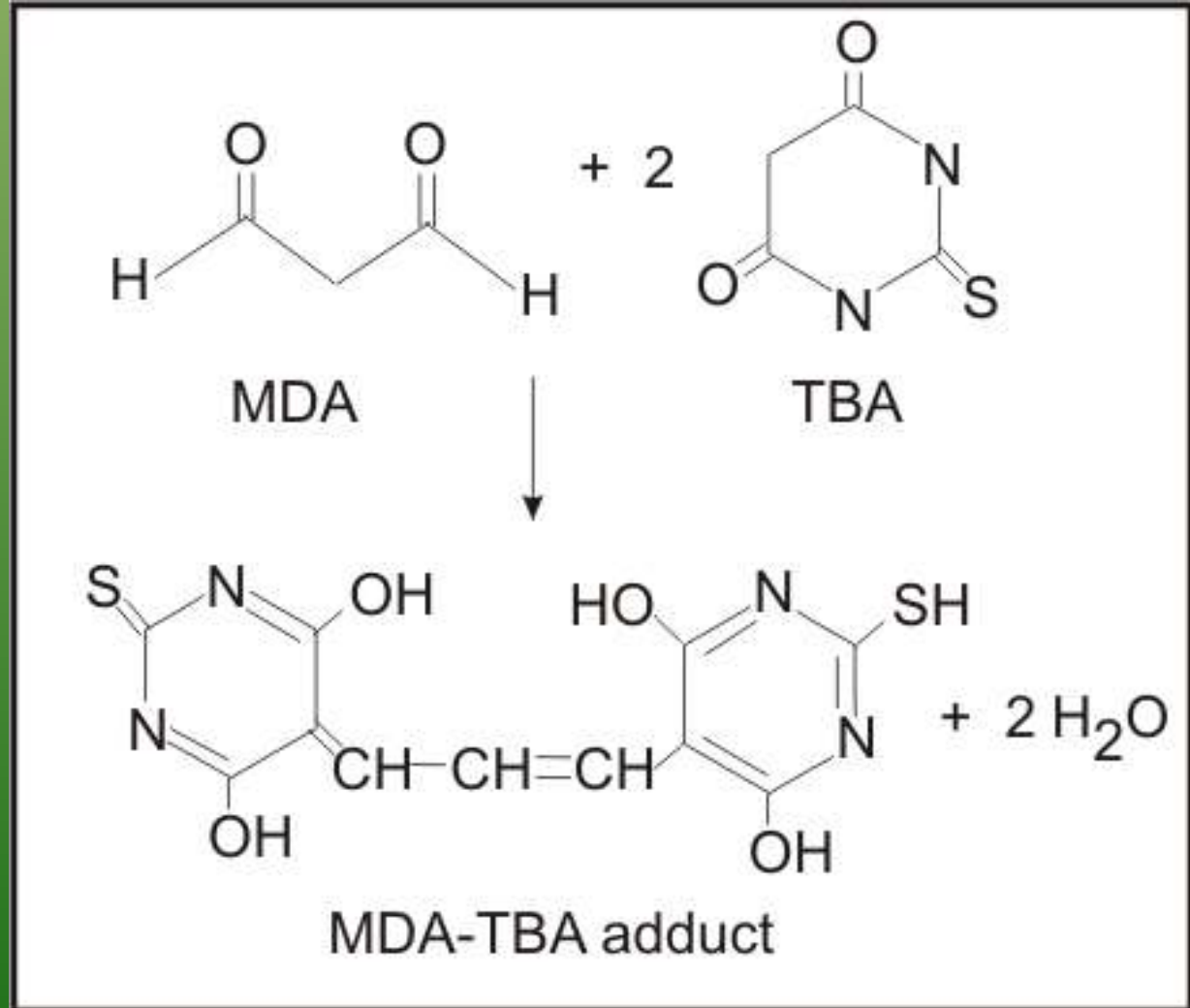
**Pierre
ATHIAS**

Spectres de RPE (2)





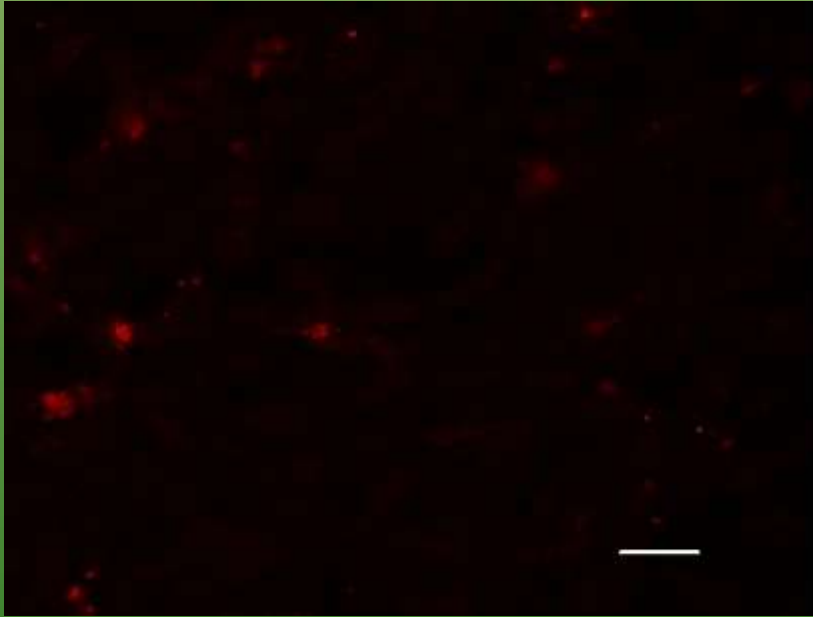
Fixation de l'Acide ThioBarbiturique



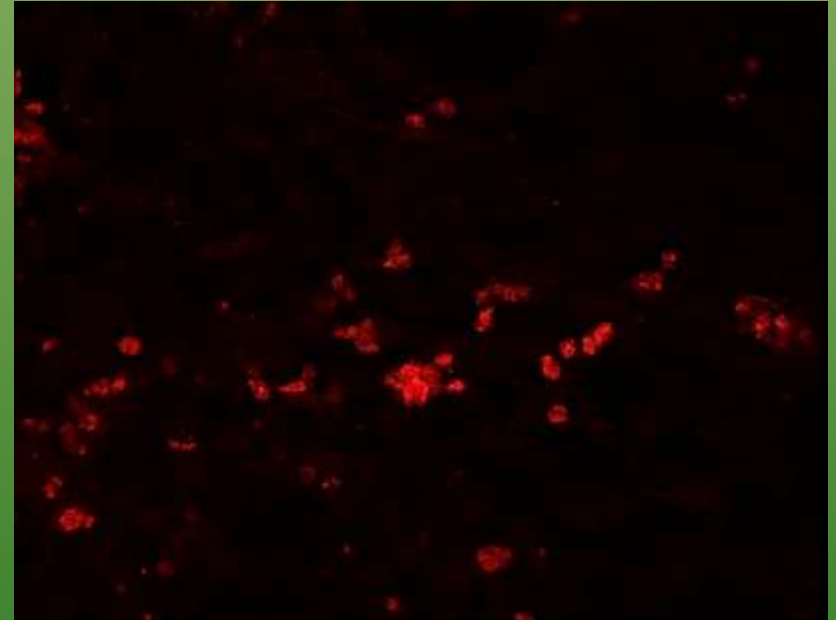


**Pierre
ATHIAS**

Fluorescence au DiHydroEthidium (DHE)



Cardiomyocytes Témoins

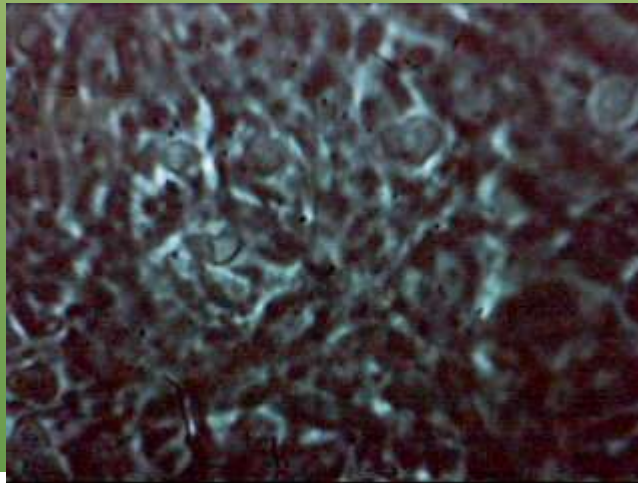


**Cardiomyocytes après
Infarctus simulé**

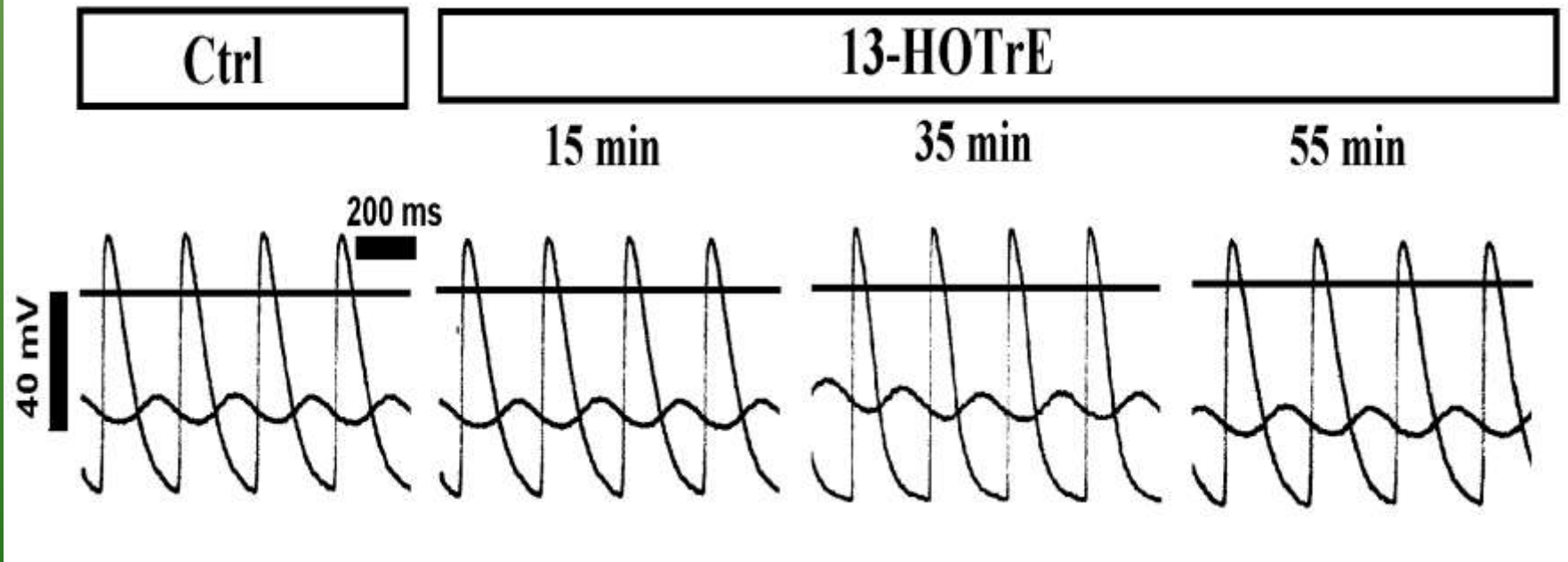




**Pierre
ATHIAS**



**Addition
d'acides gras
peroxydé**





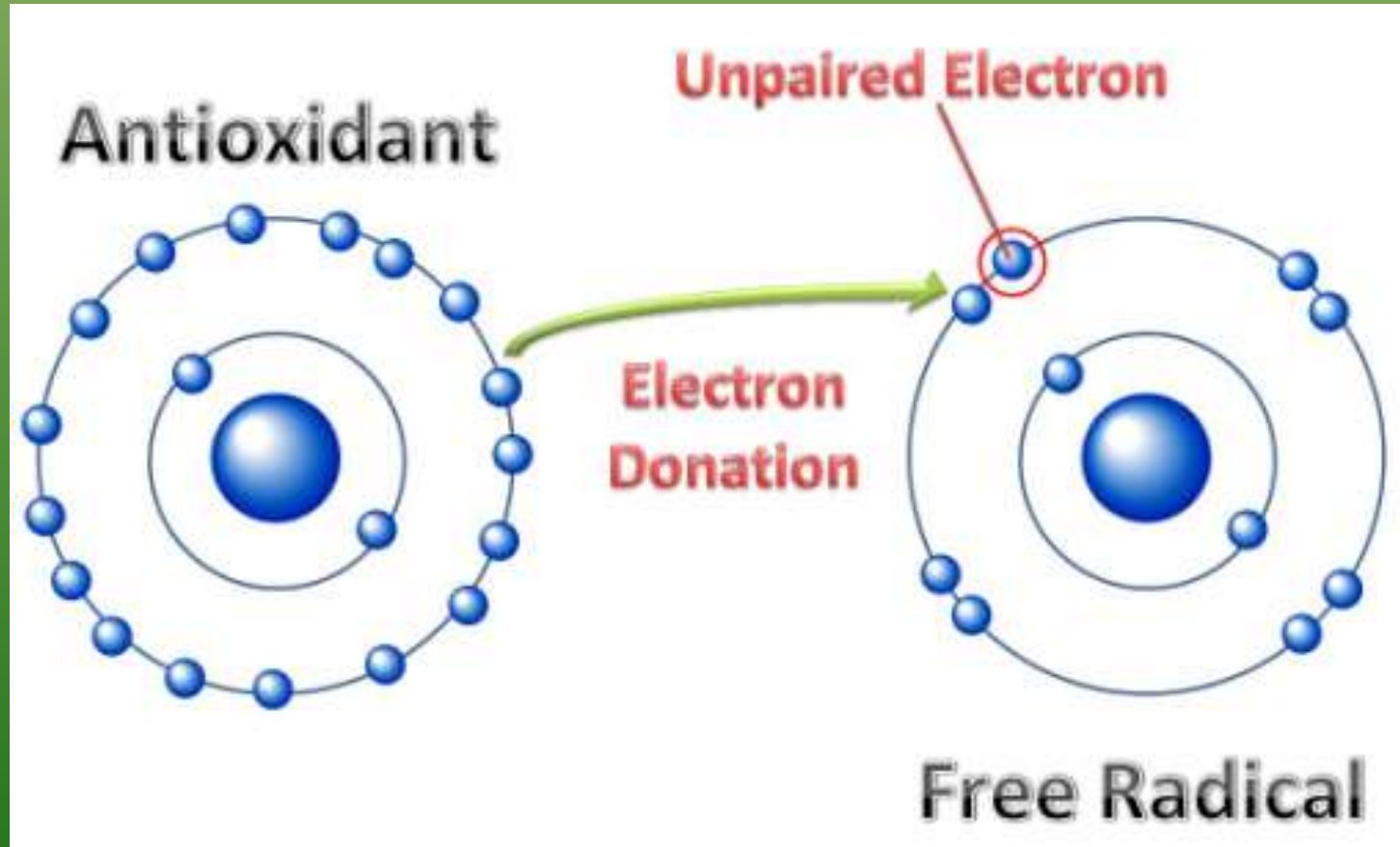
IMPLICATED DISEASE STATES





**Pierre
ATHIAS**

Traitement THEORIQUE





**Pierre
ATHIAS**

Etude SUVIMAX

COMPLÉMENTS ALIMENTAIRES - INFUSIONS - COSMÉTIQUE

LABORATOIRES YVES PONROY

LE RESPECT DU MÉTABOLISME

ÉQUILIBRE AU FÉMININ / MASCULIN | BEAUTÉ & MINCEUR | ARTICULATIONS & MOBILITÉ | VISION & MÉMOIRE | CŒUR & CIRCULATION | FORME & VITALITÉ | DÉFENSES NATURELLES | DÉTENTE & SOMMEIL | HYGIÈNE & COSMÉTIQUE

Accueil | Vous recherchez

Votre compte

- > Identifiez-vous
- > Créez votre compte

Commande avec un code promo | Mon PANIER 0 article(s)

Newsletter

Abonnez-vous pour être informé des nouveautés et actualités du mois...

Votre email

> En savoir plus

Offre de bienvenue

C'est votre 1^{re} visite ? Découvrez vite vos avantages !

> Cliquez ici

Catalogue 2012

Le respect du métabolisme

Résultats de l'étude SU.VI.MAX

Catégorie	Groupe Placebo	Groupe Antioxydants	Différence (%)
Nombre de cancers développés	124	88	-31%
Nombre de décès	63	40	-37%





SU.VI.MAX 1 : Principaux résultats

- Pas d'effet de la supplémentation en antioxydants sur l'incidence des maladies cardiovasculaires ischémiques.
- Effet de la supplémentation en antioxydants sur l'incidence des cancers, chez les hommes uniquement.
- Effet de la supplémentation en antioxydants sur la mortalité, chez les hommes uniquement.



**Pierre
ATHIAS**

Essais Cliniques

Study	Subjects				Treatment			Study Outcome	RR/Statistics
	No.	Sex	Age, y	Characteristics	Dose	Duration, y	Prevention Goal		
Vitamin E									
GISSI (1999) ⁴	11 324	M, F	No age limits	Post-MI adults	300 mg (synthetic)	3.5	Secondary	No effect on MI + CVD death + stroke	0.98 (0.87–1.10)
HOPE (2000) ⁵	9541	M, F	≥55	High CVD risk	400 IU (natural)	4.5	Primary and secondary	No effect on MI + CVD death + stroke	1.05 (0.95–1.16)
PPP (2001) ⁶	4495	M, F	64	At risk of CVD	300 mg (synthetic)	3.6	Primary	No effect on MI + CVD death + stroke	1.07 (0.74–1.56)
MICRO-HOPE (2002) ⁷	3654	M, F	65	Diabetes	400 IU (natural)	4.5	Secondary	No effect on MI + CVD death + stroke	1.03 (0.88–1.21)
VEAPS (2002) ⁸	353	M, F	≥40	Elevated LDL-C	400 IU dl- α -tocopherol	3	Primary	No effect on intima-media thickness + clinical events	<i>P</i> =0.81 for CVD events (14 placebo and 11 vitamin E)
β-Carotene									
ATBC (1998) ⁹	27 271	M	50–69	Smokers with no history of MI	20 mg	6.1	Primary	No effect on: All coronary cases Nonfatal MI Fatal CHD	1.03 (0.91–1.16) 1.06 (0.90–1.24) 0.99 (0.83–1.19)
SCPS (1996) ¹⁰	1805	M, F	<85	Skin cancer patients	50 mg	8.2	Primary	No effect on CVD mortality	1.16 (0.82–1.64)
PHS (1996) ¹¹	22 071	M	40–84	Healthy	50 mg on alternate days	12	Primary	No effect on: MI CVD CVD mortality	0.96 (0.84–1.09) 1.00 (0.91–1.09) 1.09 (0.93–1.27)
Antioxidant cocktails									
ATBC (1998) ⁹	27 271	M	50–69	Smokers with no history of MI	50 mg vitamin E and 20 mg β -carotene	6.1	Primary	No effect on: All coronary cases Nonfatal MI Fatal MI	0.97 (0.86–1.09) 0.99 (0.84–1.16) 0.94 (0.79–1.13)
HPS (2002) ¹²	20 536	M, F	40–80	High CVD risk	600 mg vitamin E, 250 mg vitamin C, 20 mg β -carotene		Secondary	No effect on CVD mortality	1.05 (0.95–1.15)





Antioxidant supplements for prevention of mortality in healthy participants and patients with various diseases

Bjelakovic G, Nikolova D, Gluud LL, Simonetti RG, Gluud C

Published Online: March 14, 2012

Previous research on animal and physiological models suggests that antioxidant supplements have beneficial effects that may prolong life. Some observational studies also suggest that antioxidant supplements may prolong life, whereas other observational studies demonstrate neutral or harmful effects. Our Cochrane review from 2008 demonstrated that antioxidant supplements seem to increase mortality. This review is now updated.

The present systematic review included 78 randomised clinical trials. In total, 296,707 participants were randomised to antioxidant supplements (beta-carotene, vitamin A, vitamin C, vitamin E, and selenium) versus placebo or no intervention. Twenty-six trials included 215,000 healthy participants. ~~Fifty-two trials included 80,007 participants with various diseases in a stable phase (including~~ gastrointestinal, cardiovascular, neurological, ocular, dermatological, rheumatoid, renal, endocrinological, or unspecified diseases). A total of 21,484 of 183,749 participants (11.7%) randomised to antioxidant supplements and 11,479 of 112,958 participants (10.2%) randomised to placebo or no intervention died. The trials appeared to have enough statistical similarity that they could be combined. When all of the trials were combined, antioxidants may or may not have increased mortality depending on which statistical combination method was employed; the analysis that is typically used when similarity is present demonstrated that antioxidant use did slightly increase mortality (that is, the patients consuming the antioxidants were 1.03 times as likely to die as were the controls). When analyses were done to identify factors that were associated with this finding, the two factors identified were better methodology to prevent bias from being a factor in the trial (trials with 'low risk of bias') and the use of vitamin A. In fact, when the trials with low risks of bias were considered separately, the increased mortality was even more pronounced (1.04 times as likely to die as were the controls). The potential damage from vitamin A disappeared when only the low risks of bias trials were considered. The increased risk of mortality was associated with beta-carotene and possibly vitamin E and vitamin A, but was not associated with the use of vitamin C or selenium.

The current evidence does not support the use of antioxidant supplements in the general population or in patients with various diseases.



**Pierre
ATHIAS**



« ... Alors ?

Les antioxydants sont-ils nos amis ou nos ennemis
lorsqu'il s'agit de lutter contre le cancer ?

Les données scientifiques actuelles montrent à quel point
ils sont double-face :

alliés de choix lorsqu'ils sont apportés par une alimentation
variée et équilibrée, ils peuvent se retourner contre nous
si l'on en vient à les consommer sous la forme de gélules...»

21-10-2009





**Pierre
ATHIAS**

www.etude-nutrinet-sante.fr/



**500 000 nutrinautes
pour étudier les relations
entre la nutrition et la santé**



ACCÈS MEMBRE

Identifiant

Mot de passe

OK

[Identifiant oublié ?](#)

[Mot de passe oublié ?](#)

[Je m'inscris](#)

Vous avez perdu votre identifiant ? [Ecrivez au support NutriNet.](#)

[Accueil](#)

[Pourquoi l'étude NutriNet-Santé ?](#)

[Objectifs de l'étude](#)

[L'étude NutriNet-Santé en bref](#)

[Qui peut participer ?](#)

[Pourquoi participer ?](#)

[Comment s'inscrire ?](#)

[Mode d'emploi](#)

[Qui coordonne ?](#)

[Partenaires ? Qui finance ?](#)

[Actualités de l'étude](#)

[NutriNet-Santé dans la presse](#)

[Foire aux questions](#)

Bienvenue sur le site de l'ÉTUDE NUTRINET-SANTÉ

Une cohorte de **500 000 Nutrinautes**
pour faire progresser la recherche publique sur
les comportements alimentaires et les
relations Nutrition-Santé

Rejoignez-nous ! Inscrivez vous !

[Je m'inscris](#)



[Voir la vidéo de présentation](#)





**Pierre
ATHIAS**



<http://pathias.free.fr/cours/UTB>



physio@pathias21.fr

