



## FBS Seminar

June 22 (Thu), 2017

15:00 - 16:00

2F Seminar room, BioSystems Building

**William C. Earnshaw**

**Wellcome Trust Centre for Cell Biology,  
University of Edinburgh, Edinburgh, Scotland, UK**

**“New insights into mitotic chromosome assembly and structure”**

The discovery of mitotic chromosomes by Flemming in 1882 established a major question in Cell Biology that remains unanswered all of these years later: How does the interphase nucleus transform itself into the thread-like mitotic chromosomes that segregate the genome in mitosis? I will discuss some work from our lab and those of our collaborators suggesting that mitotic chromosome formation involves two processes; compaction of the chromatin, and a functionally distinct architectural remodeling that disassembles the structure of the interphase nucleus and causes a helical transformation that results in the formation of individual chromatids. I will also describe recent work from our group that yielded the very surprising finding that in fact, only about 60-70 percent of those chromosomes observed by Flemming was made up of chromatin. A significant fraction - possibly up to 40% - of the volume of mitotic chromosomes is actually comprised of a mysterious highly complex layer that surrounds the chromatin. This chromosome periphery compartment helps to keep chromosomes separate in mitosis and has an important role in efficient reactivation of the nucleoli after mitosis.

Chairperson: Tatsuo Fukagawa

If you want to speak Bill in person, please let me know. I will arrange the interview with him,

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セントロメア生物学の分野を確立してきた、Earnshaw 博士によるセミナーです。

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セミナー終了前、後に、個別の discussion を行います。面談希望者は、深川までご連絡ください。個別面談をアレンジいたします。