

Female medaka fish prefer familiarized male fish as mating partners

- 1) Female Japanese **killifish**, or medaka fish, prefer **mating** partners that are visually familiar over unfamiliar male fish, a group of scientists discovered.
- 2) A study conducted by Hideaki Takeuchi of the University of Tokyo and his colleagues **revealed** that pre-mating visual contact of potential mates enhanced female preference for familiarized males. The team also discovered that when a female medaka fish is placed in visual contact with one male fish for a long time, certain **neurons** in the brain are fired as a "turn-on" switch.
- 3) In the experiment, female medaka fish were placed overnight in a fish tank with their potential mating partners with a glass wall separating them. The time it took from male **courtship** to mating was reduced compared to the time taken by female and male fish that had not had prior visual contact.
- 4) In addition, when put in a tank with two male fish, about 90 percent of female fish chose the one it spent the night with in the same tank.
- 5) Meanwhile, when researchers examined the brains of female fish that



chose unfamiliar male fish, the researchers found **abnormalities** in their neurons.

6) "We might be able to discover how humans fall in love if we can identify the neurons in the human brain that **function** similarly to those of female medaka fish," Takeuchi said. The findings have been published in the American scientific journal Science. 【01/04/2013/Mainichi Japan】

killifish:カダヤシ目の淡水および汽水魚の総称 mate:仲間になる、連れ添う reveal:明らかにする neuron:神経単位、ニューロン courtship:求婚、求愛 abnormality:異常 function:機能する

☆Ice breaker for active discussion☆

1. Please briefly explain the result of the latest study about the Medaka Fish.
2. What is the importance of the study about the mating partner selection of medaka fish to humans?
3. When you meet someone for the first time, what point do you focus the most? How long does it usually take for you to be comfortable with another person?
4. When loving someone, which do you follow, your heart or your mind?
5. February is usually called the "love month". What are the common practices in Japan related to Valentines' Day?
6. Please explain about White Day. When and how do you celebrate the day?
7. Make sentences using the following words : familiarize, mate, reveal, visually, potential, courtship, abnormality function and fall in love.

東大研究グループによると、グッピーのメスは、オスの尾の色で相手を選ぶというように、多くの動物には、パートナーを選ぶときの「好み」があるそうです。チャールズ・ダーウィンは、配偶者選択がオスの形態や行動の進化の原動力になるという「性淘汰仮説」を提唱しており、進化生態学の分野で長年注目を集めてきたものの、「異性の好み」の判断を司る神経機構はどの動物においても謎で、今回の発見は画期的だということです。メダカの『恋のスイッチ』とはロマンチックですね。