切っても切ってもプラナリア

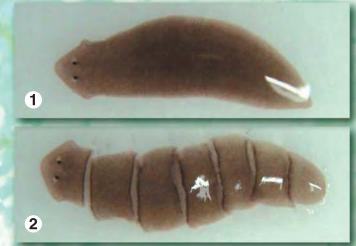
Any way you slice it, it comes up planarian!

プラナリアの再生と全能性幹細胞

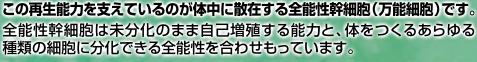
Planaria regeneration and totipotent stem cells

プラナリアは驚くべき再生能力で知られ、切断するとそれぞれの断片が プラナリアに再生します。

Planarians are extremely regenerative animals – cut into pieces, each section can grow into a complete new individual.







This regenerative ability is made possible by the presence of totipotent stem cells throughout the worm's body.

These cells have the ability to replicate themselves in an undifferentiated state, as well as to differentiate into any of the other cell types in the body, as needed.

プラナリアは全細胞の約10%が全能性幹細胞

Around 10% of the cells in the planarian body are stem cells

プラナリアが全能性幹細胞をどのようにコントロールし、必要な細胞を必要な時に必要な場所で作り出しているのか、分子レベルの研究が進められています。

Research at the molecular level is under way to find out how planarian stem cells are able to produce the exact types of cells needed at precisely the right places and times as the body regenerates.

