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プロテオーム解析を用いた化学物質の変態に及ぼす影響の解析

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タンパク質の発現に基づき、化学物質が無尾両生類の変態に与える影響の解析を試みている。まず、ツチガエル (Ranarugosa) 幼生にビスフェノール A を暴露し、尾部の短縮および肢の伸長に及ぼす影響を調べた。さらにこれらの個体群から尾部、後肢および肝臓を摘出後、タンパク質を抽出し、二次元電気泳動により発現パターンを解析した。現在までに、ビスフェノール A を暴露した個体では、タンパク質発現に特徴的な変化が生じることを確認した。

Proteomic analysis on Rana Rugosa metamorphosis exposured to Bisphenol A

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Proteomic analysis is to be an important tool to better understand the effects of chemical compounds on amphibian metamorphosis. In the course of Amphibian metamorphosis, dramatical changes in every tissue, e.g. the tail resorption, limb growth and liver cells occur. We exposed *Rana rugosa* tadpoles to Bisphenol A (BPA) in the presence or absence of thyroid hormone (TH). We then examined the protein expression profiles of tail, limb, and liver responses by two-demensional gels electrophoresis. As a result, we observed changes in protein expression profiles (up- and down-regulation). The results showed that this approach was not only used to analyze changes of protein expression profiles during amphibian metamorphosis treated with chemical compounds, but also to use this results as an indicator of effects of chemical (e.g. endocrine disruption) on amphibian metamorphosis.