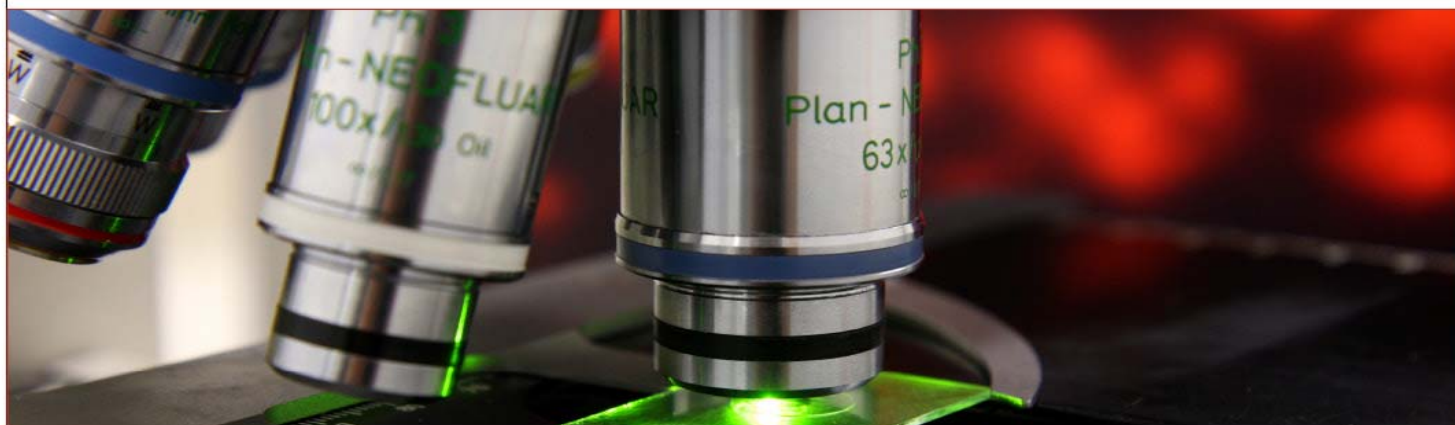


# SÉMINAIRES ET CONFÉRENCES



**Sylvie Doublé**

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Microbiology and Molecular Genetics**

**« DNA polymerase theta, genomic instability, and cancer »**

DNA polymerase theta (Pol  $\theta$ , encoded by the POLQ gene) is the defining enzyme for the double strand break repair pathway by theta-mediated end joining (TMEJ). Some alterations in cancer, including BRCA1 and BRCA2 mutations, cause cells to be sensitive to Pol  $\theta$  suppression. Pol  $\theta$  has several unique activities, including an ability to extend primers with very limited 3' pairing, and an ability to bypass some forms of template DNA damage. I will present structural work and biochemical analyses that help explain how Pol  $\theta$  carries out these unusual reactions.



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Département de biochimie  
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**Le lundi 25 mars 2019, 11h30**

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