



CDB SEMINAR

Speaker: **Angela Nieto**

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Title:

“The Snail gene family in physiology and pathology”

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| Date: | Tuesday, May 25 |
| Time: | 16:00 P.M. ~ 17:00 P.M. |
| Place: | 1F Auditorium of Building C, CDB |

Summary:

The Snail family of zinc-finger transcription factors is involved in processes that imply profound cell movements both during embryonic development and tumour progression. We and others have previously shown that they are crucial for the formation of the mesoderm and the neural crest and for the acquisition of migratory and invasive properties in epithelial tumours through the triggering of the epithelial-mesenchymal transition (EMT). Thus, Snail genes play an important role in both physiological and pathological EMTs.

We have recently found that Snail also blocks cell cycle and confers resistance to cell death, with important implications in the behaviour of both embryonic and tumour cells when they become migratory and invasive. Although a deregulation/increase in proliferation is crucial for tumor formation and growth, this may not be so for tumor malignization. In addition, the resistance to cell death conferred by Snail provides a selective advantage to embryonic cells to migrate and colonize distant territories and to malignant cells to separate from the primary tumour, invade and form metastasis.

In addition to its influence in normal and malignant migratory cells, the ability of Snail to decrease proliferation and promote survival is utilized in other developmental contexts that when deregulated are also associated to pathologies. I will discuss recent results showing that misexpression of Snail is associated to: (i) A pathological survival of palatal epithelial cells leading to the cleft palate condition and (ii) Defects during skeletal development and growth.

Host: Yoshiko Takahashi Body Patterning , CDB

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