

# Keynote seminar "Biologie & Clinique"

## Professor Ian Hickson

University of Copenhagen, Denmark

Le laboratoire d'Ian Hickson étudie les fonctions biochimiques, moléculaires et biologiques des facteurs de réparation de l'ADN dans les cellules eucaryotes, et comment ces facteurs agissent pour maintenir la stabilité des chromosomes.

## The Æenemies within: regions of the genome that are inherently difficult to replicate

Invitation : Pierre-Henri Gaillard - Centre de Recherche en Cancérologie de Marseille

Mardi 29 Mai 2018 à 11h - *Accès libre*

Salle de Conférence du Centre d'Information, de Prévention et de Consultation en Cancérologie de l'Institut Paoli-Calmettes, entrée et parking 15 Bd Leï Roure - 13009 Marseille

### Renseignements

Secrétariat du Centre de Recherche en Cancérologie de Marseille UMR 1068  
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Centre de Recherche en Cancérologie de Marseille

Unité Mixte de Recherche

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## The Ænemies within: regions of the genome that are inherently difficult to replicate



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The Hickson laboratory investigates the biochemical, molecular and cell biological functions of DNA repair factors in eukaryotic cells and how these factors act to maintain chromosome stability. In particular, they focus on those genes that, when defective, give rise to disorders in humans associated with the premature onset of aging and/or age-associated diseases such as cancer. In recent years, a major focus has been on characterization of BLM, the protein defective in Bloom's syndrome, a disorder associated with an elevated incidence of cancers of all types.

#### Selected publications:

**RECQ5 Helicase Cooperates with MUS81 Endonuclease in Processing Stalled Replication Forks at Common Fragile Sites during Mitosis.**

Di Marco S, Hasanova Z, Kanagaraj R, Chappidi N, Altmannova V, Menon S, Sedlackova H, Langhoff J, Surendranath K, Hühn D, Bhowmick R, Marini V, Ferrari S, [Hickson ID](#), Krejci L, Janscak P. *Mol Cell*. 2017 Jun 1;66(5):658-671.e8.

**Acute inactivation of the replicative helicase in human cells triggers MCM8-9-dependent DNA synthesis.**

Natsume T, Nishimura K, Minocherhomji S, Bhowmick R, [Hickson ID](#), Kanemaki MT. *Genes Dev*. 2017 Apr 15;31(8):816-829.

**Potential biomarkers of DNA replication stress in cancer.**

Ren L, Chen L, Wu W, Garribba L, Tian H, Liu Z, Vogel I, Li C, [Hickson ID](#), Liu Y. *Oncotarget*. 2017 Jun 6;8(23):36996-37008.

**RAD52 Facilitates Mitotic DNA Synthesis Following Replication Stress.**

Bhowmick R, Minocherhomji S, [Hickson ID](#). *Mol Cell*. 2016 Dec 15;64(6):1117-1126.

**A short G1 phase imposes constitutive replication stress and fork remodelling in mouse embryonic stem cells.**

Ahuja AK, Jodkowska K, Teloni F, Bizard AH, Zellweger R, Herrador R, Ortega S, [Hickson ID](#), Altmeyer M, Mendez J, Lopes M. *Nat Commun*. 2016 Feb 15;7:10660.

**Replication stress activates DNA repair synthesis in mitosis.**

Minocherhomji, S., Ying, S., Bjerregaard, V.A., Bursomanno, S., Aleliunaite, A., Wu, W., Mankouri, H.W., Shen, H., Liu, Y. and [Hickson, I.D.](#) *Nature* (2015) 528, 286-290.

**PICH promotes sister chromatid disjunction in mitosis: evidence of functional co-operation with topoisomerase II.**

Nielsen, C.F., Huttner, D., Bizard, A.H., Hirano, S., Li, T-N., Palmai-Pallag, T., Bjerregaard, V.A., Liu, Y., Nigg, E.A., Wang, L.H-C. and [Hickson, I.D.](#) *Nature Communications* (2015) 6, 8962.

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