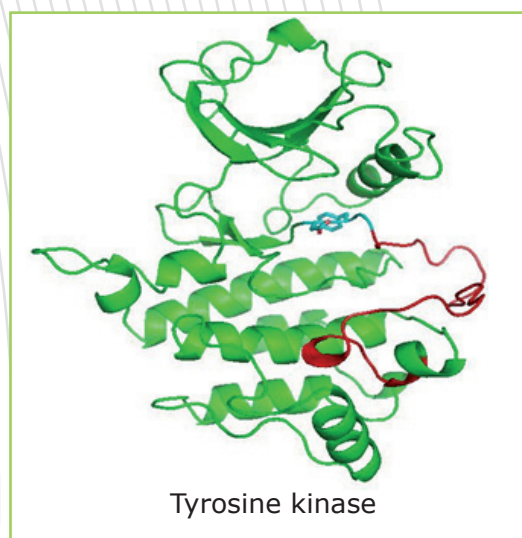


New targeted treatment against cancer

ALK fusion proteins were validated as a target for therapeutic intervention against the majority of anaplastic large cell lymphoma (46%) and a small fraction of non small cell lung cancers (5% at least in the Asian group), neuroblastomas and inflammatory myofibroblastic tumours. The laboratory has identified specific ALK kinase activity inhibitors that represent a new promising and potent treatment against several types of cancer.



Advantages / Novelty

ALK fusion proteins represent a very promising target for therapeutic intervention against several cancer types. ALK inhibitors identified by the laboratory are specific and show IC50 in the nanomolar-low micromolar range.

Applications

Cancer treatment
Chemotherapy

Research team

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Detailed description

The ALK receptor tyrosine kinase was identified as part of a protein fusion derived from a chromosomal translocation. Constitutive overexpression and activation of the X-ALK fusion protein is a key oncogenic event that maintains a persistent mitogenic signal that finally leads to tumour formation, survival and proliferation. ALK is structurally altered through translocations of point mutations in Lymphomas and lung cancer. The laboratory has designed and developed four chemical scaffolds that are able to inhibit ALK activity with IC50 in the nanomolar-low micromolar range. Within three of the four chemical classes, five lead compounds to be further optimized have been identified.

Current stage of development

5 lead compounds inhibiting ALK kinase activity were identified in vitro.

Intellectual property

European Patent Applications EP08006651 and EP08015802.5.

Collaboration type

Lyon Science Transfert looks for industrial partners for lead optimisation and offers to grant patent licences.

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