

2021 KPBMMA Conference
with MIT ILP



Accelerating Innovative Oncology Drug Development through Collaboration

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Lauren Young-Mi Lee

Senior Vice President, Head of Global R&D Innovation

Hanmi

A Pharmaceutical
Powerhouse
in Korea

25%
R&D Staffs

19%
Of Revenue

3
Manufacturing
Capacity

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

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

Drive R&D productivity by Manufacturing capacity

Global Standard
Quality & Specification



Biopant
Biologics
•RNA/DNA
•Protein

Fine Chemical
APIs
•Nucleotide
•Peptide
•PEG

Paltan
Finished Product
•Oral Dosage

Strategic Priorities in R&D

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

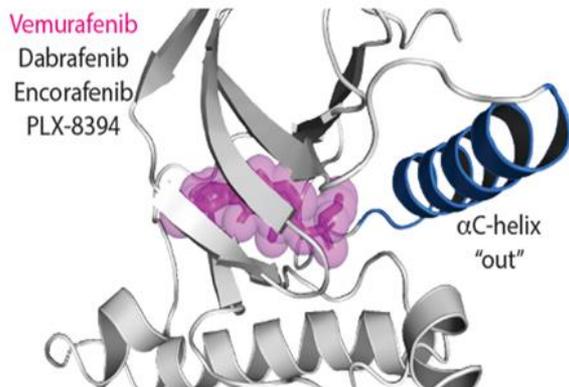
Indication Expansion & Value creation

- 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

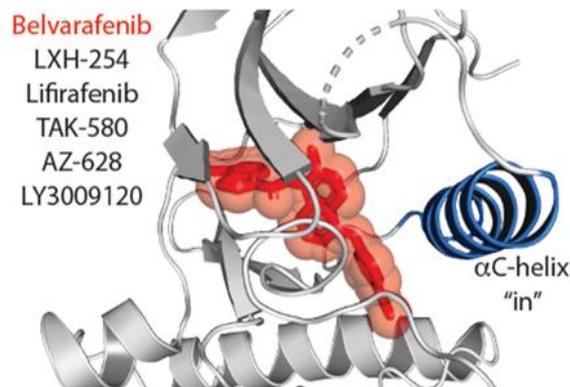
Targeting RAF mutation cancers: Belvarafenib

Highly personalized RAS MAPK therapies

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>

Ivana Yeri¹, Frances Shanahan¹, Jeeyun Lee^{2,13}, Yong Sang Hong¹, Sang Joon Shin^{5,10}, Amanda R. Moore¹, Jawahar Sudhamsu⁶, Matthew T. Chang¹, Inhwon Bae⁶, Darlene Dela Cruz², Thomas Hunsaker⁹, Christian Kljijn¹, Nicholas P. D. Liu⁹, Eva Lin¹, Scott E. Martin¹, Zora Modrusan¹⁰, Robert Piskol¹, Ehud Segal¹, Avinashnarayan Venkatanarayan¹, Xin Ye¹, Jianping Yin¹, Liangxuan Zhang¹, Jin-Soo Kim¹², Hyeong-Seok Lim¹², Kyu-Pyo Kim¹, Yu Jung Kim¹⁴, Hye Sook Han⁵, Soo Jung Lee¹⁵, Seung Tae Kim¹, Minkyu Jung¹, Yoon-hee Hong¹, Young Su Noh¹, Munjeong Choi¹, Oakpil Han¹, Malgorzata Nowicka¹, Shrividhya Srinivasan¹, Yibing Yan¹, Tae Won Kim^{12,13} & Shiva Malek^{12,13}

Received: 16 August 2020

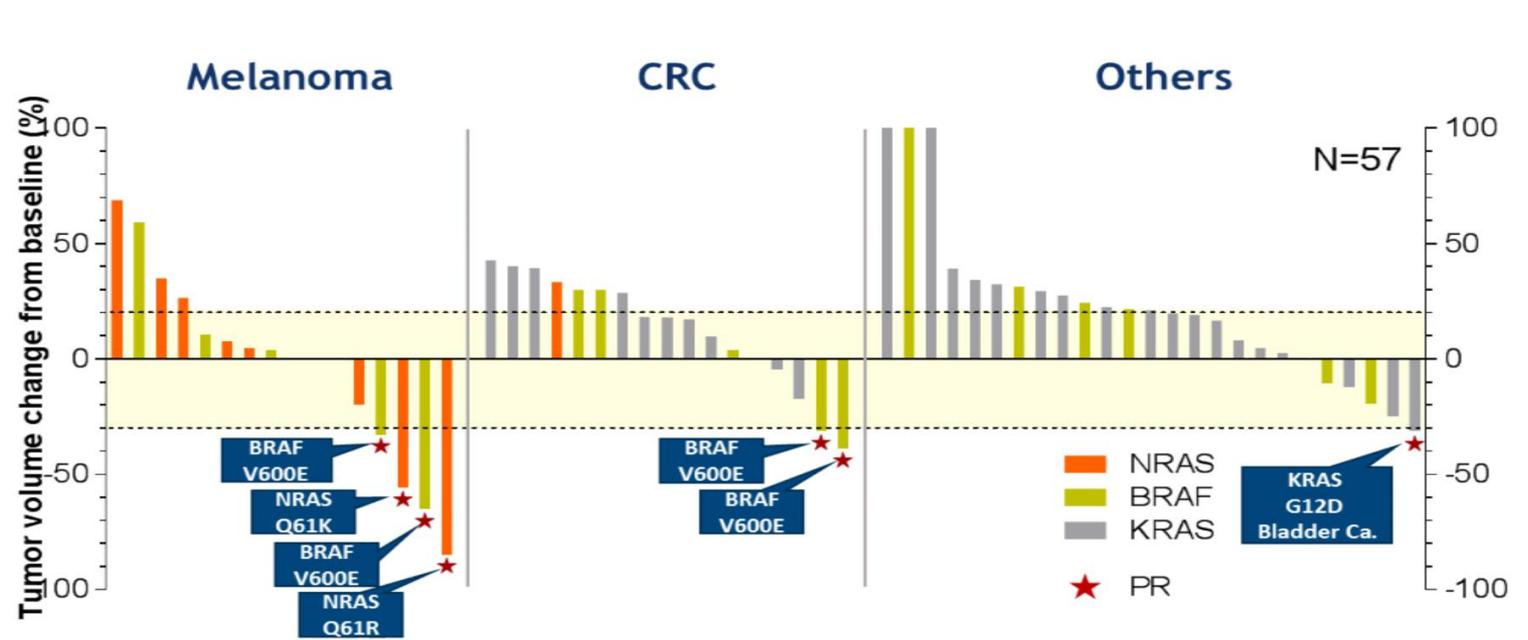
Accepted: 5 April 2021

Published online: 05 May 2021

Check for updates

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)**

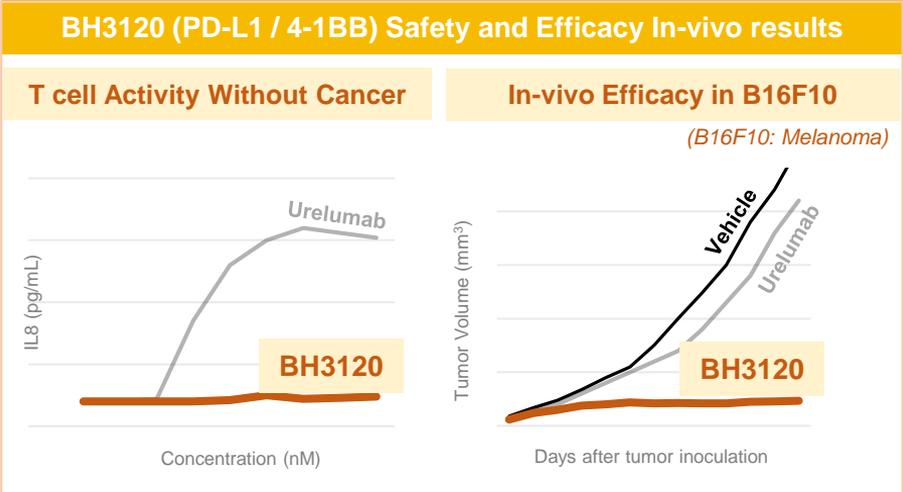
TME inhibitors
(DisC, PreC)

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



Bispecific Antibody Platform Technology

Program	Discovery	Preclinical	Phase 1
BH2950/IBI315 PD-1 / HER2	Solid Tumor →		
BH3120 PD-L1 / 4-1BB	Solid Tumor →		
BH3012 PD-L1 / CD47	Solid & Liquid Tumor →		
BH3620 Undisclosed Target	Solid Tumor →		



PENTAMBODY Platform Technology

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

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

Hanmi Open Innovation: Focused Area

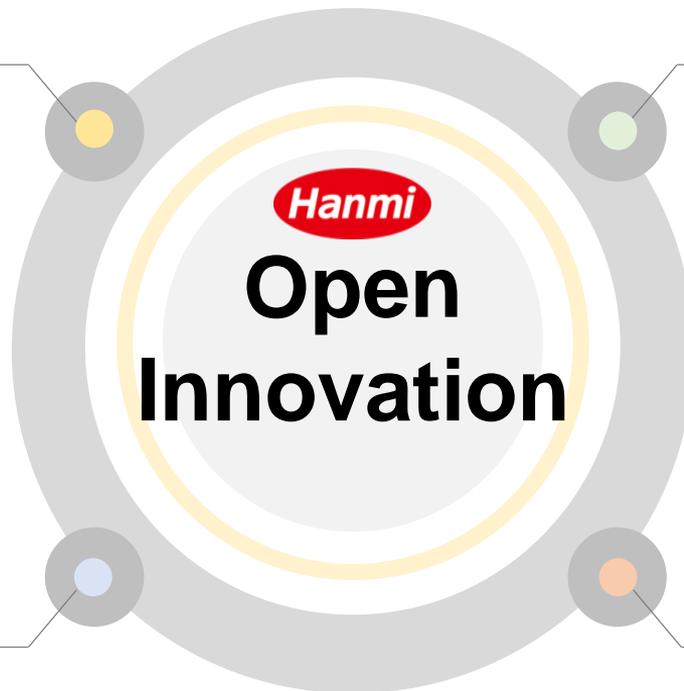
Strive to access external talents and resources

Immuno-Oncology

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

Inflammation & Fibrosis

- ✓ First-in-class



- ✓ Undruggable Target Approach
- ✓ AI & digital therapeutics

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

New Modality Platform

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	HM15450 (LAP^SASB) Mucopolysaccharidosis	Luminate® (Integrin inhibitor) Retinitis Pigmentosa	HM15136 (LAP^SGlucagon Analog) Congenital hyperinsulinism	
			HM15912 (LAP^SGLP-2 Analog) Short bowel syndrome	
			Efpegsomatropin (LAP^ShGH) GH deficiency	
			Luminate® (Integrin inhibitor) Diabetic Macular Edema	
			HM71224 (BTK Inhibitor) Autoimmune/Allergic diseases	
3 Others			Oraxol (Oral Paclitaxel + Encequidar) Angiosarcoma	



“Creating the future together”

Hanmi

Thank you!