

**A world's first : Systems Biology, from dream to operational reality.
Integrative Biology produces its first bio-medical results and confirms its
ability to really deliver.**

Medicine and the pharmaceutical industry must prepare themselves for the most significant change in paradigm since the discovery of antibiotics (the first therapeutics to really address pathological causes). Namely, the sudden transition: **from “symptomatic medicine” to “causative medicine”**.

The *in vitro* experimental validation of the first **CADI** (Computer-Assisted Deductive Integration)-generated biological model* , developed by Dr François Iris, Vice-President of the “Think Tank” Centrale-Santé-Biotech and co-founder of Bio-Modeling Systems, has been published in the October issue of **Nucleic Acids Research** (Oxford University Press).

For the very first time ever, a theoretical biological model, constructed *in silico* from differential gene expression data and validated by *a posteriori* experimentation on human cells, describes in detail the patho-physiological intracellular mechanisms leading to a complex disorder: human breast cancer associated with a mutation of the Ras gene (responsible for at least 30% of all cancers).

Furthermore, the therapeutic predictions of this model have been confirmed by blind tests carried out by three independent laboratories.

This proof of concept confirms the hybrid **CADI** approach developed by Dr Iris presents undisputable scientific medical and industrial interests, particularly in the realm of drug development.

This model puts an end to a near 40-years period of frustrating research concerning the mechanisms through which a mutation of the Ras gene could lead to the development of tumors.

At the industrial level, and as early as 1999, this model anticipated and provided explanations for the current failure of anti-farnesyl-transferases therapeutic developments.

Other models have been developed, confirming the pertinence of the **CADI** approach to numerous pathological fields (Prion disease, tamoxifen resistance

Should you wish further information, please, do not hesitate to let us know. This work will be presented during the 2004 session of “Profession: Bio-Entrepreneur”, the 16th & 17th March 2004.

For more scientific information: francoi.iris@centrale-sante.net

*: see publication

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