Global Leader of Cancer Treatments

AUTOTELIC BIO

오토텔릭바이오

Oligonucleotide Anticancer New Drug Development Company

August 2021

Disclaimer

The purpose of this file is for the investment community to gain an understanding of our company, through information provided by Autotelic Bio Inc.

- This file contains forward looking statements based on the information available to our company at the present time. Since such projections do represent some risk and uncertainty, please be aware that a variety of factors may operate to produce final results that vary greatly from these projections. These projections are expressed with “forecast”, “forward looking”, “plan” and “tendency”.

- The content on this file other than past or present facts consists of plans, future projections, or strategies based on currently available information and includes risks and uncertainties. Actual results may vary materially from these projections due to factors including risks or uncertainties pertaining to the economic situation, market trends, or changes in the tax system or other regulatory regimes. The Company may alter or omit the content of this website without prior notice..

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Company Profile

Global Leader of Cancer Treatments

- **Establishment** In November 2015
- **Company Type** Foreign investment company, Autotelic Bio & Korean investors/ USA investors (under 10%)
- **Location** R&D Center) 303, Inno-valley A dong, 253 Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
  HQ) 194-41, Osongsaengmyeong 1-ro, Yeonje-ri, Osong-eup, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, Korea

Major Business

New Drug development focusing on cancer treatment

Global licensing, Market entry strategy and RA consulting

Innovative
Anti-Cancer New Drug
for unmet medical needs

IP Status

	Korea	Global
Grant	4	1
Apply	7	11

Major R&D Government Grant

Developing innovative new drug based on antisense oligonucleotide	Developing innovative new drug based on small molecule
ATB-301 ATB-320	ATB-330

Key History

Establishment 2015~2017

- 2015.11. Autotelic Korea Establishment (Foreign investment)
- 2017.9. ATB-101 Government R&D grant (Ministry of SMEs and Startups)
- 2017.9. **Corporate R&D center accreditation**

Growth Phase 2018~2020

- 2018.7. Investment agreement with TIPS
- 2018.7. ATB-301, Immuno-Oncology Government R&D grant (Ministry of SMEs and Startups)
- 2018.8. Angel investment
- 2018.9. **Pankyo R&D center Establishment**
- 2019. 1. ATB-101 Tech Transfer and Investment agreement with Jeil Pharm.
- 2019. 4. ATB-301 selected in “Pharm Navi” project by MFDS
- 2019. 5. TASO CMO agreement with ST Pharm
- 2019.10. Investment agreement with Aju Pharm & KODIT
- 2019.12. **Series A round** with Mega Investment & UTC Investment
- 2020. 1. Technology Innovation-Oriented Small and Medium Enterprise (Inno-Biz), (Ministry of SMEs and Startups)
- 2020. 2. **Series A round** with Stonebridge Ventures
- 2020. 4. ATB-301, R&D grant (Ministry of Trade, Industry and Energy)
- 2020.12. Strategic Investment with ST Pharm and other 2 Pharmaceutical companies

Active Phase 2021~

- 2021. 1. Clinigen(UK) ATB-301 Agreement
- 2021. 2. ATB-301 Phase 1b IND Approval
- 2021. 2. ATB-101 Phase 1 IND Approval

R&D Center Accreditation

Pipelines: Non-clinical stage
Series A and Strategic Investment Attract

Pipelines: Clinical Stage
Platform Technology: ASODE™

Autotelic Bio's Leadership

Tai KIM

<CEO; Business globalization/ Management>
- Boryung Pharm New drug (Kanarb) Global Business Team head
- Huya bioscience San Diego, Licensing part
- *Major success track record*
  Boryung Pharm, KT&G Life Science and DaeWoong Pharm's New drug license out

Charlie ROH

<VP; Business globalization/Management>
- GE healthcare Marketing
- Boryung Pharm Overseas Biz team
- *Major success track record*
  Crystal genomics, Ilyang Pharm and Boryung Pharm's new drug license out

James JUN M.D.

<VP; R&D advisor>
- Boryung Biopharma Development Team Head
- KT&G Life science President
- Boryung Pharm R&D Center team Head/Kanab BD Head
- *Major success track record*
  Boryung Pharm's New drug license out

Juneui PARK

<Executive Director; R&D / Head>
- JW CreaGene Research Institute, Genexine Clinical development team head
- Memorial Sloan-Kettering Cancer Center (NY), Research Associate (Dendritic cell, NKT cell)
- Roswell Park Cancer Institute (NY) Doctor, Biochemistry & Biophysics

Kyungwan NAM

<Director; R&D Strategy>
- SamJin Pharm. R&D Center, Pharmaceutical research head
- Boryung Pharm. R&D Center, Formulation research team leader CMC research & tech transfer of New drug (Kanarb)
- DaeWoong Pharm. R&D Center, Senior researcher

Changhee PARK

<Director; R&D / MediChem>
- Hanmi research center NCE/ICE discovery team Project Leader, Oncology pipeline discovery & development, Medicinal chemistry
- Chung-ang University, Ph.D., Pharmacy

Development Product

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Indication	Product			National Project	Partner	2020 (1Q 2Q 3Q 4Q) / 2021 (1Q 2Q 3Q 4Q) / 2022 (1Q 2Q 3Q 4Q) / 2023 (1Q 2Q 3Q 4Q) / 2024 (1Q 2Q 3Q 4Q)	Global Market
Oncology	ATB-301	Immune-targeting oncology new drug	TASO + IL-2 Immune-targeting dual function <Phase I in process>	* **Project supported by TIPS** *(2018.08~2020.07)* * **MFDS Pharm-Navi** *(2019.04~)* *__Project supported by Ministry of Trade, Industry and Energy__ *(2020.05~2021.12)*	CLINIGEN	IND → Pre-clinical; Phase I/Ib; Global L/O → Phase IIa; Phase IIb	3B USD
	ATB-320		Immune-targeting oncology new drug <Lead optimization>	* **Project supported by Government** *(2021.04~2023.12)*		Discovery; Pre-clinical; Phase I/IIa; Phase II	2B USD
	ATB-330		Immune target therapy			Discovery; Pre-clinical; Phase I	2B USD
	ATB-340		Immune target therapy			Discovery; Pre-clinical; Phase I	2B USD
IMD	ATB-101	Hypertension / Diabetes Mellitus	Scale up <Phase I in process>	* **Project supported by Government** *(2017.11~2018.12)* *(2019.07~2021.06)*	JEIL Firson	IND → Pre-clinical; Phase I; Phase III; Approval / Launch ★	1.5B USD

R&D Key Word_ASODE ™, Oncology , Immune target

Oncology

Immune target

ATB-301

ATB-320

Undruggable target

New

ASO

ASODE ™ Technology

AOC

Antibody

Oligonucleotide

Linker

* **A**ntibody-
Oligonucleotide
Conjugate

New

Immune target

ATB-330

AOC Linker

New

Small Molecules

ASO Target Delivery

ASODE ™ (AntiSenseOligo Development) Technology

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Target Search

Homo sapiens transforming growth factor beta 2 (TGFB2), transcript variant 1, mRNA

NCBI Reference Sequence: NM_001135599.4

FASTA Graphics

Go to:

ORIGIN

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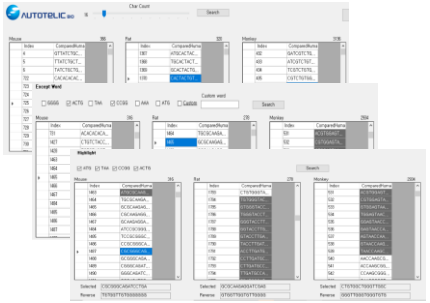
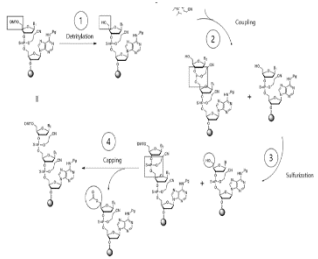
Selection

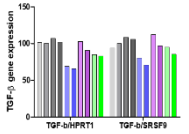


ASO Design/Manufacture

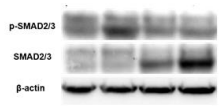
Seq No.1 5'-GGCCGATGCATTGCAACTAG-3'
Seq No.2 5'-AGCGATGGATTCGAACTAGA-3'



In-vitro



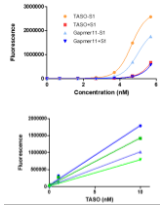
mRNA Level



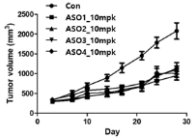
Protein Expression

Plasma Stability

In-vivo



PK (H-ELISA)



Xenograft model

Evaluation

Effective New Molecule

ASO Developmental Case

BioSpectator

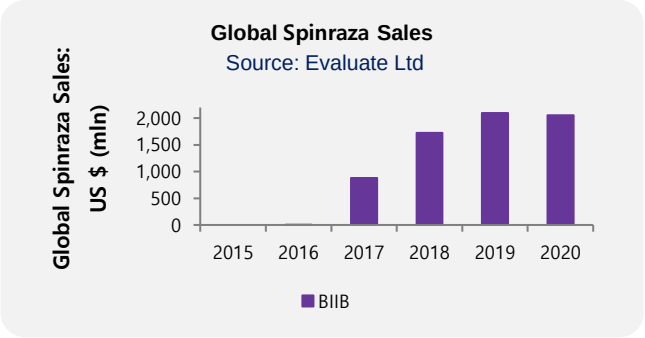
[BioS Letter] Evolving ASO, Global approval & Development Status?

2021-01-12 By UiJeong Lee, BIOSPECTATOR

ASO has been continuously developing from the first generation to the current third generation from 1978 when it was first discovered. The pre-modification (old generation) ASO had a limitation in that it was difficult to diffuse into cells due to its large size and charge, and was susceptible to nucleic acid degradation. However, at present, through chemical modification of ASO, immune response and off-target toxicity decreases, and enzyme stability and drug efficiency are increased, making it one step closer to commercialization of ASO therapeutics by supplementing the shortcomings. ~omitted~

Drug	Target	Indication	Company	Approval
Formivirsen (Vitravene ™)	CMV mRNA	CMV infection	Ionis	FDA (1998)
Mipomersen (Kynamro ™)	apo-B-100 mRNA	HoFH	Genzyme	FDA (2013)
Nusinersen (Spinraza ®)	SMN2 pre-mRNA	SMA	Biogen	FDA (2016), EMA (2017)
Inotersen (Tegsedi®)	TTR mRNA	hATTR	Ionis	FDA (2018), EMA (2018)
Eteplirsen (Exondys 51®)	exon 51	DMD	Sarepta	FDA (2016), EMA (2018)
Golodirsen (Vyondys 53™)	DMD pre-mRNA	DMD	Sarepta	FDA (2019)
Milasen	intron 6 spice acceptor cryptic site	CLN7	Boston Children's Hospital	FDA (2018) for a single patient

✦ **Spinraza (Spinal Muscular Atrophy) : $2 Bil in 2020**



✦ **Leqvio (Approved 2020, EU) : Exp $2 Bil in 2026**

Aggressive development of Combination Therapy

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Immune check point inhibitor + TGF-β inhibitor

MERCK Tilos THERAPEUTICS

acquire Tilos Therapeutics, a total of $733 million... "Potential to overcome PD-(L)1 drug resistance with LAP target antibody that inhibits Latent TGF-β"

Merck web-site

Merck, Inc. (MSD), a leader of immune check point inhibitor, has acquired antibodies; the second-generation **TGF-β drug**, targeting the latency-associated peptide (LAP).

In recent years, Merck has been aggressively acquiring a combined partner candidate to strengthen Keytruda's position as the first-line. Last month, Merck acquired Peloton Therapeutics, which develops HIF-2α inhibitors as a drug to treat kidney cancer with Keytruda, for a total of $ 2.2 billion. Which was announced a month later when the US Food and Drug Administration (FDA) approved combination of Keytruda and Pfizer's Inlyta ™ (axitinib) as first-line treatment. Evaluate Pharma estimates that in 2024, Keytruda will outstrip HUMIRA and raise $ 17 billion to become the world's best-selling drug (in the report of 2019.06).

nature

TGFβ attenuates tumour response to PD-L1 blockade by contributing to exclusion of T cells

Sanjeev Mariathansan, et al. 14 February 2018

therapeutic co-administration of **TGFβ-blocking** and anti-PD-L1 antibodies reduced TGFβ signalling in stromal cells, facilitated T-cell penetration into the centre of tumours, and provoked vigorous anti-tumour immunity and tumour regression.

Bristol Myers Squibb™ FORBIUS

Bristol Myers Squibb Completes Acquisition of Forbius

BMS News

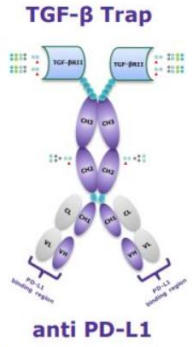
Bristol Myers Squibb (NYSE: BMY) today announced that it has successfully completed its transaction to acquire Forbius for their **TGF-beta program**, including its lead investigational asset AVID200, currently in Phase 1 for oncology and fibrosis.

future medicine
To morrow's science for today's clinician.

MERCK gsk

Merck, GSK to jointly develop novel immunotherapy 'bintrafusp alfa' for multiple difficult-to-treat cancers

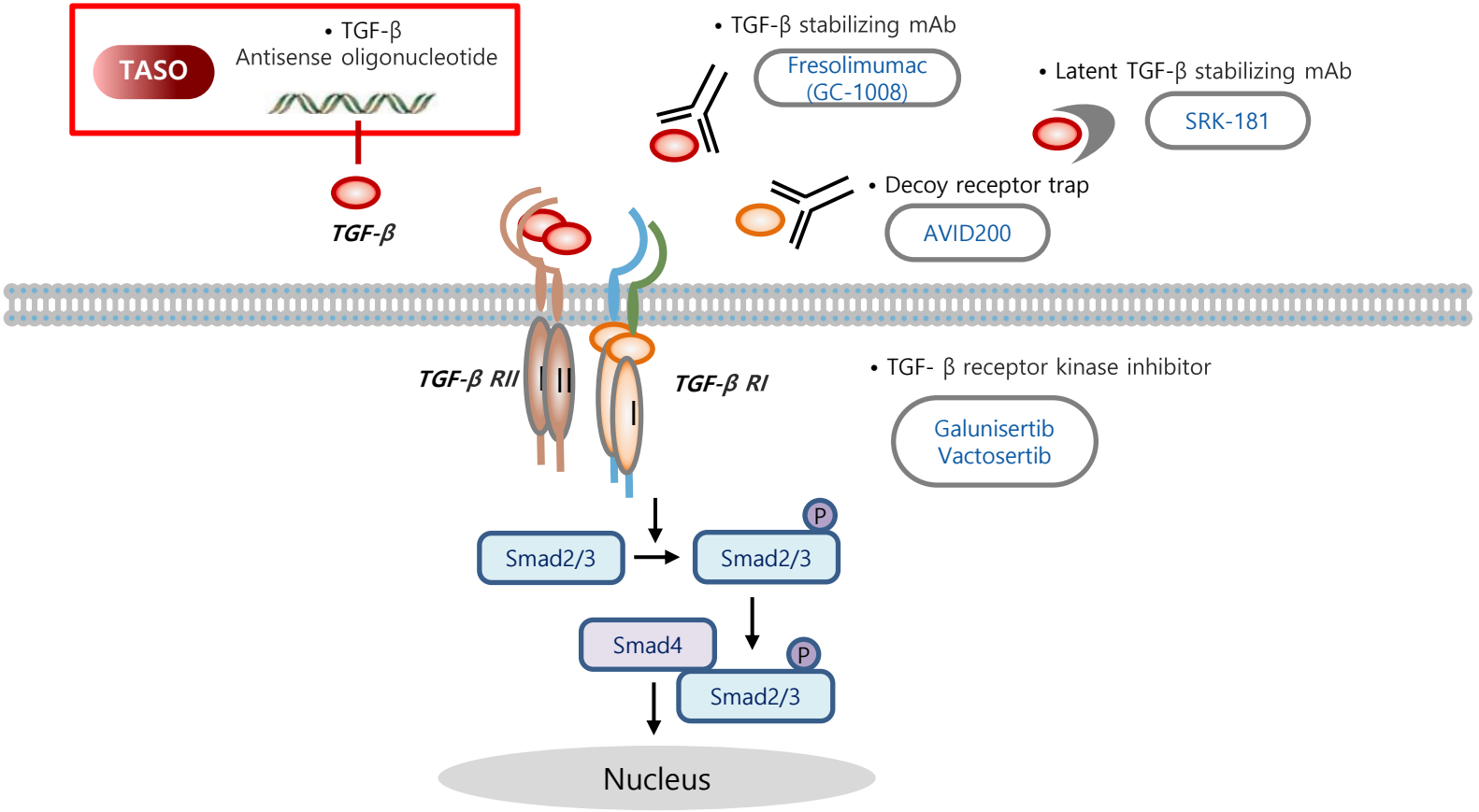
06 February 2019



European drug multinationals Merck KgaA and GSK Plc have jointly announced that they have entered into a global strategic alliance to jointly develop and commercialize M7824 (bintrafusp alfa), a novel immmuno therapy drug with potential to treat multiple difficult-to-treat cancers.

M7824 is designed to simultaneously target two immuno-suppressive pathways, transforming growth factor-β (TGF-β) trap and an anti-programmed cell death ligand-1 (PD-L1), that are commonly used by cancer cells to evade the immune system.

Competition status - Target of TGF-β



J Cancer Prev 25(4):213-222, December 30, 2020

ATB-301; Combination Therapy of TASO + IL-2

✦ TGF-β2 Targeting ASO ✦

18-mer Anti-sense Oligonucleotide new drug targeting human TGF-β2

- Designed based on the correlation between TGF-β overexpression and tumor progression
- Pre-&clinical efficacy data on single therapies for pancreatic cancer, melanoma, glioblastoma

In-vitro synergistic test
2019 ~ 2020

Autotelic Bio

Breast cancer cell line (MDA-MB-231, Hs578T, BT549), pancreatic cancer cell line (AsPC-1), lung cancer cell line (A549), melanoma cell line (Hs294T,A2058), colorectal cancer cell line (LS174T, HT29).

In-vivo synergistic test
2019 ~ 2020

Charles River, Chungbuk National Univ.

On humanized mouse (humanized mouse, NSG mouse model) using TNBC cell line (MDA-MB-231) and melanoma (A2058) xenograft model with TASO + IL-2

Patent granted
2020.10

Korean IP Office

Patent Approved: Anticancer Composition Comprising TASO and IL-2

Clinical P1b IND
2021. 01

MFDS

IND approved for phase 1 clinical trial in solid tumor

Clinical P2a
2022. First Q

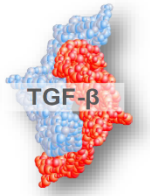
MFDS

Expect phase 2 clinical trial in solid tumor

TASO (TGF-β2 Targeting Anti-Sense Oligonucleotide)

TGF (Transforming Growth Factor)-β

- A dimeric structure protein with a M/W of 25,000
- An important factor for cancer growth and metastasis and acts as a protective factor for fibrosis and cancer.



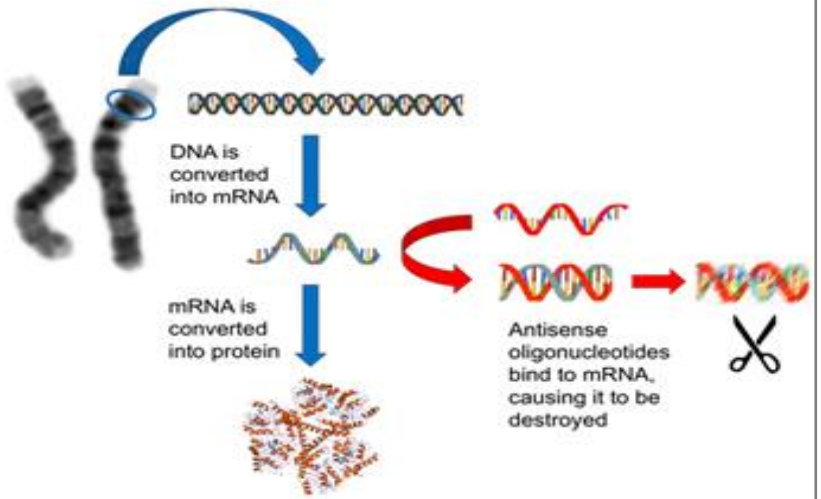
Isoforms 1, 2, 3

- **Tumor Growth**
- **Tumor Neo-Angiogenesis**
- **Metastasis**
- **Local Immunosuppression**
  - **Induction of suppressive immune cells** *(e.g. regulatory T-cells and myeloid-derived suppressor cells)*
  - **Suppression of proliferation, maturation and activity of immune cells** *(e.g. cytotoxic T-cells, natural killer cells, B-cells and dendritic cells)*

Efficacy and safety of monotherapy are confirmed for pancreatic cancer, melanoma, and glioblastoma

Anti-Sense Oligonucleotide

- Synthesized single stranded nucleic acid polymer
- Regulate protein expression by specifically complementary binding to the target mRNA sequence



How antisense therapy works. Various public domain images. Author provided

Interleukin-2 (IL-2)

Interleukin-2 (IL-2)

IL-2

High Dose

Strong anti-tumor activity
- Stimulating effector T-cells and NK cells

Toxicity
- Vascular leak syndrome
- Severe hypotension

Recombinant IL-2 (rIL-2; aldesleukin)

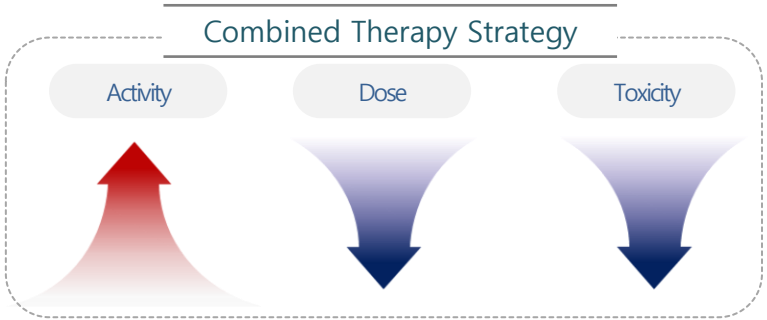
✦ First FDA approved potent immunostimulatory cytokine anticancer drug

- Promotes CD8+ T cells and NK cells
- FDA approval: Metastatic renal cell carcinoma (1992), Metastatic melanoma (1998)
- However, **IL-2 should be given in a high dose**, which will inevitably **result in severe toxicities** including vascular leak syndrome (VLS), pulmonary edema, hypotension, and heart toxicities

✦ The recent big deals around IL-2

	Funder	Partner	Up-front funding	Technology	Date announced
Development	BMS	Nektar Therapeutics	$ 1 billion	Pegylated IL-2	Feb. 2018
	Eli Lilly	Nektar Therapeutics	$ 150 million	Pegylated IL-2	Jul. 2017

	Acquirer	Target	Price	Technology	Date announced
Acquisition	Merck & Co.	Pandion Therapeutics	$ 1.85 billion	Antibody-coupled IL-2	Feb. 2021
	Sanofi	Synthorx	$ 2.5 billion	Engineered IL-2	Dec. 2019



Mode of Action for Combination; Rationale

TASO
Weakening defensive power of cancer cell by suppressing TGF- β

TGF-β pathway genes ON
T cell exclusion from Tumor

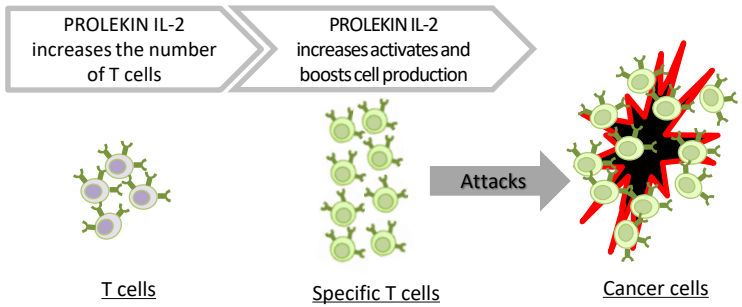
TGF-β pathway genes OFF
T cell infiltration into Tumor

Immunity. 2018 Apr 17; 48(4): 626–628. doi: 10.1016/j.immuni.2018.03.037

Increased number of T cells infiltrate into Tumors

Combination Therapy

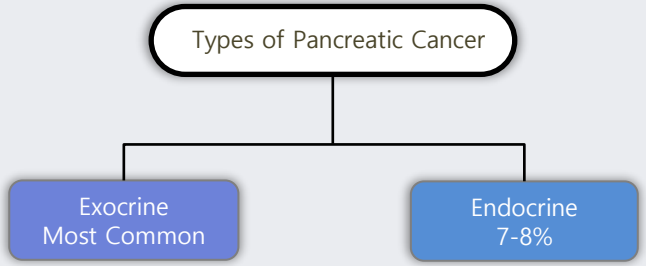
IL-2
Strengthen T cell's attack to cancer cell



Programming Immunity: Defense to Offense AUG 19, 2011 By Miriam Lueck Avery

Target Market

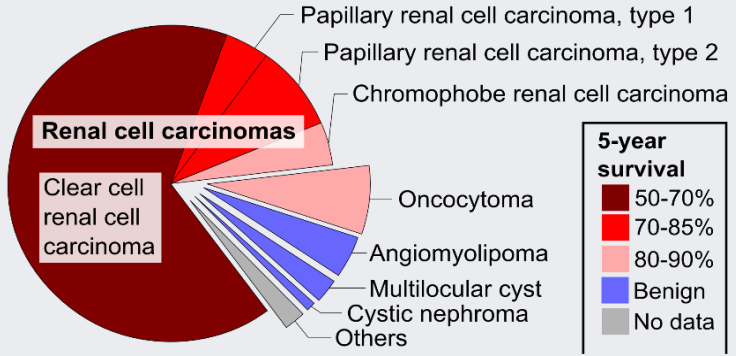
Pancreatic Cancer



- One of cancer with lowest survival rate: 2% to 9% (5-years)
- Expected market size: Market was valued at 1.7B USD in 2015. With CAGR of 8%, market is expected to be **~ 4.2B USD in 2025**

- **1.5B USD** (More than 25% of global PC market)

Renal Cell Carcinoma and etc.



- Expandable indication market: **42B USD**
- RRC 6B USD (expect in 2025), Breast cancer 22B USD (expect in 2023), NSCLC 8B USD, Pancreatic cancer 2.5B USD, Melanoma 3.5B USD and etc.

- **4B USD** (More than 10% MS of global RCC, Breast cancer, Lung cancer market)

Expected Sales

- Targeted to achieve over 150M USD in annual revenue through the successful clinical trial & the product release of ATB-301
- Expected to receive more than 300M USD as upfront and milestone when licensing out after successful efficacy and safety P1 study just for pancreatic cancer and renal cell carcinoma only
- Larger market is expected when indication expands to RCC, Breast Cancer (TNBC) and Melanoma

TGF-β Target Developmental Trend

The possibility of overcoming the patients without immune anticancer drug responses

Dec. 2017 — **Confirmation of overexpression of TGF-β gene related to PD-L1 resistance**

Roche's Genentech found main biomarkers during their Tecentrig trial in Bladder cancer and announced the finding at the European Society for Medical Oncology (ESMO)

June. 2018 — **M7824, a novel bifunctional anti-PD-L1/TGF-β trap fusion protein**

Merck KGaA announced M7824's clinical trial results on NSCLC at American Society of Clinical Oncology (ASCO) that ORR = 40.7% was observed in the patients with ≥1% and ORR = 71.4% was observed in the patients with high PD-L1+ expressing tumors

Feb. 2019 — **Merck KGaA and GSK Plc entered into a global strategic alliance to jointly develop and commercialize M7824**

With Upfront payment of €300 Mil, Development milestone up to €500 Mil, and Approval & Commercial milestone up to €2.9 Bil, the total deal value is €3.7 Bil (~ $4.2 Bil)

June. 2019 — **Merck acquires Tilos Therapeutics' 'TGF-β inhibitor'**

A total of $733 mil spent to overcome PD-(L)1 drug resistance with LAP target antibody that inhibits Latent TGF-β. It is differentiated in that the existing TGFβ only inhibits that are already in activated state.

Aug. 2020 — **BMS acquires a Canadian biopharmaceutical company Forbius**

Forbius has been focusing on developing a portfolio of potent highly selective TGF-β 1 and 3 inhibitors.
It is believed that selective inhibition of TGF-β 1 and 3 can improve anticancer effects while exerting synergistic effects with immunotherapy drugs.

Competition status - Differentiation point

Combination therapy of TGF-β ligand / receptor inhibitor and Immunotherapy are under active clinical trial phases

Type	Molecules	Developer	Target	Status	Study Start	Remarks
TGF-β **Ligand** Inhibitor	ATB-301 (TASO+IL-2)	Autotelic Bio	TGF-β2	Phase 1	2021.02	• *in-vivo* synergistic effect confirmed
	M7824 (Bintrafusp alfa)	EMD serono/GSK	TGF-β X PD-L1 mAb	Phase 3	2018~	• Failed Gallbladder Cancer, NSCLC clinical trials, but other 47 clinical trials are active
	SAR439459	Sanofi	Anti-TGFβ mAb	Phase 1	2021. 02	• Combi with Libtayo (Cemiplimab, anti PD-1)
	SRK-181	Scholar Rock	Anti-TGFβ mAb	Phase 1	2020.04	• Combi with anti-PD-(L)1
	AVID200	BMS	TGFβ 1,3	Phase 1	2019.01	• Combi with Opdivo (nivolumab, PD-1, BMS) • 2020, Acquired Forbius
	TLS-010	MSD	Anti-Latent TFG β	Preclinical	-	• 2019, Acquired Tilos Therapeutics • Expected to combi with Keytruda (pembrolizumab)
TGF-β **Receptor** Inhibitor	Vactosertib (TEW-7197)	MedPacto	TGF-βRI	Phase 2	2020. 12	• Combi with Keytruda (pembrolizumab) on PD-L1 positive NSCLC
	LY3200882	Eli Lilly	TGF-βRI	Phase 1		• Combi with Capecitabine on TGF-β positive colon cancer

ATB-101: Hybrid New Drug Candidate

✦ Hypertension + Diabetes Hybrid New Drug ✦

- Provides dose convenience to patients by developing Hybrid New Drug which treats hypertension and diabetes concurrently having the biggest market shares in global pharmaceutical market
- Key features
  - Statistically improved anti-hypertensive effects were seen at a GLP site. (4 week study)
  - Proven improved efficacy of hypotensive effect in clinical trials will allow higher price
  - Hybrid New Drug suitable to go global

In-vivo Complete
2017 ~ 2018

Biotoxtech

· Non clinical efficacy study at a GLP institute confirmed synergistic effect

Formul/Toxi Complete
2018 ~ 2020

Chungbuk National Univ.
Biotoxtech

· Formulation completed
· Toxicology -4 week dose response study completed
· 13 week repeated dose toxicity study completed

Patent Granted
2019.01, 2020.07

Korean IP Office

· Medicinal Composition Comprising SGLT-2 Inhibitor and Angiotensin Receptor Blocker
· Pharmaceutical Composition Having Improved Stability

2 Patents registered in Korea

Clinical P1 IND
2021. 02

MFDS

· **Phase 1 (DDI) clinical trial** in healthy subjects
  - **IND Approved**
  - **Site Initiated**

· **Phase 1 (PK) clinical trial** in healthy subjects
  - **IND Approved**
  - **Site Initiated**

Clinical P3
2021. Second half

MFDS

Phase 3 clinical trial

New Drug R&D & Global BD Ability

※ Borad Directors of Autotelic Bio **supervise successful R&D and commercialization of ND** in the domestic and global markets.

Business Globalization

CEO, Tai KIM
- Boryung Pharm(Kanab), DaeWoong Pharm's (IMD) license out

VP, Charlie ROH
- Crystal genomics, Ilyang Pharm and Boryung Pharm's NCE license out

Manager, Jin LEE, Assistant Manager, Peter UM
- Ilyang NCE(Noltec, Supect) license out

Clinical Research Strategy

VP, James(Yongkwan) Jun, MD
- **Pharmedix & Pharvis** pharm. President, VP
- **KT&G Life science** President
- **Boryung** Pharm R&D Center team Head/Kanab BD Head(VP)

ND Business record

√ **Kanab** : Domestic S/F **100 billion Won** '2020, Export to **51 countries**

√ **Noltec** (PPI) : Domestic S/F **35 billion Won**, License out to **37 countries**

√ **Supect** (AntiCancer) : Domestic S/F **5.5 billion Won**, License out to **19 countries**

Discovery and Synthesis

Director, Changhee PARK, Ph.D
- **Hanmi** research center NCE/ICE discovery team Project Leader
- Discovery and development of New anticancer drug candidates
- Participation in the development of **RAF inhibitors** (Genentech license out, '2017)
- Participation in the development of **BTK inhibitors** (Lilly license out, '2015)

Non-clinical effect, MOA

Director R&D Head, Juneui PARK, Ph.D
- **JW CreaGene** Research Institute**, Genexine** Clinical development team head
- Participation in the development **Dendritic Cell Therapy**
- Participation in the development **Gene Therapy** (Simcere license out, '2015)
- Participation in the development **Biologics Therapy** (I-Mab license out, '2017)

Establishment of Manufacturing process and Quality standards (CMC)

Director, Kyungwan NAM, Ph.D
- **SamJin** Pharm. R&D Center, Pharmaceutical research head
- **Boryung** Pharm. R&D Center, Formulation research team leader CMC research & tech transfer of NCE (Kanarb & FDC)

Press Release

Autotelic Bio deals with Clinigen for supply of IL-2 'Proleukin' (Jan. 2021)

2021-01-14 By Sungmin Kim, BIOSPECTATOR

Deal for supplying IL-2 'Proleukin' with English Biopharmaceutical Company, Clinigen...Plan to initiate phase1b clinical trials of IL-2 combo with Oligonucleotide TGF-β2

Autotelic Bio announced that they have entered into an agreement with Clinigen Group, the British global pharmaceutical product and services company, January 14th, for the supply of IL-2 for investigational purposes.

Autotelic Bio is planning to proceed the local (Korea, Republic of) clinical phase 1b of ATB-301 (TGF-β2 inhibition & T-Cell activation; Immuno-Target Dual Action Onco-therapeutic) which is an investigational anticancer drug candidate with the potential for dual function of immune targets. Where TGF-β2 inhibitors weaken the immune avoidance mechanism of cancer cells and IL-2 enhances the attack power of T cells.

Autotelic Bio-Jeil Pharm Co-development Agreement (Jan. 2019)

2019-01-30 By Byeongchul Noh, DAILYPHARM

▲ 성석제 제일약품 사장(왼쪽에서 네 번째)과 김태훈 오토텔릭바이오 대표(왼쪽에서 다섯 번째)를 비롯한 관계자들이 계약 체결 후 기념 촬영을 하고 있는 모습.

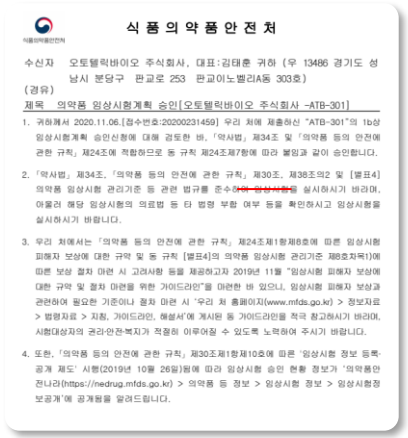
On the 30th, Jeil Pharm announced that it plans to enter co-development and technology transfer contract for Autotelic Bio's new drug for hypertension/diabete (ATB-101), and to conduct global clinical trials from the second half of this year. Jeil Pharm has exclusive sales rights in Korea, China, and Japan, and Autotelic Bio has global exclusive sales rights, including the United States.

ATB-101 is an improved drug candidate that can replace the hydrochlorothiazide hypertension combination drug market and is evaluated as having high potential for growth. Autotelic Bio will receive a down payment of 2.2 billion won and milestones from Jeil Pharm through this joint development and technology transfer contract. The total contract size is about 20 billion won.

Press Release

Autotelic Bio, Immuno-targeted anticancer drug “Approved by the MFDS for Phase 1b” (Feb, 2021)

2021-02-17 By Sungmin Kim, BIOSPECTATOR



식 품 의 약 품 안 전 처

수신자 오토텔릭바이오 주식회사, 대표:김태훈 귀하 (우 13486 경기도 성남시 분당구 판교로 253 판교이노밸리A동 303호)

(경유)

제목 의약품 임상시험계획 승인[오토텔릭바이오 주식회사 -ATB-301]

1. 귀하께서 2020.11.06.[접수번호:20200231459] 우리 처에 제출하신 "ATB-301"의 1b상 임상시험계획 승인신청에 대해 검토한 바, 「약사법」 제34조 및 「의약품 등의 안전에 관한 규칙」 제24조에 적합하므로 동 규칙 제24조제7항에 따라 붙임과 같이 승인합니다.

2. 「약사법」 제34조, 「의약품 등의 안전에 관한 규칙」 제30조, 제38조의2 및 [별표4] 의약품 임상시험 관리기준 등 관련 법규를 준수하여 임상시험을 실시하시기 바라며, 아울러 해당 임상시험의 의료법 등 타 법령 부합 여부 등을 확인하시고 임상시험을 실시하시기 바랍니다.

3. 우리 처에서는 「의약품 등의 안전에 관한 규칙」 제24조제1항제8호에 따른 임상시험 피해자 보상에 대한 규약 및 동 규칙 [별표4]의 의약품 임상시험 관리기준 제8호차목1)에 따른 보상 절차 마련 시 고려사항 등을 제공하고자 2019년 11월 "임상시험 피해자 보상에 대한 규약 및 절차 마련을 위한 가이드라인"을 마련한 바 있으니, 임상시험 피해자 보상과 관련하여 필요한 기준이나 절차 마련 시 '우리 처 홈페이지(www.mfds.go.kr) > 정보자료 > 법령자료 > 지침, 가이드라인, 해설서'에 게시된 동 가이드라인을 적극 참고하시기 바라며, 시험대상자의 권리·안전·복지가 적절히 이루어질 수 있도록 노력하여 주시기 바랍니다.

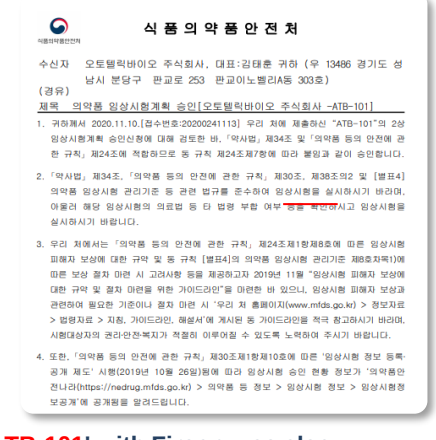
4. 또한, 「의약품 등의 안전에 관한 규칙」 제30조제1항제10호에 따른 '임상시험 정보 등록·공개 제도' 시행(2019년 10월 26일)됨에 따라 임상시험 승인 현황 정보가 '의약품안전나라(https://nedrug.mfds.go.kr) > 의약품 등 정보 > 임상시험 정보 > 임상시험정보공개'에 공개됨을 알려드립니다.

Evaluation of safety and efficacy of “ATB-301 (TGF-β2 inhibitor + IL-2)” immuno-targeted anticancer on solid cancer....” Based on the results, specific indication for Phase 2 will be studied”

Autotelic Bio announced on the 17th that it has received IND approval from the Ministry of Food and Drug Safety for the clinical trial phase 1b of “ATB-301,” a candidate for immuno-targeted anticancer drug. In addition, it was announced that ATB-301 had obtained a patent for anticancer use and composition.

Autotelic Bio, a new drug for “Hypertension + Diabetes combination” “IND approval” (Feb. 2021)

2021-03-02 By Sungmin Kim, BIOSPECTATOR



식 품 의 약 품 안 전 처

수신자 오토텔릭바이오 주식회사, 대표:김태훈 귀하 (우 13486 경기도 성남시 분당구 판교로 253 판교이노밸리A동 303호)

(경유)

제목 의약품 임상시험계획 승인[오토텔릭바이오 주식회사 -ATB-101]

1. 귀하께서 2020.11.10.[접수번호:20200241113] 우리 처에 제출하신 "ATB-101"의 2상 임상시험계획 승인신청에 대해 검토한 바, 「약사법」 제34조 및 「의약품 등의 안전에 관한 규칙」 제24조에 적합하므로 동 규칙 제24조제7항에 따라 붙임과 같이 승인합니다.

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A contract for co-development of 'ATB-101' with Firson was also announced....Firson secured domestic sales right

Autotelic Bio announced on the 2nd that the new chronic disease drug 'ATB-101', has been approved by the Ministry of Food and Drug Safety for the Phase 1 Clinical Trial (IND). In addition, on the same day, it announced the signing of a co-development contract with Firson. Autotelic Bio's new drug ATB-101 is the world's first candidate to simultaneously treat diabetes and hypertension and has proven synergistic effects in animal model, and based on the results, a composition patent was also obtained in January 2019.

Key Members of Mgmt/BD & Finance

Dept	Name	Position	Education(Major)		Career	Job Description	Joined
			Major	Degree			
Mgmt / Global Business	Tai Kim	CEO	Pharmacology	Completed doctoral course (pharmacist)	2015 ~ Present Autotelic Bio CEO 2014 ~ 2015 HCC KOREA President 2008 ~ 2014 Boryung Pharm New Drug Kanarb Global Business Team Leader 2008 ~ 2008 Huya Bioscience SanDiego, USA	Top Management	2015.11
	Charlie Roh	VP	Biology	Bachelor	2017 ~ Present Autotelic Bio VP(Global Business) 2008 ~ 2017 Pharmaphenix _President (Il-yang, Crystal Genomics, Ahngook New Drug L/O) 2006 ~ 2008 GE healthcare Marketing 2003 ~ 2006 Boryung Pharm Global Business	Global Business Local Business	2017.09
	Jin Sung Lee	Manager	Anatomy and Cell Biology	Bachelor	2019 ~ Present Autotelic Bio Business Development Manager 2014 ~ 2019 Il-yang Pharm. Oversea Deparrment, BD team New Drug L/O; Radotinib & Ilaprazole	Global Business Local Business	2019.02

Key Members of R&D Center

Dept	Name	Position	Education(Major)		Career	Job Description	Joined
			Major	Degree			
R&D Head	Juneui Park	Director, R&D Head	BioChemistry/ Biophysical Pharmacy	Doctor (Pharmacist)	2018 ~ Present Autotelic Bio Head of Research Center 2016 ~ 2018 Genexine Clinical Development Team Head, Protein Therapeutic, Gene Therapy Development 2012 ~ 2016 JW CreaGene Research Institute Team Leader, Dendritic Cell Therapy Development 2004 ~ 2010 Memorial Sloan-Kettering Cancer Center (NY), Doctor and Post-doctor researcher Dendritic cell, NKT cell 1998 ~ 2003 Roswell Park Cancer Institute (NY), Doctoral course, heat shock protein, Immunovaccine 1997 ~ 1998 SNU Medical school Biochemistry lab researcher	Research Management	2018.09
R&D MediChem	Changhee Park	Director	Pharmacy/ Chemistry	Doctor/ Master	2020 ~ Present Autotelic Bio Director of Research Center 2005 ~ 2020 Hanmi research center NCE/ICE discovery team Project Leader	New drug Technology	2020.07
Oncology Research	JiHye Kim	Senior Manager	Medical Lifescience	Master	2019 ~ Present Autotelic Bio Research Center 2010 ~ 2018 AbClon, Antibody New Drug candidate and lead antibody screening 2007 ~ 2010 AdipoGen Inc, Antibody for research development, QC	Technology A-SAM Research	2019.01
RA	Rhoda Chung	General Manager	Pharmaceutical Science	Bachelor (US/ Korean pharmacist)	2016 ~ Present Autotelic Bio R&D Strategy, RA 2010 ~ 2012 Nycomed/Takeda Korea RA, GMP inspection 2009 ~ 2010 IMS Health Korea, IMS Global Database, Manager 2006 ~ 2008 Hyundai Pharm Business Development/RA, Manager 2003 ~ 2005 CVS/Pharmacy Corporation (Virginia, USA)	RA Document Management	2016.04

Key Members of R&D Strategy

Dept	Name	Position	Education(Major)		Career	Job Description	Joined
			Major	Degree			
R&D Strategy Head	Kyungwan Nam	Director, R&D Strategy	Pharmaceutical / Pharmacology	Doctor (Pharmacist)	2019 ~ Present Autotelic Bio Head of R&D Strategy 2016 ~ 2019 SamJin Pharm. R&D Center, Pharmceutical Research Head CMC and Analysis research of new product, New drug CMC research management 2014 ~ 2016 Janssen Korea, Technical operation Manufacturing process development, process analysis and improvement 2006 ~ 2014 Boryung Pharm. R&D Center, Formulation team leader New drug (Kanarb) and combination therapy formulation research, CMC reserach / tech transfer 2001 ~ 2006 DaeWoong Pharm. R&D Center, Formulation senior researcher	R&D Strategy CMC management	2019.09
R&D Strategy	Pearl Jin	Director	Microbiology	Bachelor	2017 ~ Present Autotelic Bio R&D Strategy Director 2015 ~ 2016 LM Co., LTD Global Business Team Leader, Manager 2012 ~ 2014 Pharmaphenix Global Business Team Leader 2009 ~ 2012 BoryungMediance Product Planning Team Leader 2001 ~ 2006 Boryung Pharm Export(EU, Japan) Team, Manager	R&D Strategy, Government Funded Projects	2017.06
	Yujeong Jeong	Senior Manager	IT Software	Bachelor	2020 ~ Present Autotelic Bio R&D Strategy 2016 ~ 2019 Hyerang Co., Ltd. Business Planning Team, National inssurance 2010 ~ 2014 Pharmaphenix Business Planning Team 1999 ~ 2009 Boryung Pharm Business Development	R&D Strategy, Government Funded Projects	2020.02
Analytical Research	Dongkyu Oh	Senior Manager	Applied Chemistry	Bachelor	2020 ~ Present Autotelic Bio R&D Strategy, Analytical Research 2015 ~ 2020 Inist Bio Pharm. R&D Center, Formulation Analysis and Analytical Research 2007 ~ 2015 Myungin Pharm. QC	HYBRID New Drug Analytical	2020.03

Key Members of Clinical Research

Dept	Name	Position	Education(Major)		Career	Job Description	Joined
			Major	Degree			
Clinical Research Head	James (Yongkwan) Jun	Vice president	Management/ Medicine	Master (Doctor)	2020 ~ Present Autotelic Bio Head of Clinical Research 2019 ~ 2020 Boryung Biopharma Development Team Head 2016 ~ 2018 Phamedix & Pharvis Pharm. President & Vice President 2014 ~ 2016 KT&G Life science President 2006 ~ 2014 Boryung Pharm R&D Center team Head/Kanab BD Head New drug “Kanab” Clinical Phase III/RA/Launching, License out 2005 ~ 2006 LSK Global Medical Director 2004 ~ 2005 BioHeart Korea Inc. President 2000 ~ 2003 Parexel Korea Vice President	Clinical Research Strategy	2020.07
Oncology Clinical	Hyojung Seo	Senior Manager	Nursing	Bacherlor	2020 ~ Present Autotelic Bio Research Center Oncology New Drug Clinical Research 2016 ~ 2019 Genexine Clinical Development Team, Oncology & Gene Therapy development 2013 ~ 2015 JW Pharm., Clinical Development Team 2006 ~ 2012 ADM Korea, Clinical Team Leader	Oncology New Drug Clinical Research	2020.03
New Drug Clinical	Boyoung Lee	Senior Manager	Pharmaceutical	Bachelor (Pharmacist)	2020 ~ Present Autotelic Bio R&D Strategy, Hybrid New Drug Clinical Research 2015 ~ 2018 Boryung Pharm Clinical Development Team 2010 ~ 2014 DongA ST (DongA Pharm) Clinical Development Team 2009 ~ 2010 Quintiles Korea Clinical Team 2007 ~ 2009 CJ CheilJedang Clinical Development Team	HYBRID New Drug Clinical Research	2020.03

Global Leader of Cancer Treatments

AUTOTELIC BIO

오토텔릭바이오

Thank you.

http://www.autotelicbio.com

https://www.youtube.com/watch?v=Myg8cBpi1iY