

Inhibitors of SK3-based channel complex for targeted cancer cells

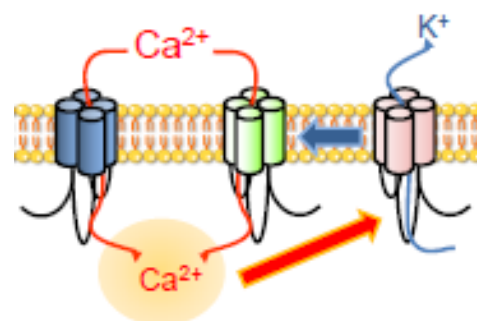


HEALTH
ONCOLOGY

PREVENTION OF BONE METASTASIS AND SREs IN CANCER PATIENTS

Currently, there is no treatment able to prevent metastasis. Our scientific team ("We") discovered that while the abnormal expression of the SK channels by cancer cells promotes bone metastasis development, its inhibition by a class of small molecule ("GF") reduces it. As SK channels does not involved in the primary tumor development its inhibition by GF would be used mostly as an adjuvant therapy and in association with other anti-cancer therapeutics. Furthermore, GF will be adapted for the prevention of SK-positive cancers that have a high risk to develop bone metastases.

Described here is a new family of chemical compounds that target potassium channels on cancer cells and inhibit them.



#Keywords

First-in-class
Anti-metastatic drugs
Potassium Channel
Ion channel inhibitor
Bone metastasis / SREs

Research Team

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Partnership

Co-development & Licensing

Intellectual Property

FR17/54564
Priority filing in May 2017

Competitive Advantages

Our assets could be used as anti-metastatic drugs in targeted and personalized cancer therapies for patients with tumor cells expressing the SK channels by targeting SK channels. **Benefits include :**

- **First in class compounds : new molecules / new target**
- Optimized chemical synthesis
- Investigation and validation of biology around SK channels
- No need of cell internalisation (SK channels at plasma membrane)
- Potentially high tumoral bioavailability.
- Drug has shown a good tolerance and an apparent safety in rodents and the few preclinical studies performed *in vitro* have shown no adverse biological activity and no mutagenicity
- *In vivo* data show that these drugs significantly reduce bone metastasis over a 15-week treatment

Development Status

- Target validation
- *In vitro* testings
- Some physico-chemical investigations are on-going
- Preliminary *in vivo* testings has been scheduled with mouse models

Business Opportunities

Oncology and SK overexpression-related diseases:

- Indication for cancers with bone tropism (prostate cancer)
- Used as adjuvant for the prevention of metastasis, and especially bone metastasis and SREs in cancer expressing SK channels
- Heart diseases expressing SK Channels

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