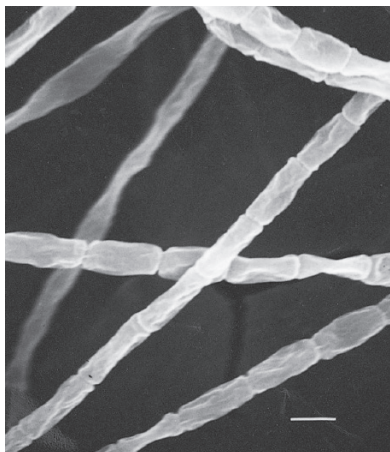


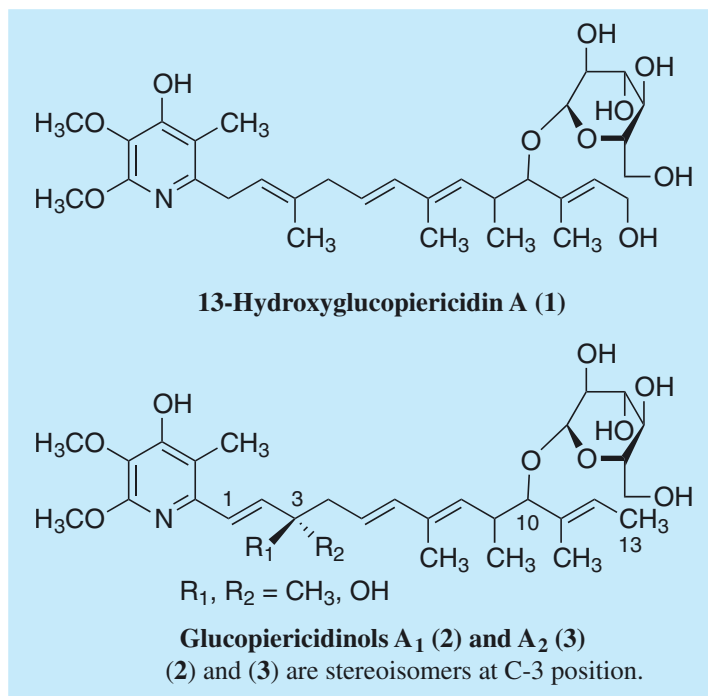
# Glucopiericidin

## 1. Discovery, producing organism and structures<sup>1,2)</sup>

Glucopiericidins and glucopiericidinols were isolated from the culture broth of the actinomycete strain OM-5689 and identified as a cytotoxic substance active against HeLa S3 cells.



*Streptomyces* sp. OM-5689



## 2. Physical data (13-Hydroxyglucopiericidin A)<sup>2)</sup>

Yellow oil.  $\text{C}_{31}\text{H}_{47}\text{NO}_{10}$ ; mol wt 593.32. Sol. in MeOH,  $\text{CHCl}_3$ . Insol. in  $\text{H}_2\text{O}$ .

## 3. Biological activity<sup>2,4)</sup>

### 1) Cytocidal activity

Cell line \ Compound	IC <sub>50</sub> (μg/ml)			
	1	2	3	4
HeLa S3 human cervical carcinoma	0.76	0.62	0.98	0.11
B16 murine melanoma	0.21	0.32	0.67	0.0074
H69-human lung carcinoma	0.066	0.47	0.83	0.019
P388 murine leukemia	2.5	0.58	1.6	0.36
P388/ADM murine leukemia	0.78	4.3	4.2	0.25

### 4 : Glucopiericidin A<sup>3)</sup>

### 2) Antimicrobial activity

Test organism	MIC (μg/ml)			
	1	2	3	4
<i>Pyricularia oryzae</i>	500	125	31	31

Recently, glucopiericidin A was isolated while screening microbial samples for a filopodia protrusion inhibitor. Interestingly, glucopiericidin A alone did not inhibit filopodia protrusion, but synergistically inhibit protrusion with piericidin A in A431 cells.<sup>4)</sup>

#### 4. References

1. [431] S. Funayama *et al.*, *J. Antibiot.* **42**, 1734-1740 (1989)
2. [450] H. Mori *et al.*, *J. Antibiot.* **43**, 1329-1331 (1990)
3. M. Matsumoto *et al.*, *J. Antibiot.* **40**, 149-156 (1987)
4. M. Kitagawa *et al.*, *Chem. Biol.* **17**, 989-998 (2010)