

January 27, 2006  
Inter Cyto Nano Science Co., Ltd.

## **Exclusive Patent Licensing of Degranulation Inhibiting Mechanism on Allergy-related Cells**

On January 23, 2006, Independent Administrative Institution, The Institute of Physical and Chemical Research (RIKEN), and Inter Cyto Nano Science Co., Ltd. (ICNS) agreed and executed an agreement, granting ICNS an exclusive patent (being applied under RIKEN's proprietary) licensing right of "Degranulation reaction and cytokine synthesis inhibitor".

Allergy-related cells, such as mast cell, basophile, eosinophile play an important role on several allergic diseases like atopic dermatitis and pollen allergy. These cells are activated by antigen-antibody reactions, and cause allergic reactions by releasing chemical mediators like histamine from cytoplasmic granule to extracellular region. It has been unclear how a series of process, such as translocation of granules to plasma membrane, fusion of plasma membrane and granule membrane, release and re-filling of granule contents, leads to degranulation.

Prof. Dr. Toshio Hirano ( Dean of Graduate School of Frontier Biosciences, Osaka University, and also a member of ICNS's technical advisors), a group director of laboratory for cytokine signaling at RIKEN's research center for allergy and immunology, clarified the mechanism of the important process of translocation of granule to plasma membrane in degranulation reaction, by studying the molecular mechanism of degaranulation of mast cell, especially a calcium-independent signaling through Gab family adaptor molecule, and a patent regarding "Degranulation reaction and cytokine synthesis inhibitor" was applied under the name of RIKEN.

Though a few degranulation inhibitors of mast cell are already on the market, the efficacy is not good enough. This patent from RIKEN indicates that degranulation reaction and cytokine synthesis are inhibited also in various cells other than mast cell, and it is expected a new and efficient therapeutic agent for atopic dermatitis and pollen allergy will be developed.

From last August, ICNS started together with RIKEN a research work to develop a medicinal product based on the patent of degranulation inhibitor, and is accumulating important basic data for a product which would be entirely different mechanism of action from precedent anti-allergic agent.

Under this agreement, ICNS will make the most of the results of this research collaboration, and will materialize the patent by sub-licensing an exclusive right to such pharmaceutical company as is interested in developing an anti-allergic agent based on this new mechanism.

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## **Inter Cyto Nano Science**

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### Independent Administrative Institution RIKEN

The objectives of RIKEN are to conduct comprehensive research in science and technology (excluding only humanities and social sciences) under the RIKEN regulations, and to disseminate the results of its scientific research and technological developments. RIKEN carries out high level experimental and research work in a wide range of fields, including physics, chemistry, medical science, biology, and engineering extending from basic research to practical application.

This institute was first founded in 1917 as a private research foundation known as “RIKEN”. In 2003, it was reorganized as an Independent Administrative Institution under the Ministry of Education, Culture, Sports, Science and Technology, since when it has engaged in wide-ranging research activities that span basic to applied science.

### Inter Cyto Nano Science Co., Ltd.

ICNS has a unique business model of mediating between academies and pharmaceutical industries. The company introduces small molecule design for new medicinal products, based on the information obtained through analysis of gene function and of protein structure, making good use of the latest biotechnology and nanotechnology originated from the 11 laboratories of 5 universities, Osaka, Kyoto, Osaka Prefecture, Kumamoto and Kagoshima, and RIKEN.

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