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14 May 2015 | News | By BioSpectrum Bureau

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Singapore: US-Australian drug discovery company, Novogen's drug candidate, Anisina, has progressed successfully in pre-clinical trial as an effective monotherapy against human melanoma.

The company previously has announced the effectiveness of Anisina as a monotherapy in mice bearing human neuroblastoma tumors, thereby justifying taking it into clinical trials in children and juveniles with solid cancers such as neuroblastoma. Taken together, the two results confirm the potential clinical benefit of this drug across both adult and paediatric cancers.

In the current study, highly chemo-resistant human melanoma cells were grown in athymic mice and the animals treated either orally or intravenously with Anisina. Both dosage forms were equally effective.

Dr Justine Stehn, anti-tropomyosin program director, Novogen said, "We are pleasantly surprised by the degree of anti-tumor activity of this drug candidate on its own. We had always seen the anti-tropomyosin technology as being an adjunct therapy for the more commonly used anti-mitotic drugs. The rationale behind its development was to destroy that half of a cancer cell's cytoskeleton that the anti-mitotic drugs didn't target. We reasoned that destabilising the entire cytoskeleton would achieve a much higher level of anti-cancer effect than that coming from targeting either half alone. And, indeed, that is what we see. Anisina used in combination with anti-mitotic drug, vincristine, increases the anti-cancer potency of vincristine 20-fold."

Dr Stehn added, "Despite all the evidence showing that Anisina has the potential to be just as effective a stand-alone chemotherapy as the anti-mitotic drugs, we still intend to see Anisina as a companion drug for an anti-mitotic drug. The initial patients, however, will need to be treated with Anisina on its own, and this study now gives us the green light to proceed into a Phase 1 study in the first half of 2016."

In preparation for both adult and paediatric clinical studies, the company is conducting studies in a variety of both adult and paediatric solid and non-solid cancer types in order to determine the optimal drug combination.