

Accelerating Takeda's R&D Success



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Takeda Pharmaceutical Co., Ltd.

Our Mission is to Serve Patients



**We do more than
develop medicines**



**We innovate to
improve patients' lives**

Takeda R&D places the patient at the center of everything we do

The Healthcare Industry is Immensely Dynamic, Facing both Opportunities and Headwinds



- Insight into the Mechanisms of Disease
- Emerging Therapeutic Modalities
- Genomics/Big Data
- The Rewards of Innovation
- Patient Advocacy

- Competition for Enrollment in Clinical Trials
- Cost of Trials
- Established Standard of Care
- Comparative Efficacy (HTA)
- Impact of Unethical Behaviors



Takeda's History



Our Leaders



Chobei I

Chobei IV

Chobei V

Chobei VI

Kunio Takeda

Yasuchika Hasegawa

Christophe Weber

World History

1776
US Declaration
of Independence

1804
Coronation
of Napoleon I

1914
Beginning
of World War I

1939
Beginning of
World War II

1961
First man in space

1989
Fall of
the Berlin wall

2000
International
Space Station

2003
Mapping of
the human genome

2011
Great Tohoku
Earthquake and Tsunami

Period of Poor Productivity Following Approval of Pioglitazone in 1999



Product Launches by Discovery Source (FY2005 – 2015)

Internal (4)	Acquisition (8)	Licensed (9)
Dexilant	Alogliptin (Nesina)	Adcetris
Edarbi / Azilva ¹	Colcyr ²	Amitiza
Rozerem	Daxas	Azilect
Takecab	Entyvio	Brintellix
	Ninlaro	Contrave ⁴
	Revestive ³	Copaxone
	Trelagliptin (Zafatek)	Galantamine
	Vectibix	Mepact
		Xeljanz

■ Global

□ Regional

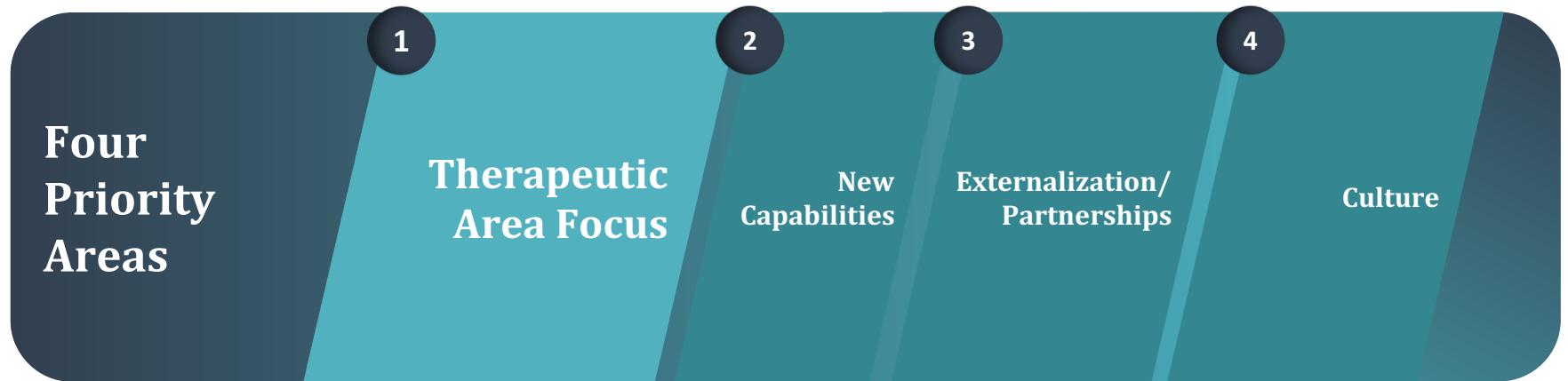
1. For purposes of NME counts, Edarbi and Azilva are combined.

2. Colcyr is counted as an NME, although the product was on-market in generic form.

3. Revestive has been returned to partner: no revenues in Takeda LRF.

4. Contrave is counted as an NME, although it is composed of two on-market products.

R&D – Four Priority Areas



1) Focus: Core Therapeutic Areas



Core Focus

- 1 **Oncology**
- 2 **Gastroenterology (GI)**
- 3 **Central Nervous System (CNS)**

We are focusing our innovation in three core therapeutic areas where we have:

- Track record of recent successes
- Deep scientific expertise
- High unmet patient need

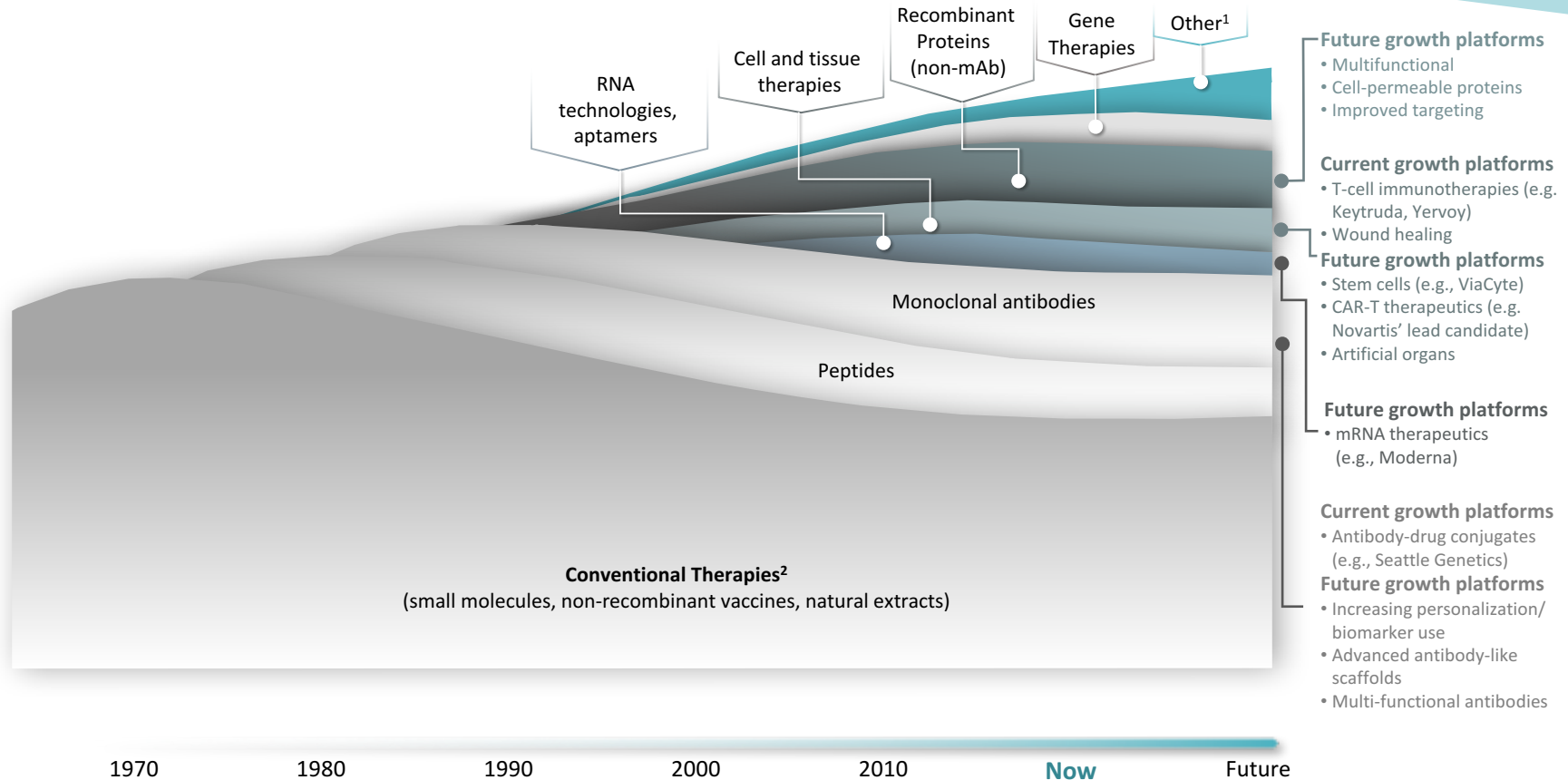
Vaccines

We are committed to global public health through our Vaccines portfolio

2) New Capabilities: What's Driving Innovation Today



Source: Pharmaprojects 2014; McKinsey analysis



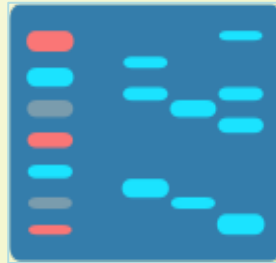
¹ E.g., nanotechnologies, bioelectronics, virus particles

² Currently ~ 60% of global clinical pipeline

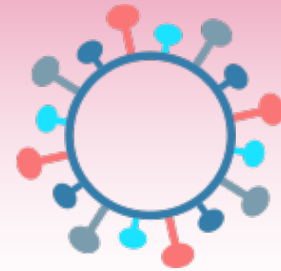
Modality Diversification



Genomics & Big Data



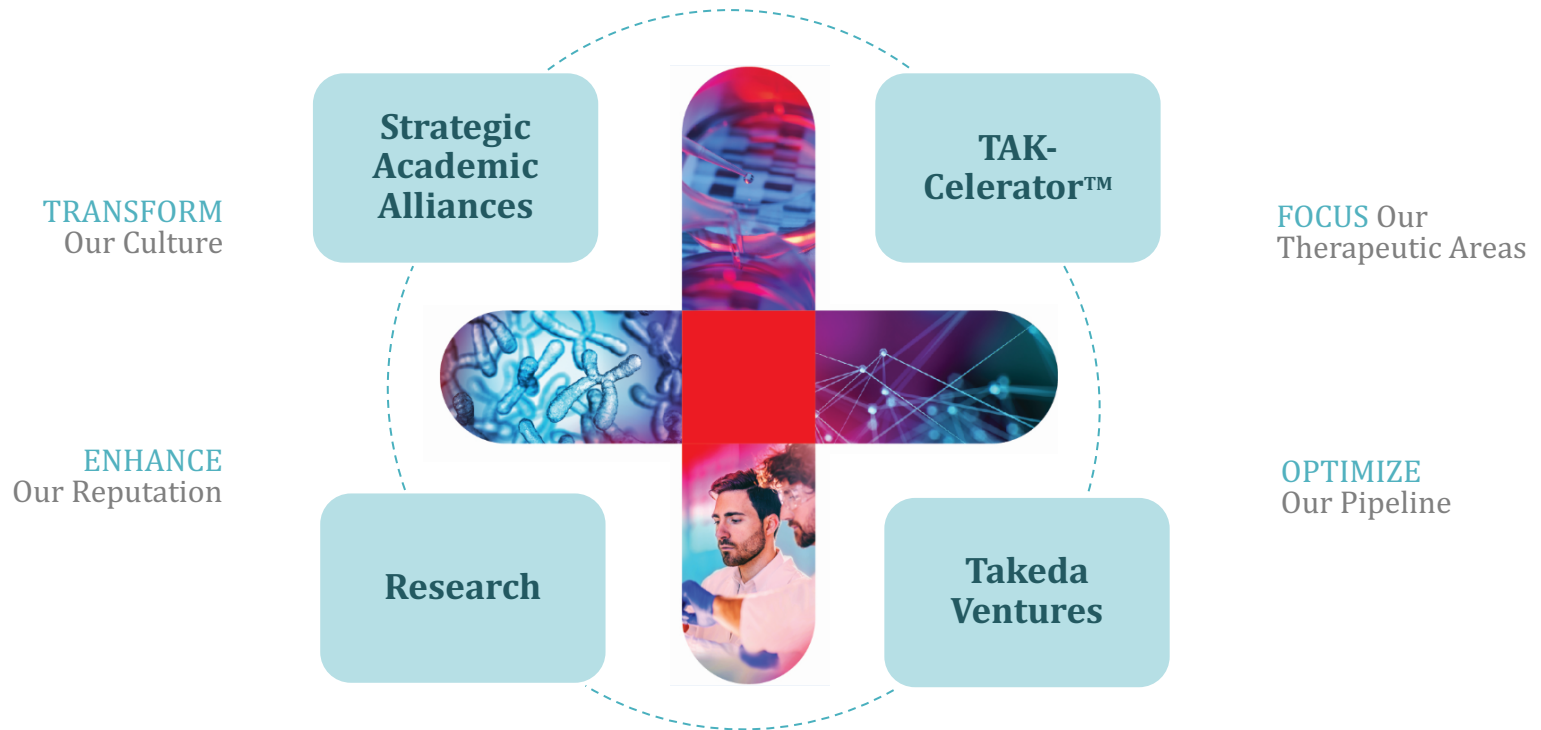
Translational Medicine



3) External Innovation/Partnerships



Our business development team nurtures an ecosystem of academic institutions, nonprofit organizations, venture capital firms and biopharmaceutical peers



THE POWER OF PLUS

External Innovation: 2017 Efforts to Date



	Research	Early Development	Late Stage / LCM
Oncology	Heidelberg PHARMA Focused Cancer Therapies GAMMADELTA THERAPEUTICS SCHROEDINGER. NEKTAR NOILE-IMMUNE BIOTECH Numerate tem SELEXIS SHATTUCK LABS Stanford University		TESARO niraparib (Jpn, select EM)
GI	HEMOSHEAR THERAPEUTICS NUBIYOTA Karolinska Institutet SGC SCHROEDINGER. BioSurfaces Harrington Discovery Institute University Hospitals Cleveland, Ohio Numerate isogenica RECURSION Stanford University		
CNS	AstraZeneca MEDI134 SCHROEDINGER. PRANA BIOTECHNOLOGY Numerate RECURSION Stanford University Harrington Discovery Institute University Hospitals Cleveland, Ohio		
Vaccines	1		Biological E. Limited Celebrating Life Every Day
External Value Creation	CARDURIUM PHARMA Chordia Therapeutics SAMSUNG BIOEPIB TAK-671		
Strategy & Operations	AXCELEAD Drug Discovery Partners	SEEDSUPPLY	ChromaJean

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Drill Down: Mersana Therapeutics



- Based in Cambridge, Mass., Mersana is a clinical stage antibody drug conjugate (ADC) company developing proprietary technologies to enable improved efficacy, safety and tolerability relative to existing ADC therapies
- Takeda and Mersana entered a strategic partnership granting Takeda rights to Mersana's lead product candidate, XMT-1522.
- The deal also expanded an existing collaboration between the companies to provide Takeda with additional access to Mersana's Fleximer® ACD platform.

The Boston Globe

Mersana Therapeutics expands partnership with Takeda

FierceBiotech

Partnering

Takeda ups bet on Mersana's armed antibodies to \$1B-plus, snags lead drug rights

the pharma letter

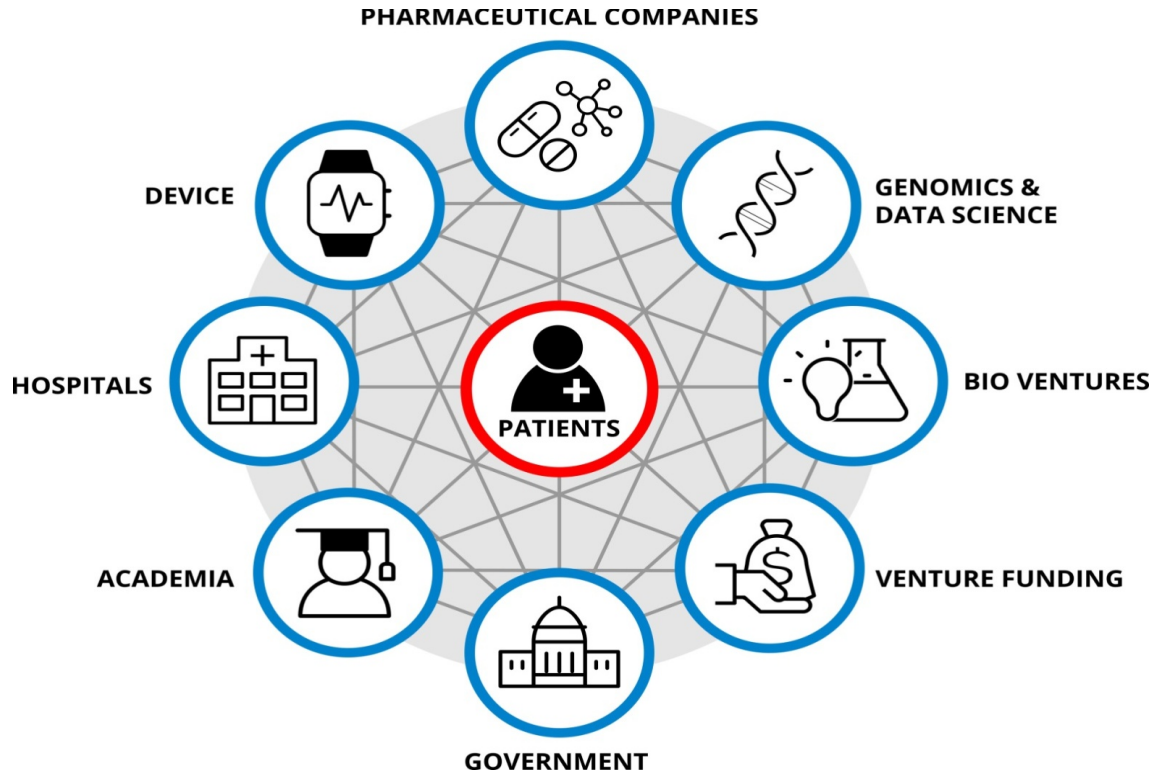
* Up to date news for the Pharmaceutical and Biotechnology industries

Mersana Therapeutics in up to \$300 million deal with Takeda

Scaling our Externalization Efforts



Shonan Health Innovation Park: Japan's first pharma-led open innovation ecosystem



4) Culture



TAKEDA RESEARCH & DEVELOPMENT

Dare to Discover

Patients live in hope of solutions. They inspire us to **make daring breakthroughs** and deliver the new therapies they seek.

We're building a culture that drives us towards unexpected solutions, allowing our researchers to reach further and **achieve the remarkable.**

We view every partnership as an opportunity to **embolden each other**, because innovation comes from surprising places.

