

Introducing a natural compound, MP304 which shows strong and broad efficacy against causal agents of cavity, gingivitis and halitosis

MYCOPLUS CO. LTD.

Contact Information

| Korea Health Industry Development Institute | |
|---|------------------------------|
| Contact Point | Heajin Jung, Esq. |
| email | heajinjungattorney@gmail.com |
| Cell | +82 10 7215 3543 |

| | |
|-----------------------------|---------------|
| Industry Sector | Human Medical |
| Therapeutic Area | Surgery |
| Stage of Development | Phase I |

1. Summary

- The new technology is about the natural compound, MP304(Approx.190 M.W) which shows strong and broad efficacy against causal microbes of cavity, gingivitis and halitosis.
- MP304 is a member of sesquiterpenoids derived from a fungal liquid-fermentation.
- In laboratory experiment on rats, it showed little toxicity.
- Bioprocess technology for mass production has been established.
 - Yield : approx. 1.5~2g/L in liquid fermentation
 - very simple purification process
- MP304 is applicable to broad industrial fields including various foods & medicine.

2. Applications

- MP304 can be used as a major ingredient in tooth paste, mouth wash products, medicine, various foods and drinks to prevent or control cavity, gingivitis and halitosis.

3. Market Feasibility

- Market size for oral disease-related fields is uncountable because it can include food and pharmaceutical industries.
- The needs for natural compound specially in cavity has been constantly increasing in related industries.

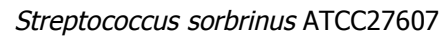
4. Type of Business Relationship Sought (include licensing availability)

- We are seeking a collaboration partner for registering and marketing MP304.
- We are also interested in licensing out of MP304 (Technology transfer)

- Most of ingredients for cavity, gingivitis and halitosis are synthetic and are not edible due to its toxicity.
- MP304 is natural with little toxicity but has broad and strong efficacy against oral pathogens. This strong advantage should satisfy customer needs.
- Productivity of natural compound from microbes is always unsatisfactory. Productivity of MP304, however, is very high yielding 1.5~2g/L thanks to strain improvement and fermentation optimization.

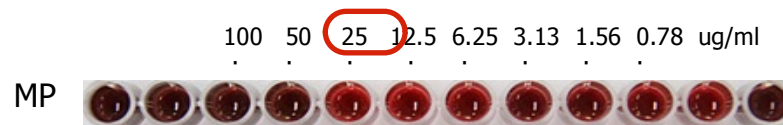
- MIC against major pathogens by alamar blue method

Streptococcus mutans ATCC25175



2) Efficacy against gingivitis-causing *P. gingivalis* ATCC33277

Porphyromonas aйнаivalis ATCC33277

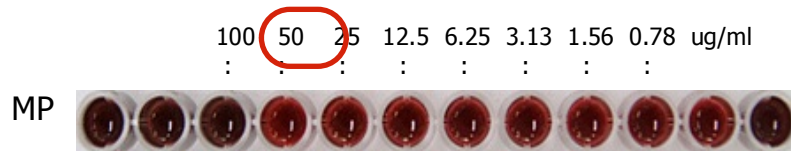


37°C, 5days, 5×10^4 CFU/well

- MIC : 25 ug/ml

3) Efficacy against mouth halitosis-causing bacteria

Fusobacterium nucleatum ATCC23726



37°C, 48hrs, 5×10^4 CFU/well

- MIC : 50 ug/ml

Klebsiella pneumoniae ATCC15380



37°C, 48hrs, 5×10^4 CFU/well

- MIC : 6.25 ug/ml

7. Mechanism (MOA)

- Inhibition of cell wall synthesis

8. Patent Information and Status

- There is no problem with applying patent on MP304. Patent, however, will be applied when potential partner show strong interest in collaboration.

9. Key Words

- Natural compound, cavity, gingivitis, halitosis, medicine, food and drink

10. Company Description

Mycoplus is a venture and INNO-BIZ company, certificated by the Small and Medium Business Administration (SMBA) of Korea. Mycoplus is involved in screening and developing natural medicinal candidates and functional cosmeceutical products.

Various bioactive compounds are either being developed in the lab or are on the way of being patented. Those compounds include treatments against oral diseases and superbacteria, cholestrol, pneumonia, cerebral hemorrhage and pulmonary embolism, acne, inflammatory skin, dandruff, seborrheic dermatitis, atopic dermatitis and athlete's foot, and so on.