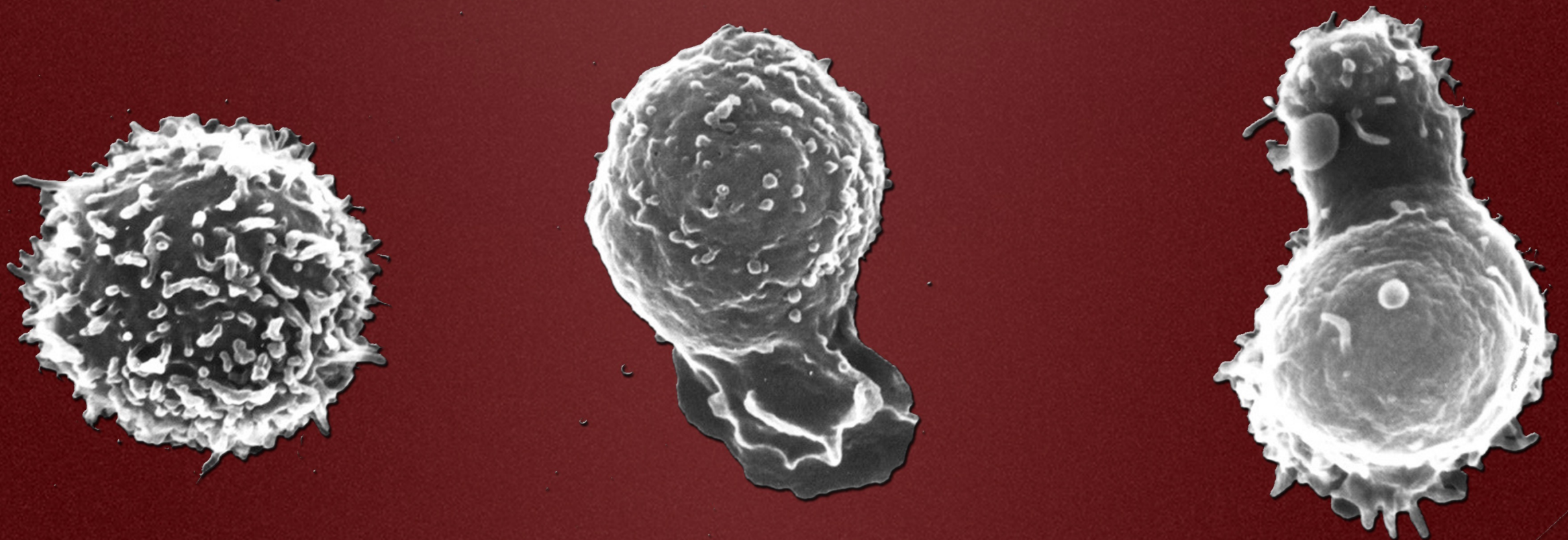
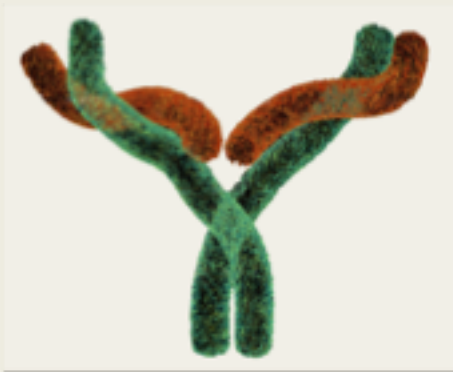


ANTICORPI MONOCLONALI





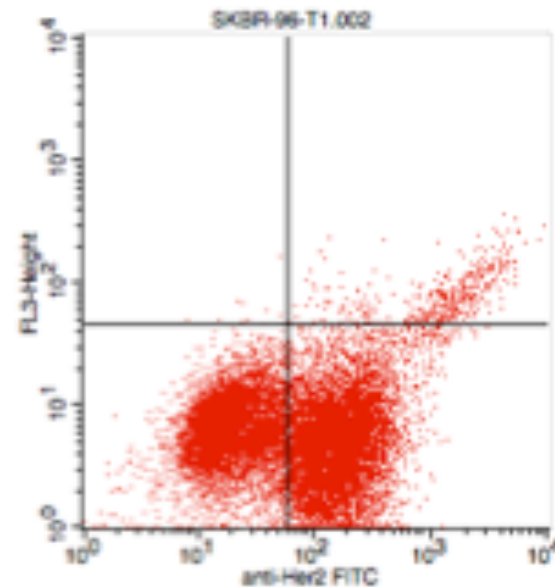
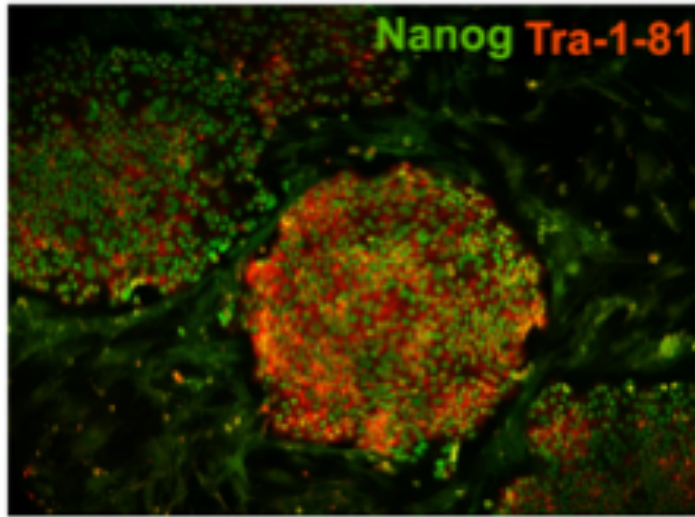
Ce sunt anticorpii monoclonali?



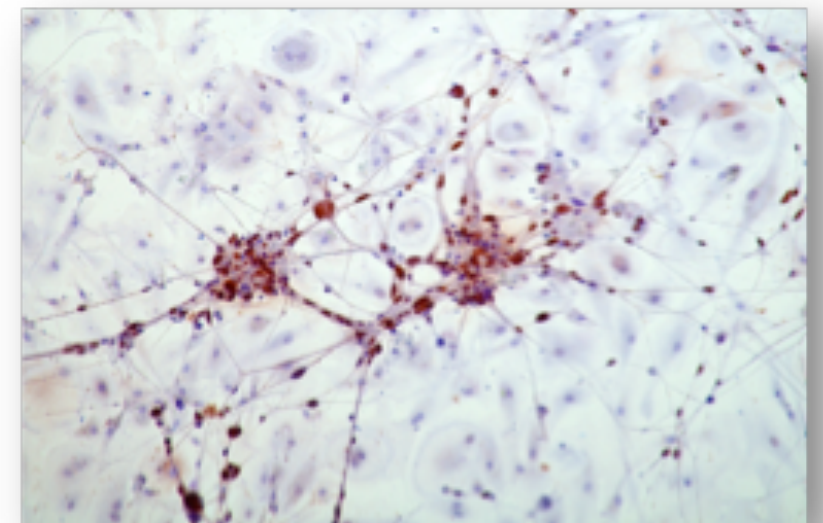
- Anticorpi identici, cu specificitate unică
- Aplicații în cercetare
- Utilizați pt. diagnostic
- Agenți terapeutici

Aplicații în imunologie

Imunofluorescenta /citometrie: mAb conjugati cu fluorocromi



Imunohistochimie/ELISA: mAb conjugati cu enzime



Antibody Therapy

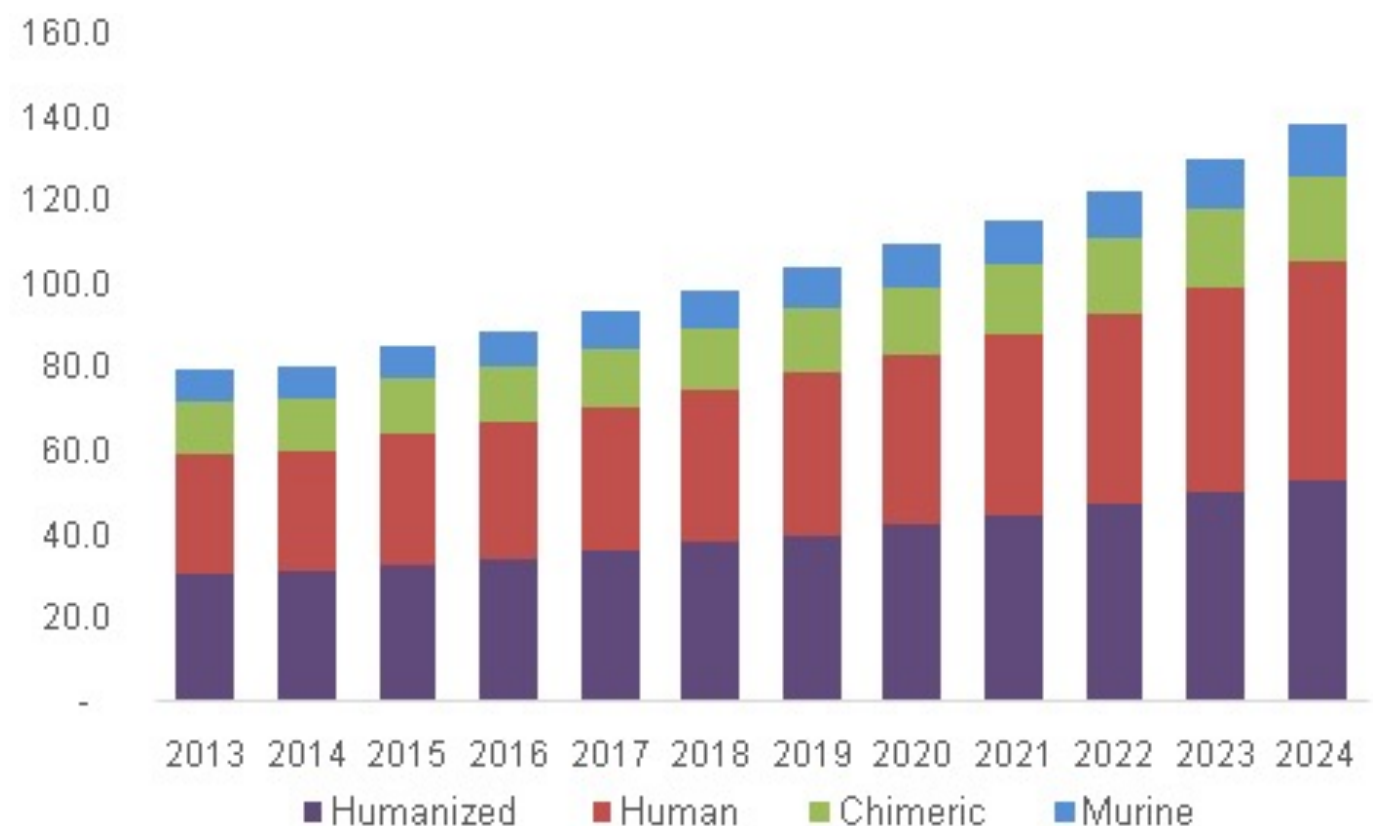
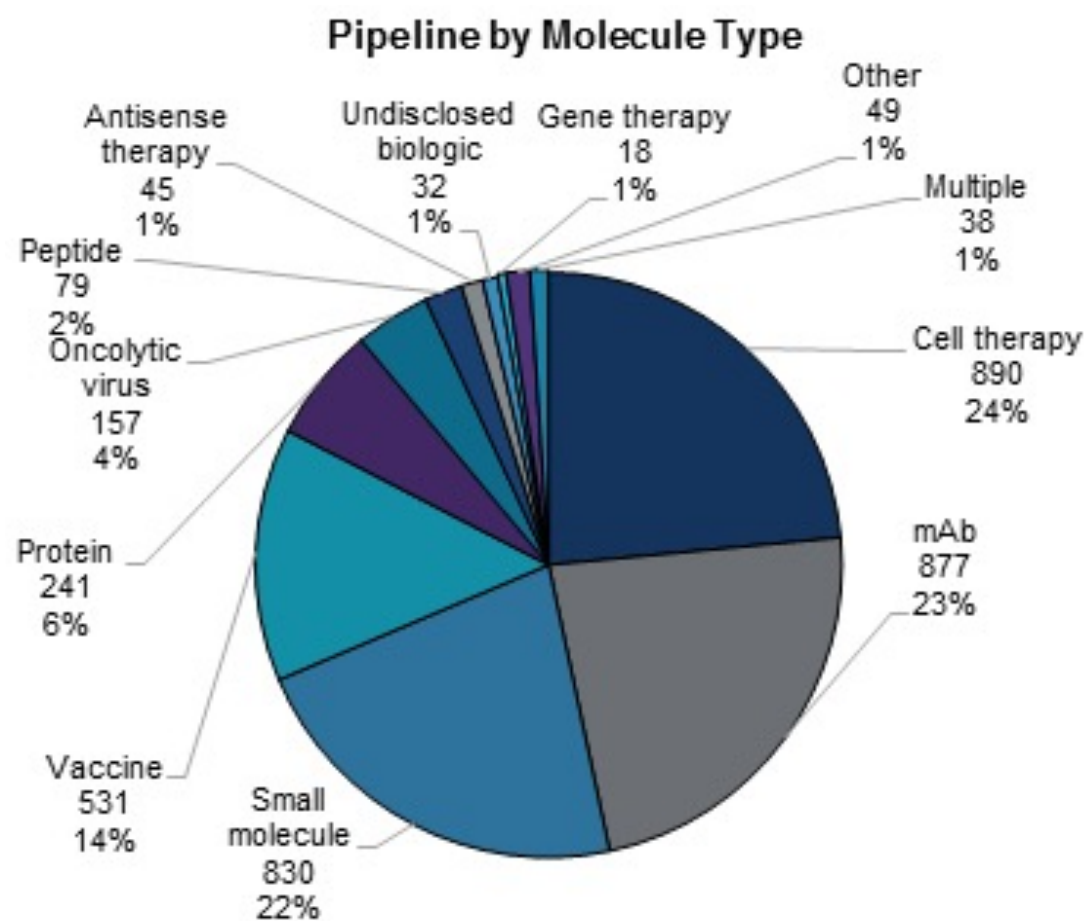


- Cancer
- Autoimmune diseases
- Infectious diseases
- Others
- Inflammatory diseases
- Microbial diseases



Anticorpi aprobați pentru uz clinic

- ± 80 mAb aprobați pentru uz clinic (dec 2019)



Monoclonal Antibodies Market, By source Type, 2013 - 2024 (USD Billion)

- 3863 imunoterapii în teste clinice (2018) in cancer

Dezvoltarea terapiei cu mAb

Milstein &
Kohler
(Nobel)

Nature Vol. 256 August 7 1975

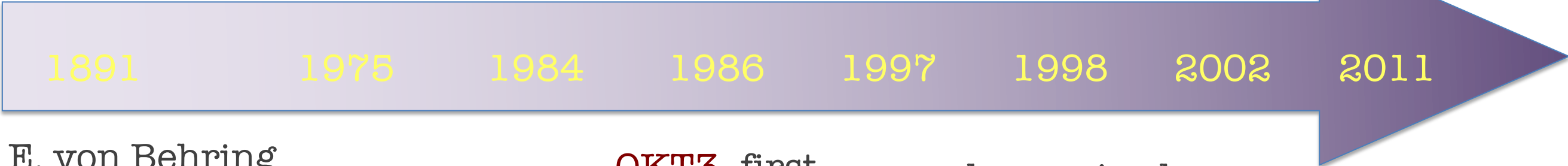
Continuous cultures of fused cells
secreting antibody of predefined specificity

Hybridoma



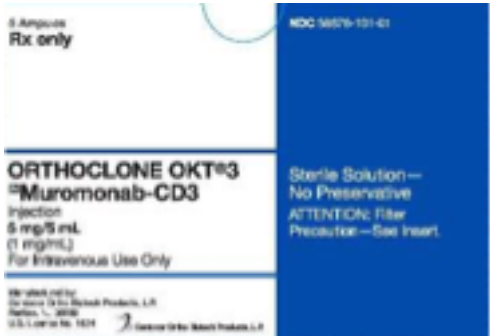
• Rituximab ('97)
chimeric
Ab

• Adalimumab/
HUMIRA ('02)
human Ab



1891
E. von Behring
P. Ehrlich

1984
1986
OKT3- first
antibody
approved by
FDA

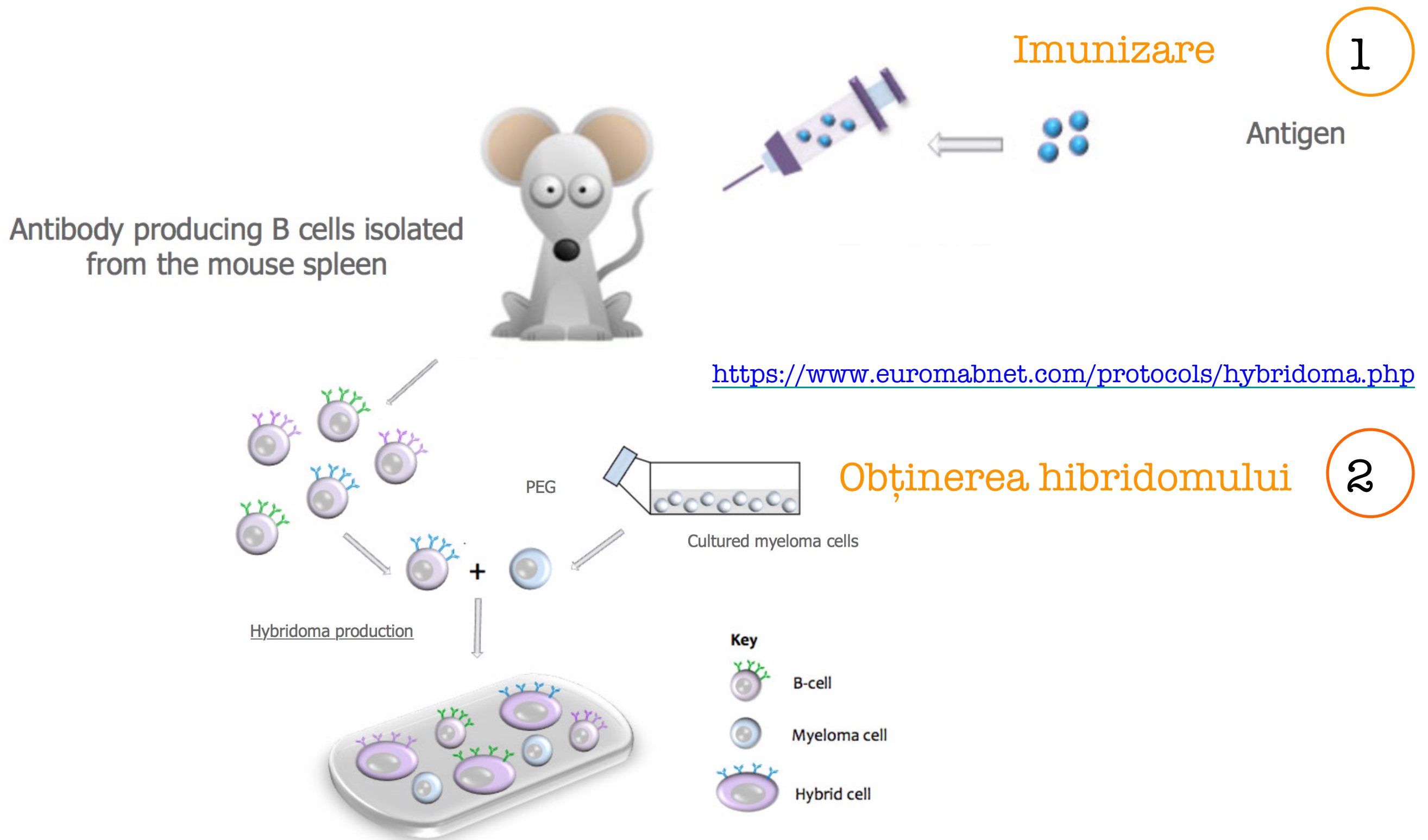


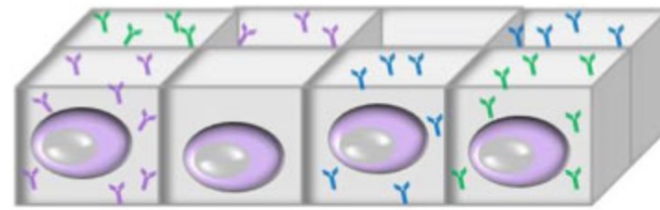
1997
1998
humanized
Ab
• Trastuzumab ('98)

2002
2011
Checkpoint
inhibitor
Ipilimumab

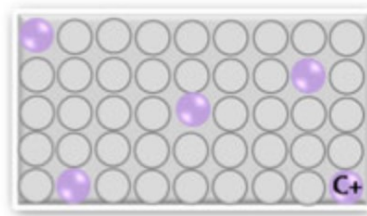
Tehnologia hibridoamelor

G. Kohler & C. Millstein, Nature 256 (5517): 495-497 (1975) Continuous Cultures of F





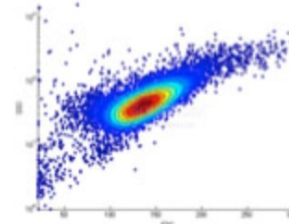
Screening



ELISA

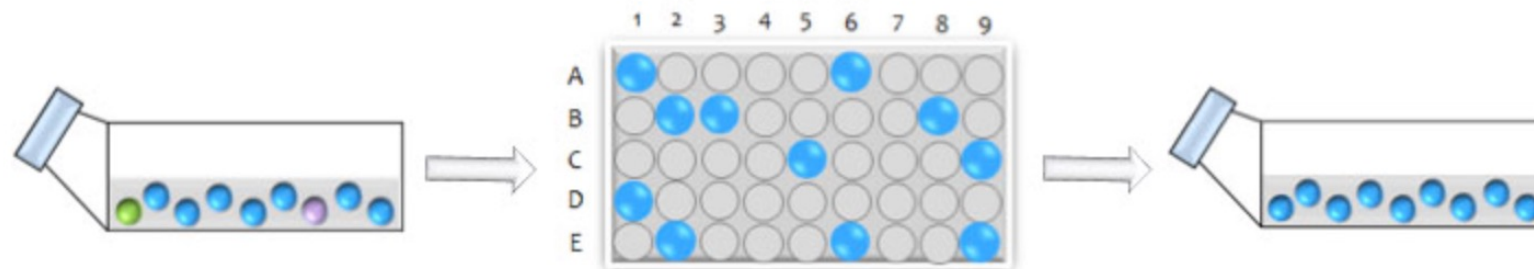


IHC in frozen tissues
or in transfected cells



Flow cytometry

Cloning technique



Expanding and freezing down
the hybridomas



Monoclonal antibodies produced

Antibody Validation

Screening

3

Subclonare

4

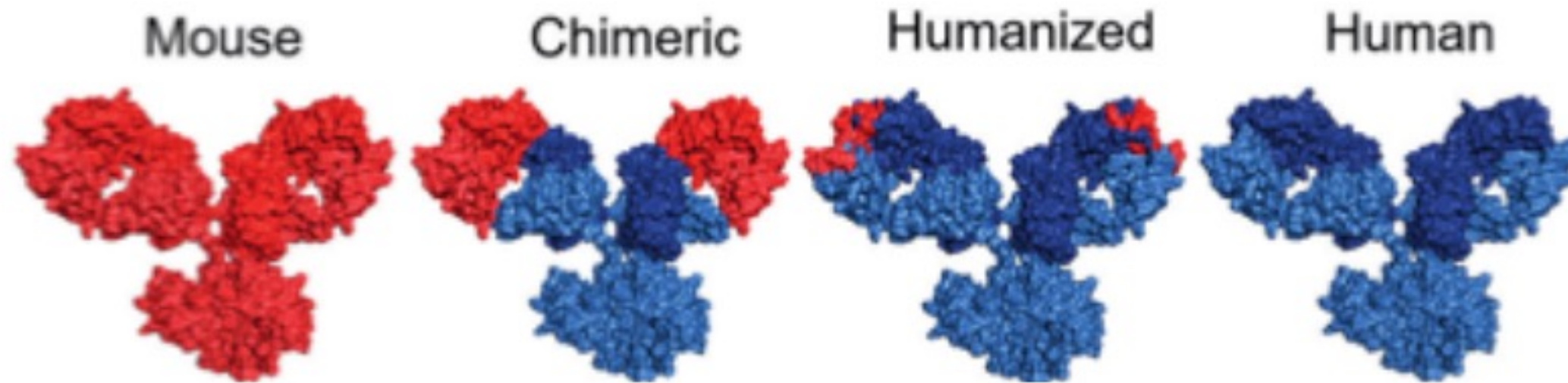
Cultura celulara

5

Purificare Ab

6

Ingineria genetica a anticorpilor



Nomenclature

-O-

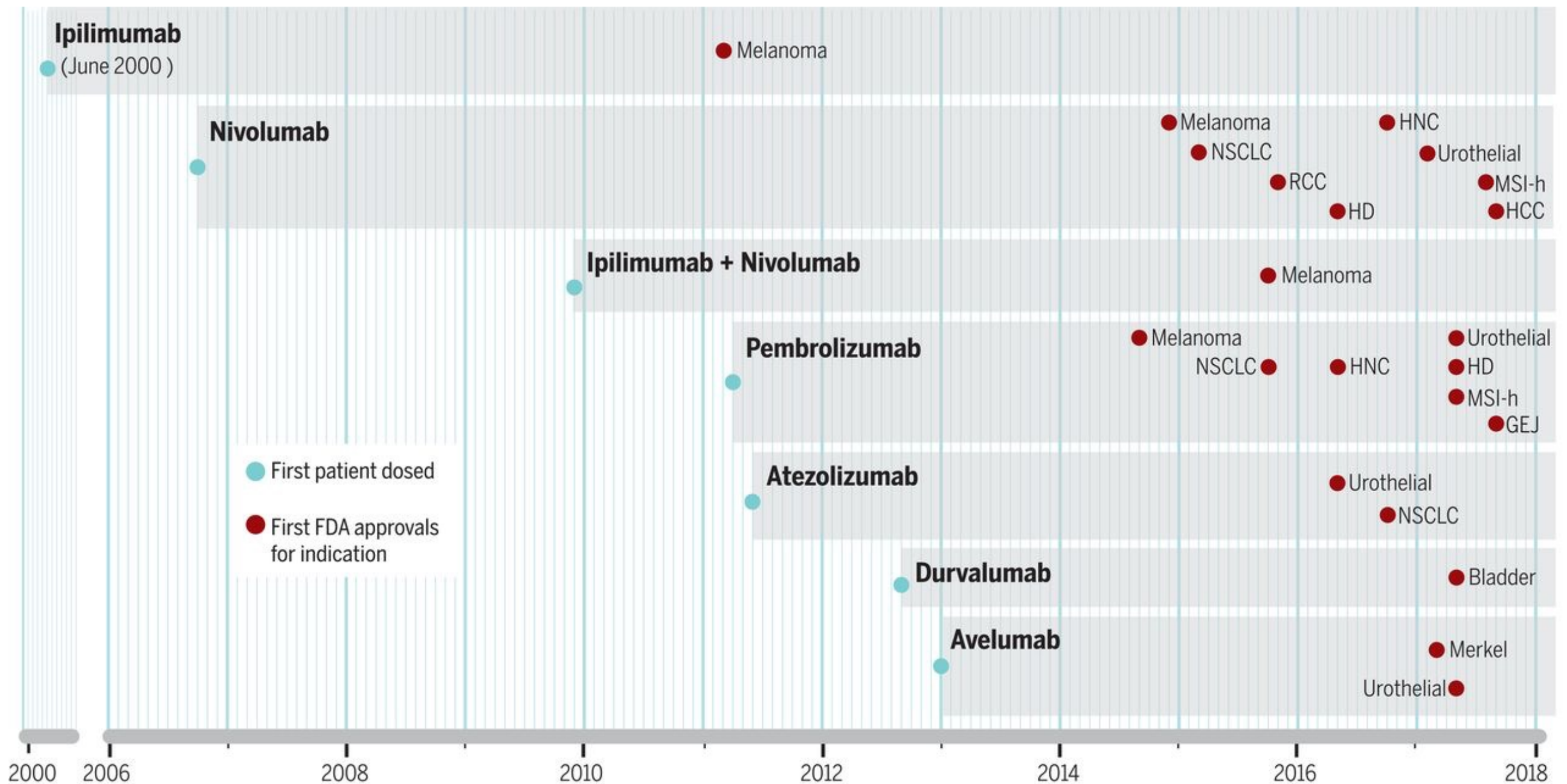
-xi-

-zu-

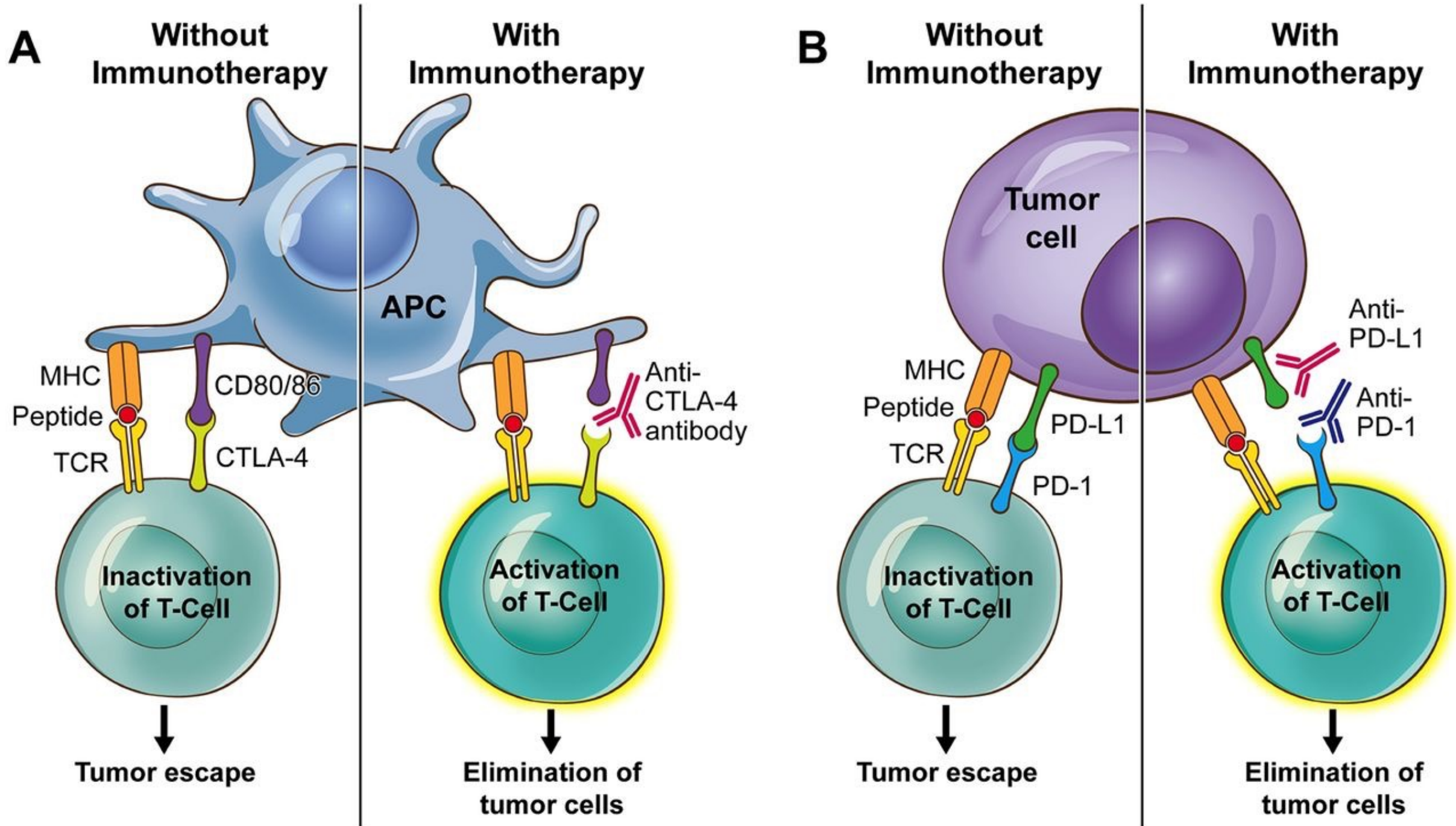
-u-

-mab

Checkpoint inhibitors

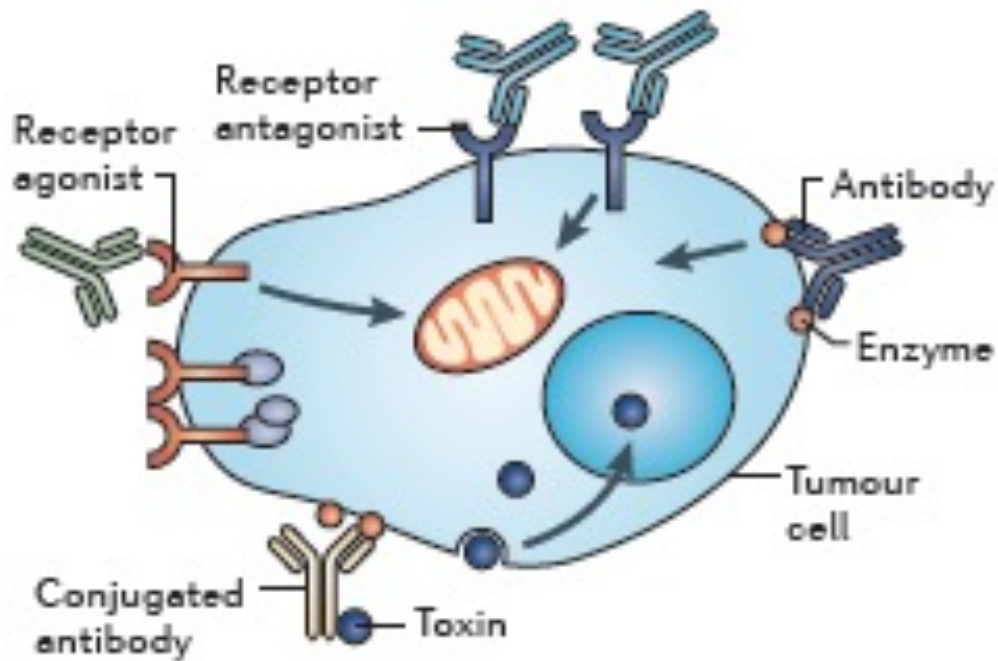


Deblocarea sistemului imun

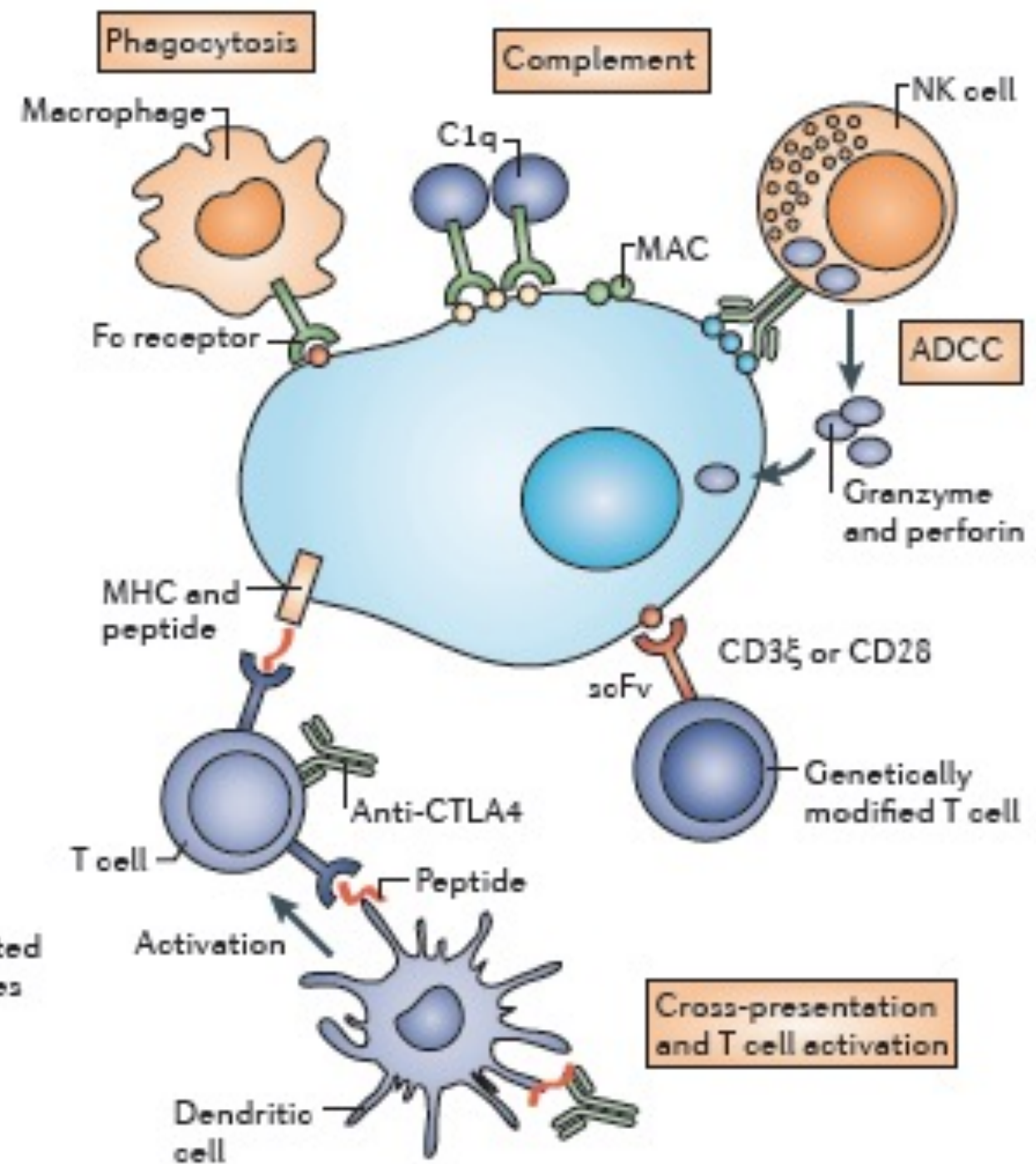


Modul de acțiune al mAb

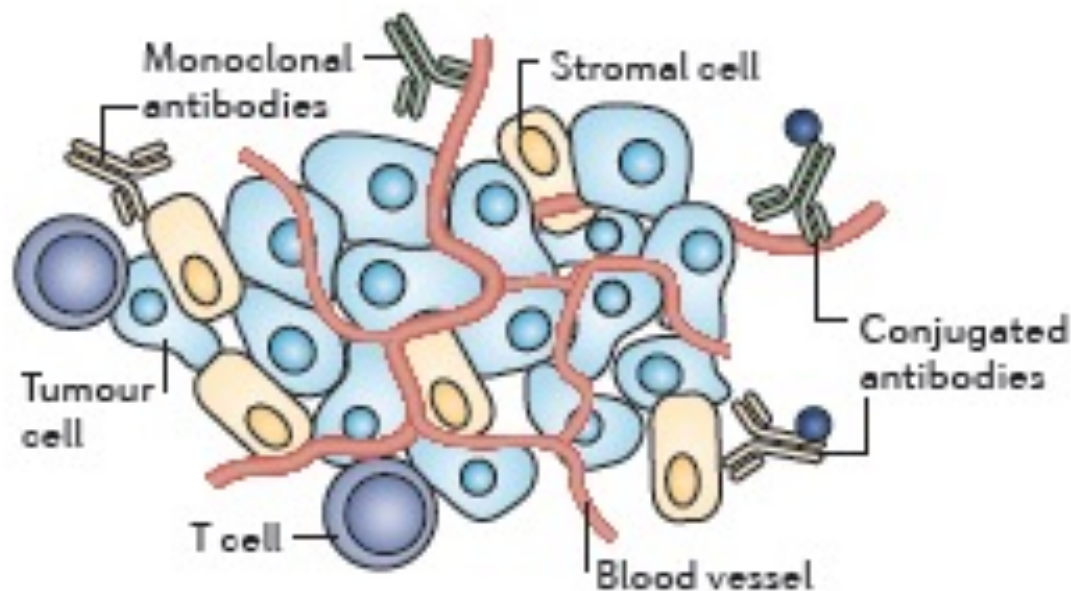
a Direct tumour cell killing



b Immune-mediated tumour cell killing



c Vascular and stromal cell ablation



Generația următoare

Anticorpi bispecifici

Anticorpi conjugati

Anticorpi cu functie Fc modi

Fragmente de Ab

‘Intracorpi’

nature

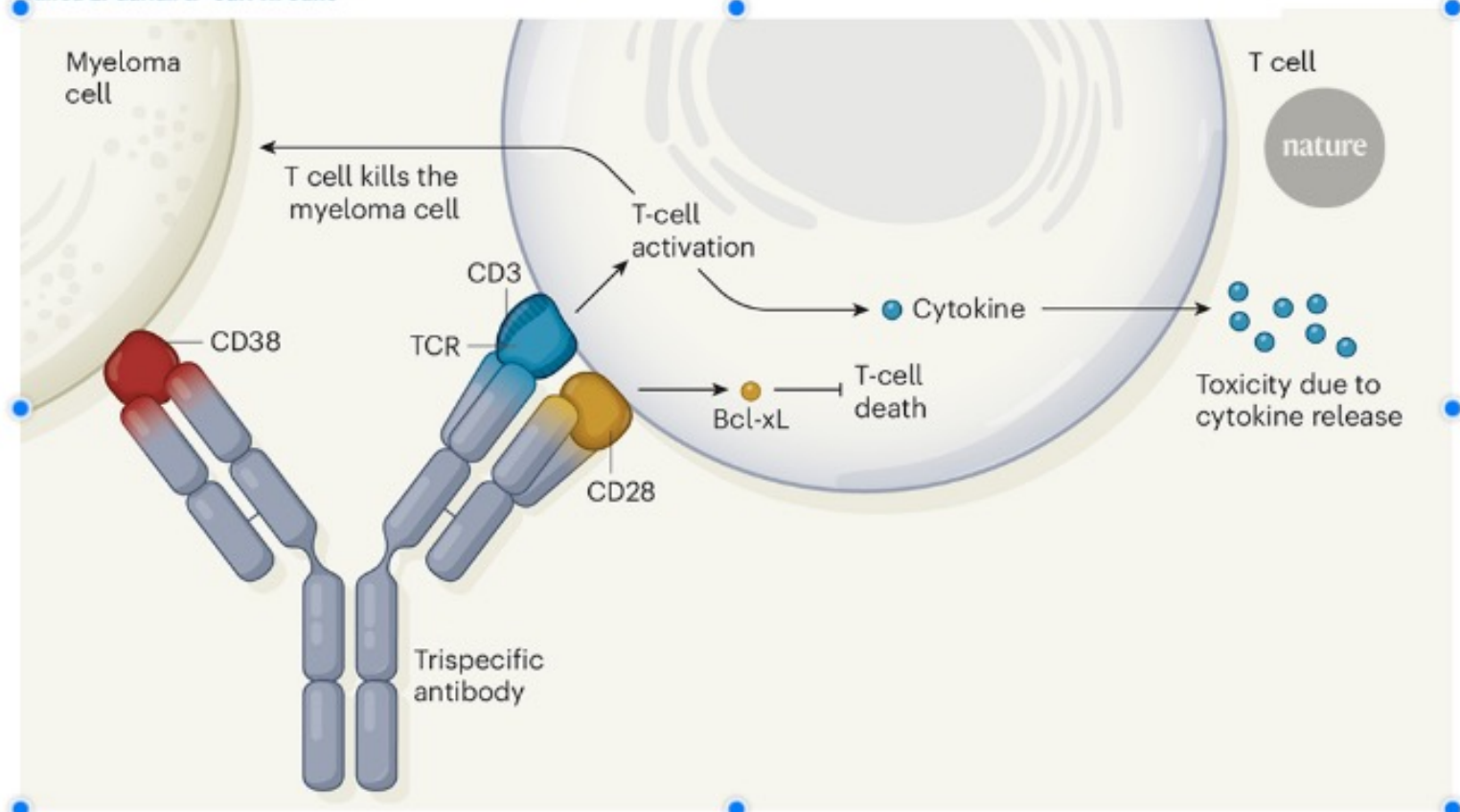
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NEWS AND VIEWS · 18 NOVEMBER 2019

Trispecific antibodies offer a third way forward for anticancer immunotherapy

Immunotherapy approaches seek to boost immune responses against cancer. A single antibody engineered to recognize three targets shows promise, when tested in animals, in improving the ability of T cells to target cancer.

Alfred L. Garfall & Carl H. June



ANTIBODY COCKTAILS



fineart
america