Details of Technology

Name of Technology	Elucidation of the mechanism of urinary odor production in cats	Life Science
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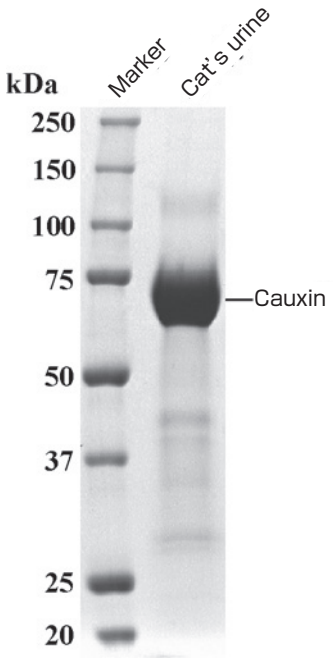
Key words	cat, urine, odor, protein	

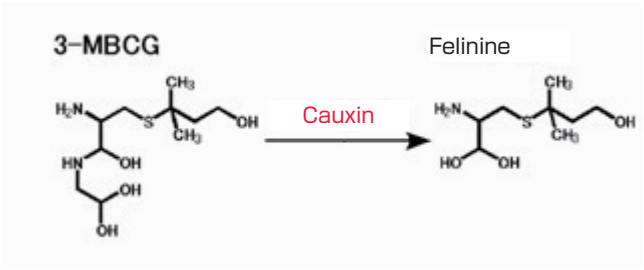
What kind of technology is this?

Outline

We elucidated that cauxin, a major protein excreted in the cat's urine, played a role in the production of a compound with peculiar odor in the cat's urine.

We discovered a novel protein in the cat's urine and termed it "cauxin." We studied the physiological function of cauxin in the relationship with felinine, a sulfur-containing amino acid specifically found in the cat's urine. As a result, we demonstrated that cauxin plays a role as an enzyme for the synthesis of felinine. The analysis of volatile odor components in the cat's urine revealed that the urine contained 3-mercapto-3-methyl-1-butanol, a degraded product of felinine, indicating that felinine is the material causing urinary odor peculiar to cats.





Electrophoresis image of protein in cat's urine

What are its applications?

This technology can be applied to the development of a drug which suppresses the odor in the cat's urine by inhibiting the action of cauxin.

Related patents	Japanese Patent Laid-Open No. 2003-250575
Related materials	http://www.riken.go.jp/r-world/info/release/press/2006/061021/index.html

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