

# Séminaire



CONFÉRENCIER  
INVITÉ

Vendredi 11 Juin 2021 à 11h

Visioconférence

Institut de biologie structurale - 71 avenue des Martyrs CS 10090 38044 Grenoble Cedex 9 - T.+33 (0)4 57 42 85 00

[www.ibs.fr](http://www.ibs.fr)

par **Lubka Roumenina**

Centre de Recherche des Cordeliers, Paris  
InC2 lab (Inflammation, complement and cancer)

## Impact of complement in the tumor progression: the enemy within

Constituent of innate immunity, the complement system plays a key role in the defense against the pathogens. The well-known functions of the complement proteins are related to the action of the complement cascade and include, opsonization, inflammation and lysis of the bacteria. Complement components are produced mainly by the liver and function in the extracellular space. Recent studies revealed the existence of cascade-unrelated, intracellular functions of the complement proteins in T cells changing the paradigm, revealing non-canonical functions of the complement proteins.

Using transcriptomic analyses, we revealed that complement genes are expressed in the tumors. We established a classification of the cancers based on the prognostic impact of the co-regulated overexpression of the complement genes. This allowed us to distinguish cancers, in which the overexpression of these genes confers poor (aggressive) or favorable (protective) prognosis, showing that the action of complement in tumors is context-dependent, varying according to the cancer type. Exploring the mechanism of action behind the prognostic impact of complement in renal and lung cancer, we discovered a concomitant activation of the complement cascade and existence of novel and unexpected intracellular functions of the complement proteins. This seminar will discuss the interplay between the canonical and non-canonical functions of the complement proteins, which drive cancer progression and modify the immune microenvironment of the tumors.

*Hôte : Christine Gaboriaud (IBS/groupe CAID)*

Ce séminaire aura lieu uniquement par visioconférence :

<https://cnrs.zoom.us/j/95355023916>

(ID de réunion : 953 5502 3916 - Code : 3Sxn4Y)