

**2021 KPBMA Conference
with MIT ILP**



Accelerating Innovative Oncology Drug Development through Collaboration

2021.06.10

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Senior Vice President, Head of Global R&D Innovation



Hanmi

A Pharmaceutical
Powerhouse
in Korea

25%
R&D Staffs

Strong focus on R&D

Over +580 experts (Ph.D. 65, MS 332)

Innovative pipeline expands & late stage clinical studies and registration
6 R&D centers in Korea & China

19%
Of Revenue

Advances in R&D

Strong commitment in R&D supported by investment
Multi-angle approaches powered by strong internal R&D capacity,
as well as open innovation

3
Manufacturing
Capacity

Drive R&D productivity by Manufacturing capacity

Global Standard
Quality & Specification



Bioplant
Biologics
•RNA/DNA
•Protein

Fine Chemical
APIs
•Nucleotide
•Peptide
•PEG

Paltan
Finished Product
•Oral Dosage

Focusing on Core Therapeutic Areas

“ Creating value through innovation ”

Inflammation & Fibrosis

**Extensive research
on human incretin analogues to treat
inflammatory and fibrotic disease**

**Co-agonists to resolute NASH,
a complex disease with
no approved therapies**

Metabolic Disease

**Novel solutions for OBESITY and
T2DM together with mono and
combination regimens**

Oncology

**Cancer treatment
through innovative
platforms,
TKIs, Biologics and
Immuno-oncologics**

Rare Disease

**Technologies to
overcome
rare disease**

- Short bowel syndrome
- Congenital Hyperinsulinism
- Lysosomal Storage Diseases

Sustaining Novel cancer drug Innovation through Internal and External expertise

Programs Under Development

Poziotinib
Pan-HER inhibitor

EGFR/HER2 Exon20 NSCLC
NDA Submission Anticipated



Belvarafenib
Pan-RAF inhibitor

Solid Tumors
Phase 1



HM43239
FLT3/SYK dual inhibitor

Acute Myeloid Leukemia
Phase 1/2
Open for partnership

FLX 475
CCR4 antagonist

Solid Tumors
Phase 2



HM97662
EZH1/2 dual inhibitor

Multiple Indications
Preclinical

Open for partnership

Under Registration



Rolontis®
LAPS- GCSF

Chemo-induced Neutropenia
US BLA Review



Oraxol
Oral Paclitaxel +
Encequidar

Metastatic Breast Cancer
US NDA Priority Review

Focusing on Disruptive Platform Technology & Collaboration

“ Creating value through innovation ”

IO platform Precision medicine

- Cancer treatment through innovative platforms, TKIs, Biologics and Immuno-oncology therapeutics
- Precision medicine through personalized biomarker study and genomic analysis
- Expanding IO platform with collaboration (PENTAMBODY; bispecific and more)

Beyond ICI Novel I-O Target approach

- Highlighting the dysfunction in the TME as a next chapter of immunotherapy
- Evaluating synergistic effects of novel Immunotherapy and Immune checkpoint inhibitor via clinical research collaboration with partners

Indication Expansion & Value creation

- Solid Mode of Action & latest Science based Indication expansion
- Targeting specific genetic alteration (e.g. TMB, EGFR, BRAF, etc.) as effective tissue agnostic treatments
- Maximizing our value through tissue-agnostic therapies

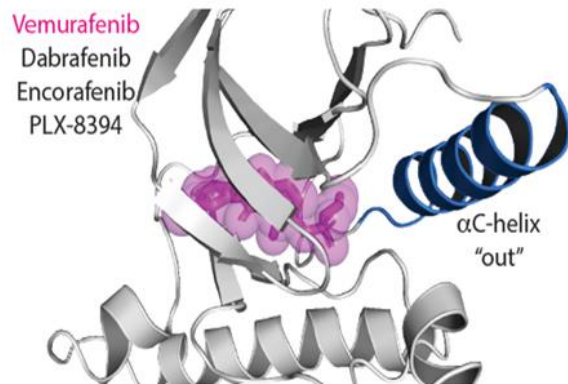
Targeting RAF mutation cancers: Belvarafenib

Highly personalized RAS MAPK therapies

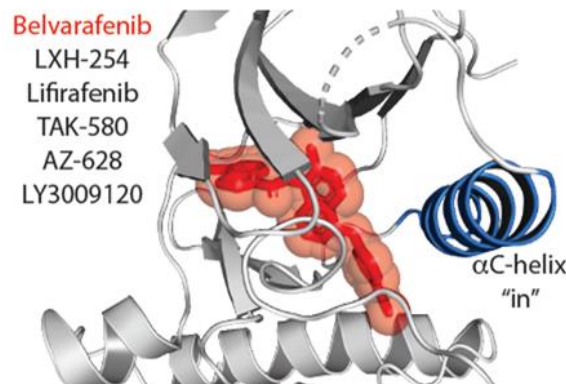
Genentech
A Member of the Roche Group



RAF monomer inhibitors α C "out"



RAF dimer inhibitors α C "in"



Nature | www.nature.com May 5, 2021

Article

ARAF mutations confer resistance to the RAF inhibitor belvarafenib in melanoma

<https://doi.org/10.1038/s41586-021-03515-1>

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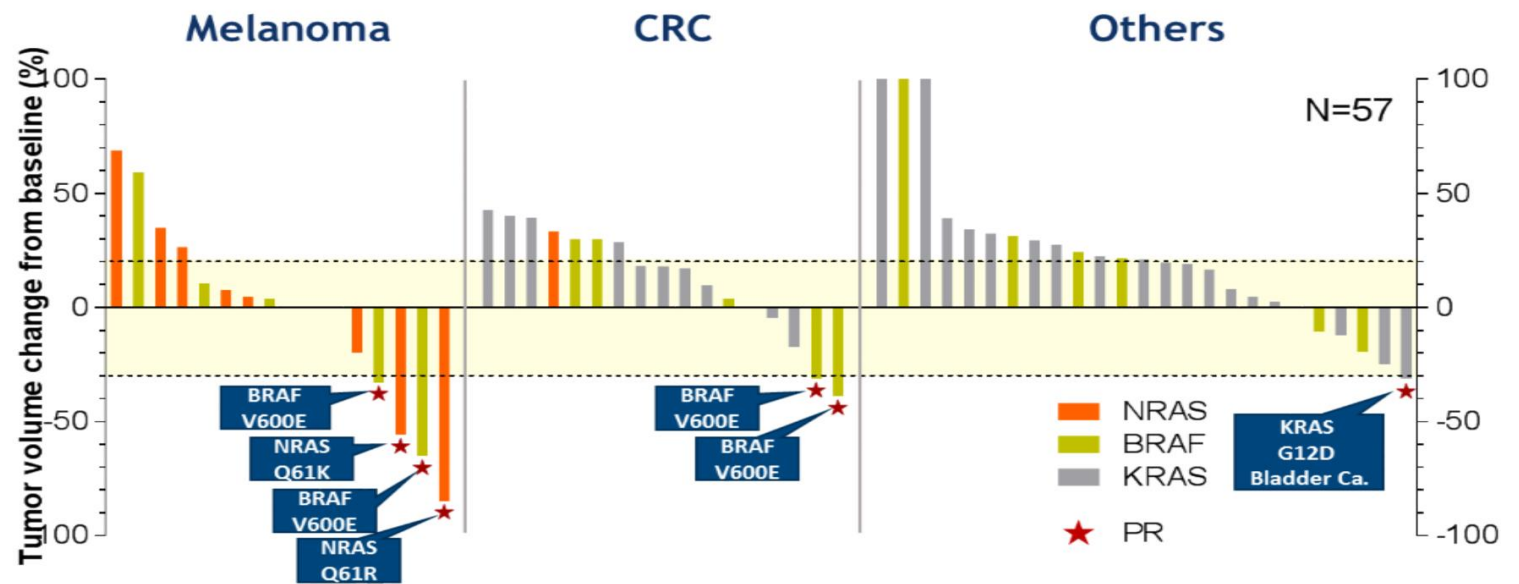
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Check for updates

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Targeting RAF mutation cancers: Belvarafenib

Belvarafenib exhibits clinical activity in BRAF V600E and NRAS mutant tumors



Others include gallbladder, bladder, nephroblastoma, thymic, endometrial, PDAC, malignant neoplasm, NSCLC, breast, cholangiocarcinoma Dr. Tae Won Kim, ASCO 2019; Hanmi Pharm.

TAPSTRY (Tumor-Agnostic Precision Immuno-Oncology and Somatic Targeting Rational For You) clinical study by Roche

Targeting Tumor Immunology through Internal and External Expertise



AI-based T cell Target



Standigm

✓ **Research Development &
Collaboration for AI Platform**
(22-JAN-2020)

- Standigm AI platform (Standigm BEST®)
- AI-based lead optimization

Immune Modulating Target



RAPT
(CCR4 inhibitor)

**FLX475 Rights of
Korea & China**
(03-DEC-2019)



MERCK

KEYTRUDA Supply
(15-SEP-2020)

✓ **Combination Therapy :
FLX475 + KEYTRUDA**

GC¹⁾ Ph2 in Korea & China 1Q 2021

Tumor Microenvironment Target

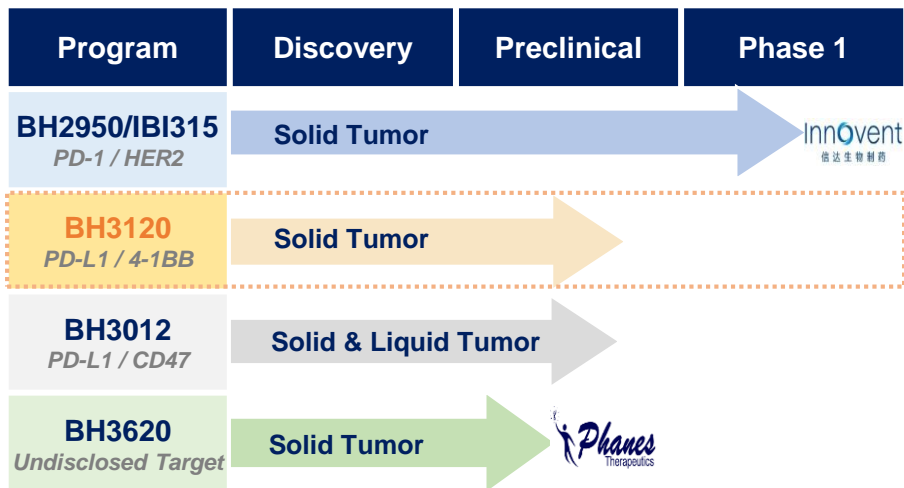
✓ **In-house Candidates :
Open to Collaboration (New target)**

TME inhibitors
(DisC, PreC)

✓ **Seeking new research
collaboration using
PENTAMBODY™**



Bispecific Antibody Platform Technology

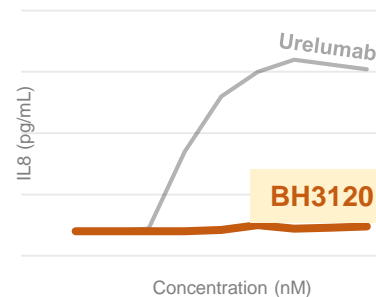


PENTAMBODY Platform Technology

- Maximized Therapeutic Synergies
- Enhanced Stability and Manufacturability
- Safe and Stable Profile in Human

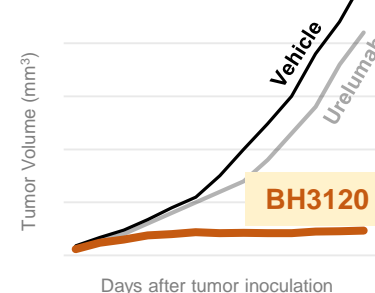
BH3120 (PD-L1 / 4-1BB) Safety and Efficacy In-vivo results

T cell Activity Without Cancer



In-vivo Efficacy in B16F10

(B16F10: Melanoma)



Differentiated Bispecific Antibody Program

- T-cell activation only with the presence of cancer cells
- Significantly improved liver toxicity profile compared to Urelumab
- Shown promising efficacy in solid tumor cell lines

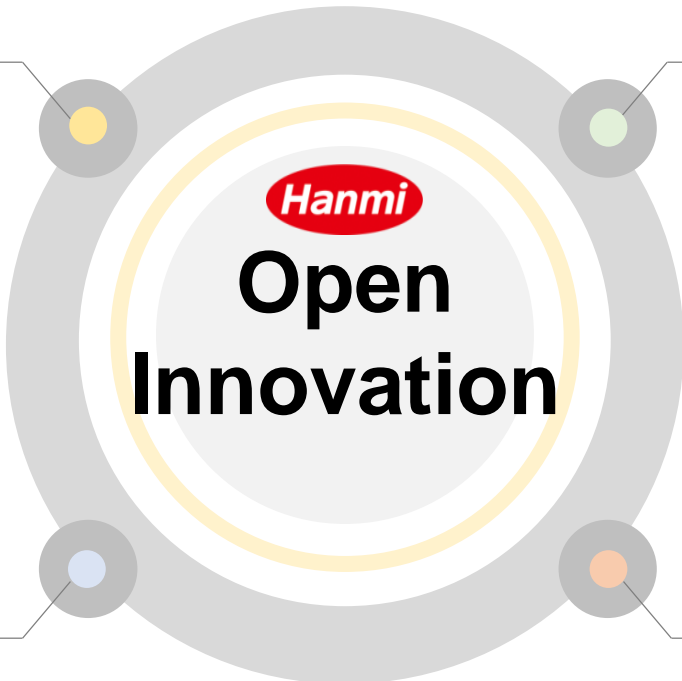
Strive to access external talents and resources

Immuno -Oncology

- ✓ First-in-class
- ✓ AI for drug discovery
- ✓ Precision medicine

Inflammation & Fibrosis

- ✓ First-in-class



Open Innovation















- ✓ Undruggable Target Approach
- ✓ AI & digital therapeutics

New Modality Platform

- ✓ Neuro-inflammation
- ✓ First-in-class
- ✓ Co-development collaboration

CNS & Rare Disease

Innovative R&D Pipeline (June 2021)

	Pre-Clinical	Phase 1	Phase 2	Phase 3 / Registration
8 Obesity/NASH Diabetes	HM14320 (LAP^SGlucagon Combo) Obesity/NASH/Diabetes	HM15136 (LAP^SGlucagon Analog) Obesity	Efinopegdutide (LAP^SGLP/GCG) NASH 	Efpeglenatide (LAP^SExd4 Analog) Diabetes
	HM14220 (LAP^SInsulin Combo) Diabetes	HM12460A / HM12470 (LAP^SInsulin) Diabetes	HM15211 (LAP^STriple Agonist) NASH	
	HM12480 (LAP^SInsulin148) Diabetes			Under BLA/NDA Review
12 Oncology	HM97662 (EZH1/2 Dual Inhibitor) Solid tumors / Hematology malignancies	Belvarafenib (Pan-RAF Inhibitor) Solid tumor 	Poziotinib (Pan-HER Inhibitor) NSCLC & Breast cancer 	Rolontis® (Eflapegrastim) Neutropenia 
	BH3620 (Undisclosed BsAb) Targeted immuno-oncology 	HM43239 (FLT3 Inhibitor) AML	Oratecan (Oral Irinotecan + Encequidar) Solid tumor <i>*Phase 2 Planned</i> 	Oraxol (Oral Paclitaxel + Encequidar) Metastatic Breast cancer 
	BH3120 (PD-L1/4-1BB BsAb) Solid tumor	IBI315/BH2950 (PD-1/HER2 BsAb) Targeted immuno-oncology 	Oradoxel (Oral Docetaxel + Encequidar) Solid tumor <i>*Phase 2 Planned</i> 	
5 Rare Diseases			FLX475 (CCR4 inhibitor) Gastric Cancer  	
	HM15450 (LAP^SASB) Mucopolysaccharidosis	Luminate® (Integrin inhibitor) Retinitis Pigmentosa 	HM15136 (LAP^SGlucagon Analog) Congenital hyperinsulinism	
			HM15912 (LAP^SGLP-2 Analog) Short bowel syndrome	
3 Others			Efpegsomatropin (LAP^ShGH) GH deficiency	
			Luminate® (Integrin inhibitor) Diabetic Macular Edema 	
			HM71224 (BTK Inhibitor) Autoimmune/Allergic diseases	
			Oraxol (Oral Paclitaxel + Encequidar) Angiosarcoma 	



“Creating the future together”



Thank you!