Fig. 1

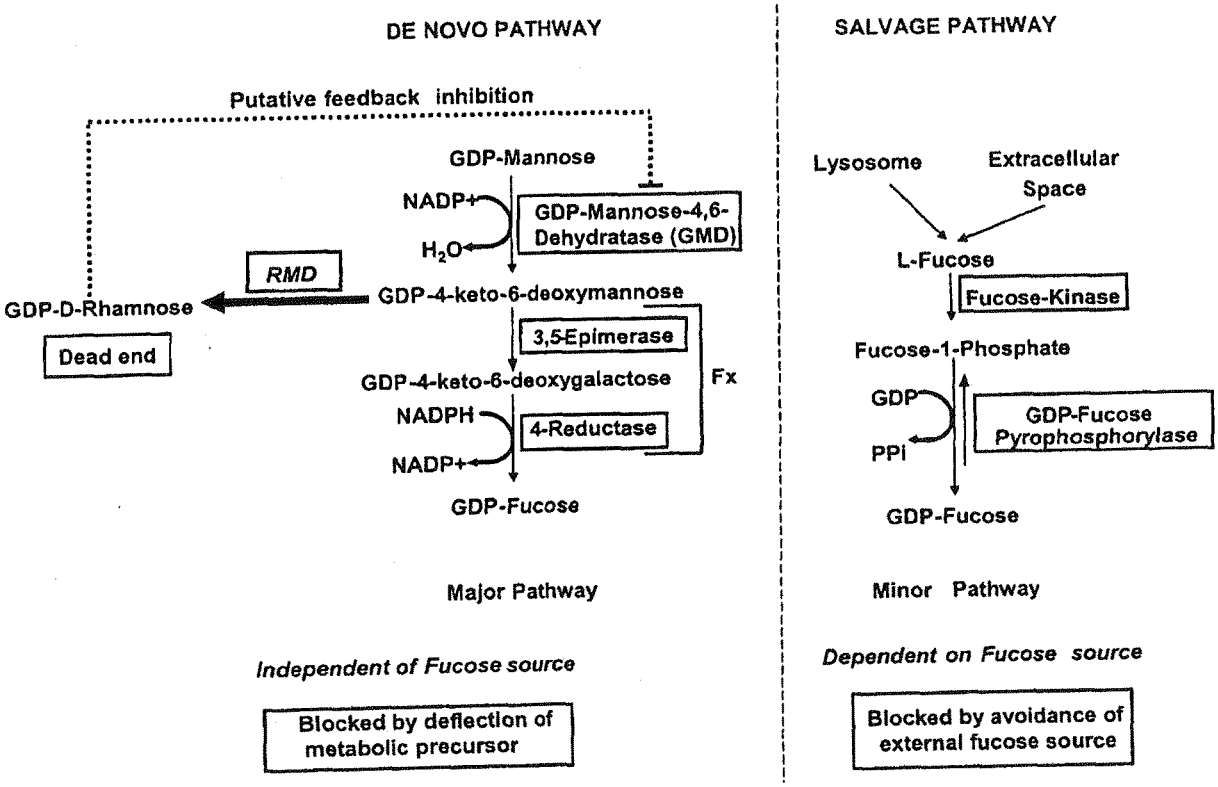

DE NOVO PATHWAY
SALVAGE PATHWAY
Putative feedback inhibition
GDP-Mannose
NADP+
H2O
GDP-Mannose-4,6-Dehydratase (GMD)
RMD
GDP-D-Rhamnose
Dead end
GDP-4-keto-6-deoxymannose
3,5-Epimerase
GDP-4-keto-6-deoxygalactose
Fx
NADPH
4-Reductase
NADP+
GDP-Fucose
Major Pathway
Independent of Fucose source
Blocked by deflection of metabolic precursor
Lysosome
Extracellular Space
L-Fucose
Fucose-Kinase
Fucose-1-Phosphate
GDP
PPi
GDP-Fucose Pyrophosphorylase
GDP-Fucose
Minor Pathway
Dependent on Fucose source
Blocked by avoidance of external fucose source

Fig. 2

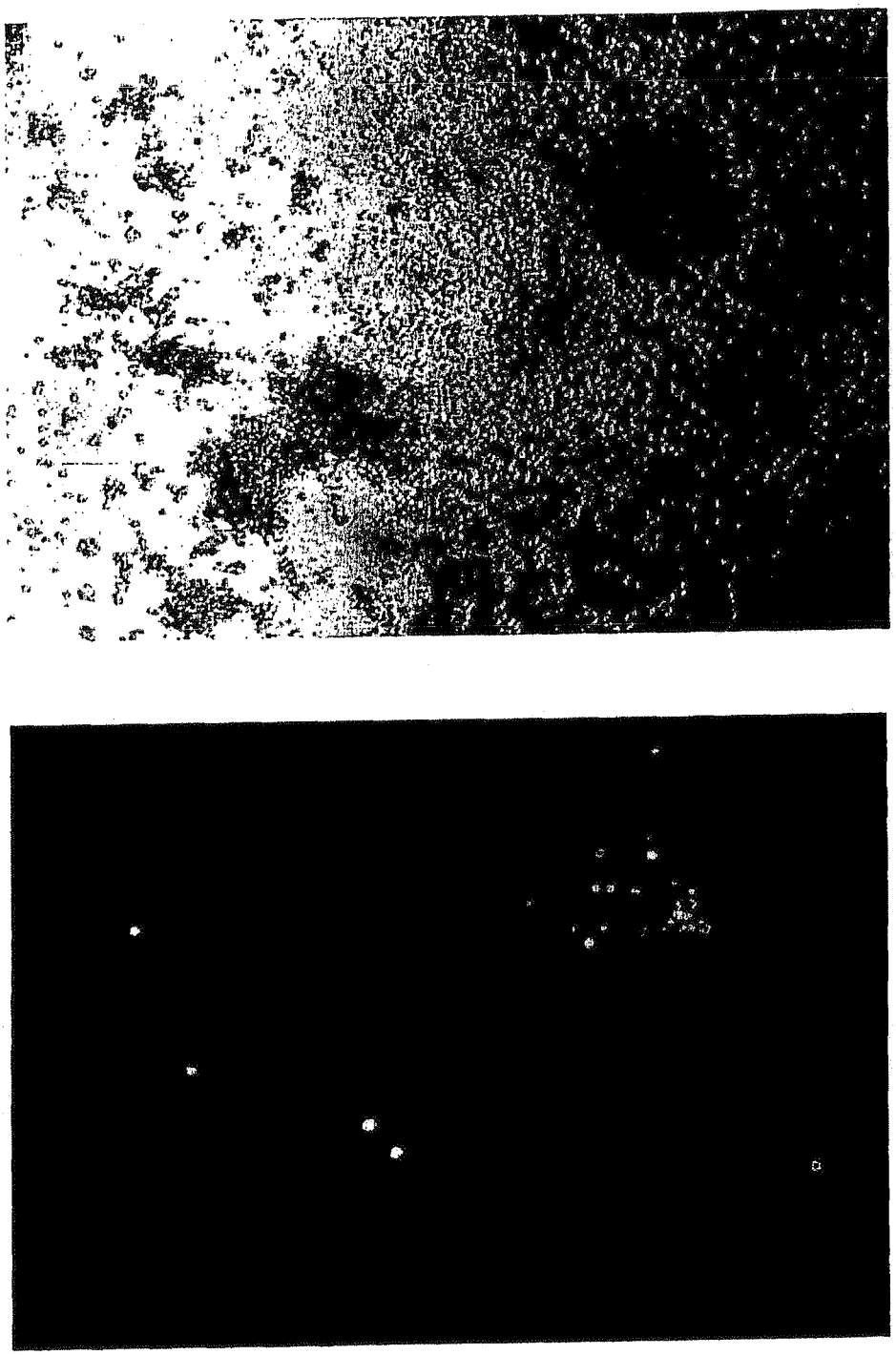


Fig. 3

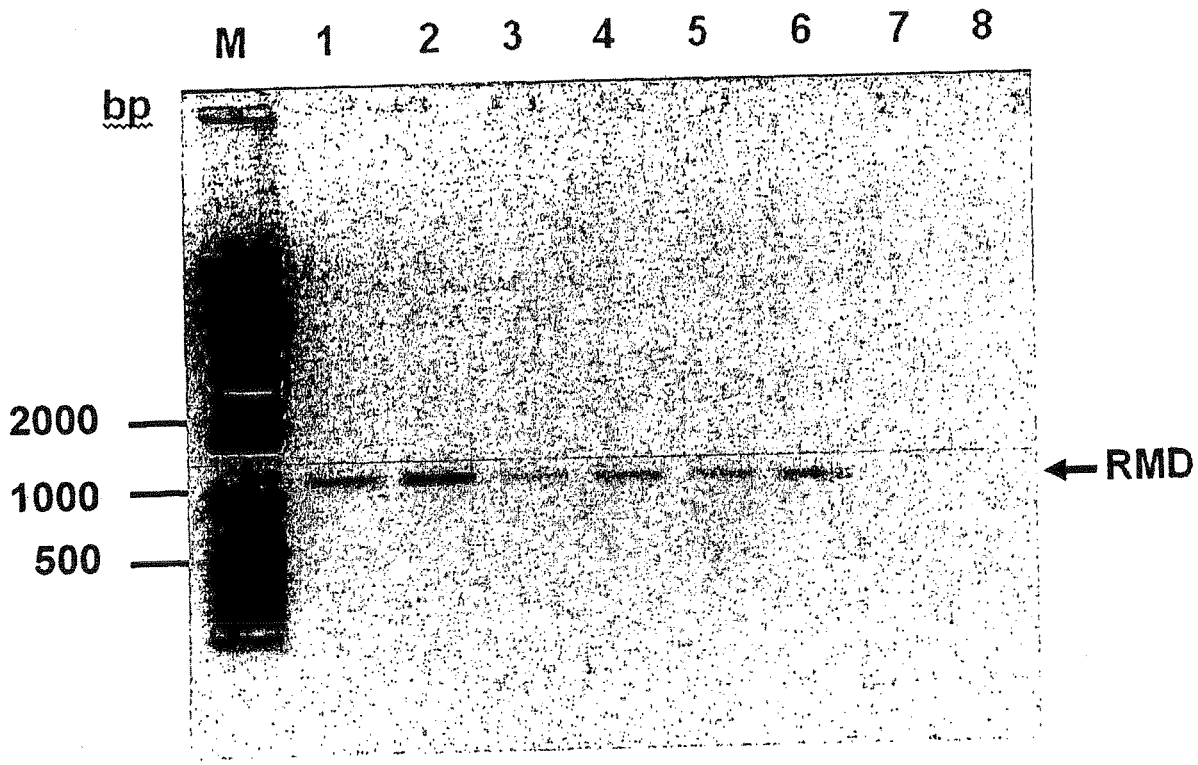


Fig. 4

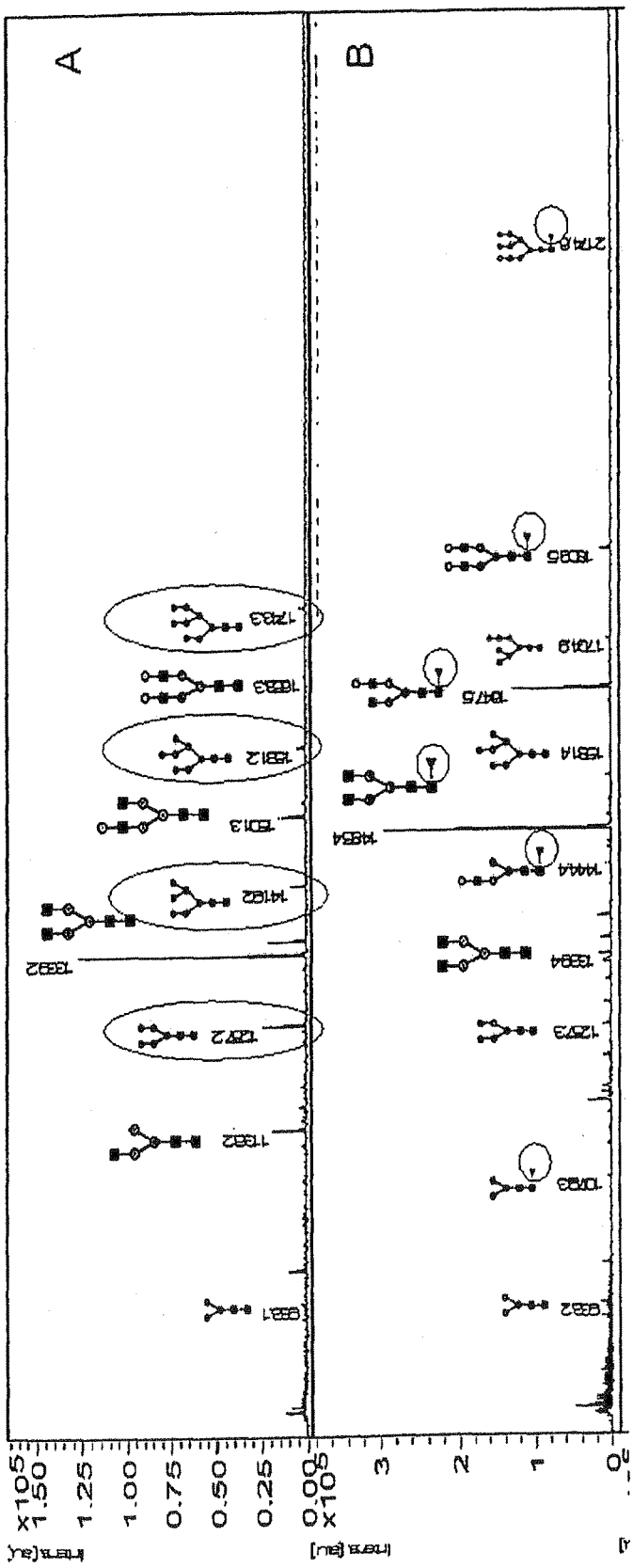
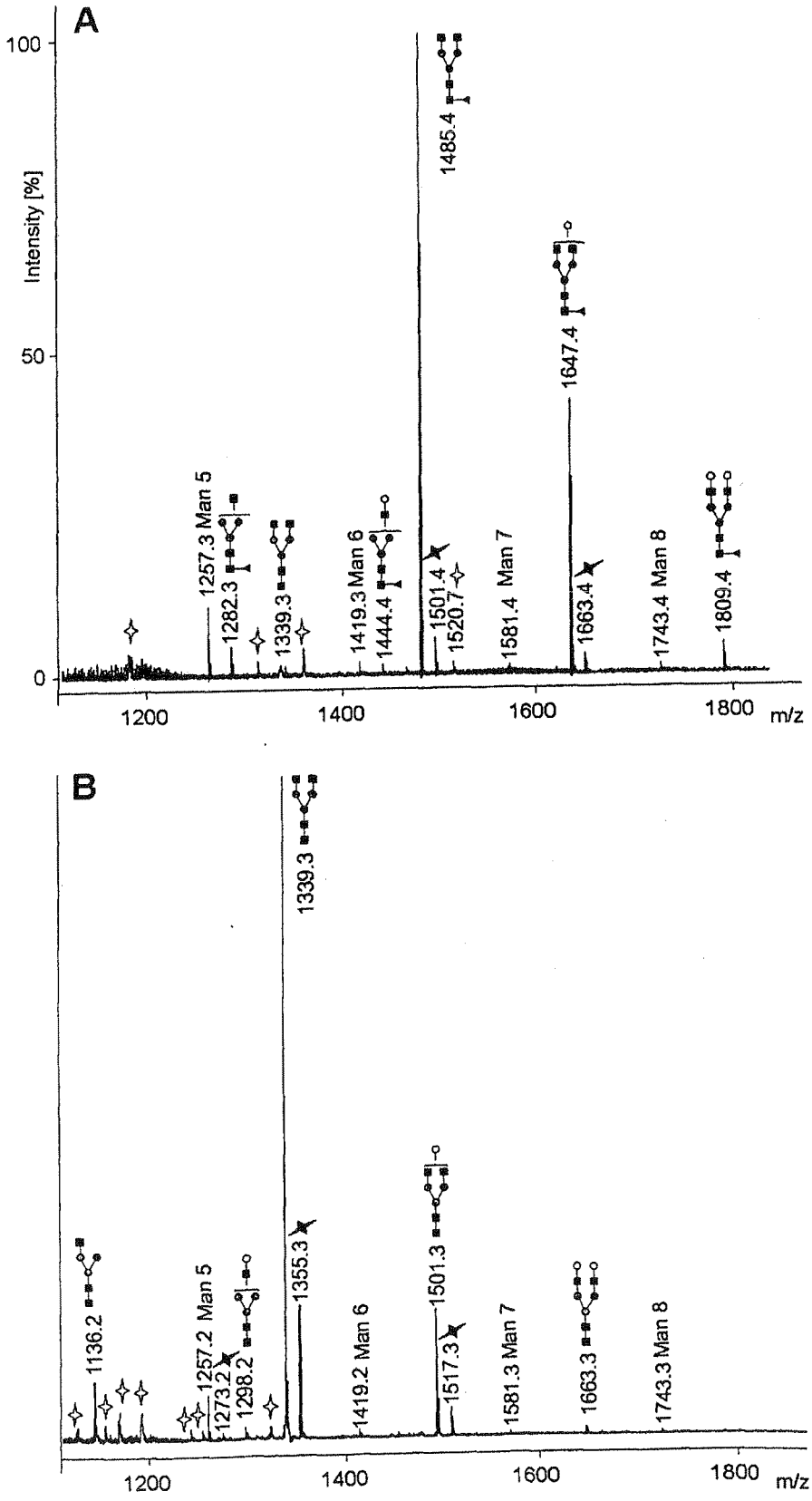
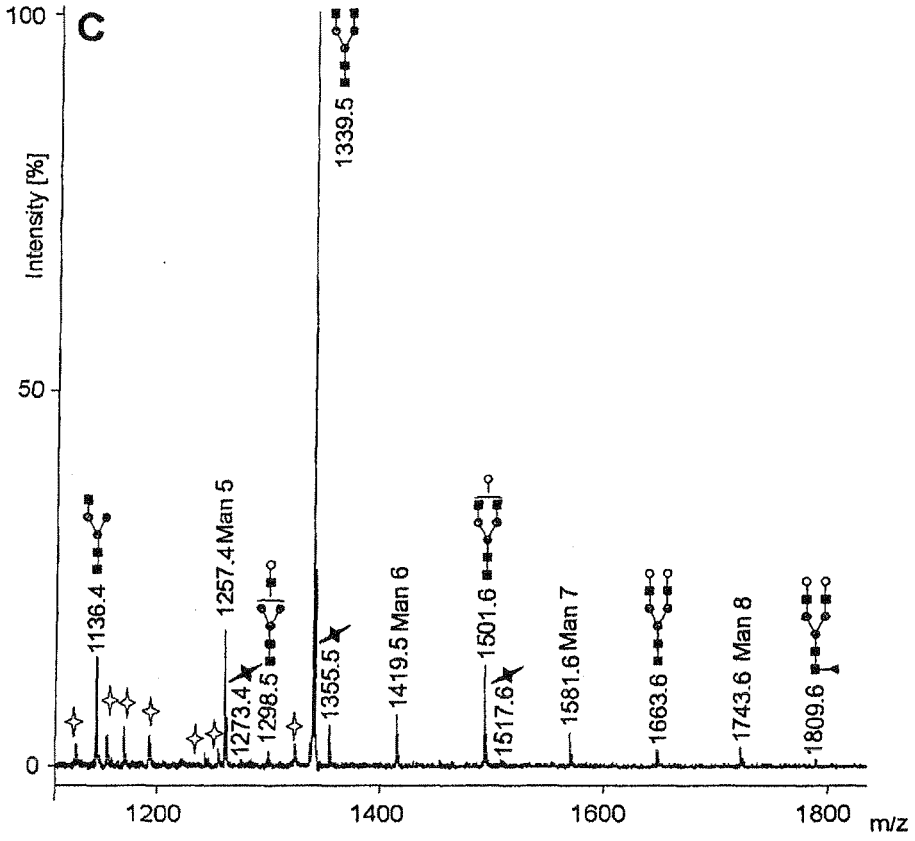


Fig. 5


A
100
50
0
Intensity [%]
1257.3 Man 5
1282.3
1339.3
1419.3 Man 6
1444.4
1485.4
1501.4
1520.7
1581.4 Man 7
1647.4
1663.4
1743.4 Man 8
1809.4
1200
1400
1600
1800
m/z
B
1339.3
1136.2
1257.2 Man 5
1273.2
1298.2
1355.3
1419.2 Man 6
1501.3
1517.3
1581.3 Man 7
1663.3
1743.3 Man 8
1200
1400
1600
1800
m/z


C
100
50
0
Intensity [%]
1136.4
1257.4Man 5
1273.4
1298.5
1339.5
1355.5
1419.5 Man 6
1501.6
1517.6
1581.6 Man 7
1663.6
1743.6 Man 8
1809.6
1200
1400
1600
1800
m/z

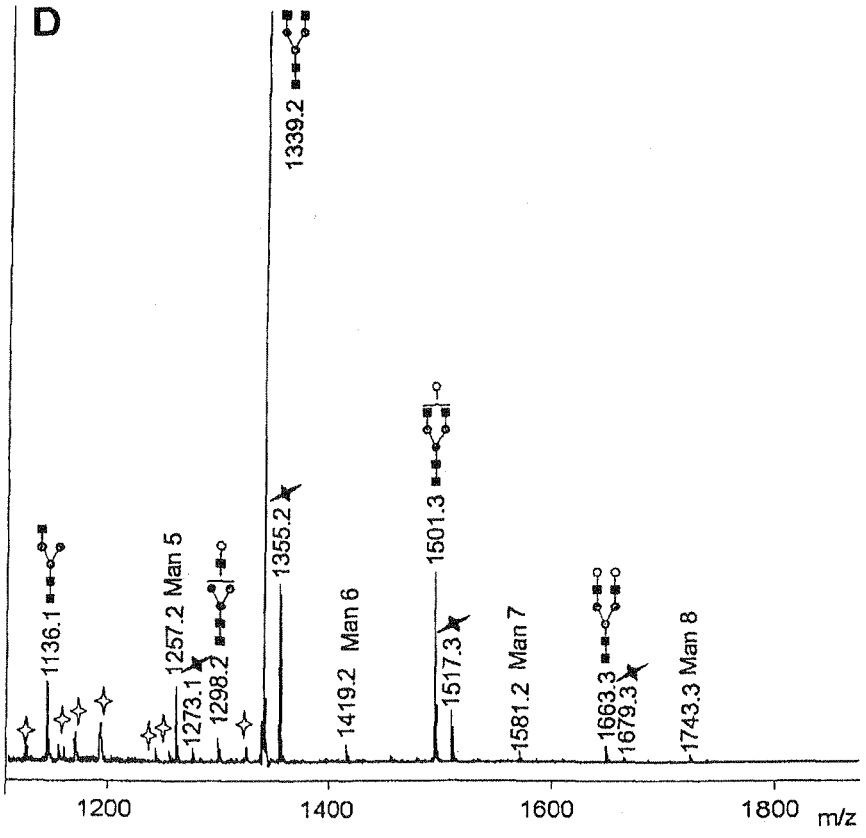

D
1136.1
1257.2 Man 5
1273.1
1298.2
1339.2
1355.2
1419.2 Man 6
1501.3
1517.3
1581.2 Man 7
1663.3
1679.3
1743.3 Man 8
1200
1400
1600
1800
m/z

Fig. 6

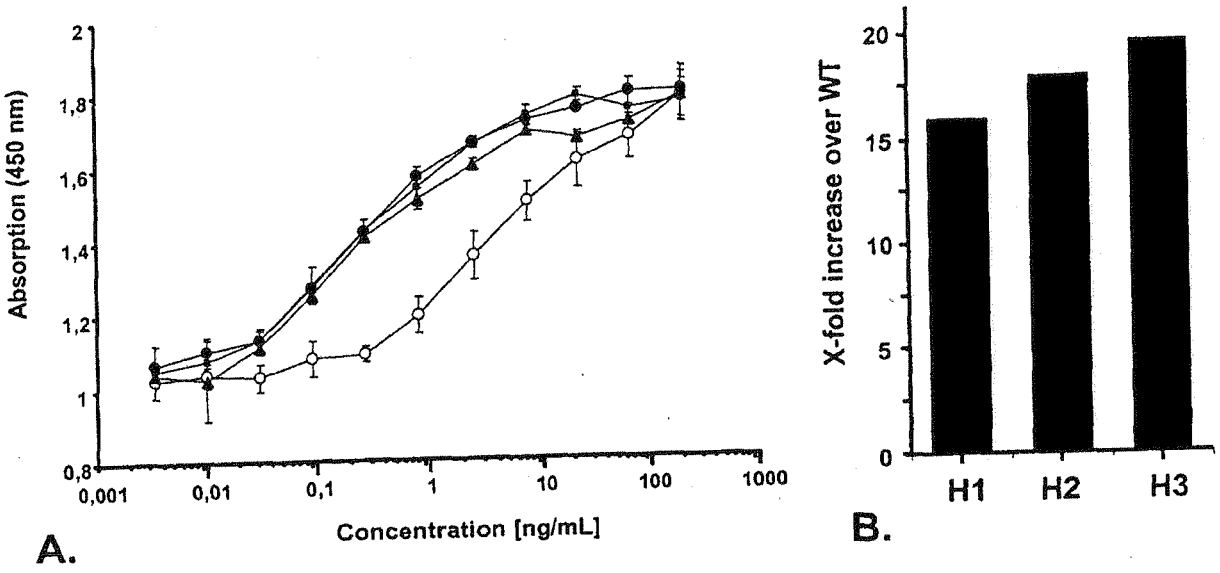

Absorption (450 nm)
2
1,8
1,6
1,4
1,2
1
0,8
0,001
0,01
0,1
1
10
100
1000
Concentration [ng/mL]
A.
X-fold increase over WT
20
15
10
5
0
H1
H2
H3
B.

Fig. 7

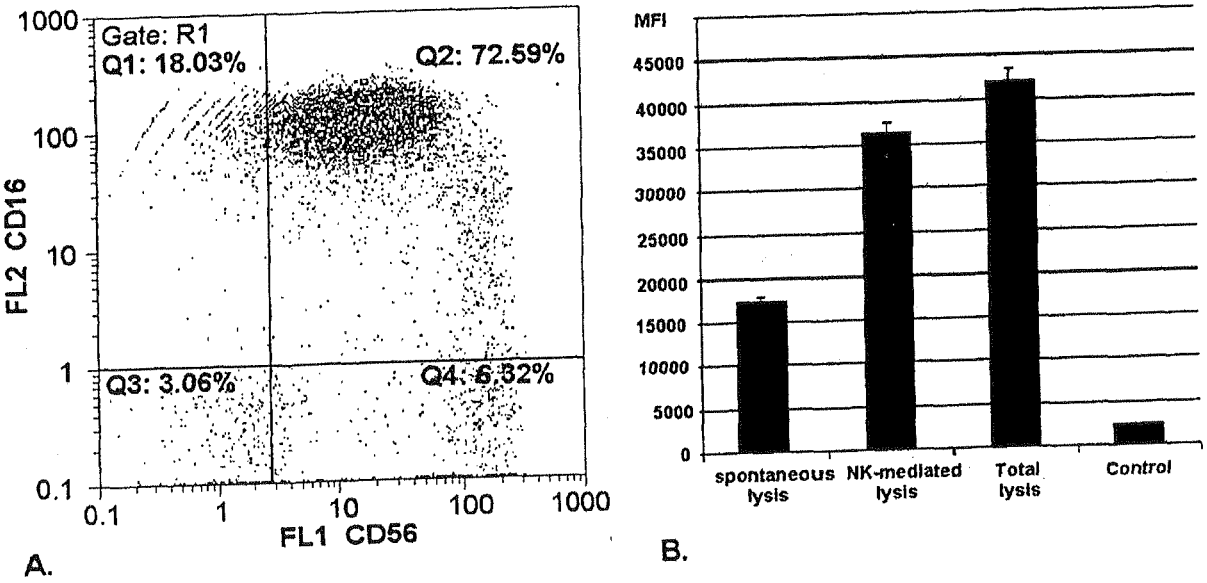

Gate: R1
Q1: 18.03%
Q2: 72.59%
Q3: 3.06%
Q4: 6.32%
FL2 CD16
1000
100
10
1
0.1
0.1
1
10
100
1000
FL1 CD56
A.
MFI
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
spontaneous lysis
NK-mediated lysis
Total lysis
Control
B.

Fig. 8

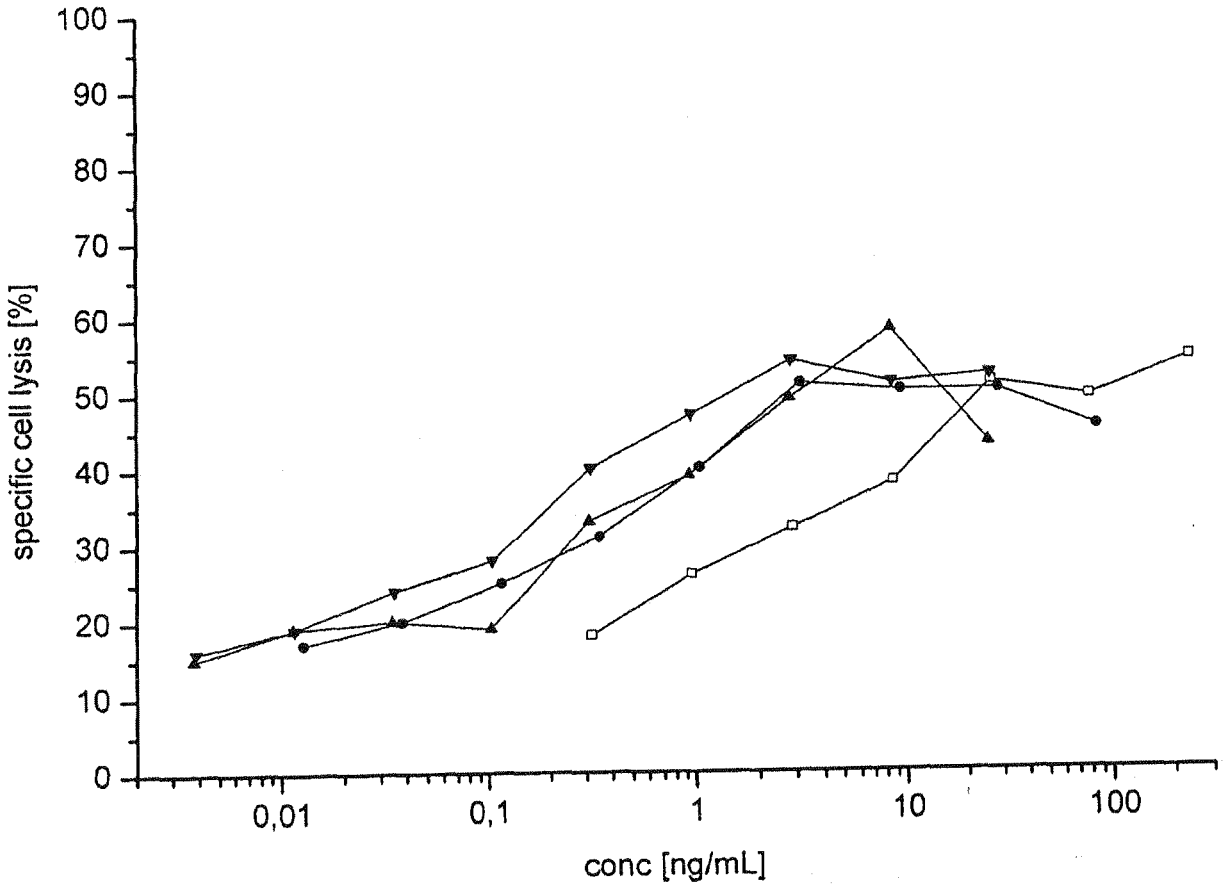

specific cell lysis [%]
100
90
80
70
60
50
40
30
20
10
0
0,01
0,1
1
10
100
conc [ng/mL]

Fig. 9

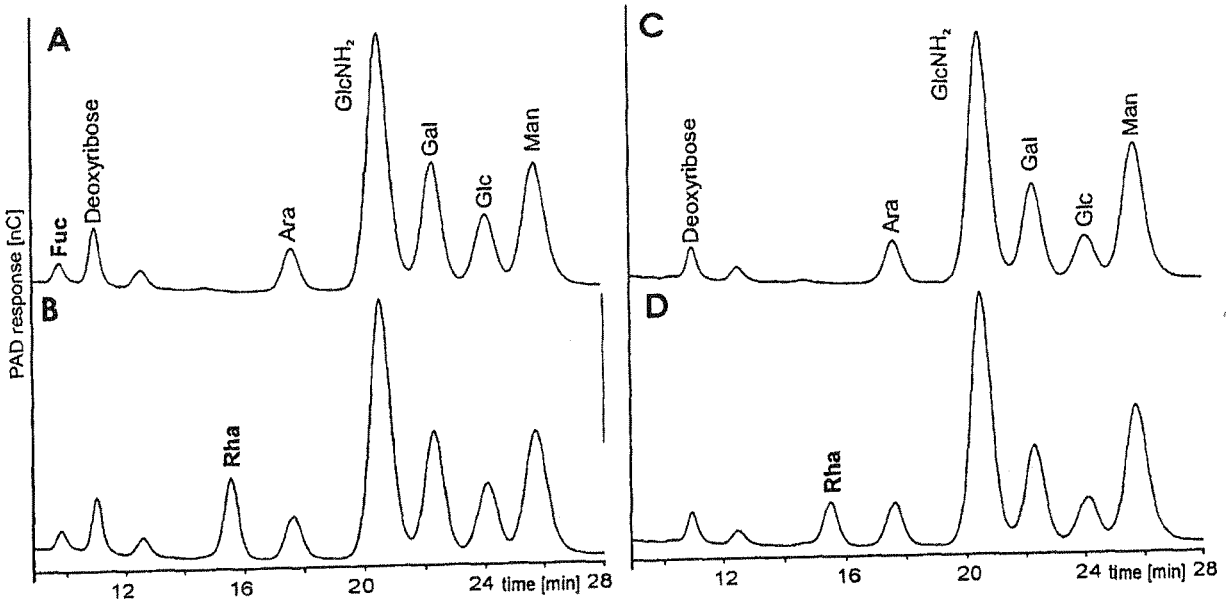
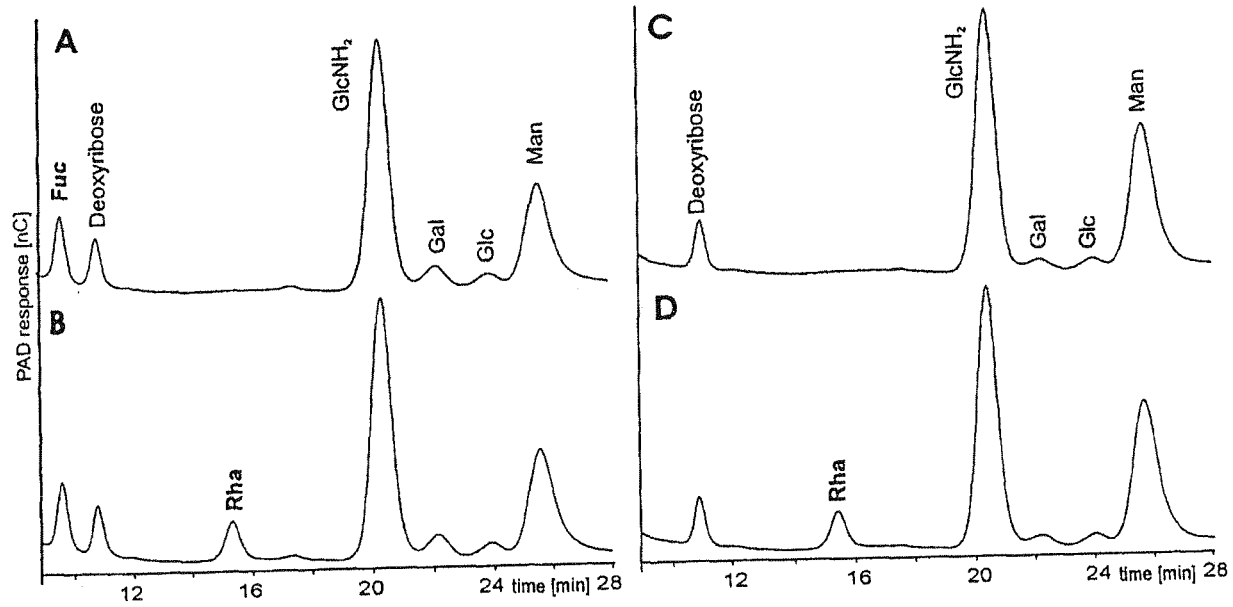

A
B
C
D
PAD response [nC]
Fuc
Deoxyribose
Ara
GlcNH2
Gal
Glc
Man
Rha
12
16
20
24 time [min] 28

Fig. 10


A
B
C
D
PAD response [nC]
Fuc
Deoxyribose
GlcNH2
Gal
Glc
Man
Rha
12
16
20
24 time [min] 28