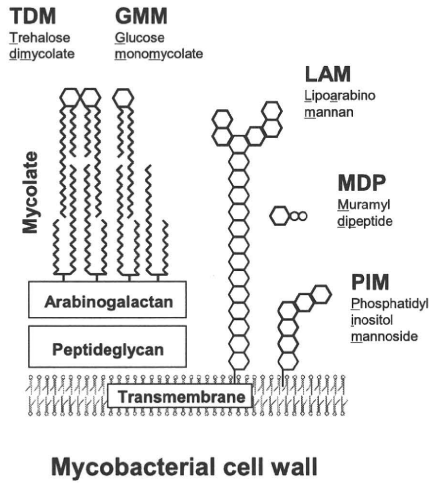
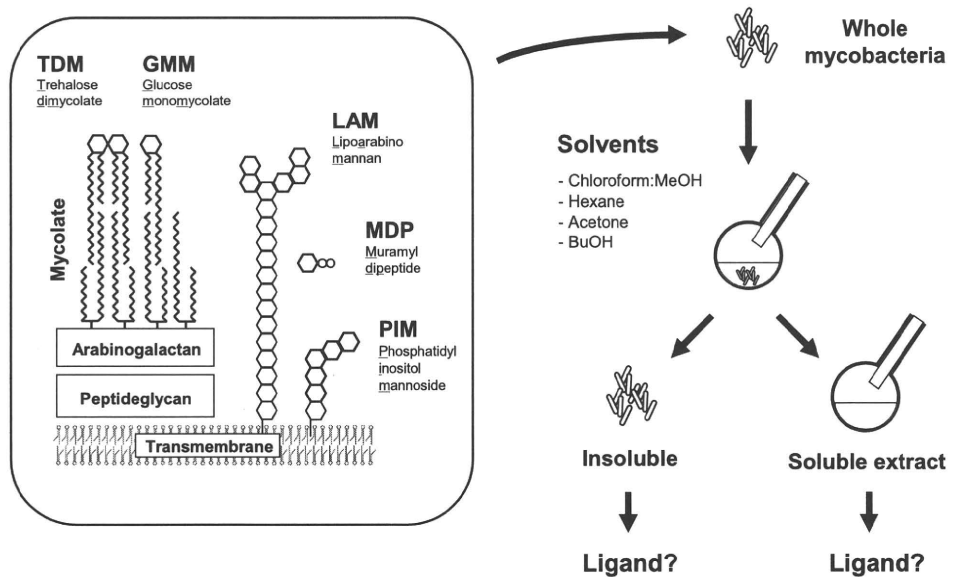


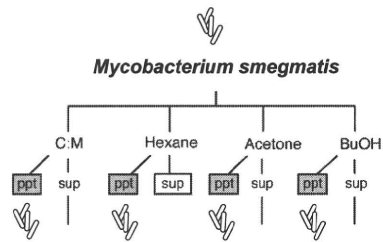
What is the ligand for Mincle?



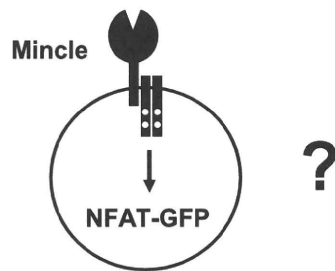
What is the ligand for Mincle?



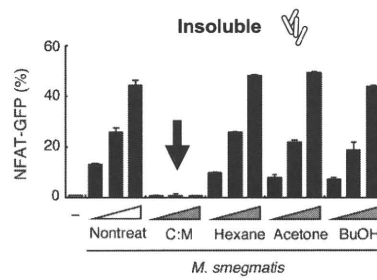
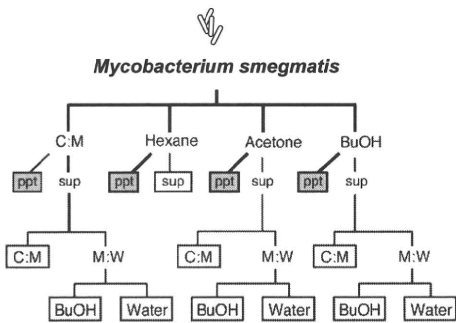
What is the ligand for Mincle?



Insoluble fractions

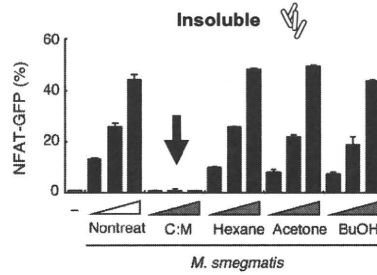
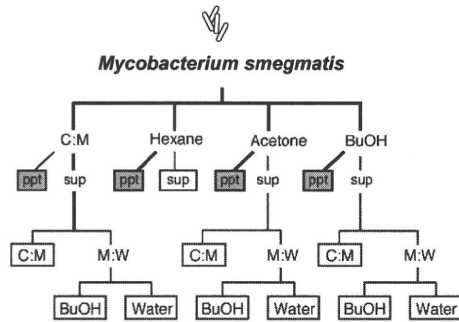


What is the ligand for Mincle?



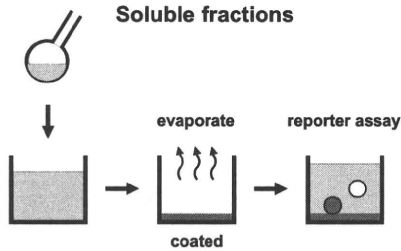
C:M ; Chloroform:MeOH = 9:1

What is the ligand for Mincle?

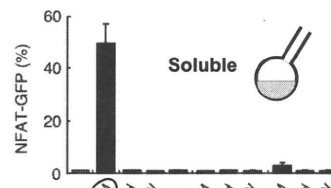
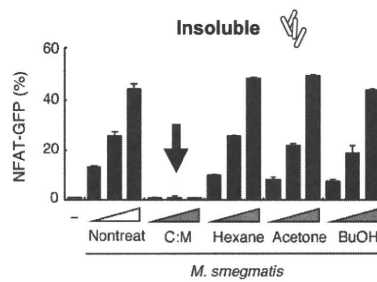
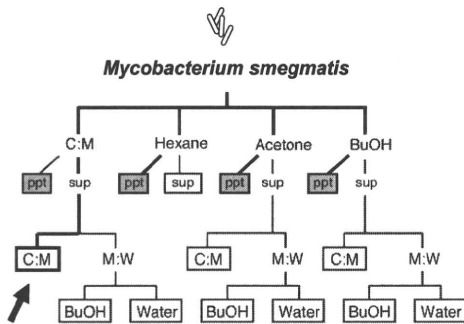


C:M ; Chloroform:MeOH = 9:1

Soluble fractions



Ligand was extracted into "lipophilic" fraction

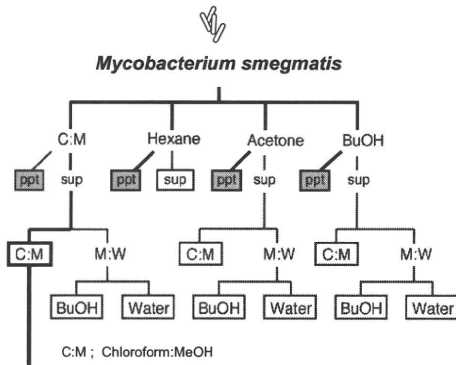


2nd extract: C:M, BuOH, W

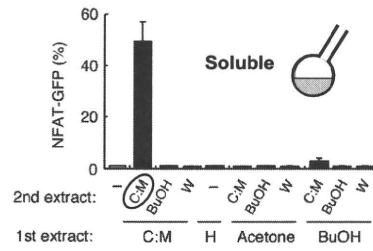
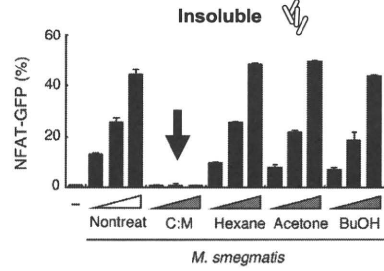
1st extract: C:M, H, Acetone, BuOH

C:M ; Chloroform:MeOH = 9:1

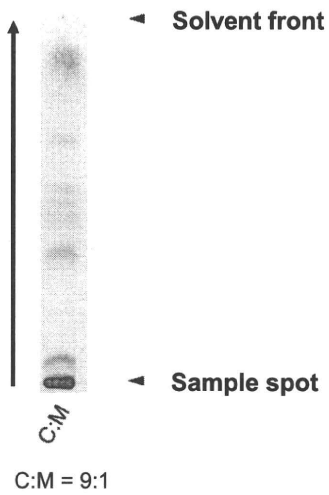
Ligand was extracted into "lipophilic" fraction



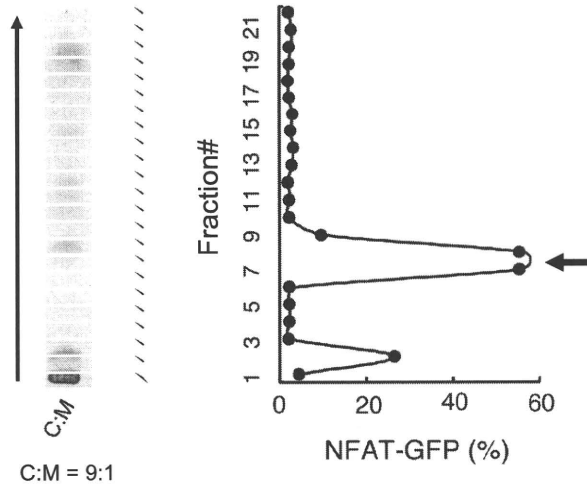
Lipid?



TLC (Thin Layer Chromatography)



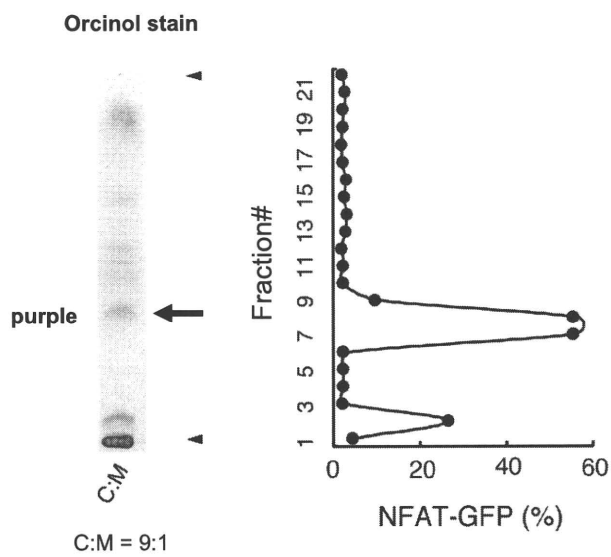
TLC (Thin Layer Chromatography)



C:M = 9:1

Yasu Morita
Tetsuaki Ishikawa

Active fraction contains sugar and lipid moiety



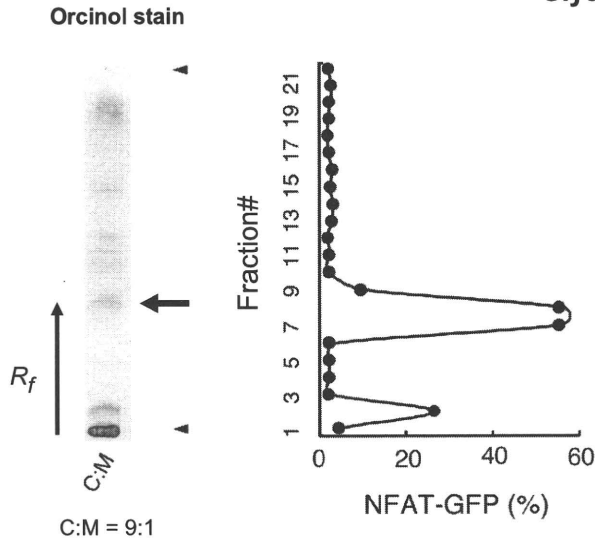
purple

C:M = 9:1

Yasu Morita
Tetsuaki Ishikawa

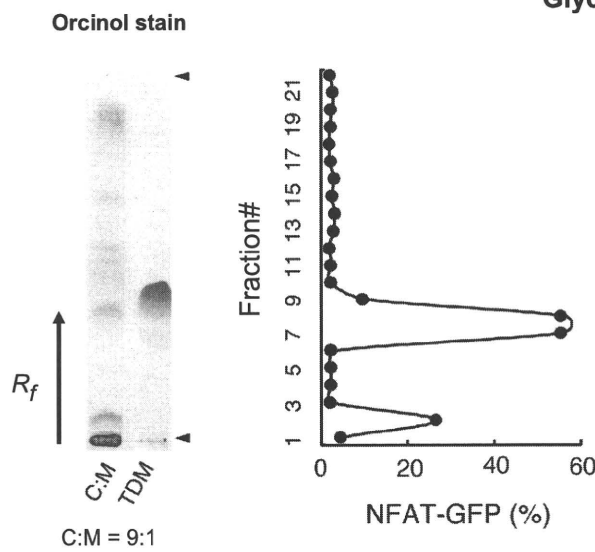
Active fraction contains sugar and lipid moiety

Glycolipid

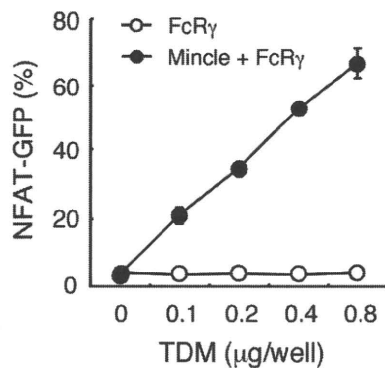
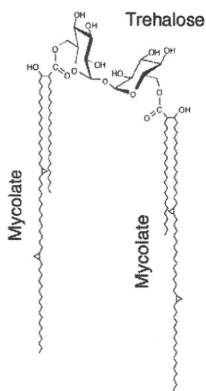


Active fraction contains sugar and lipid moiety

Glycolipid

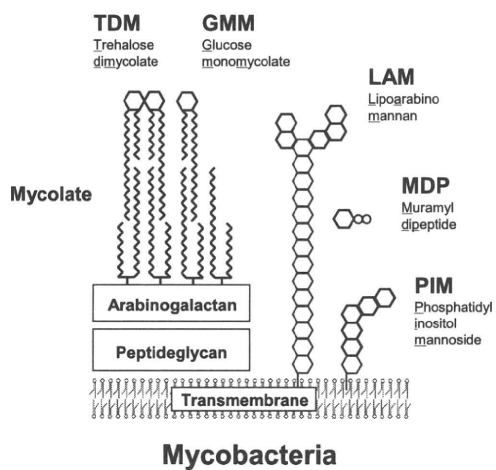
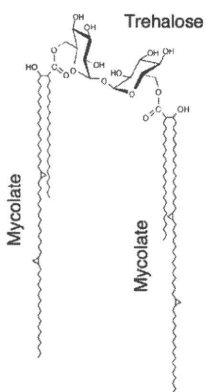


TDM (trehalose 6,6' dimycolate)



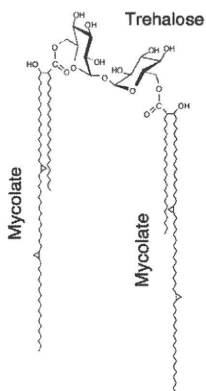
TDM (trehalose 6,6' dimycolate)

- unique mycobacterial glycolipid



TDM (trehalose 6,6' dimycolate)

- unique mycobacterial glycolipid
- immunostimulant called "cord factor"



Kekkaku 9:521-4., 1955

家兎肺臓における実験的結核性空洞の形成

その4 流動パラフィン抽出液による空洞形成

国立療養所刀根山病院 (院長 渡辺三郎博士)

山口 正民・小川 弥栄・遠藤 一男・竹内 弘之

矢坂 茂・中村 滋・山村 雄一

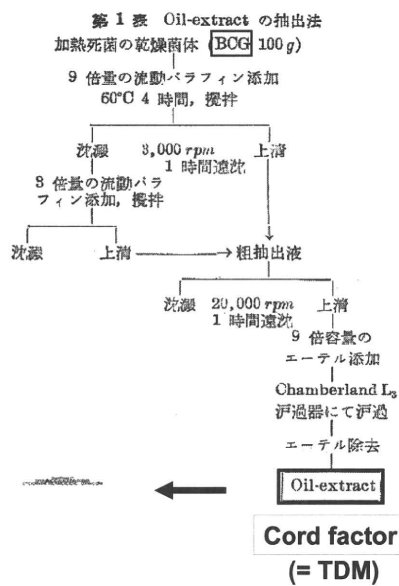
(本論文要旨は昭和 29 年 11 月第 8 回日本アレルギー学会総会において発表した。)

(受付 昭和 30 年 4 月 8 日)

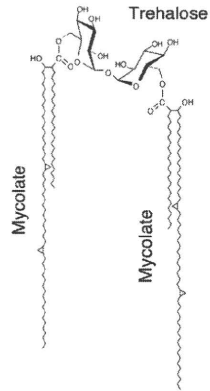
Lung cavity



注：原液注射 30日後の空洞 (患感作家兎)

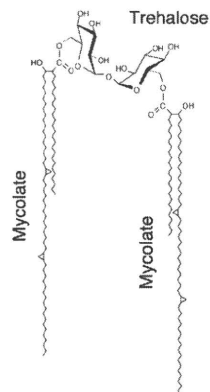


TDM (trehalose 6,6' dimycolate)



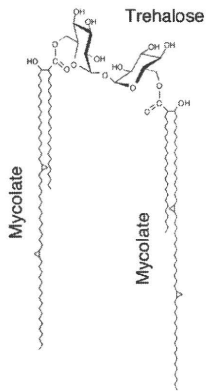
- unique mycobacterial glycolipid
- immunostimulant called “cord factor”
- major adjuvant component of CFA

TDM (trehalose 6,6' dimycolate)



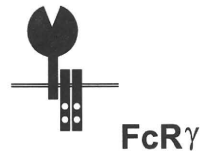
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- specific receptor??

TDM (trehalose 6,6' dimycolate)



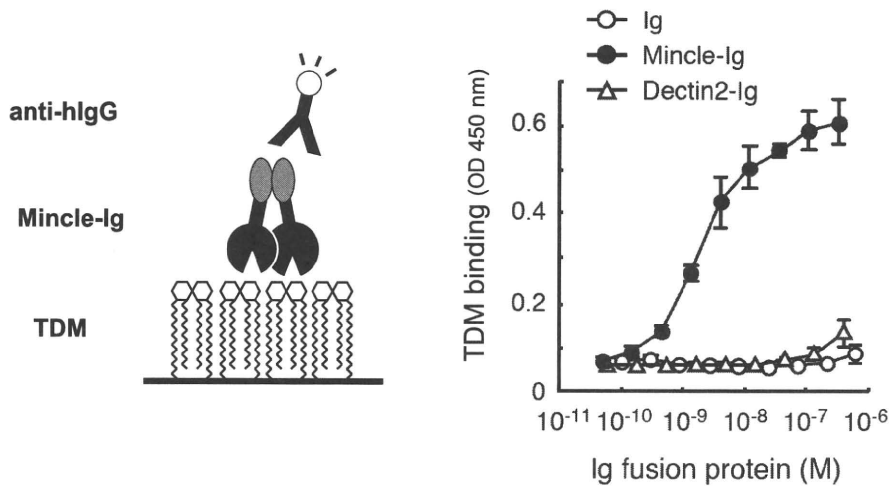
- unique mycobacterial glycolipid
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- specific receptor??

Mincle

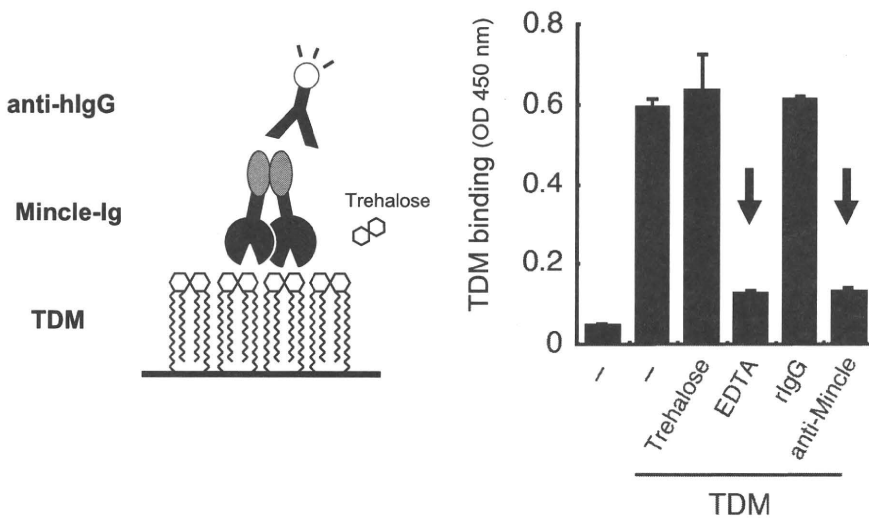


Direct receptor?

Mincle is a direct receptor for TDM

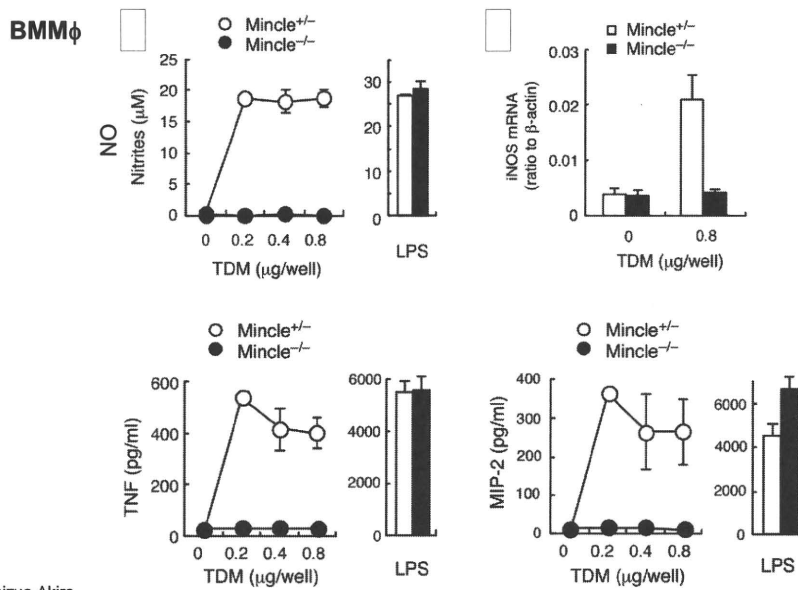


Mincle is a direct receptor for TDM



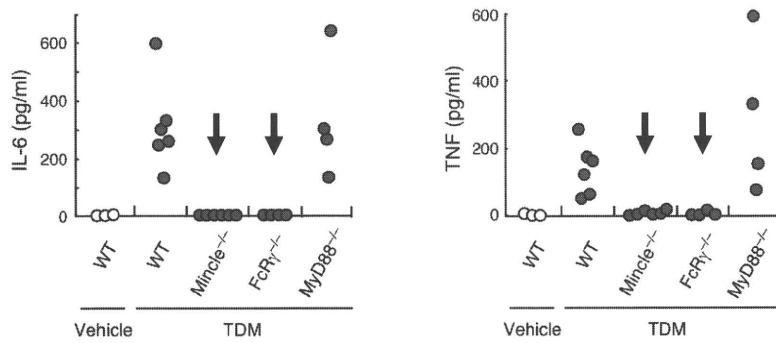
Mincle-deficient mice?

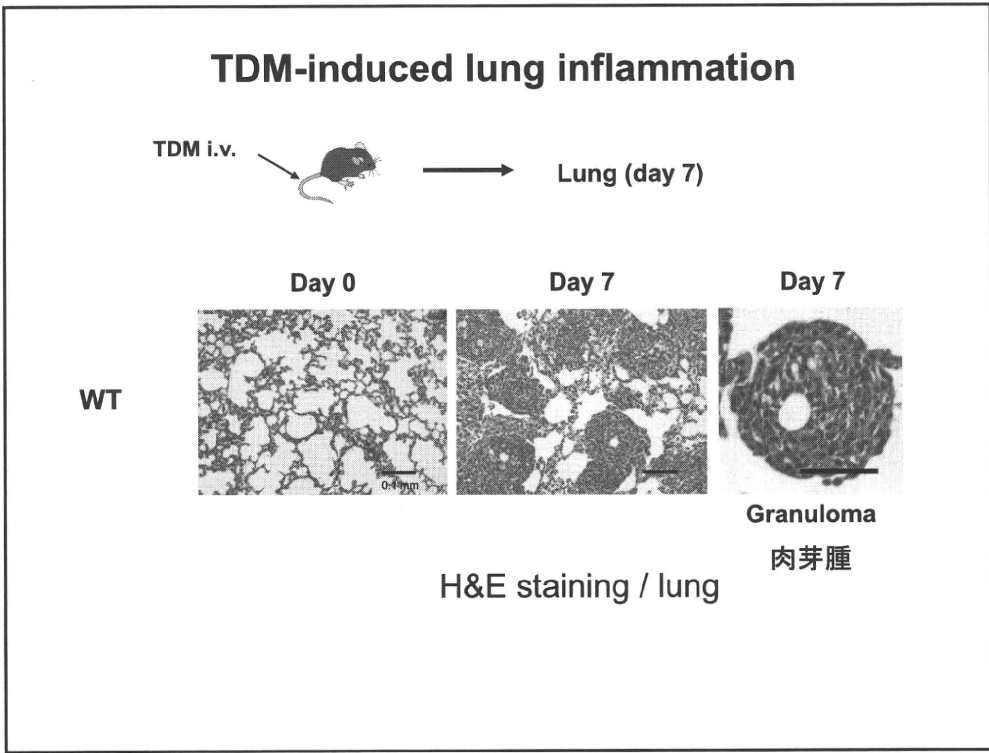
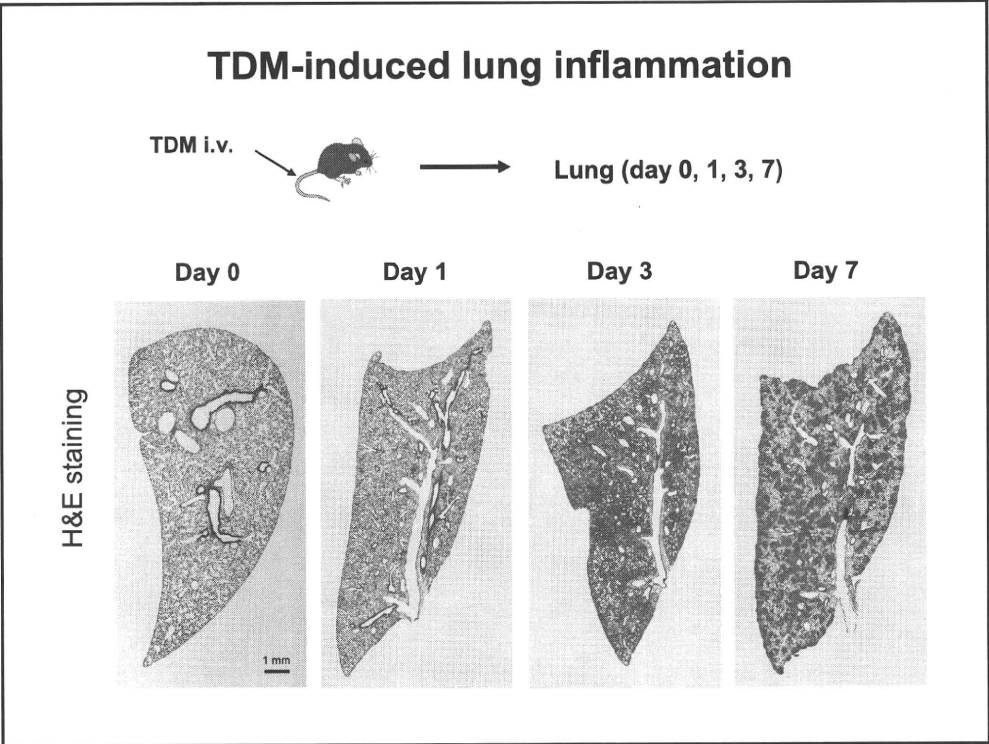
Mincle is essential for TDM-induced M ϕ activation



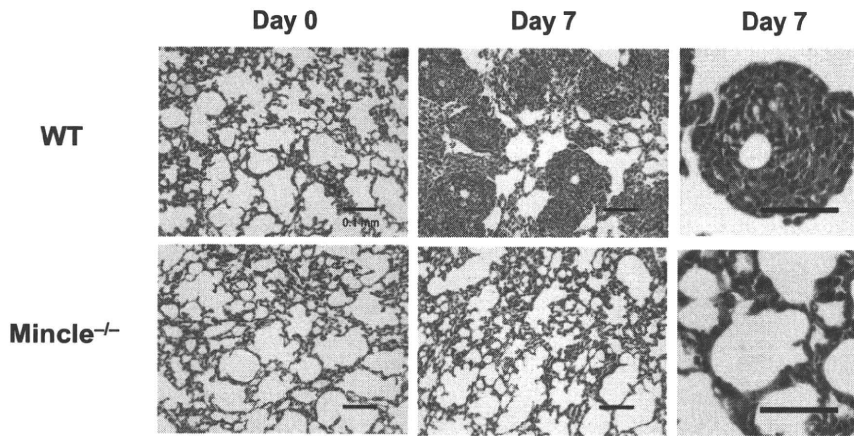
In vivo response?

TDM-induced systemic inflammation

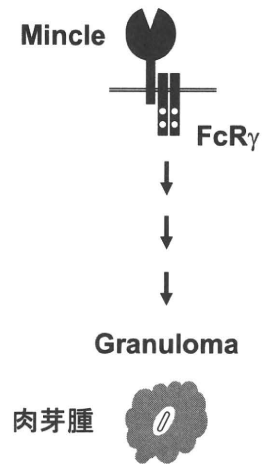
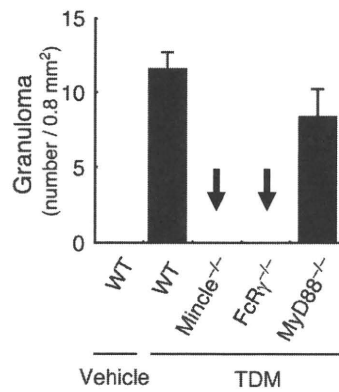




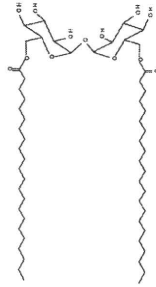
TDM-induced lung inflammation



Mincle mediates granuloma-forming signal *in vivo*

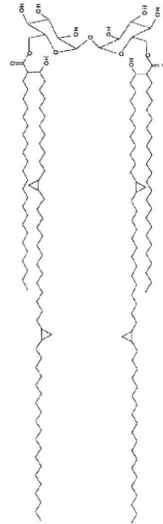


Synthetic adjuvant, TDB



TDB

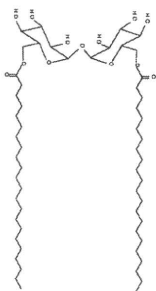
**Trehalose
dibehenate**



TDM

**Trehalose
dimycolate**

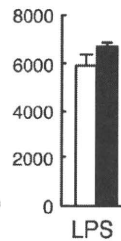
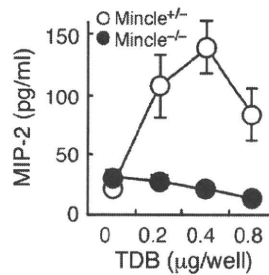
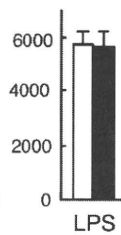
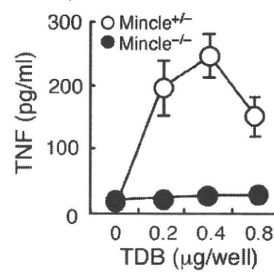
TDB acts through Mincle



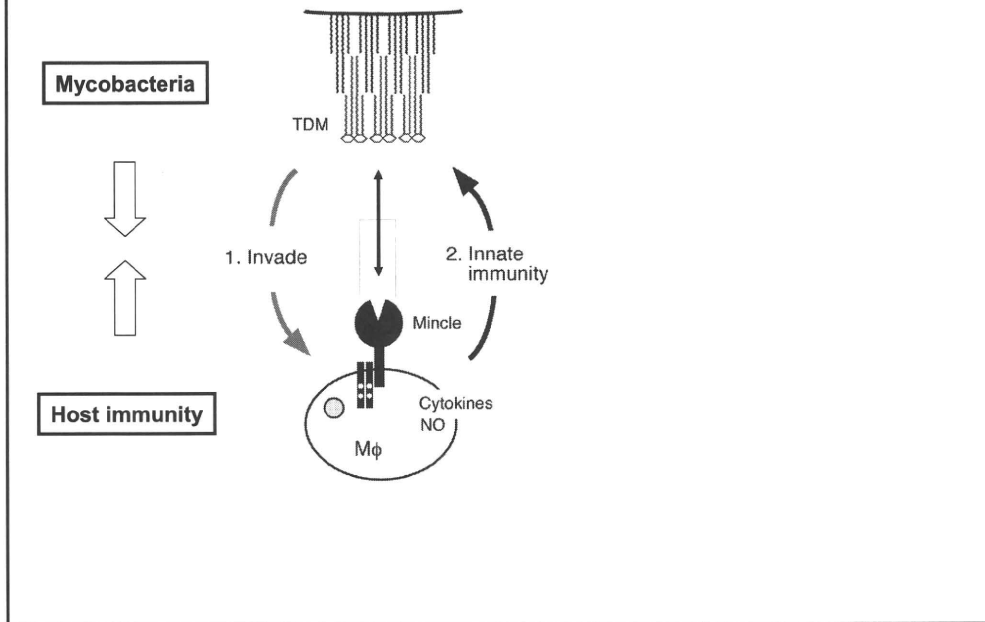
TDB

**Trehalose
dibehenate**

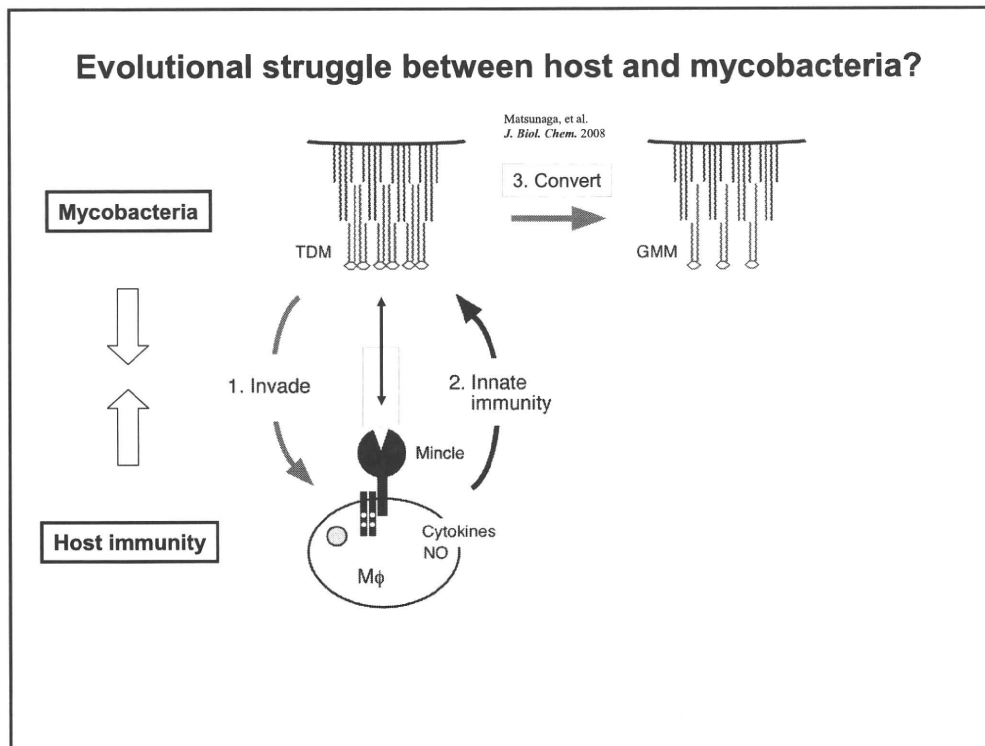
BMM ϕ

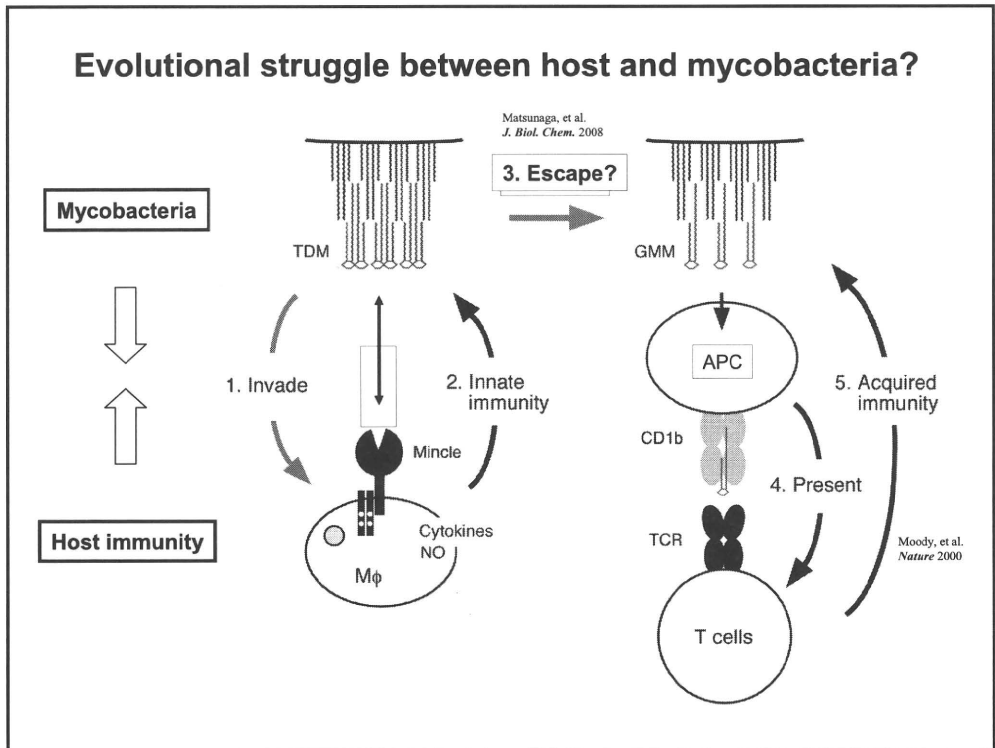
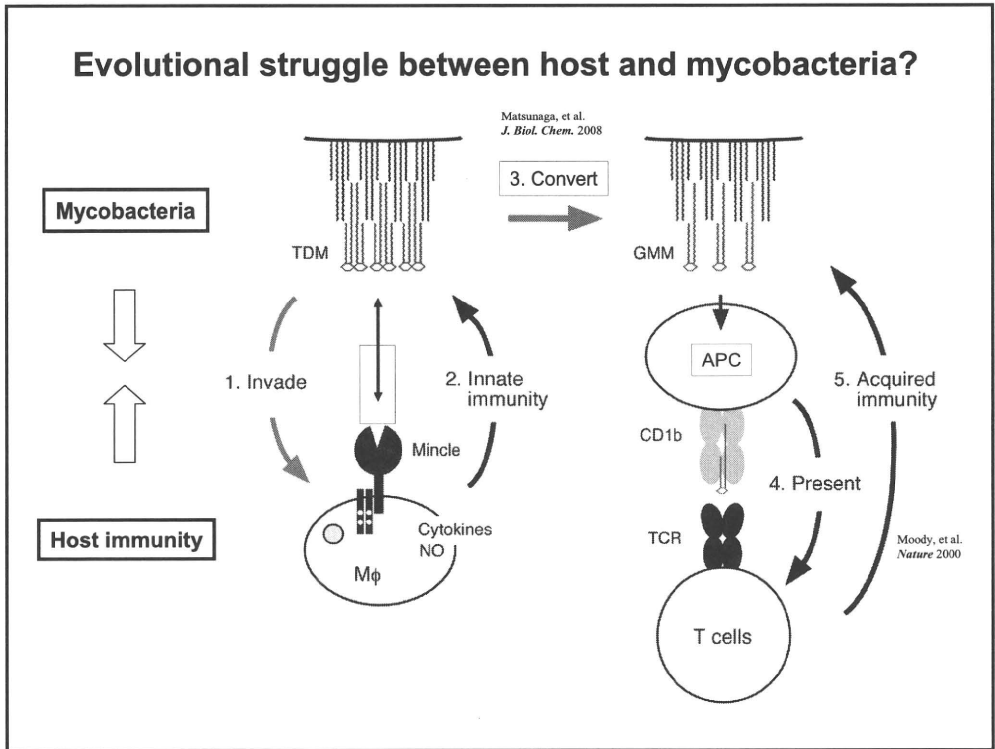


Evolutional struggle between host and mycobacteria?

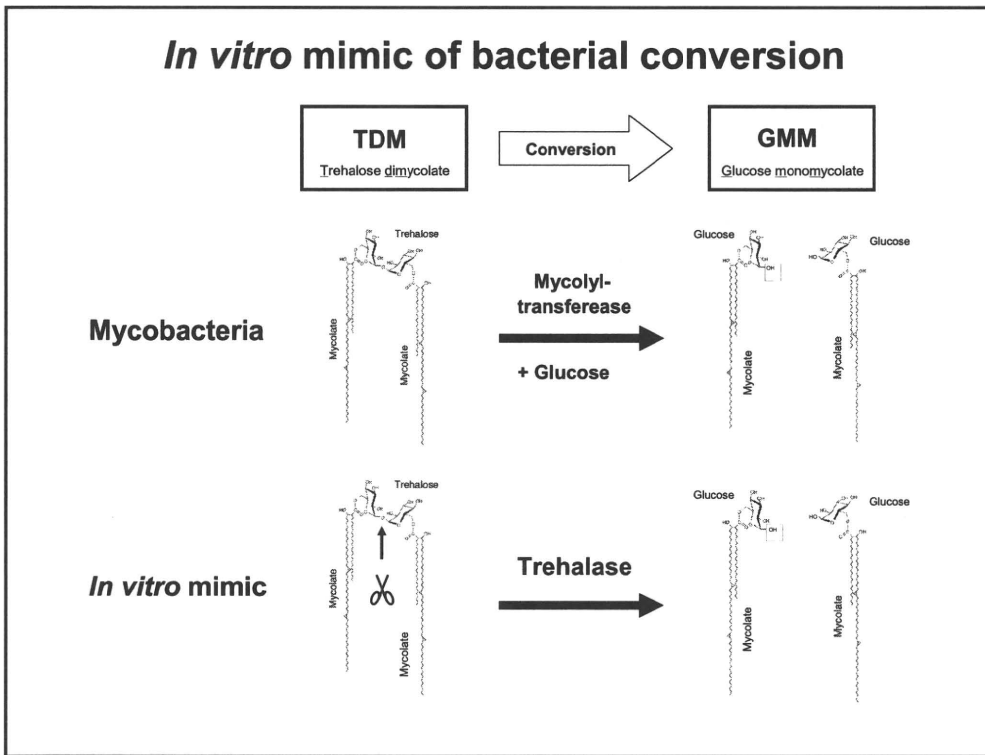


Evolutional struggle between host and mycobacteria?





In vitro mimic of bacterial conversion



GMM conversion may be an escape strategy

