**Company Profile**

**Name:** MicroBiopharm Japan Co., Ltd. (Abbreviation MBJ)

**Date of Establishment:** July 1st, 2011

**Representative:** President & CEO Akito Umeda

**Total Employee:** 389 (As of April 1st, 2018)

**Stockholder:** Mitsui&Co., Ltd. 80% Toray Industries, Inc. 20%

**Sales amount:** JPY 9,160 million in fiscal 2017 (USD=111JPY)

**Office:**
- 1-3-1 Kyobashi, Chuo-ku, Tokyo, 104-0031
- Tel. +81-3-6265-1761, Fax. +81-3-6265-1768
- http://www.microbiopharm.com

**Subsidiaries**
- Shenzhen Main Luck Pharmaceuticals Inc. (China)

**History**

1941 Business started

1981 Start the production of the injectable Aclarubicin

1988 Start the production of Daunorubicin, and injectable Pirarubicin

1989 Start the production of Doxorubicin

1990 Established Shenzhen Main Luck Pharmaceuticals Inc. (China)

1994 Start the production of Calcitriol

2007 Start the production of Epirubicin

2011 MicroBiopharm Japan was founded and started the business as the wholly-owned subsidiary of Mitsui & Co., Ltd. by the succession of Pharmaceuticals & Chemicals business unit of Mercian Corporation.

2012 On January 5th, Toray Industries, Inc. acquired 20% of the capital stock of MicroBiopharm Japan.

2016 Operation start up at Kiyosu plant in Aichi, acquired from Astellas Pharma Inc. at April 1st.

**Product List**

**Anthracycline analogues**
- Daunorubicin hydrochloride 23541-50-6 USP, JP, in-house
- Doxorubicin hydrochloride 25316-40-9 USP, JP, EP
- Epirubicin hydrochloride 56390-09-1 JP, EP
- Pirarubicin 72496-41-4 JP

**Vitamin D analogues**
- Calcitriol 32222-06-3 In-house
- 25-Hydroxyvitamin D3 19356-17-3 (under development)

**Macrolide analogue**
- Rapamycin (Sirolimus Crude) 51323-88-8 In-house

**Amino acid analogues**
- cis-5-Hydroxy-L-pipecolinic acid 63088-78-8 In-house

**MicroBiopharm Japan**

Micro Biopharm Japan Co., Ltd.
Strive to contribute to healthier and quality life of people throughout the world by providing pharmaceutical and other advanced products and services, taking advantage of our distinctive microbiological expertise and technologies.

Our core technology
- Experienced recombinant protein production by applying microbial host systems
- Track record of launched products in Japan
- Supports early stage development of Protein/Peptide drugs
- Cytokine
- Enzyme
- Fab
- ADC, etc.
- Commercial production with up to 2kL fermentation tanks

Our services and facilities
- Laboratory scale
  - DNA sequencer
  - HPLC
  - LC-MS
  - GC-MS
  - SEC
  - HPLC
  - Thermogravimetry etc.
- Pilot scale
  - Development of fermentation and synthetic process for industrial manufacture
  - Manufacturing for investigational new drug
- Commercial scale
  - Fermentation tanks: 3L~5kL
  - Filtration facilities: Filter press, Membrane filter, Centrifugal filter
  - Resin for purification: 8~10kL
  - Extraction tanks
  - Concentration: Evaporator, Thin-film evaporator
  - Dryer: Freeze dryer, Spray dryer, Vacuum dryer
  - Others: Preparative HPLC, Isolater

Drug discovery service: microbial product library
Combining our proven microbial isolation and cultivation technology with the latest informatics makes it possible to find microorganisms/resources producing seed compounds of your interest.

Drug discovery service: P450 hydroxylation library
P450 library is a powerful screening tool, collected with Cytochrome P450 hydroxylation enzymes of various microorganisms expressed in E.coli. Our P450 library enables you to diversify and to improve properties of compounds efficiently.

Productivity improvement
We maximize the productivity of the compounds of your interest.
1) Strain improvement with genetic engineering and optimization of cultivation conditions.
2) Metabolome analysis to find contributing factors for fermentation.
3) Improvement of recovery and purification processes from fermentation mixture.

Productivity improvement
The wild type enzymes have lower regio-selectivity in hydroxylation reaction. They will give not only targeted 14-OH-Clarithromycin but also the compounds of hydroxylated in other positions. By applying our enzyme modification technology, we successfully produce the enzyme which can selectively produce the target compound with the highest selectivity.

Our original Technology of R&D
By exploring and utilizing the potentials of microorganisms, MBJ meets the customer’s needs at various stages of researches, development and commercial production.