

		.....	1
1	D	.....	1
2	Levan	.....	2
3	L-	.....	3
4	L-	.....	4
5	α	.....	5
6	α	α	5
7	γ -	.....	6
8	γ -	.....	7
9		.....	8
10		.....	9
11		A MPL	10
12	(3-6 )	.....	10
13		.....	11
14		.....	12
15	A	.....	13
16		.....	13
17		.....	14
18		.....	16
19		.....	16
20	β	.....	17
21		.....	18
22		.....	20
23		γ	21
24	D	.....	21
25		.....	22
26		.....	23
27		.....	24
28	L-	.....	25
29	L-	.....	26
30		C 2- -D-	26
31	α -	.....	27
32	β -	.....	28
33	γ -	.....	28
34	L-	.....	29
35		.....	30
36		.....	31
37		.....	31
38	L-	.....	32

39	L -	.....	33
40		.....	34
41		.....	34
42		R-J6	35
43	C	.....	36

1 D

“ 863 ”

1

D- tagatose

D-

D- C-4

D-

D-

D-

D-

Miada

D-

D-

D-

D-

D-

2

D-

3

50 D-

500

D-

200610085922.2

D-

L-

L20A

201010112337.3

13382890702

0510-85329055
bjiang@jiangnan.edu.cn

Levan

(levansucrase EC2.4.1.10)
 β - (2 → 6)

1

Levan

(levansucrase EC2.4.1.10)
 β - (2 → 6) Levan
 ~~β - (2 → 1)~~
225 ° C 141 ° C

Levan

Levan

levan

201210012005.7

0510-85329055

13382890702

bjiang@jiangnan.edu.cn

“ 863 ” “ 973 ”

1

L -

L -

L -

“ ” L -

L -

21 mmol/L

2

L -

3

L -

20

L -

-

pDXW-8

200910233618.1

-

200910260991.6

201010108464.6

sacB

201110302090.6

103409446A

0510-85329329

13921527325

xwang65@gmail.com

“ 863 ” “ 973 ”

1

L -

L -

L -

L -

L -

L -

“

”

L -

L -

20

2

L -

3

L -

20

L -

-

pDXW-8

200910233618.1

-
200910260991.6

sacB

201010108464.6

201110302090.6

103409446A

0510-85329329

13921527325

xwang65@gmail.com

5 α

1

α -

α -

α -

11 U/mL

2

α -

α -

200810244467.5

0510-85327802

13921108356

jingwu@jiangnan.edu.cn

6 α

α

2011

1

α-CGT

100 U/ml (α-) 70400 U/ml ()

15% 55% α - 85

2

α - α -

α -

200910029154.2

200910260985.0

α - 200910260986.5

0510-85327802

13921108356 0510-85326653

GABA 117 g L.

buchneri WPZ001

GABA *E. coli* BL21(DE3)/pET20b-*torA-gadB* TorA
GadB GABA Weimberg
GABA 7 *E. coli* JWZ08/pWZt7-g3/pWZt7-xyl
GABA GABA 3

γ - 201210136696.1
L 201610853074.9
γ - 201510208490.9
γ -

201310519881.3
0510-85329329 13921527325

xiaoyuanwang@hotmail.com

8 γ -
γ - Poly γ -glutamic acid γ -PGA

1
D- L-
γ -

DNA

2

50 y -

500

20110189421.X

0510-85329055

13382890702

bjiang@jiangnan.edu.cn

9

“ 863 ”

1

2 6

()

 β -D-

2

3

3000

500

4

β -
201010160761.5

β -
201210012038.1

β -
201210012040.9

13382890702 0510-85329055
bjiang@jiangnan.edu.cn

10

lactosucrose lactosyl fructoside

1

galactopyranosyl-(1,4)-O- α -D-glucopyranosyl-(1,2)- β -D-fructofuranoside O- β -D-

25 ° C C18H32O16 504.4 g/mol
2000 g/L 3670 g/L
30%

pH 4.5 120 ° C 1 h

2

3

1000

500

0510-85329055

13382890702

bjiang@jiangnan.edu.cn

11

A

MPL

MPL

1

A

Corixa

A MPL

MPL

A

A

pagL

lpxE

pagP

A

MPL

2

MPL

3

MPL

w3110

MPL

MPL

A

201110316939.5

0510-85329329

13921527325

xwang65@gmail.com

12

(3-6)

1-6

“ ”

(1)

(2)

(3)

(4)

	863					
		70		Trends Biotechnol	Biotechnol	
Adv	7		SCI	500		
Lonnie O. Ingram		Jens Nielsen			2	1
				1		
		17	6			
		6			4.02	1.24

0510-85197875

mingll@jiangnan.edu.cn

40g/L

2

0510-85327802

13921108356

0510-85326653

jingwu@jiangnan.edu.cn

14

Bacillus

amyloliquefaciens FMME044

44 h

71.5 g/L

0.40 g/g

8 /

15 / 100

700 /

1.

201210014603.8

2.

201310658954.7

0510-85197875

:mingll@jiangnan.edu.cn

15

A

A

TLR4

[50, 51]

Corexa

MPL

MPL

IL-1 β

MPL

MPL

Salmonella minnesota RC595

A

A

A

A

MPL

MPL

MPL

A

MPL

Kdo2-

A

201510284792.4

0510-85329329

xiaoyuanwang@hotmail.com

16

1

Y -

2

3

20%

4

-

pDXw-8

200910233618.1

-

200910260991.6

201010108464.6

sacB

201110302090.6

y -

201110020606.8

0510-85329329

13921527325

xwang65@gmail.com

17

1

2

1

2

3

4

1

2

LED

3

4 LED

APP

3

1

ZL201822208617.9

2

ZL201822208604.1

3

ZL201822208662.4

4

1

2

1

2

3

4

MRSA

3

Wellman Center for Photomedicine

5

0510-85197729 13771037523

18

1

L-

70g/L 96%

2

ZL201210012022.0

0510-85919161

13382890702 bjiang@jiangnan.edu.cn

19

1

Arginine deiminase ADI

L-

250g/L

100%

2

ZL201210012036.2

ZL201210012037.7

0510-85919161

L- PHAs C.

glutamicum

3

201610512651.8

L

201610853074.9

4

5

PHAs

PHAs

13921527325

2

LPS

LPS

3

201410713700.5

Kdo2-

A

201510282822.8

4

LPS

LPS

Y. lipolytica

LPS

LPS

LPS

~70%

LPS

LPS

E. coli

LPS

Kdo2-lipid A

HEK-Blue hTLR4

TLR4

W3110

5

LPS

,

,

LPS

0510-85329329

13921527325

23

y

y

GABA) ,L.

buchneri WPZ001

GABA GABA

25

1

L -

C. glutamicum

L -

103.28%

TWF001

37

42

37

37

42

2

L -

33

2014

33

/

L-

Serratia marcescens

Escherichia coli

Corynebacterium glutamicum

Brevibacterium lactofermentum *Brevibacterium flavum*

1-1 *Escherichia coli*

Corynebacterium glutamicum

L -

ADM

L -

90%

60%

L-

L -

L-

3

L- 201610853074.9
L- 201910077955.X
PTS L-
201910077967.2
201910077953.0
4
200 20
125 g/L IPTG
103.28%
5
L- 20%
0510-85329329 13921527325
26
“ 863 ” “ 973 ”
1
MPL Corixa
MPL TLR4-TRAM-TRIF
TLR4-Mal-MyD88 [34]
MPL A A MPLA
A
A HW001 M-MPLA
TLC ESI/MS MPLA LPS

M-MPLA

M-MPLA

2

MPLA

3

, M-MPLA

M-MPLA

1

A

:

Kdo2-lipid A

201410052649.8

A

201210420986.9

A

201210421431.6

0510-85329329

13921527325

xwang65@gmail.com

27

1

2

L-

8

L-

30-35 g/L 60-70%
20-22g/L 40-
50% L-
3 L- 201410726700.9
L- 201610853074.9
4
C. glutamicum L-
L-
L- 3 L
L- 24.3 g · L⁻¹ 32.3 g · L⁻¹
32.9%
5
30%
0510-85329329 13921527325
28 L-
1
36 h 193 g/L
74%
2
(1)

(2) L -

(3)

3

L -

CN201911370748.X

4

5

(1) ()

6.6

/ (2) 12 / 1000
5400 / (2) L -

8

0510-85197875

29

L -

1

65~68 h L -

100 g/L

45%

2

(1)

(2)

L -

3

L -

CN201910349280.X

4

5

(1) ()

7

/ (2) 12 / 1000

5000

/

(2)

L -

20

L -

L -

0510-85197875

30

C

2 -

-D -

1

D-		C		2-	-D-	D-
			(NH ₄) ₂ SO ₄		2-	-D-
	30L		42 h		265.8 g/L	
1.04 g/g	500 L		48 h		220 g/L	
0.99 g/g						
2						
(1)						
(2)						
(3)		2-	-D-			
3						
(1)	2-	-D-				
2011110317435.5						
(2)		2-	-D-		201610250613.X	
4						
5						
(1)	()				1.5	
/		3	/	1000	1500	
/						
(2)	D-		C			
				2-	-D-	
D-						
			0510-85197875			
	31		α -			
1						
			L -			
					L -	
		15g/L	L -	100 g/L	α -	
95.6 g/L		96.4%				
2						
(1)						
(2)	L -					
(3)						
3						
(1)	α -		CN201811350903.7			

(2) L- CN201811350819.5
 4
 5
 (1) () 5
 / 7.5 / 1000 2500
 /
 (2) α -

0510-85197875

32 β -

1
 L- L- - α -
 (1) 20 g/L
 158.0 g/L 12~14 h β - 118.6 g/L
 98% (2) 30 g/L 216.0 g/L 12~14 h
 β - 162.1 g/L 98%
 2
 (1) (2)
 β - (3)

3
 (1) L- α -
 CN201911425979.6
 4

5
 (1) () 2.85
 / 8.5 / 1000
 5650 / (2) β - β

0510-85197875

33 γ -

1
 (glutamate decarboxylase , GAD) L-
 γ - C02
 γ -

300 L- 8 / 11 /
L- 900

0510-85197875
mingll@jiangnan.edu.cn

35

CCTCC M202019
T. glabrata
T. glabrata

60 h 70 g/L 0.56 g/g
Para-Pyruvate/Pyr < 1.4%

2.3 /
5 / 1000 2700 /

1.
200710131672.6

2. 201010581532.0
0510-85197875 :mingll@jiangnan.edu.cn

36

β -1,4- D- N-
C-6 N- C-4

40 h 3 g/L

45 / 10 20 /
250 /

1.
201110127831.1

2. 201210487801.6
0510-85197875 :mingll@jiangnan.edu.cn

37

, ,
,

0.62 g/g

1000 /

:mingll@jiangnan.edu.cn

L-

DNA	PMN
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

L -

L -

1. L - 201510230669.4

0510-85197875

:mingll@jiangnan.edu.cn

39

L -

L -

L -

L -

L - 6 h ARG 177.3 U/mL 4 h
112.3 g/L 87 %

14 / 1000 10 /
4000 /

L -

1. L - .
201310658955.1

0510-85197875

:mingll@jiangnan.edu.cn

40

Agmatine arginine
decarboxylase ADC L-

50 /

ADC

L-

100 g/L L- 5 h 52.02 g/L
69.6%

12 /

42 / 100 3000 /

1.

201510535382.2

0510-85197875

:mingll@jiangnan.edu.cn

41

phosphatidylserine PS

D

102.4 g/L 2 h 43.8 U/g D
94.3%

20 / 100 14 /
600 /

0510-85197875
:mingll@jiangnan.edu.cn

42

(statins)

R-J6

A (HMG-CoA)

51.3 g/L 60 g/L 60 h 3-TBDMSO
85.5% eeR 98.3%

30 / 100 20 /
1000 /

(Statins)

A (HMG-CoA)

1. (R)-3- CALB
201510179543.9

2. (R)-3-TBDMSO
201410746816.9

0510-85197875

:mingll@jiangnan.edu.cn

43 C
C (SAP) C(AsA)
AsA ()
AsA SAP
SAP

C
0.5 mol/L C 0.6 mol/L
42 8 h C 54.7 g/L 42.9%

20 /
60 / 100 600 /

C C

0510-85197875

:mingll@jiangnan.edu.cn