Introduction to

MycHunter Therapeutics

Development of new therapeutics targeting *MYC*-amplified tumors

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MYC oncogene

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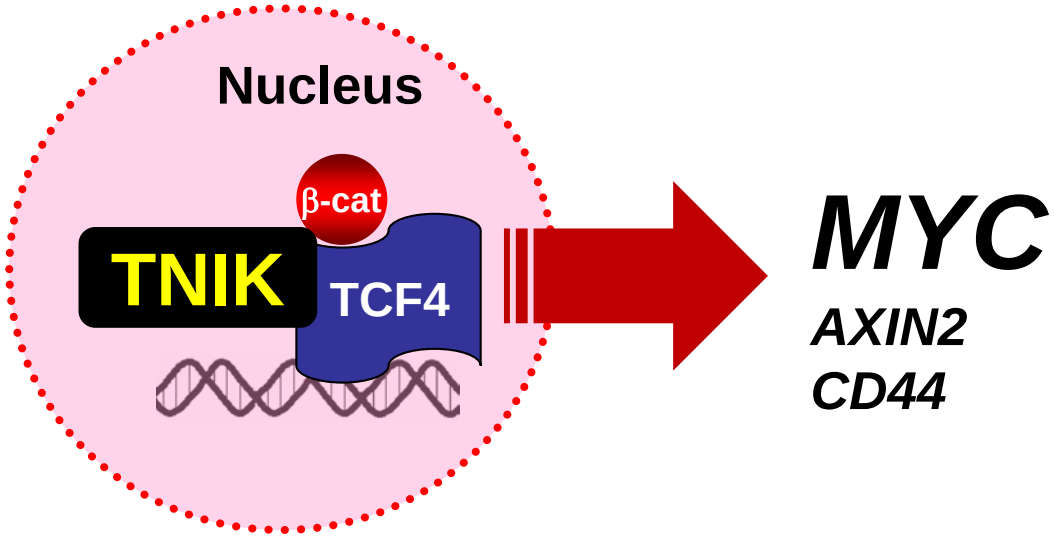
- Gene amplification or chromosomal translocation in **20% of all human malignancies**
- Generation of **cancer stem cell**
- Associated with **drug resistance** and **lethal outcomes**
- **No approved drug**

Lacks a structure targetable by chemical compounds

Turner et al., ***Nat Struct Biol.***, 2003; 10:157.

Our approach:
Transcriptional inhibition of *MYC*

TNIK (TRAF2 and NCK-interacting protein kinase)
a transcriptional co-regulator essential for *MYC* gene expression

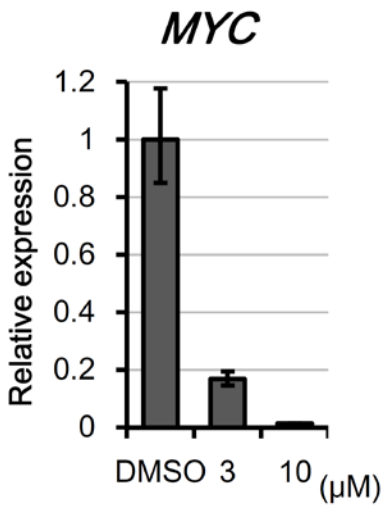


β-cat ; β-catenin

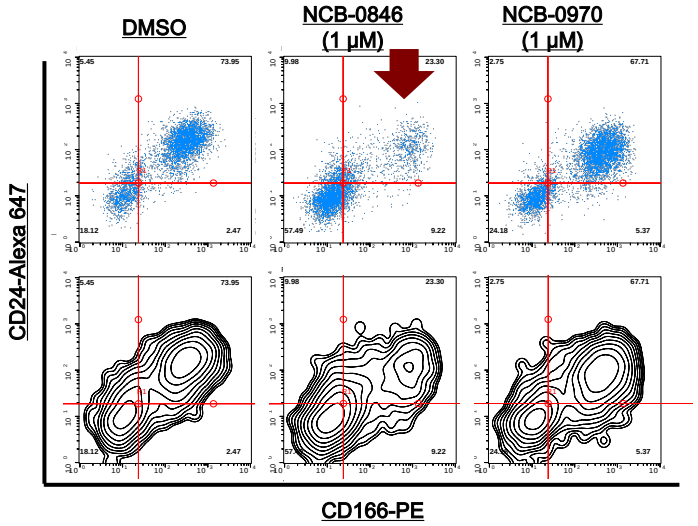
Shitashige *et al.*, ***Gastroenterology***, 2008; 134:1961.
Shitashige *et al.*, ***Cancer Res.***, 2010; 70:5024.
Satow *et al.*, ***J Biol Chem.***, 2010; 285:26289.

A small-molecule **TNIK inhibitor** (NCB-0846)

● Suppress *MYC* expression

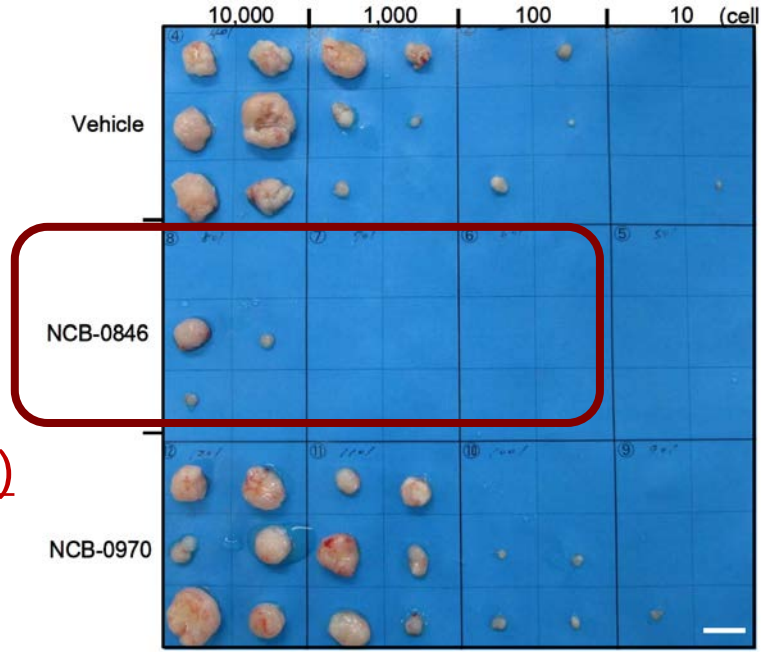


● Reduce cancer stem cells



(CD44、CD133、CD24、CD166)

● Abolish tumorigenicity

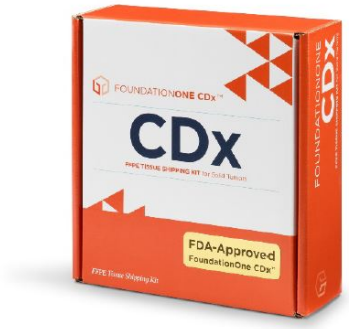


Masuda *et al.*, ***Nat Commun.***, 2016; 7:12586.
Yamada *et al.*, ***Cancer Sci.***, 2017; 108: 818

Companion diagnostics

- High sensitivity of *MYC*-amplified cancer cells
- *MYC* gene amplification as a **predictive biomarker**
- Promises the high success rates of clinical trials
- Approved **genetic tests** (ready for clinical trials)

FoundationOne® CDx
がんゲノムプロファイル



sysmex | Lighting the way with diagnostics

Target product profile (TPP)

Category	
Product concept	Small-molecule compound selectively cytotoxic to *MYC*-amplified tumors
Mode of action	Transcriptional inhibition of *MYC* gene expression
Indication	**Any tumors with *MYC* gene amplification** (Triple-negative breast cancer, Small cell lung cancer, Colorectal cancer, Castration-resistant prostate cancer)
Market size	**2 million patients** (20% of all cancer deaths)
Benchmark drug	None
Application	**First-line treatment**
Safety	Tolerable/recoverable adverse effects on Wnt target organs (gastrointestinal, hematopoietic, osteogenic)
Administration	Oral (once daily)
Formulation	Tablet or capsule

Current status

Next step

Exit

Target discovery

Compound screening

Lead optimization

Preclinical

Phase I/II

Phase III

2020

2022

国立研究開発法人
国立がん研究センター
National Cancer Center Japan

Pharmaceutical company

MycHunter

Valley of Death

Notable drug deals in 2019

	Buyer	Seller	Price	Drug
Jul-2019	Jazz Pharm.	Redx Pharm.	**$3.5M** (Upfront) **$203M** (Contingent)	Pan-RAF inhibitor (Phase 1/2a)
May-2019	Pfizer	Therachon	**$340M** (upfront) **$470M** (Contingent)	FGFR3 decoy (Phase 1 & orphan drug designation for achondroplasia)
Apr-2019	Novartis AG	IFM Therapeutics	**$310M** (Upfront) **$1.27B** (Contingent)	NLPR3 antagonists (1 clinical and 2 pre-clinical)
May-2019	Merck	Peloton	**$1.05B** (Upfront) **$1.15B** (Contingent)	HIF-2α inhibitor (Phase 2)

Our advantages

- Large patient population with **no effective treatment**
- Strong **scientific** background

  Masuda *et al.*, ***Nat Commun.***, 2016; 7:12586.
- **Selective killing** of *MYC*-amplified tumors
- **Companion diagnostics** available
- **Global patent strategy**

  Granted in the US (**2017**), Japan (**2019**), and China (**2019**)

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Safe Harbor Statement

This presentation contains forward-looking statements, which are subject to various risks and uncertainties. Actual results could materially differ from those contained in, or implied by such statements.