

Art Advancing Science



: Filmmaking Leads to Deep Insights into Nanomedicine

AN ENTERTAINING SHORT FILM

: The nanoparticle-mediated drug delivery process within human body

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: The nanoparticle-mediated drug delivery process within human body

: The targeted drug delivery across multiple spatial scales

AN ENTERTAINING SHORT FILM

: The nanoparticle-mediated drug delivery process within human body

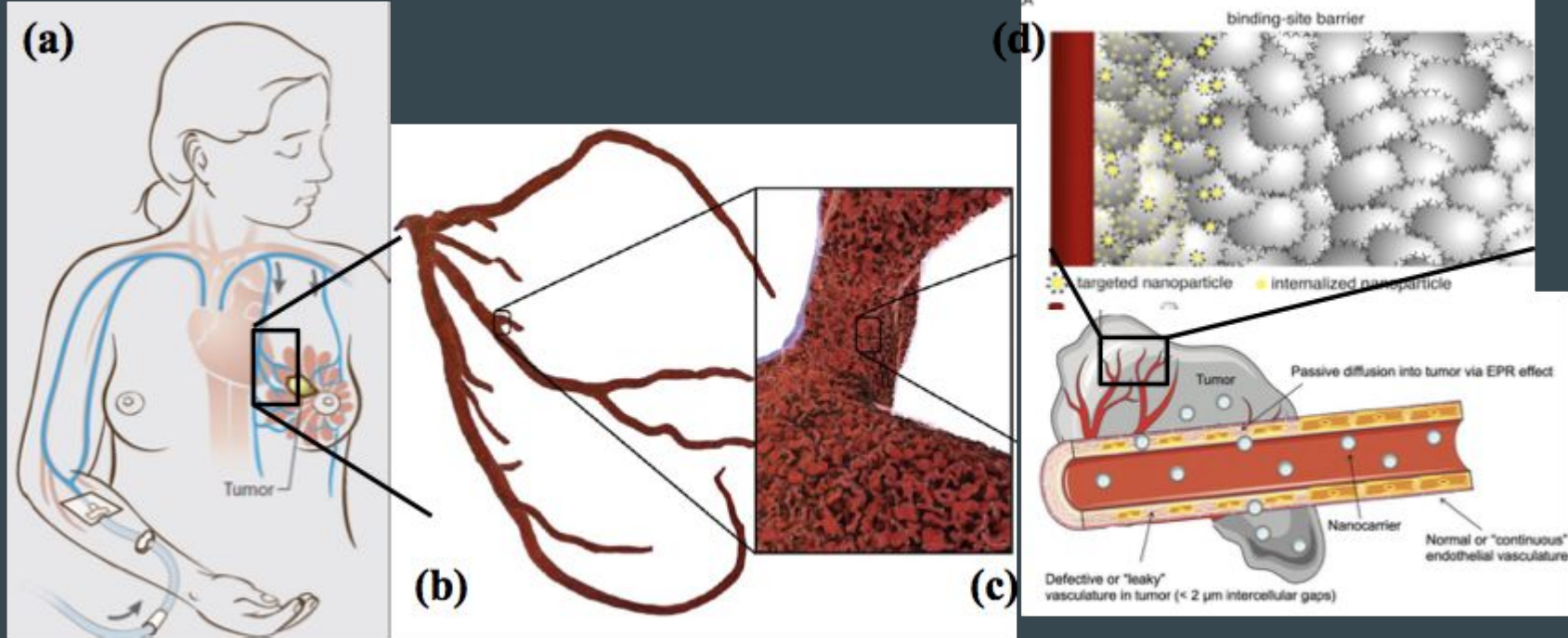
: The targeted drug delivery across multiple spatial scales

: The drug delivery vehicles circulate with blood flow in the human vasculature network

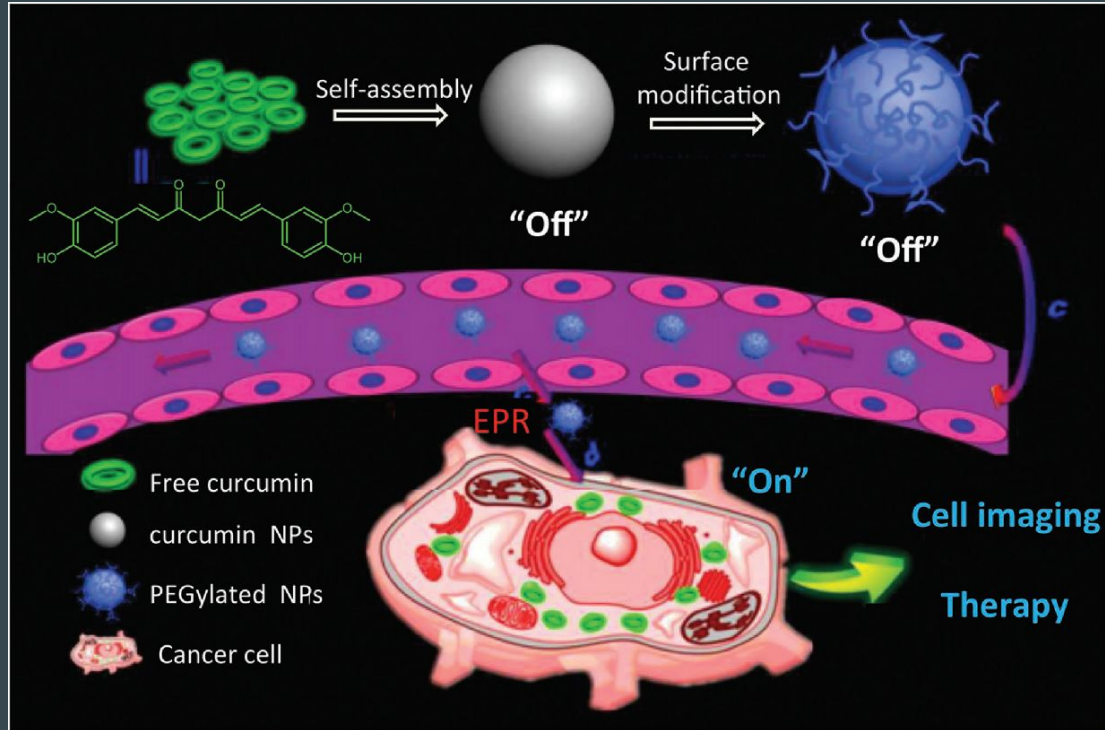
AN ENTERTAINING SHORT FILM

- : The nanoparticle-mediated drug delivery process within human body
- : The targeted drug delivery across multiple spatial scales
- : The drug delivery vehicles circulate with blood flow in the human vasculature network
- : Deep insights into biological system at multiple scales

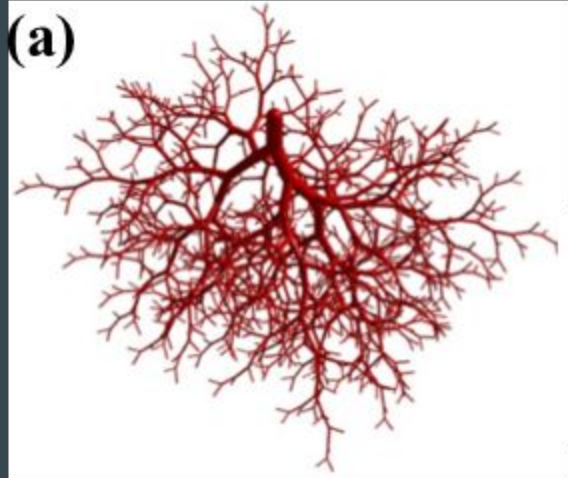
Mediated drug delivery process



Mediated drug delivery process: Drug > Tumor



MultiScale Models



Blood vasculature model

(b)

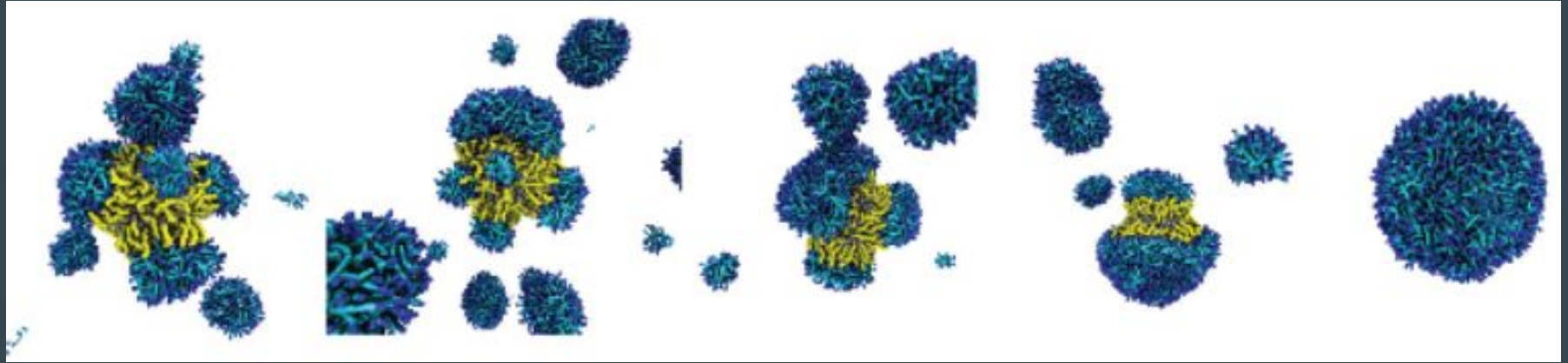


Blood flow simulation

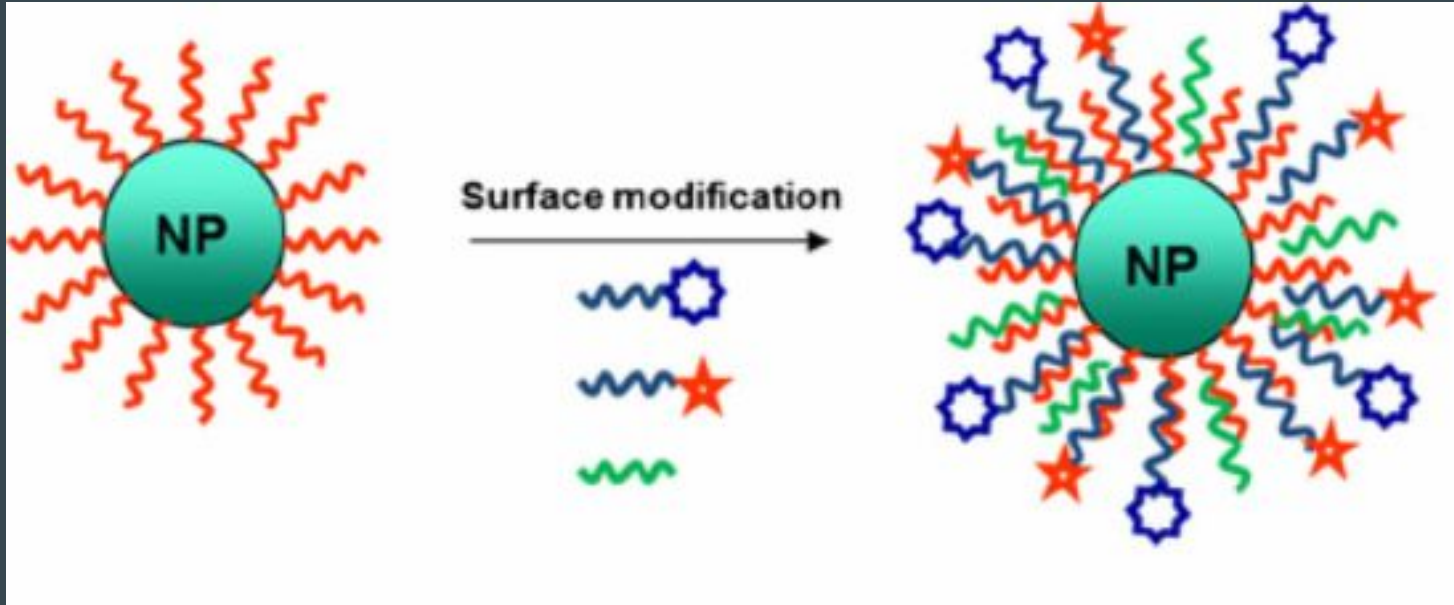
(c) NP diffusion in tumor stroma



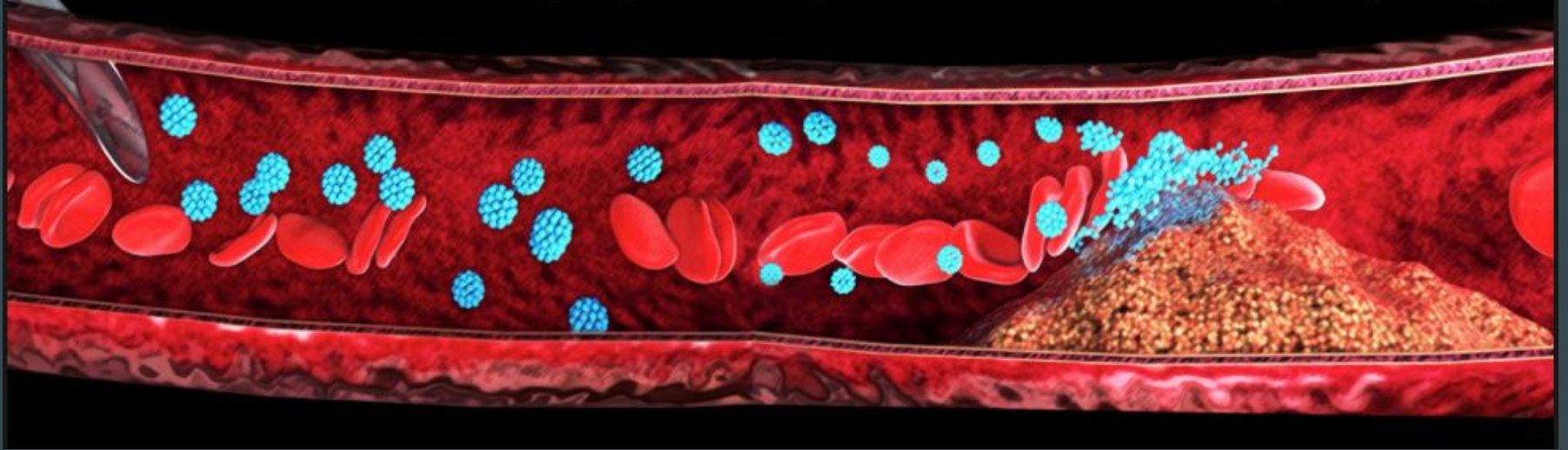
Self assembly of Nanoparticle



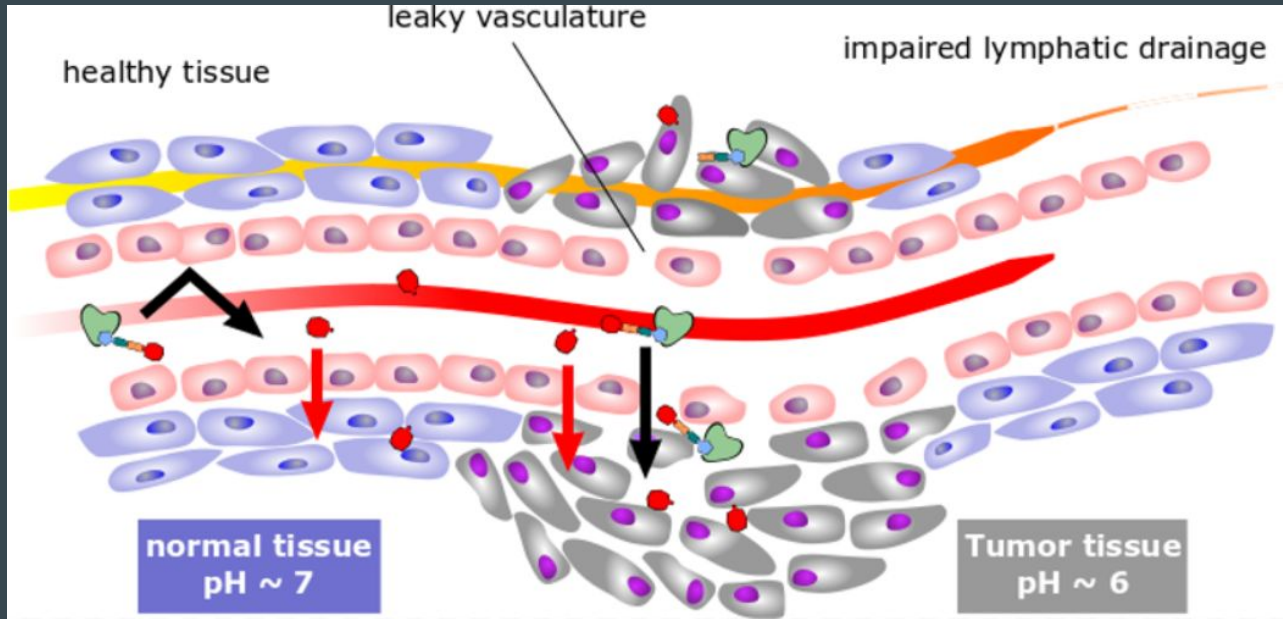
Surface Modification



Circulation in blood flow

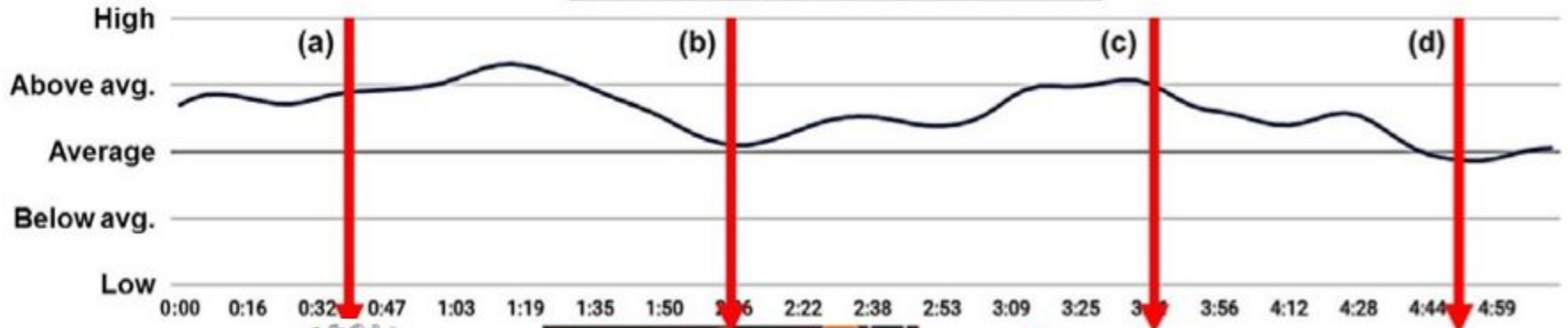


Penetrating into tumor microenvironment

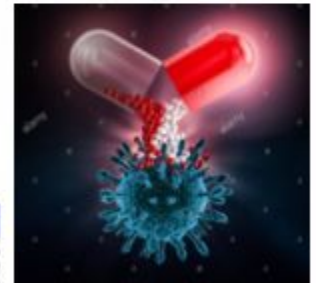
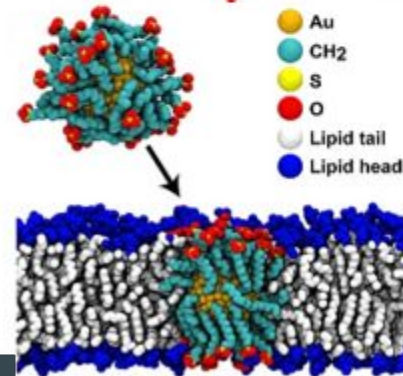
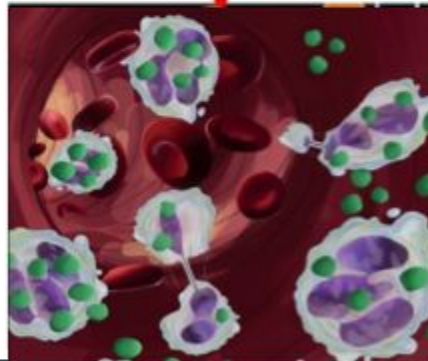
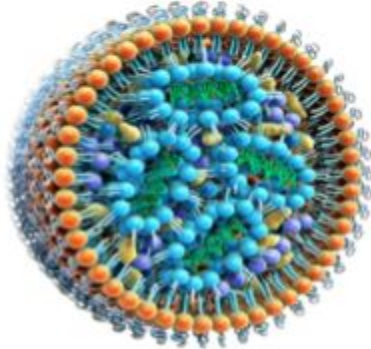


Relative Audience Attention VS Time

Relative Audience Attention Vs. Time

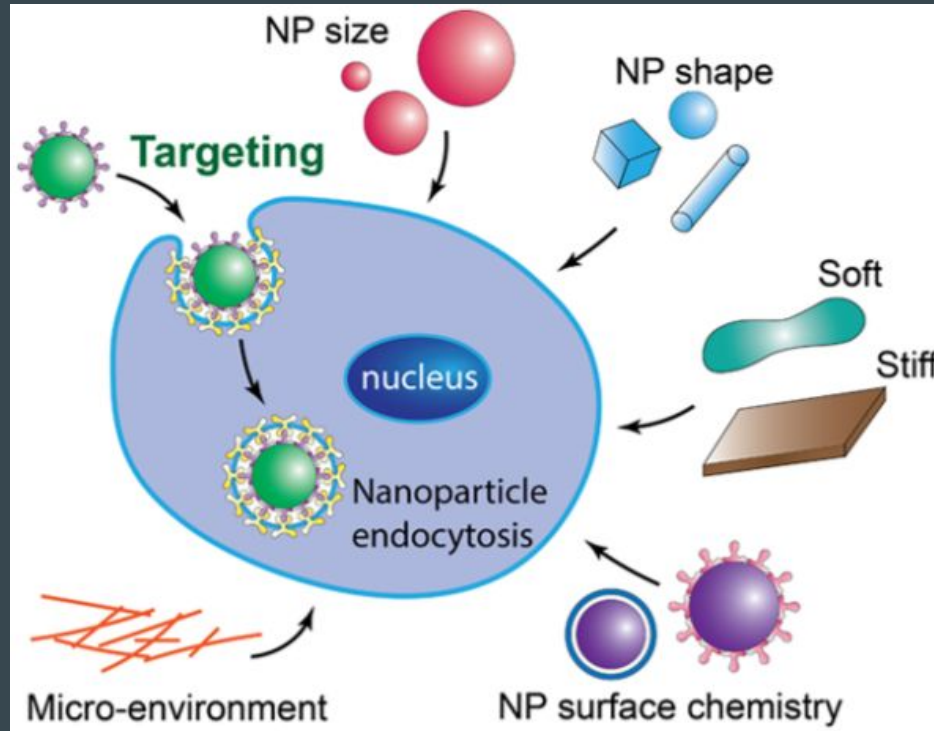


Scenes from movie:

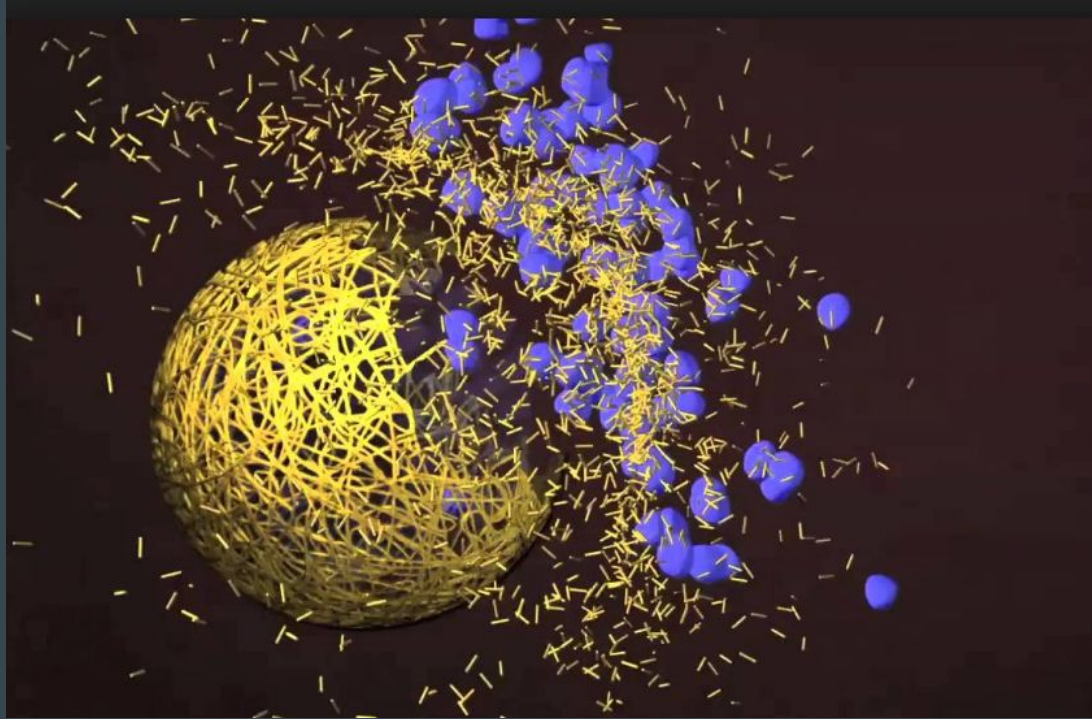


Nanomedicine

Endocytosis: after penetration



Drug Release



Innovation

: A new synergistics approach to integrate art and science

Innovation

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: Advanced scientific visual communication

Innovation

: A new synergistics approach to integrate art and science

: Advanced scientific visual communication

Impact and Outcomes

: An impactful educational film

Impact and Outcomes

: An impactful educational film

: An factor articles

Impact and Outcomes

: An impactful educational film

: An factor articles

: Internal multidisciplinary collaboration

Impact and Outcomes

: An impactful educational film

: An factor articles

: Internal multidisciplinary collaboration

: Possible external funding search

Impact and Outcomes

: An impactful educational film

: An factor articles

: Internal multidisciplinary collaboration

: Possible external funding search

: Leadership in science research and scientific filmmaking

