ile de Science
PARIS-SACLAY

L'Innovation Bio-Inspirée - *SAISON 2*

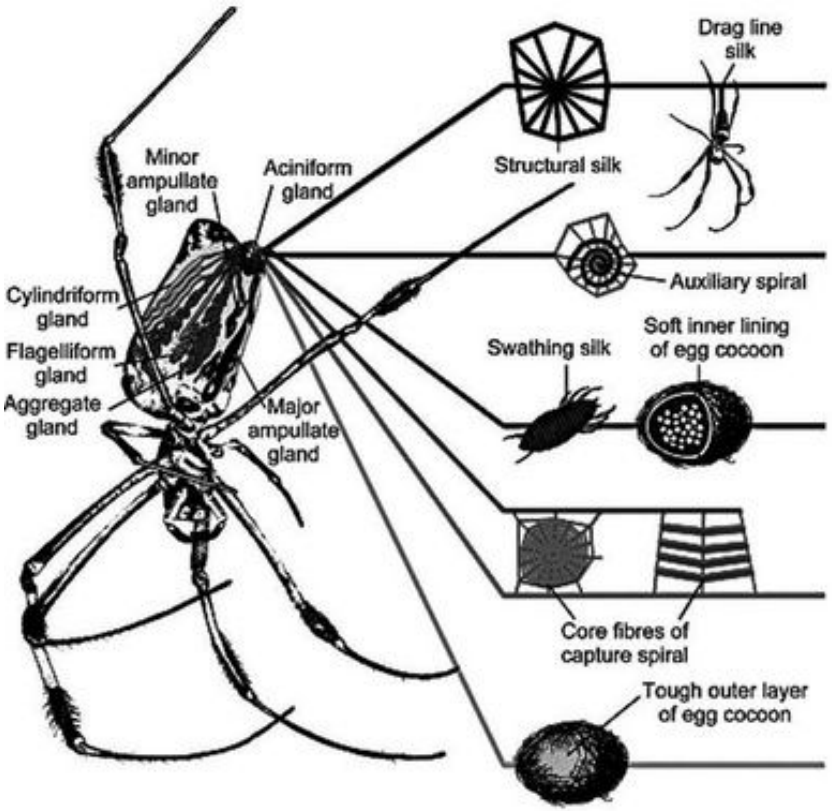
MASP

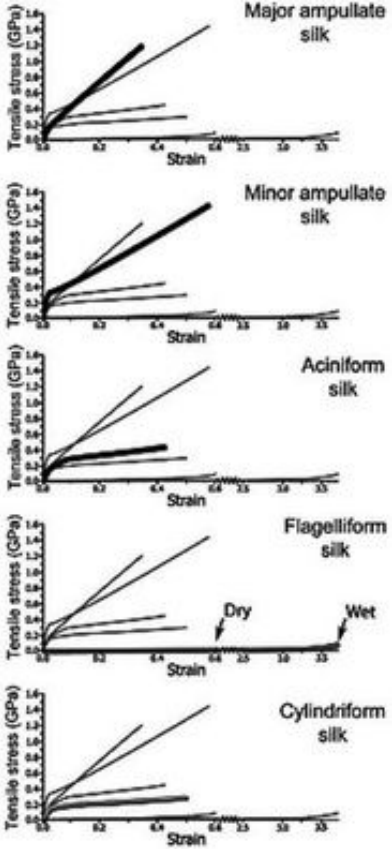
Louis KOKKINIS - Président, co-fondateur - MASP

Sommaire

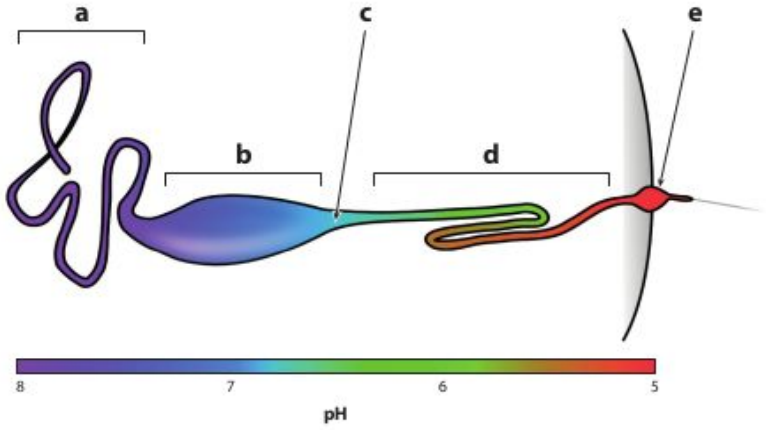
1. *Description des soies, production naturelle : avantages et inconvénients*
2. *La solution MASP, la production à large échelle de soies et de leurs composites*
3. *Applications et futur des biocomposites à base de soie d'araignée*

Les soies d'araignée, une boîte à outils complète

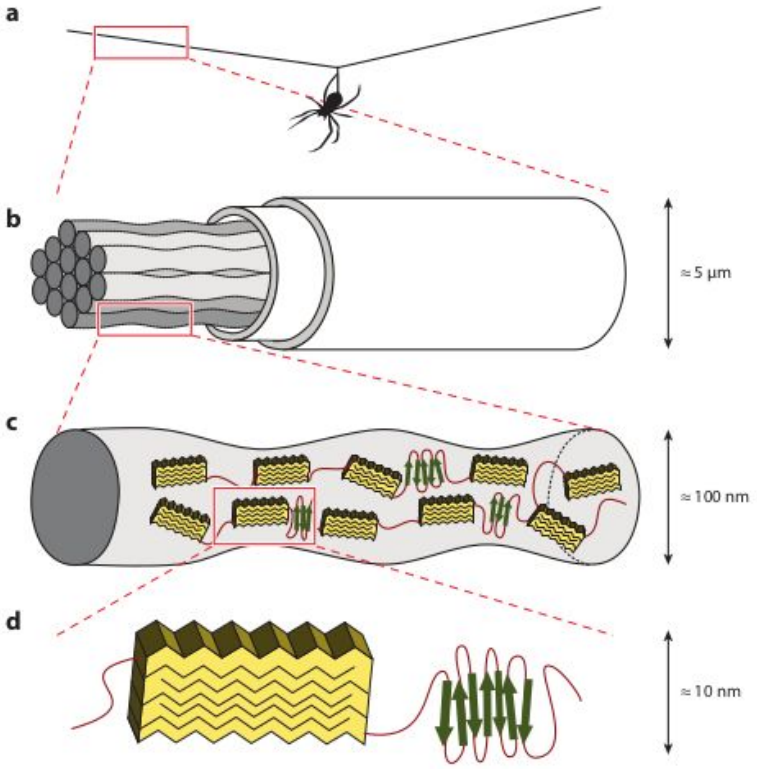




Composition et production



The major ampullate silk gland. Showing the location of the (*a*) tail, (*b*) sac, (*c*) entrance to duct, or ampulla, (*d*) duct, and (*e*) spigot. The pH gradient range from approximately pH 8 at the tail to approximately pH 5 at the spigot is indicated.



The hierarchical structure of spider silk. (*a*) A single thread is depicted, composed of (*b*) skin-covered fibrils, which are (*c*) conglomerates of proteins (spidroins) that are arranged as (*d*) crystalline β-sheets separated by protein chains of variable structure representing the so-called amorphous region. The scale arrows indicate the approximate sizes of the structures.

Physicochemical Property Variation in Spider Silk: Ecology, Evolution, and Synthetic Production

MASP : Production de super soies à l'échelle

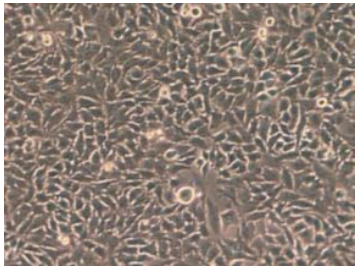
Cell culture

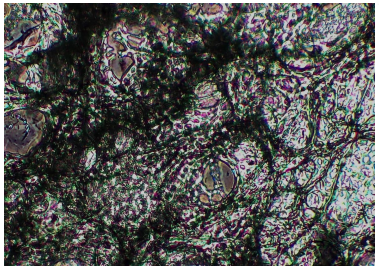
↓

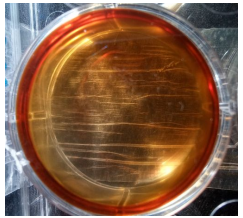
Purification and blends

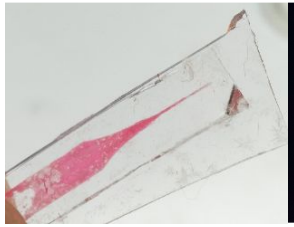
↓

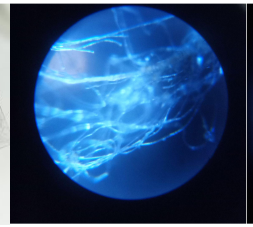
Fiber production

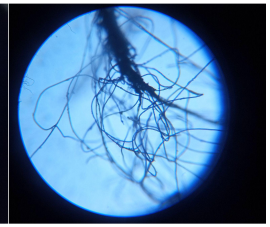












High performance fibers
Extreme & lightweight composites
Safety & protection products
MASP
Advanced medical products

Des applications infinies

Contact: louis.kokkinis@masp.tech / www.masp.tech / +336 88 63 14 00