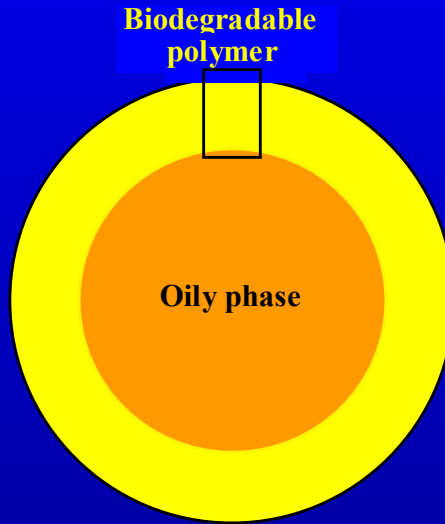
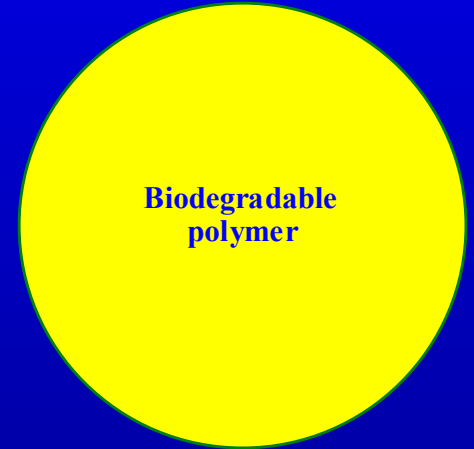


Liposomes



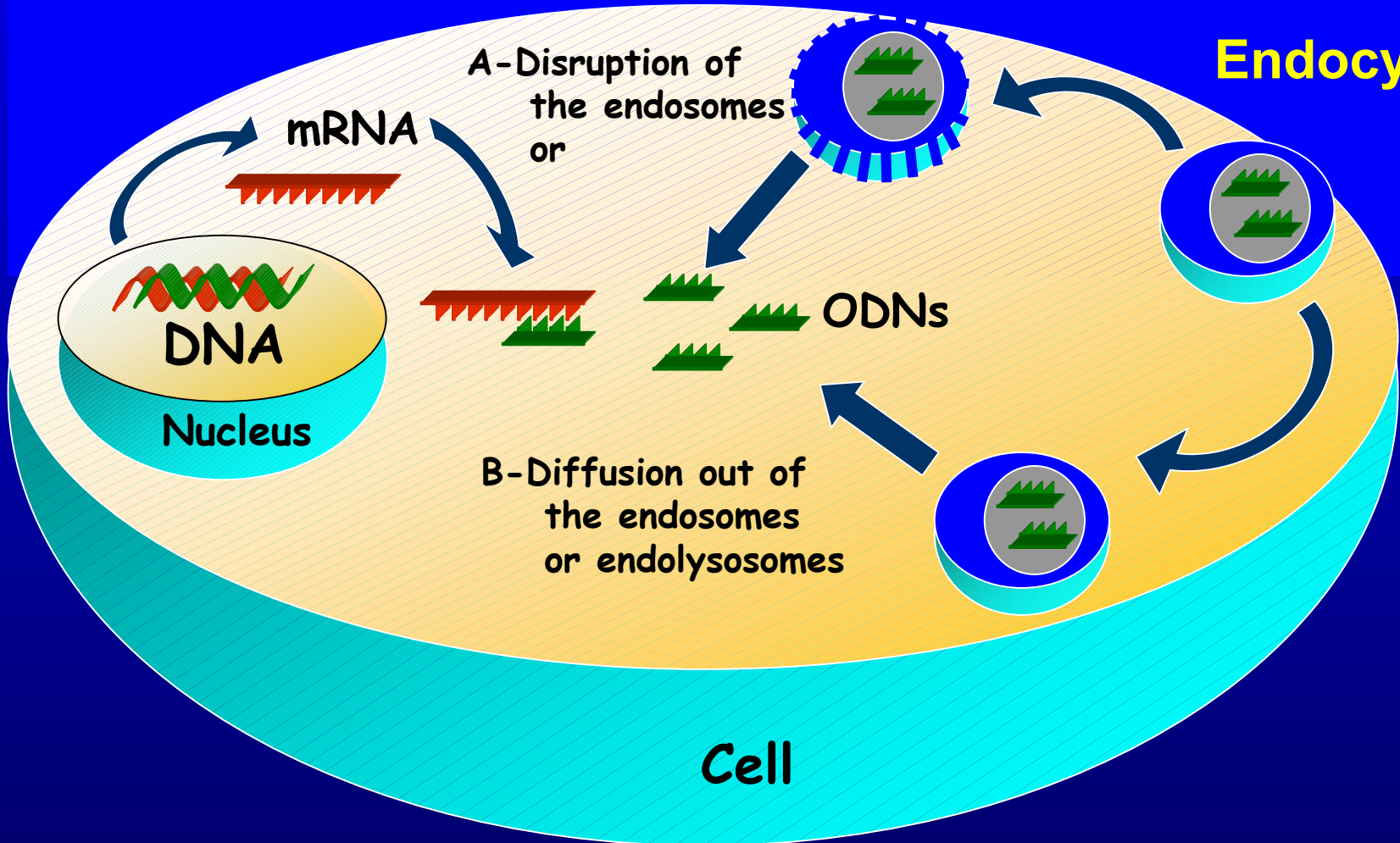
Nanocapsules



Nanospheres

Nanoparticles

Endocytosis



mRNA

A-Disruption of the endosomes or

ODNs

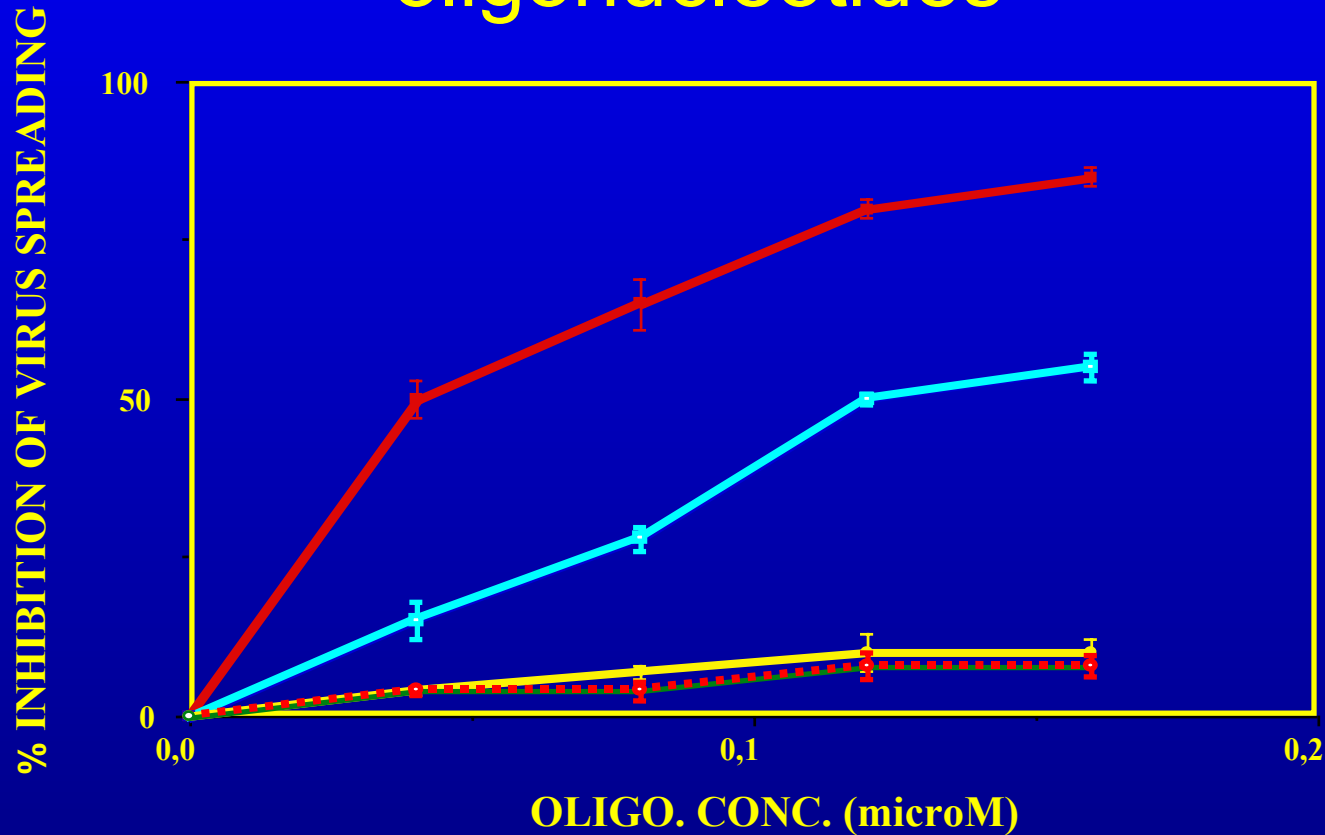
B-Diffusion out of the endosomes or endolysosomes

DNA

Nucleus

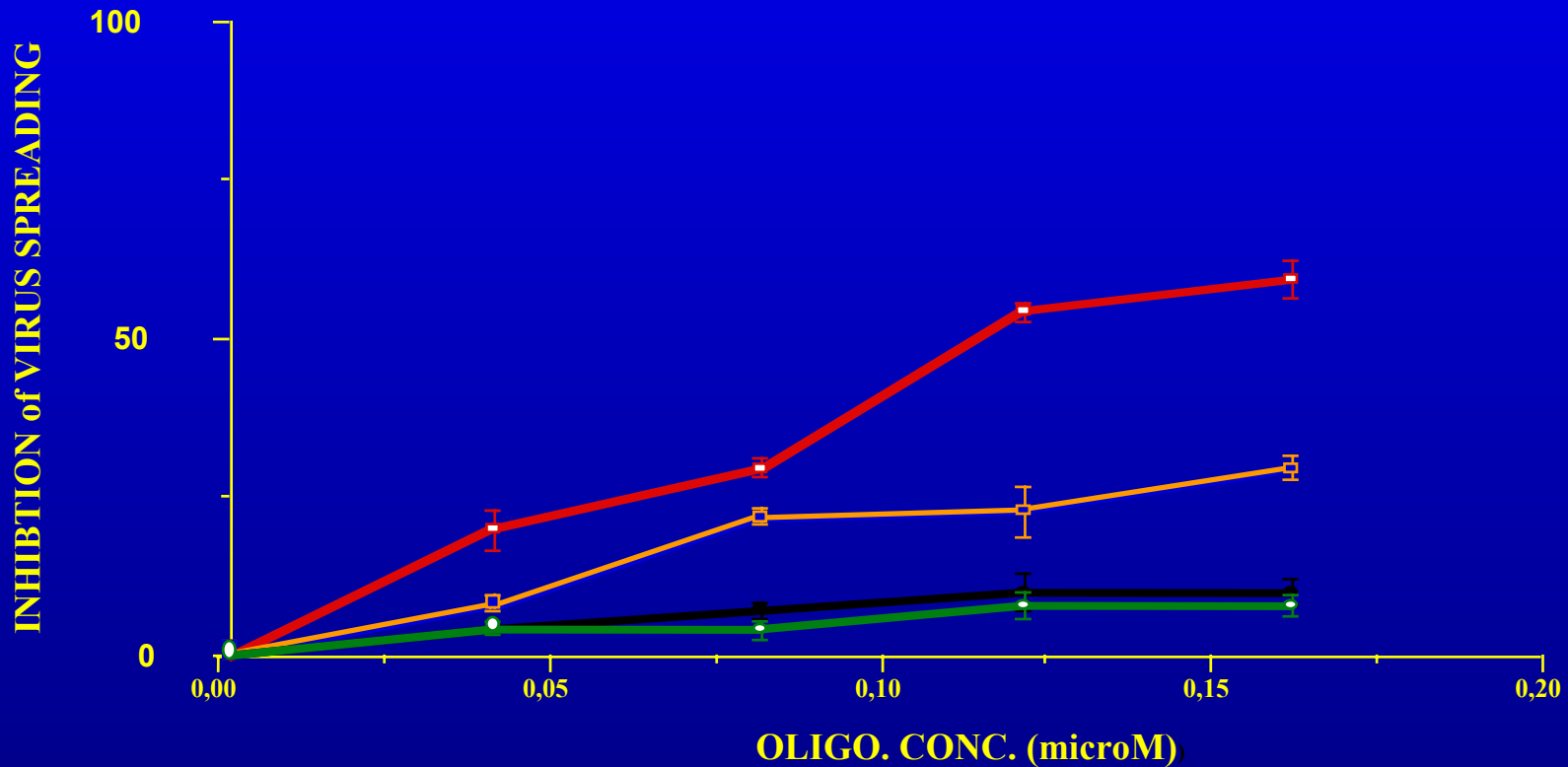
Cell

Inhibition of virus spreading by liposomes oligonucleotides



- Antisense oligo in pH-sensitive liposomes
- Antisense oligo in pH-nonsensitive liposomes
- Control oligo in pH-sensitive liposomes
- - -●- - - Control oligo in pH-nonsensitive liposomes

Inhibition of virus spreading by liposomes oligonucleotides



- Antisense oligo in pH-sensitive liposomes
- Antisense oligo in pH-nonsensitive liposomes
- Control oligo in pH-nonsensitive liposomes
- Control oligo in pH-sensitive liposomes

Colloidal carriers may serve to elucidate a physiopathological mechanism

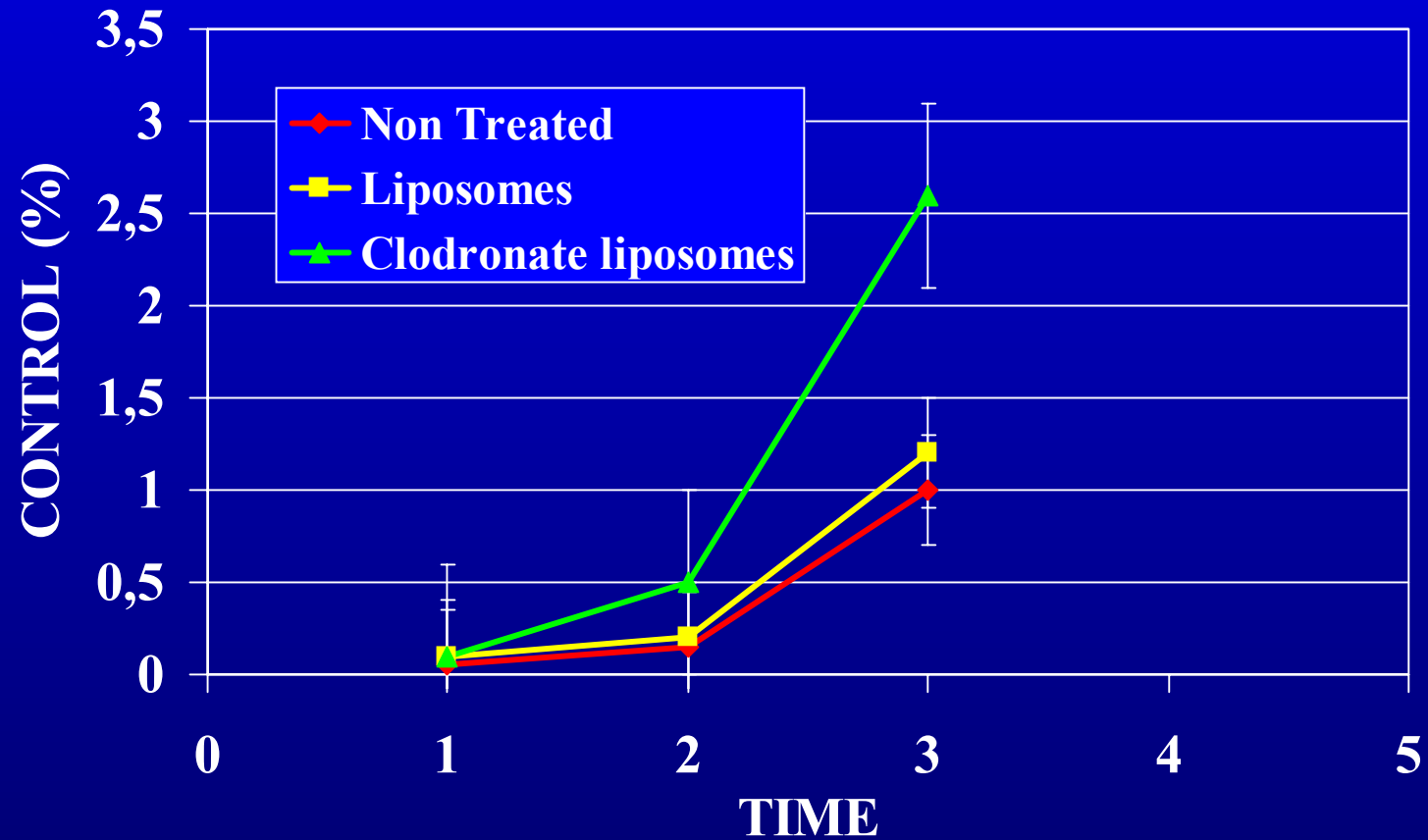
- In experimental prion disease, spleen is actively involved in the PrPres dissemination;
- Nanoparticles and liposomes are actively taken up by spleen macrophages;
- Using clodronate liposomes it is possible to kill spleen macrophages and immunocompetent cells in spleen to elucidate their physiopathologic role in prion spreading.

Kinetics of vanishing and reappearance of various immunocompetent spleen cells after Cl²MDP liposomes treatment

<i>Cell type</i>	<i>Staining</i>	<i>Non Treated</i>	<i>Treated J1</i>	<i>Treated J3</i>	<i>Treated J6</i>	<i>Treated J10</i>	<i>Treated J16</i>	<i>Treated J28</i>	<i>Treated J50</i>
RPM	PhoA or FNP	++	-	-	-	+/-	nd	++	nd
MMM	PhoA or FNP	++	-	-	-	+/-	nd	++	nd
MZM	PhoA or FNP	++	-	-	-	-	nd	++	nd
T lymphocytes	Anti-Thy1.2	++	++	++	++	++	++	nd	++
B lymphocytes	Anti-B220	++	++	++	-	-	++	nd	++
FDC	8C12	++	++	+/-	+/-	-	+/-	nd	++

++ normal number of cells, +/- vanishing or reappearance of cells, - absence of cells
 RPM red pulp macrophages, MMM marginal metallophil macrophages, MZM marginal zone macrophages, FDC follicular dendritic cells

ACCUMULATION OF PrPres IN SPLEEN



CONCLUSIONS

- Macrophages are identified as the first natural host defender against scrapie agent invasion
- In the absence of B Lymphocytes and FDC, T lymphocytes may be an alternative support for scrapie replication which has never been described before