

Takeda Pharmaceutical Co., Ltd.

Stock Exchange: XTKS
 Ticker: 4502
 HQ: Osaka, Japan
 Employees: 31,168 (consolidated)

Index performance by Research Area



The number of cells represents the maximum possible score. Coloured cells represent points attained. Takeda was evaluated in one Research Area: Research & Development.

PERFORMANCE

Takeda currently markets vaccines in Japan only and is growing its vaccine pipeline, including R&D projects for dengue and chikungunya (both neglected tropical diseases). Takeda performs above average in Research & Development, and has clear access provisions for its late-stage vaccine candidate. While it does not currently market vaccines in countries in scope, it is taking steps to support affordability and supply of vaccines in its pipeline. For example, from 2016, Takeda has been developing a low-cost IPV with support from the Bill & Melinda Gates Foundation. As part of the worldwide

polio eradication strategy, Takeda will produce at least 50 million IPV doses per year for supply to more than 70 developing countries. For this vaccine, Takeda is committed to a ceiling price for Gavi countries through UNICEF, and intends to extend Gavi-level prices to Gavi transitioning countries for a number of years post-transition. Pricing for non-Gavi-eligible countries will take into account (among other criteria) the cost of goods, country GDP per capita, procurement conditions, terms and impact of competition.

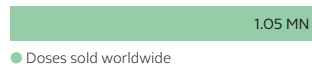
SALES AND OPERATIONS

Takeda's three business segments are ethical drugs (including vaccines); consumer health care; and other (including industrial chemicals). The ethical drugs division accounts for the largest share of revenue (around 90%). For its entire portfolio, Takeda has sales in 29 countries in scope of the Index. Its vaccines business unit currently markets seven vaccines in Japan only.

Sales in countries in scope (all products)



Number of doses sold in 2015



Sales by segment 2015



VACCINE PORTFOLIO

Takeda has seven vaccines on the market for six diseases in scope. Its portfolio comprises a diphtheria and tetanus combination vaccine, a tetanus vaccine, vaccines for measles, mumps and rubella including a MR combination vaccine, and a pandemic influenza vaccine.

Marketed vaccines

DT	1	Pandemic influenza	1
Measles	1	Tetanus	1
MR	1		
Mumps	1		
Rubella	1	Total	7

OPPORTUNITIES

Continue to make strong investments in R&D. As its vaccine business grows, Takeda can continue to make R&D investments that represent a high proportion of its vaccine revenue.

Expand processes to respond to vaccine shortages. Takeda is taking steps to support sufficient vaccine supply. As it expands its vaccine business outside Japan, it can work with relevant national and global health stakeholders to expand and adapt its processes for preventing and responding to vaccine shortages. It can also commit to continuing supply of vaccines outside Japan for which there are few or no other suppliers.

Aim toward product attributes that meet needs of populations in scope. Takeda should continue its efforts to identify what product attributes are most desirable for addressing population needs. Expanding on its commitment to develop multi-dose vials of certain vaccine candidates in response to WHO recommendations, Takeda can consider factors such as dose schedule and temperature stability for all its vaccine R&D.

Continue to share expertise with local manufacturers. As demonstrated by its partnership for chikungunya vaccine development in India, Takeda has valuable expertise that it can share

with vaccine manufacturers and developers in countries in scope. In that way, it can contribute to improving global vaccine manufacturing expertise and supply. In assessing capacity building opportunities, the company should consider how it could draw upon its expertise to assess and respond to local capacity building needs.

Put pricing strategies in place for new vaccines. Takeda is researching affordability for its future vaccines for chikungunya, dengue and enterovirus 71, and should strive to ensure that these future vaccines are affordable for both Gavi and non-Gavi low-and middle-income countries.

RESEARCH AREAS

RESEARCH & DEVELOPMENT

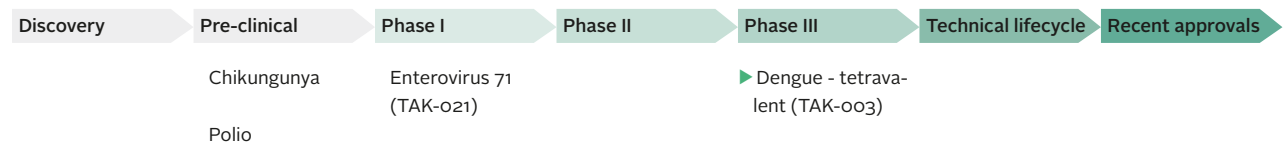
Proportionally high R&D investments. As a proportion of its global vaccine revenue, Takeda made relatively high investments into vaccine R&D targeting diseases in scope in 2014 and 2015, compared to other companies in scope.

Relatively small vaccine pipeline. Takeda has four R&D projects. It is working to develop vaccines against chikungunya, dengue, enterovirus 71 and polio. Dengue is prioritised by WHO for vaccine R&D.

Access provisions in place for late-stage project. Takeda intends to seek WHO prequalification for TAK-003, its phase III live-attenuated tetravalent dengue vaccine candidate. Takeda will prioritise registration in countries where clinical trials have taken place and in countries with the highest medical needs.

Vaccine pipeline

Takeda's live-attenuated tetravalent dengue vaccine candidate, TAK-003, is approaching potential regulatory approval.



▶ WHO has identified a need for vaccine R&D targeting this disease/pathogen.