

Novel SN-38 Derivatives

~ A Nano Carrier-free Prodrug for High Anti-Tumor Activity and Safety ~

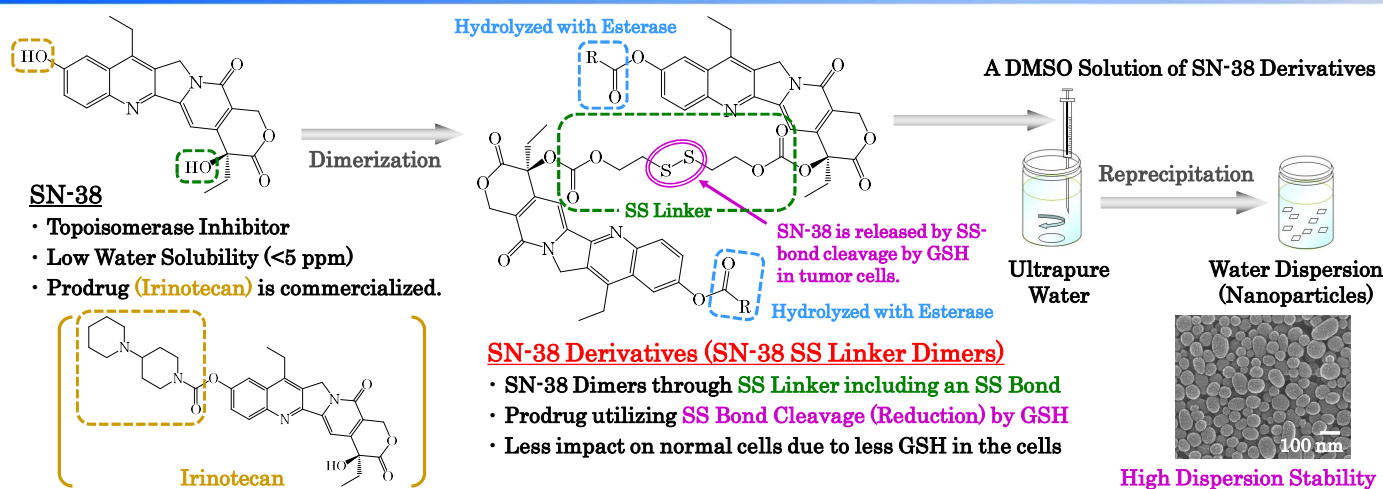
KEY INVENTION

- A prodrug utilizing SS bond reduction by glutathione (GSH) localized in tumors
 - A nano carrier-free DDS designed by making the drug itself into nanoparticles
- ➔ **For development of a novel drug showing a high anti-tumor activity and safety!**
(A medical doctor-led clinical trial is expected to be carried out.)

[Disadvantage of Current Nano Carriers and Prodrugs] [Advantage of SN-38 Derivatives]

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|---|--|--|
| <ul style="list-style-type: none"> ◎ Nano Carriers (LNP, etc.) <ul style="list-style-type: none"> • High Liver Accumulation (>90%) • Low API Loading (<10%) • Side Effects by Carriers (other than API) ◎ Prodrug <ul style="list-style-type: none"> • Low efficacy and side effect by metabolism before delivery to the target cells | | <ul style="list-style-type: none"> • High Target Cell Accumulation • High API Loading • Nanoparticles by Drug Itself (No Carrier) |
| | | <ul style="list-style-type: none"> • Poorly metabolized before delivery to the target cell (metabolized by GSH) |

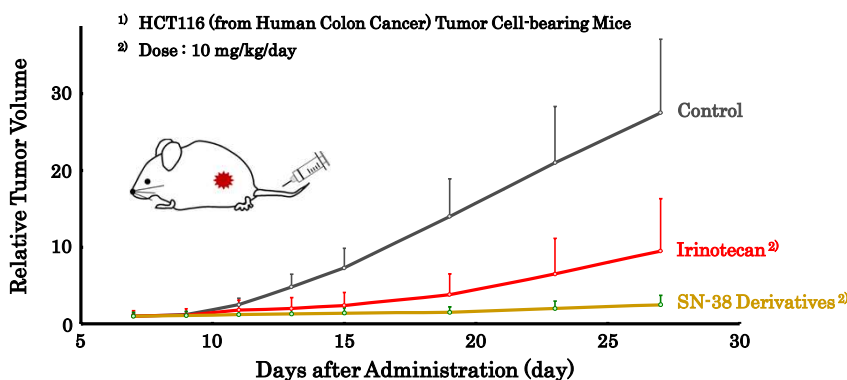
SUMMARY of INVENTION



COMPARISON with and ADVANTAGE over CURRENT TECHNOLOGY

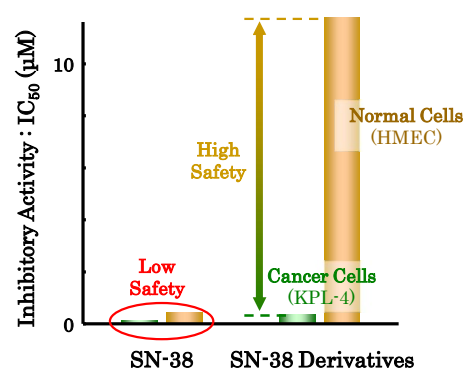
[Efficacy and Safety Comparisons of this Technology with Current Technology]

a. *in vivo* Trial (Mice¹⁾, i.v.)



The anti-tumor activity of SN-38 derivatives is higher than that of Irinotecan.

b. Safety (SN-38 vs. SN-38 Derivatives)



The safety of SN-38 derivatives is higher than that of SN-38.

APPLICATION expected

- ◎ Development of Novel Anti-Cancer Drugs such as for Lung, Breast, Colorectal, Cervical or Stomach Cancers

Representative Inventor :

Co-Inventor :

Licensable Patent

Title of Invention :

International Publication No.:

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SN-38 Derivatives, Nanoparticles including the Derivatives, Medicines and Production Methods of the Nanoparticles

WO2022190626

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