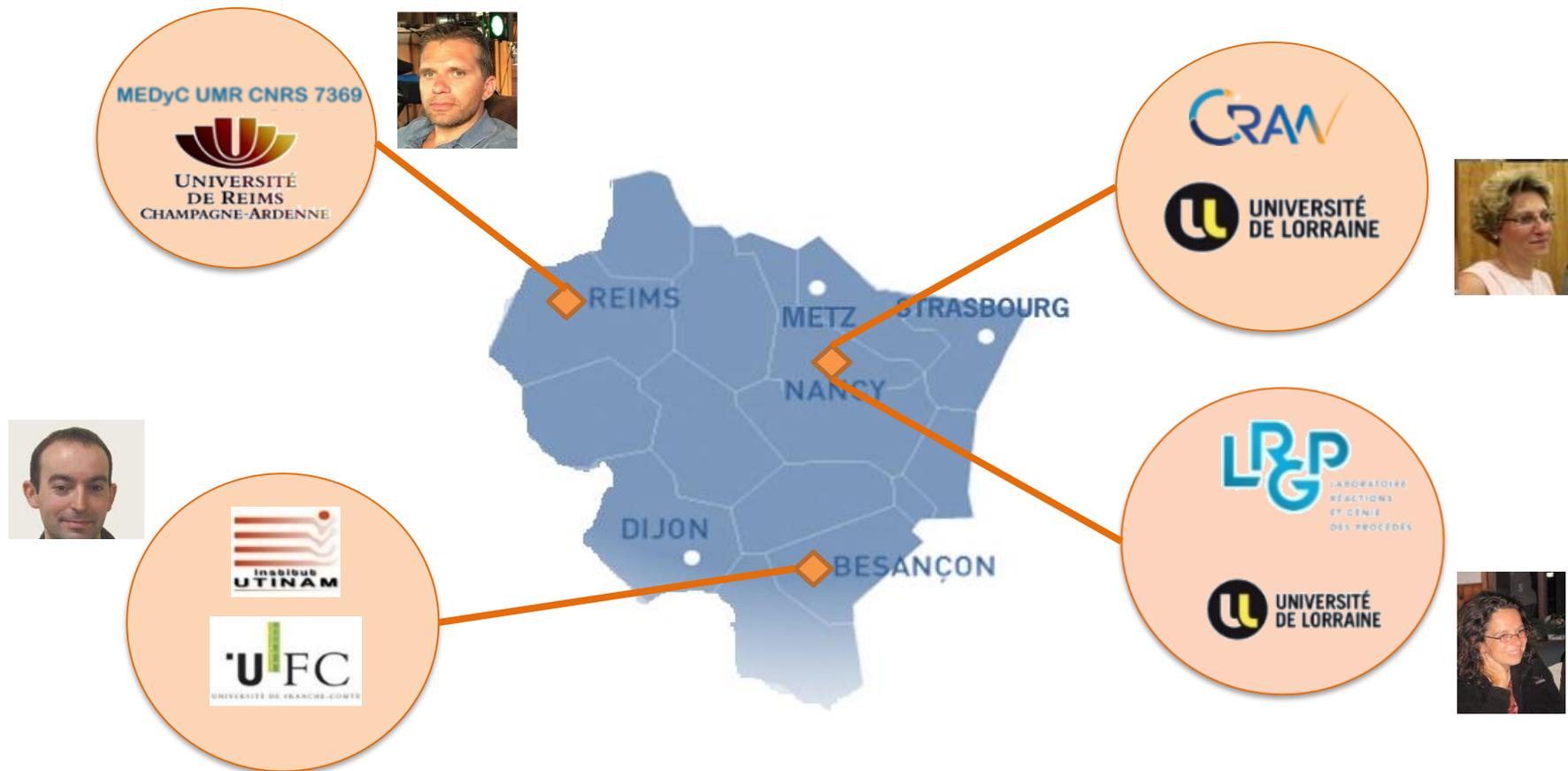


# E-NANORX

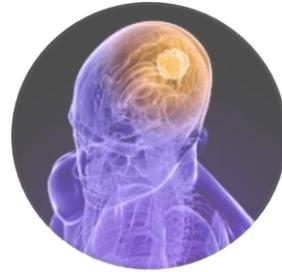
## NANOPARTICULES MULTIMODALES EXCITABLES PAR RAYONS X



Coordination du projet : **Sophie PINEL**

CRAN Département BioSiS  
sophie.pinel@univ-lorraine.fr

2017-2021



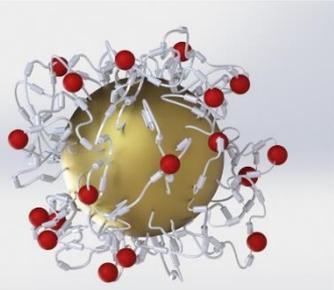
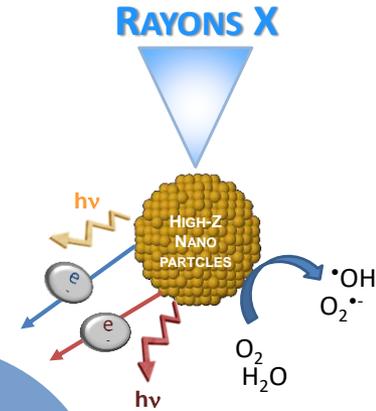
Tumeurs  
cérébrales  
primitives ou  
secondaires

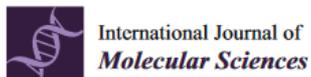
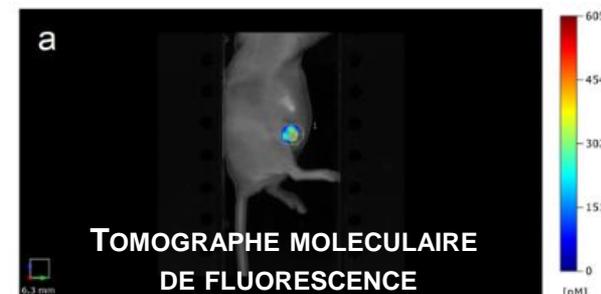
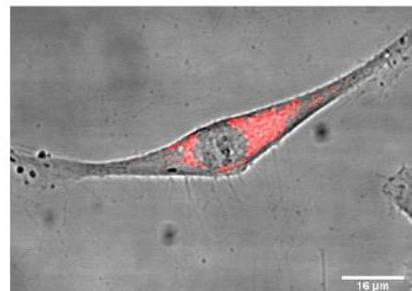
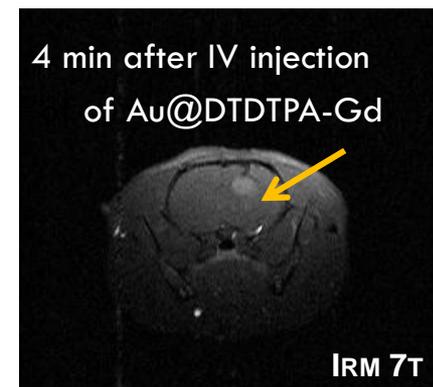
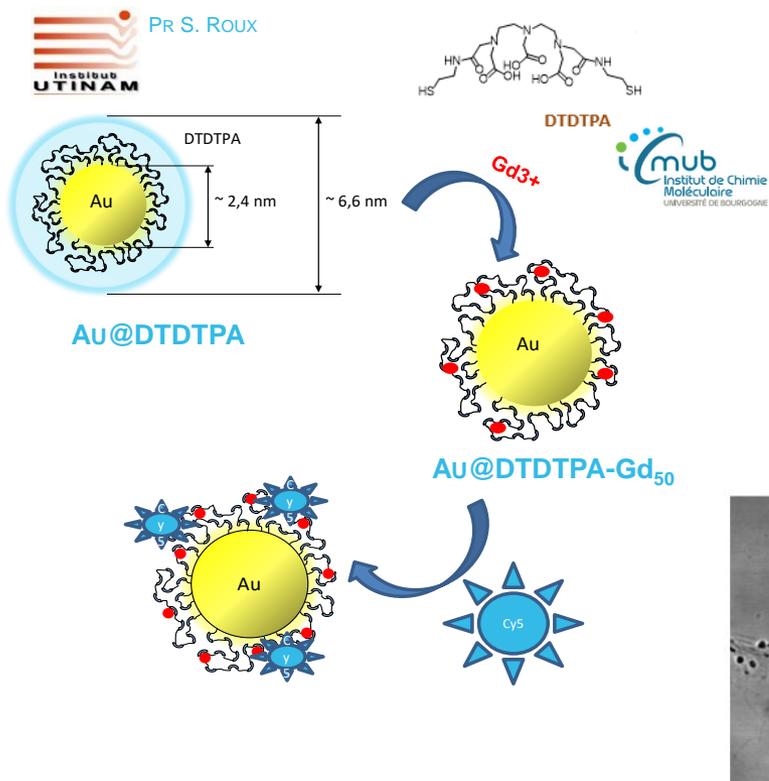
Nanoparticules  
hybrides  
Or / Gd

E-NanoRX

Agents radio-  
amplificateurs

Imagerie  
multi-modale





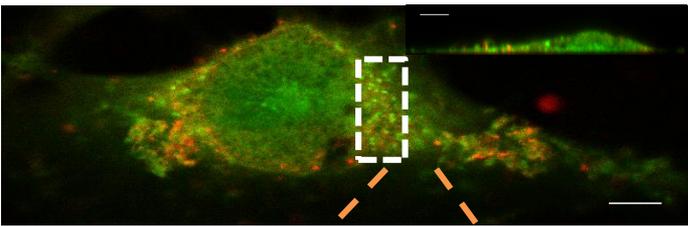
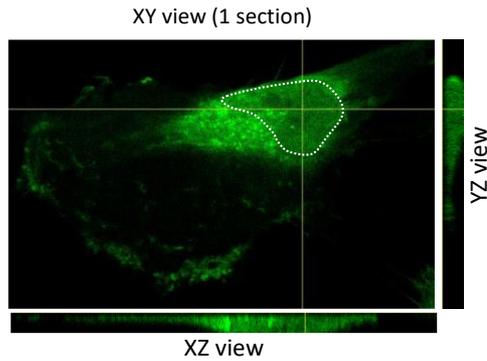
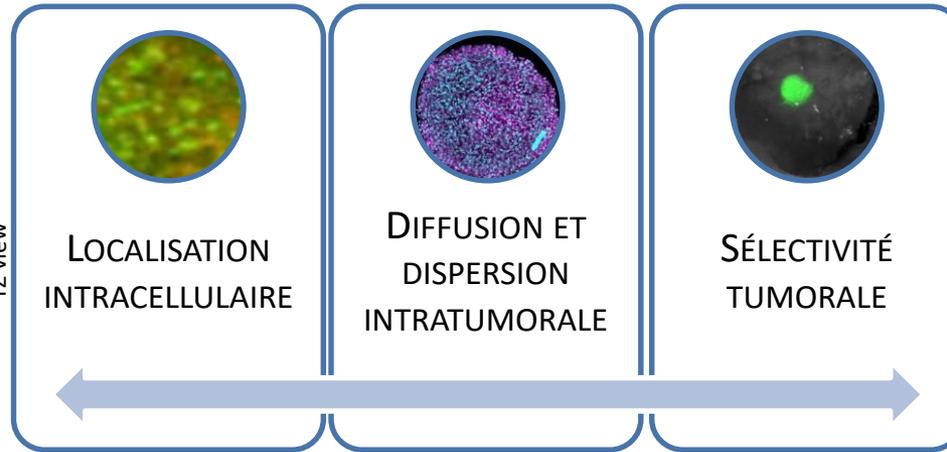
Article

## Fluorescent Radiosensitizing Gold Nanoparticles

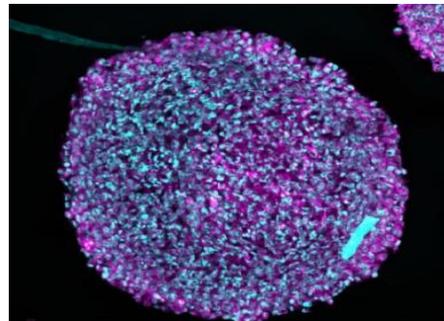
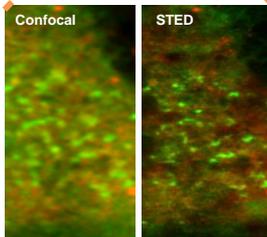
Gloria Jiménez Sánchez<sup>1</sup>, Pauline Maury<sup>2</sup>, Lenka Stefancikova<sup>2</sup>, Océane Campion<sup>3</sup>,  
 Gautier Laurent<sup>1</sup> , Alicia Chateau<sup>4</sup>, Farhan Bouraleh Hoch<sup>1</sup>, Frédéric Boschetti<sup>5</sup>,  
 Franck Denat<sup>6</sup> , Sophie Pinel<sup>4</sup>, Jérôme Devy<sup>3</sup> , Erika Porcel<sup>2</sup> , Sandrine Lacombe<sup>2</sup> ,  
 Rana Bazzi<sup>1</sup> and Stéphane Roux<sup>1,\*</sup> 

17/11/2021

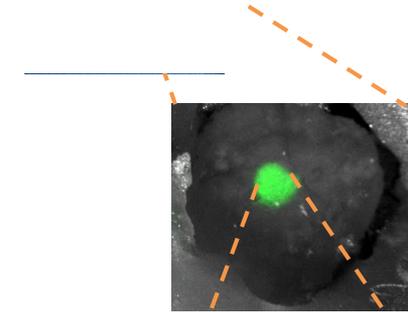




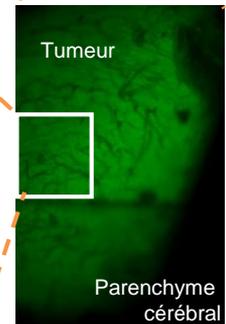
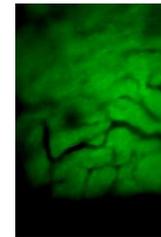
Au@DT(TPA-Cy3)  
Calnexin (REG)



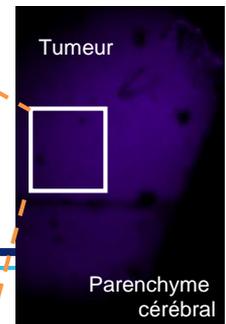
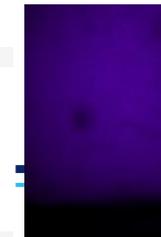
■ Noyau des cellules U87  
■ Au@DTDTPA-Gd50 -Cy5



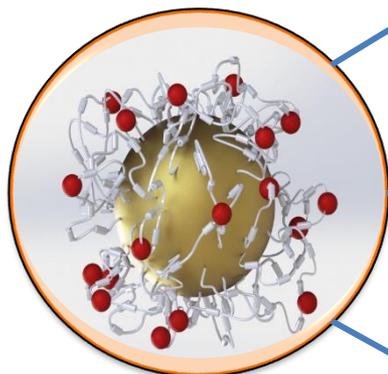
Tumeur U87-GFP



Au@DTDTPA(Gd)-Cy5



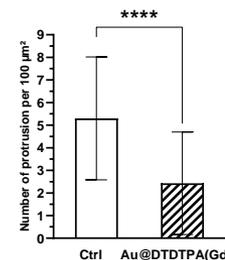
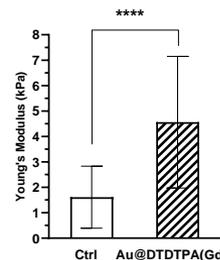
U251  
Culture 2D



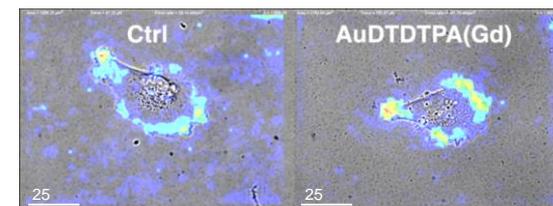
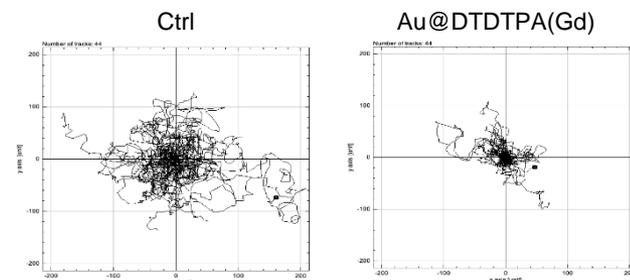
Altération des propriétés biomécaniques des cellules

Réduction de la motilité cellulaire

Diminution des capacités migratoires & invasives des cellules

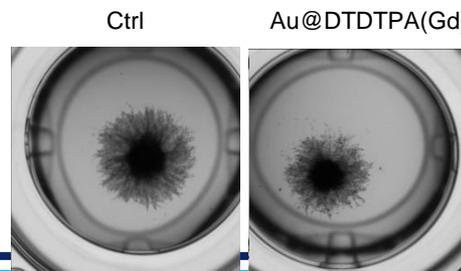


A. BERQUAND  
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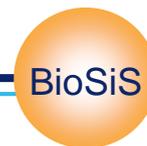
Nanoscale

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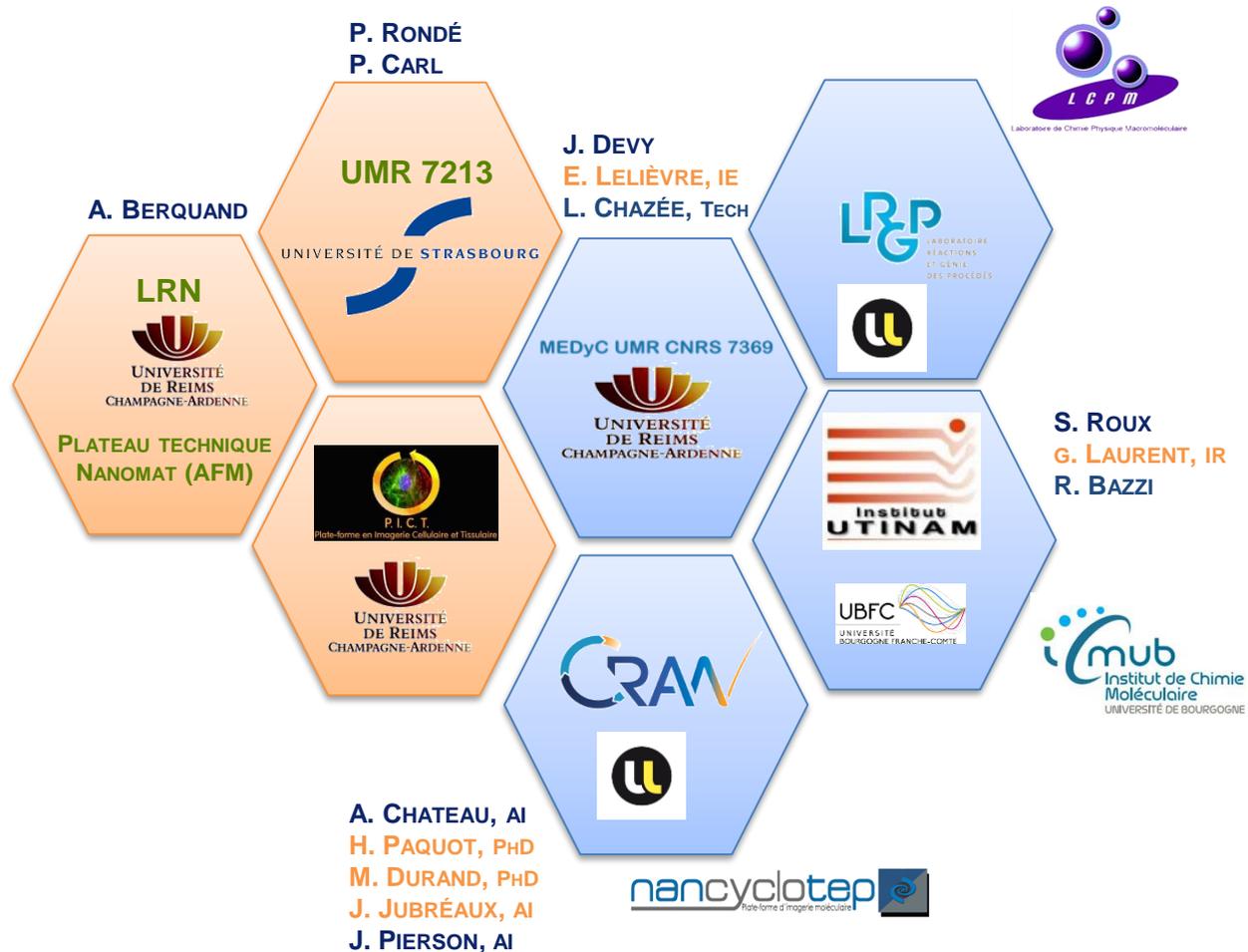
The detrimental invasiveness of glioma cells controlled by gadolinium chelate-coated gold nanoparticles†

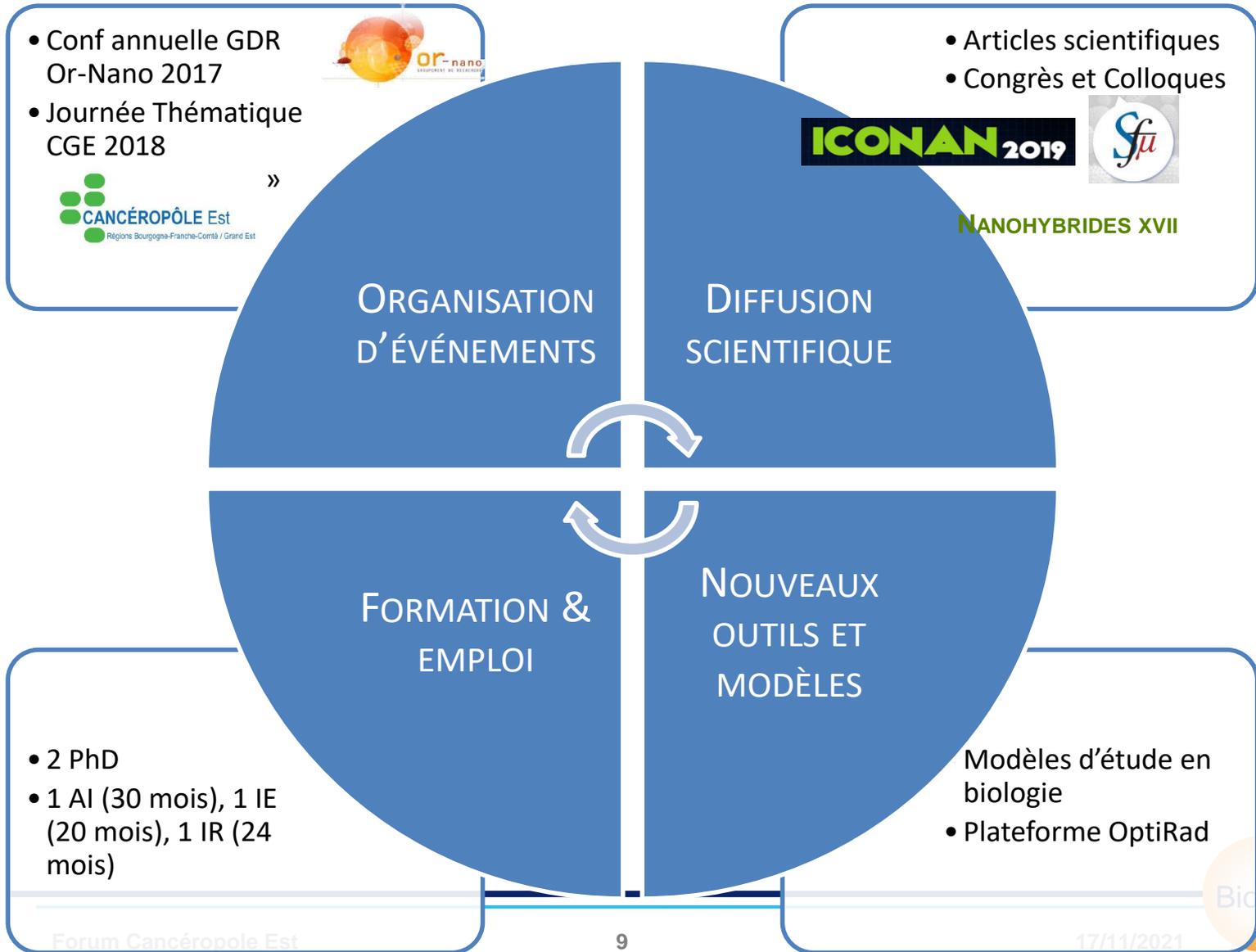
Maxime Durand,<sup>a</sup> Elodie Lelievre,<sup>b</sup> Alicia Chateau,<sup>†a</sup> Alexandre Berquand,<sup>†c</sup> Gautier Laurent,<sup>a</sup> Philippe Carl,<sup>a</sup> Stéphane Roux,<sup>a</sup> Lise Chazee,<sup>b</sup> Rana Bazzi,<sup>a</sup> Frederic Eghiaian,<sup>†</sup> Justine Jubreaux,<sup>a</sup> Philippe Ronde,<sup>c</sup> Muriel Barberi-Heyob,<sup>b</sup> Pascal Chastagner,<sup>a</sup> Jérôme Devy<sup>†a,b</sup> and Sophie Pinel<sup>†a,b</sup>



# CONCLUSION

# VALORISATIONS & RETOMBÉES





**Merci pour votre attention**

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