



Mitsubishi Tanabe Pharma

GHIT Fund - Product Development Partnerships Webinar Series: Contribution for Global Health from Mitsubishi Tanabe Pharma Corp.

Sep. 3rd Friday 2021

KANO Hiroki

Mitsubishi Tanabe Pharma Corp.

Materiality that contributes to SDGs

Eight Material issues

- Innovative pharmaceuticals and healthcare services
- Quality assurance and stable supply
- Appropriate use of products
- Access to healthcare*

- Stakeholder engagement*
- Employee health, diversity and inclusion
- Environment-friendly business*
- Ethics, fairness and integrity

Drive growth strategies and create hope

Enhancing as the foundation for fulfilling MISSION, VISION 30

SUSTAINABLE DEVELOPMENT GOALS



* Changed/added from material issues designated in 2018

Creating hope for all facing illness.

Solving Issues Related to Improving Access to Healthcare

Promotion of R&D

To improve access to medicine, it is important to continuously create innovative new drugs that meet unmet medical needs. We are actively promoting open innovation to continuously create valuable new drugs. We will also begin gene drug discovery to provide new drugs and healthcare services for the prevention and cure of intractable and rare diseases, and will play a distinctive role in addressing challenges in the global health field.

Participation in the Global Health Innovative Technology Fund

The Global Health Innovative Technology Fund (GHIT Fund), is Japan's first public-private partnership to promote the creation of innovative treatment agents for infectious diseases that affect people in developing countries, such as malaria, tuberculosis, and neglected tropical diseases. We support the GHIT Fund's objective of contributing to global health, and financially support the fund. Through the GHIT Fund, the Company provided its pharmaceutical compound library (50,000 compounds) to Medicines for Malaria Venture (MMV), a research institution that focuses on the discovery of new anti-malaria drugs. Three types of promising hit compounds that have the potential to become pharmaceutical products have been identified. In addition, we promoted joint research and from one of these compounds, we acquired two lead compounds as new anti-malaria drug candidates. In April 2019, we will move to the next phase and continue conducting research in collaboration with MMV to create candidate compounds. Malaria, along with AIDS and tuberculosis, is one of the three major infectious diseases in the world, and its eradication is a goal of the United Nations SDGs. As always, we will contribute to improving access to ethical drugs in developing countries and achieving the SDGs.






Meeting to exchange information with members of the GHIT Fund and related partners

Intractable disease initiatives Example: amyotrophic lateral sclerosis (ALS)

Promoting open innovation (collaboration with academia, pharmaceutical companies, and GHIT Fund)

https://www.mt-pharma.co.jp/e/sustainability/social/medical_access.html

Overview

- **Malaria : Collaboration with** 
Medicines for Malaria Venture
 - 2014 : HTS
 - 2016 : Hit to Lead
 - 2019 : Lead Optimization (“Product Development Platform”)
 - Ongoing: Toward the Creation of Preclinical Candidates
- **Tuberculosis : Collaboration with**  **TB Alliance**
 - 2015 : HTS
 - Terminated : Unsuccessful to obtain promising HIT compounds
- **NTDs : Collaboration with** 
Drugs for Neglected Diseases *initiative*
 - 2019 : HTS
 - 2021 : Hit to Lead (“Hit to Lead Platform”)
 - Ongoing: Toward the Creation of Early Lead

Contributions



- Overall management of projects
- Progress management of CROs and academia

- Synthesis of New Compound

- Bio-assays

- *in vitro*

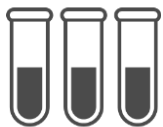
- ADMET

- *in vivo*

- PK/PD

- MOA analysis

- MaLDA Consortium Network



Drug Design



Mitsubishi Tanabe Pharma

- Screening Compound Library

- Computational Chemistry

- SBDD

- Analytical Chemistry

- Absolute Configuration Determination (X-ray Crystallography)

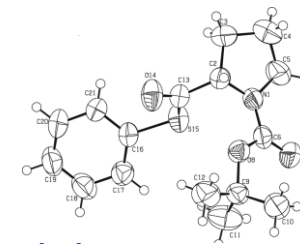
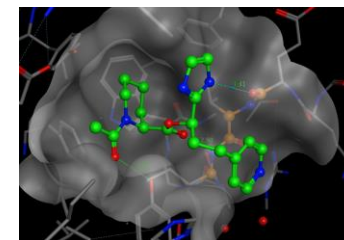
- Chiral Resolution Screening

- Genotoxic Assessment

- Genotoxic Risk Prediction Calculation

- Micro Ames ("FAT Assay")

- Full Ames



Global Collaboration Network



Global Health Innovative Technology Fund
Tokyo, Japan (Funding)



Mitsubishi Tanabe Pharma



Penn., USA
(MOA)



Cambridge, USA
(MOA)



San Diego, USA
(Pb liver assay)



Sao Paulo, BZ
(ex vivo)



Brisbane, Australia
(HTS, in vitro assays)



Scotland, UK
(Protein-X assay)



London, UK
(DGFA assay)



Medicines for Malaria Venture
Geneva, Swiss (PJ coordinate)



Swiss TPH

Swiss Tropical and Public Health Institute
Schweizerisches Tropen- und Public Health-Institut
Basel, Swiss (MoA, in vivo)



Tres Cantos, Spain
(in vivo, rate of killing)



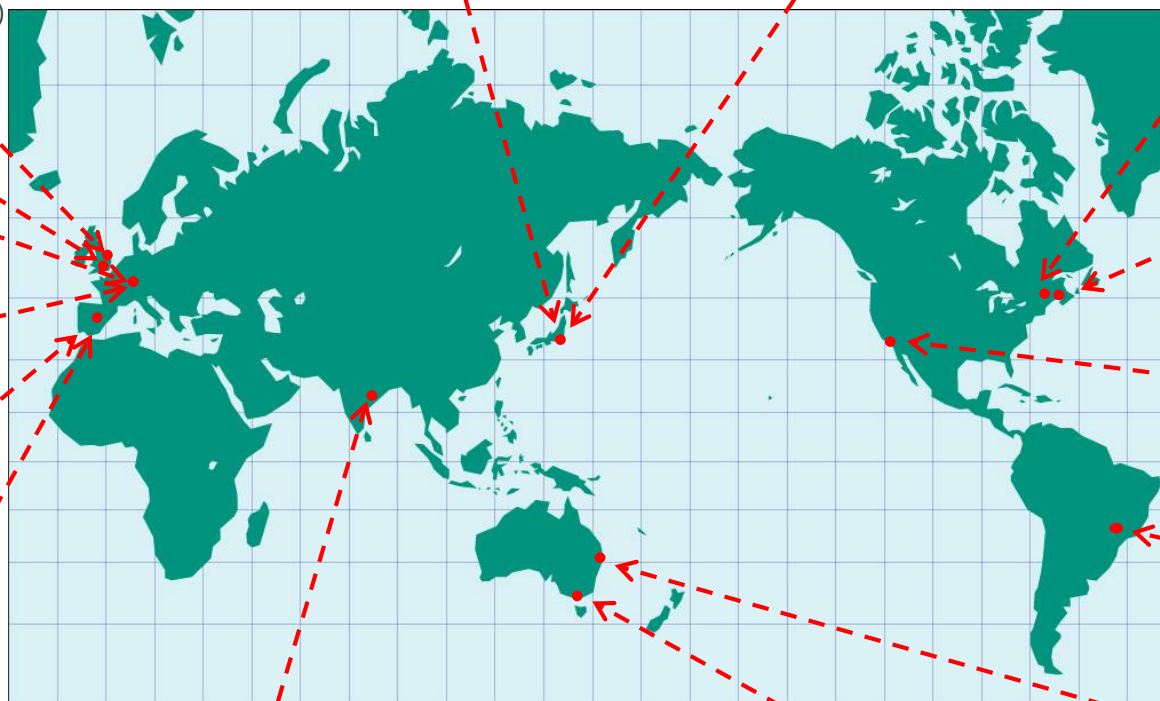
Derio, Spain (in vivo)



West Bengal, India (Chemistry)

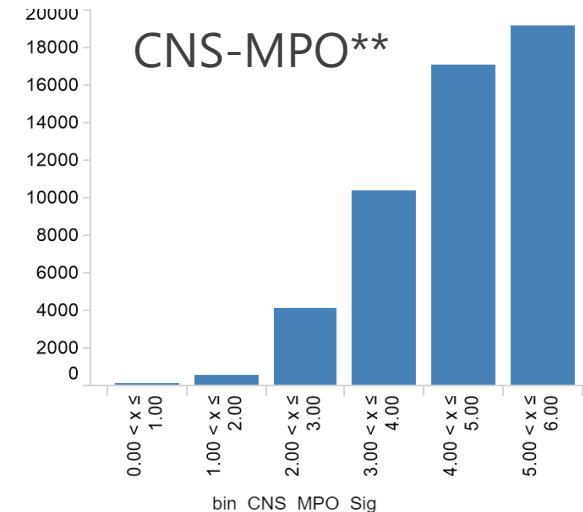
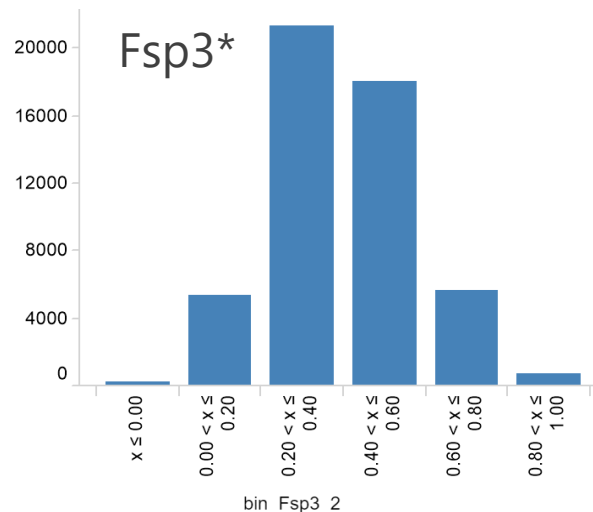
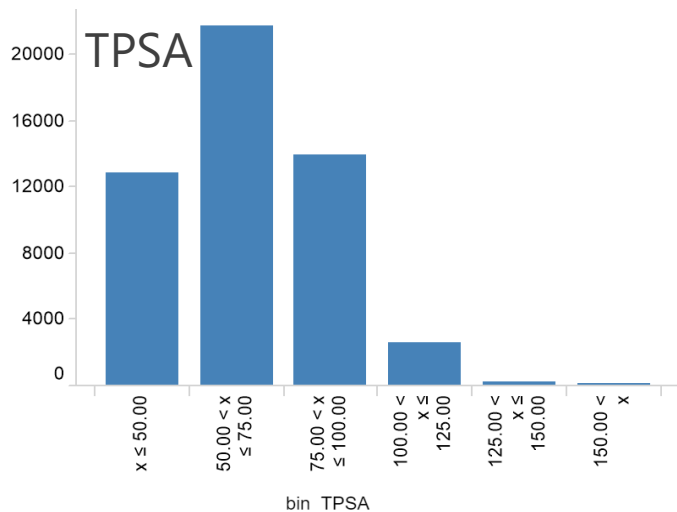
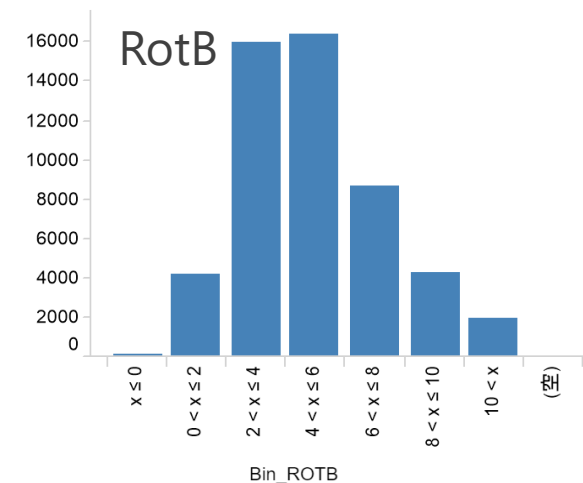
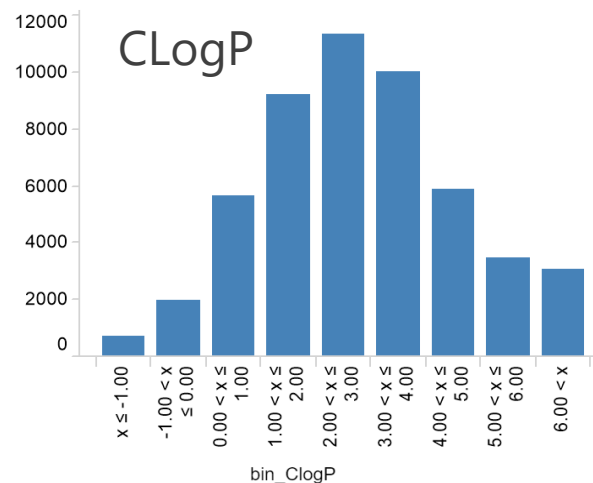
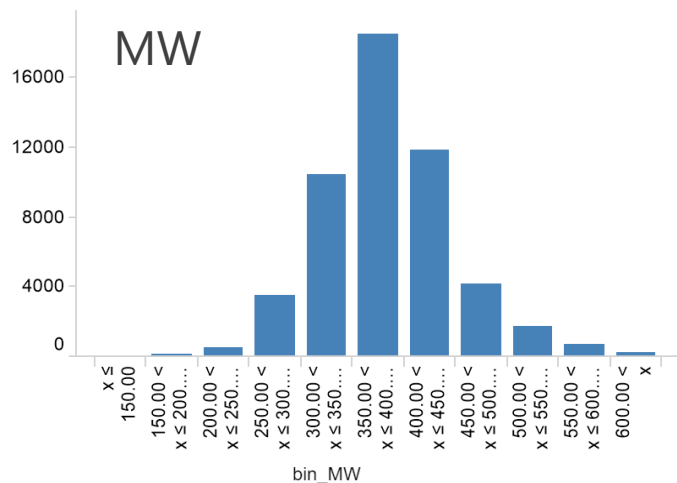


Institute of Pharmaceutical Sciences
Melbourne, Australia (DMPK)



MTPC Screening Library

- Size : 51.2k



* Lovering, F. et. al., *J. Med. Chem.*, **2009**, 52(21), 6752-6756.

** Wager, T. T., et. al. *ACS. Chem. Neurosci.*, **2010**, 1(6), 435-449.

Outline of Collaboration with DNDi

- Target : NTDs (Chagas disease / Leishmaniasis)
- Current Status : 9 chemotypes Hit Series from MTPC Screening Collection
 - "Chagas Selective" and "Chagas/Leishmaniasis Dual"
- Objective : Selection of promising hit series



- Overall management of projects
- Progress management of CROs and academia



- Screening Compound Library
- SAR Analysis for Preliminary Hit Series Selection

Acknowledgement

Mitsubishi Tanabe Pharma Corp.

Dr. KAMIYAMA Tsutomu

Dr. TORIMOTO-KATORI Nao

Dr. OKADA Okimasa

Dr. ONO Satoshi

Ms. NABENO Mika

Ms. TAHARA Saori

Ms. UEDA Naoko

Ms. TANIGUCHI Tomomi

Mr. TSUDA Naoki

Dr. TAKANO Ryo

Dr. MUTO Shigeharu

Dr. YAMADA Katsuya

Ms. FURUKAW Ayaka

Mr. KAJI Takahide

Mr. AOYAMA Yukio

Medicines for Malaria Venture

Dr. Robert Jacobs

Dr. Stephen Brand

Ms. Delphine Baud

Dr. Benjamin Blasco

Dr. James Duffy

Monash University

Prof. Susan Sharman

Dr. Karen White

Griffith University

Prof. Vicky Avery

Dr. Leonardo Lucantoni

Drugs for Neglected Disease *Initiative*

Dr. Jean-Robert Ioset

Dr. Peter Sjö

Mr. Leela Pavan Tadoori

Mr. KUZUKI Tatsuro

Ms. MORIOKA Midori

INSTITUT PASTEUR KOREA

Dr. David Shum

TB Alliance

Dr. KANEKO Takushi

All Financial Support from GHIT Fund



Mitsubishi Tanabe Pharma

Creating hope for all facing illness.

Confidential