



# CDB SEMINAR

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Monday, September 7, 2009

16:00~17:00 C1F CDB Auditorium

## Developmental Evolution of Digit Identity in Birds

### Summary

One of the most persistent enigmas in comparative biology is the identity of birds in the hand of birds. The problem arises from a conflict between two types of data: comparative osteology and paleontology suggest that the digits of the adult hand of birds are digits I, II, and III, but in development these digits arise from anlagen that usually develop into digits II, III, and IV. One hypothesis that can accommodate these facts is the frame shift hypothesis, FSH, which states that in the stem lineage of birds the digit identity has "changed place" by a homeotic transformation, so that now digit I is arising in position 2 and digit II from position 3, etc. In this talk I will summarize recent progress towards the identification of the molecular mechanisms underlying the digit identity frameshift in birds. In addition I will show data that suggests that a similar event has happened during digit reduction in skinks, in particular the three digitated forms of the genus *Chalcides*.

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### Host:

**Shigeru Kuratani**

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