



Specialized structure inside fertilized egg discovered by this research. Two fibrous structures can be seen inside nucleus.

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Discovery of Novel Nuclear Structure Inside Fertilized Eggs - Research Results Bring Us Closer to Solving the Riddle of the Development of Animals -- Kindai University

Highlights of Article

- A specialized nuclear structure (not found in regular cells), made from the protein actin was discovered inside the nucleus of fertilized eggs containing mouse DNA.

- It was discovered the protein, actin, is also involved in animal development by maintaining the form and function of the DNA-containing nucleus.

- This research is expected to contribute to the development of reproductive medicine, including human infertility treatment, and animal breeding technology through practical application of the special characteristics of fertilized eggs that were discovered.

Kinokawa, Wakayama, Japan. July 1, 2020

Led by Asso. Prof. Kei Miyamoto of Kindai University's Department of Genetic Engineering (Faculty of Biology-oriented Science and Technology, Kinokawa, Wakayama), a research group comprised of representatives from Kindai University and University of Freiburg (Germany) have discovered for the first time in the world that actin, a protein, is responsible for creating a specialized structure inside the nucleus of fertilized eggs, which not found in the nucleus of regular cells.

These research results draw us nearer to solving the mystery of how animal life develops, and is also a significant discovery, proving for the first time that actin plays a role in embryonic development.

About Publication

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