SUMMARY

WITHANOLIDES USEFUL FOR THE TREATMENT OF NEURODEGENERATIVE DISEASES

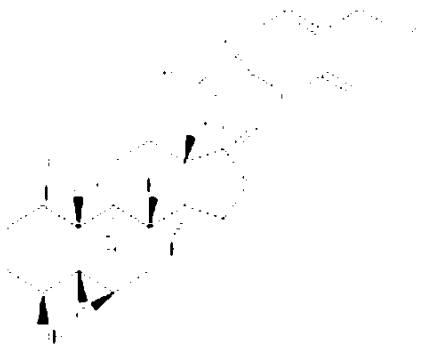
Provided herein are synthetic analogs of withanolide natural products of formula (I), wherein R1-R4 are as defined herein, and their pharmaceutical uses in treating neurodegenerative diseases.

[0002]

Claims

2.

3.



[illegible]

4. [illegible]

5. [illegible]

6. [illegible]

7. [illegible]

8. [illegible]

b) [illegible]

9. [illegible]

10. [illegible]

11. [illegible]

12. [illegible]

13. [illegible]

14. [illegible]

Description

[0301]

[0302]

[0303]

[0304]

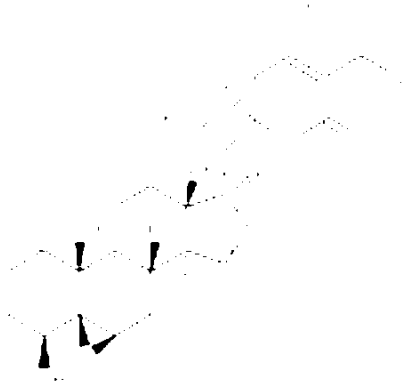
[0305]

[0306]

[0307]

[0208]

[0209]



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[0212]

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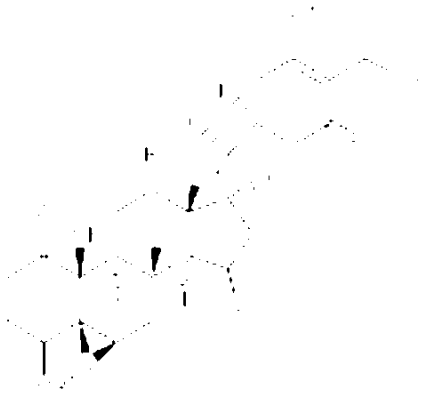
[0315]

[0316]

[0317]

[0318]

[0319]



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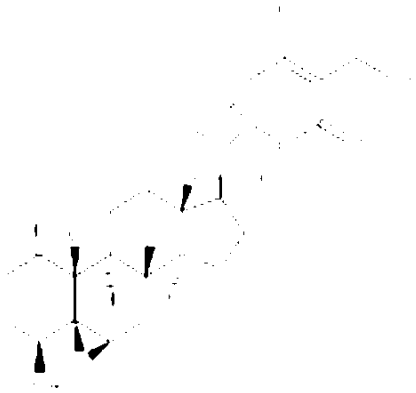

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[0324] [illegible]

[0325] [illegible]

[0326] [illegible]

[0327] [illegible]

[0328] [illegible]

[0329] [illegible]

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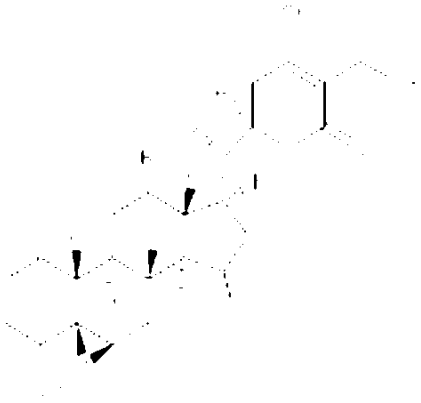
[0332] [illegible]

[illegible]

[0333] [illegible]



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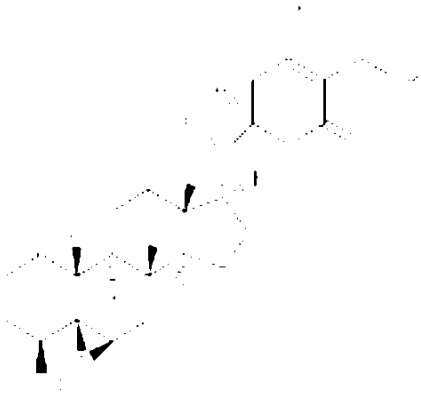

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[0036] [illegible]

[0037] [illegible]

[0038] [illegible]

[0039] [illegible]

[0040] [illegible]

[0041] [illegible]

[0042] [illegible]

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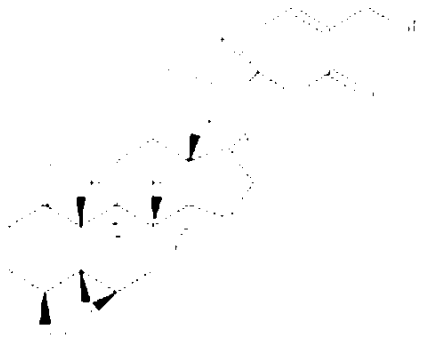
[0345]

[0346]

[0347]



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[0349]

[0350]

[0351]

[0352]

[0353]

[0354]

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[0356]

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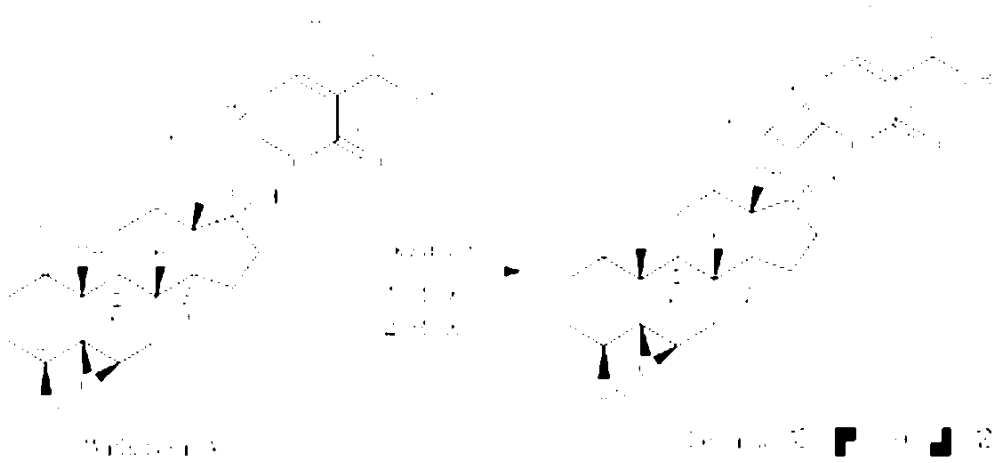
[0359]

[0363]

[0364]

[0365]

[0366]



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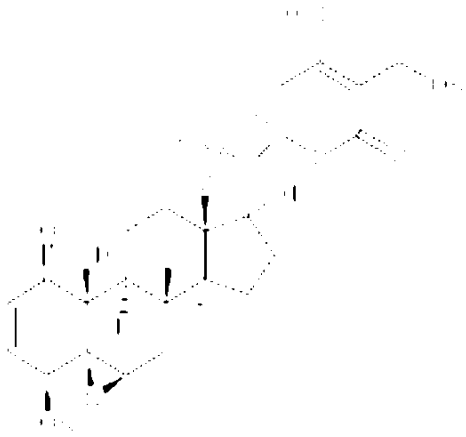

[0372]

[0373]

Compound	m/z [M+H]+	δ (ppm) (DMSO-d6)						
		4-H	5-CH2a	5-CH2b	6-CH2	7-CH2	4-OMe	2-OMe

[0374]

[0375]

[0376]

[0377]

[0378]

[0379]

[0382]

[0383]

[0384]

[0385]

[0386]

[0387]

[0388]

[0389]

[0390]

[0391]

[0392]

[0393]

[0394]

[0335]

[0336]

[0337]

[0338]

[0339]

[0340]

[0002]

Claims

2.

3.


Saline / DMSO
27-O-methyl WA
4-O-methyl WA

FIG. 1A

Relative light unit
Saline / DMSO
27-O-methyl WA
4-O-methyl WA

FIG. 1B

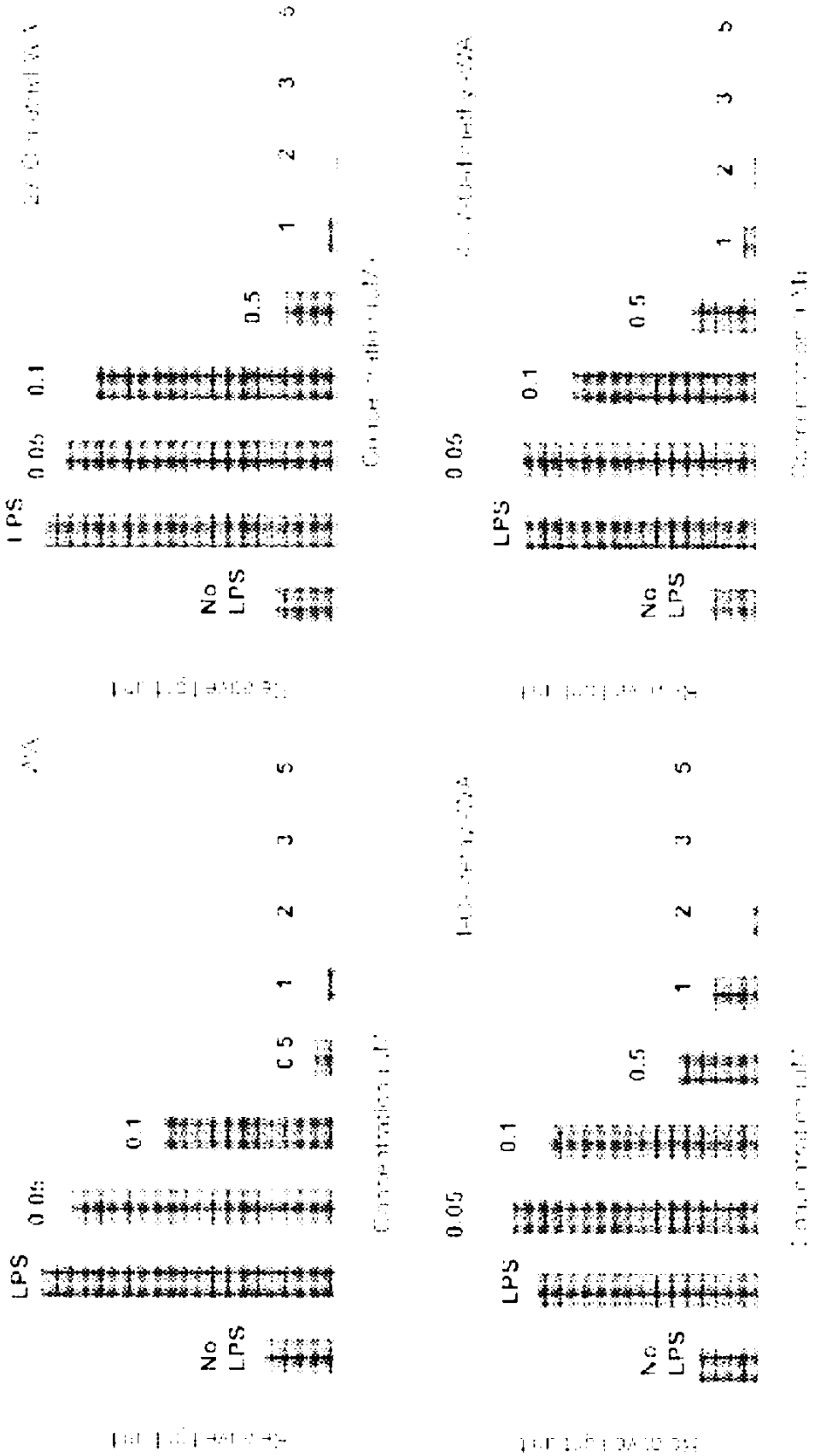

FIG. 2

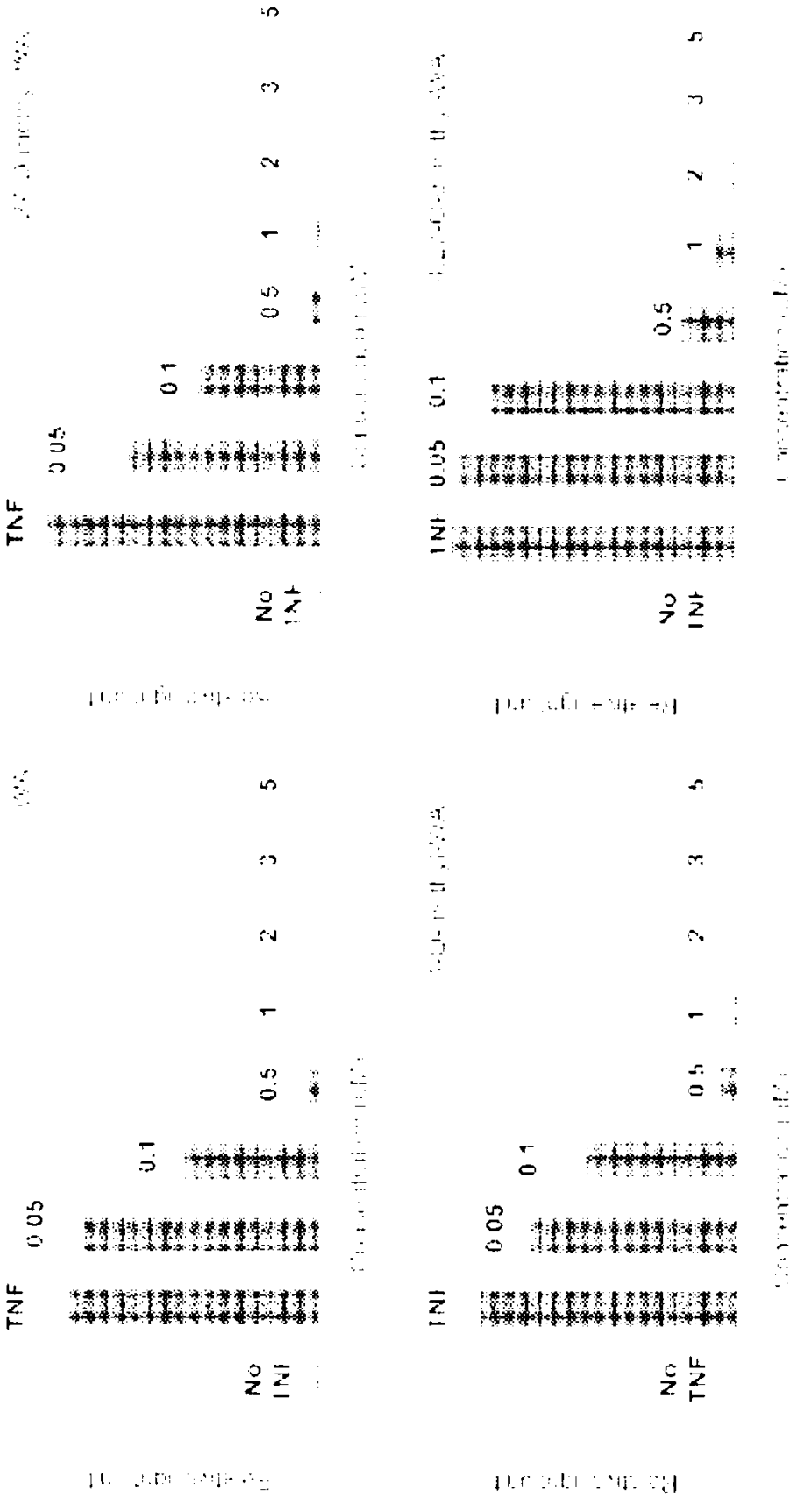
TNF
0.05
0.1
0.5
1
2
3
5
No INF
INI
0.05
0.1
0.5
1
2
3
5
No INF
TNF
0.05
0.1
0.5
1
2
3
5
No TNF
INI
0.05
0.1
0.5
1
2
3
5
No TNF

FIG. 3

FIG. 4A

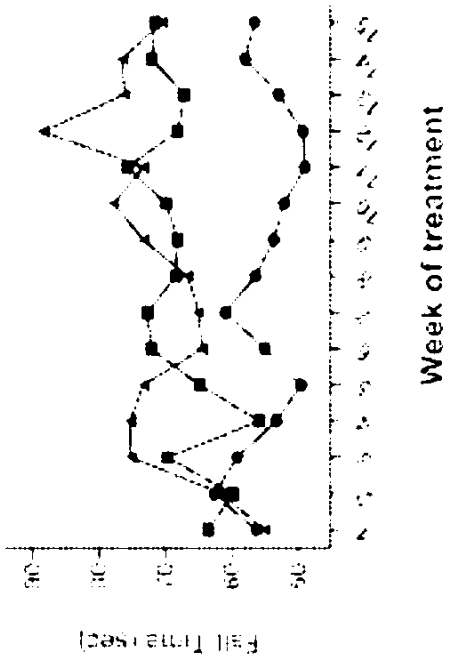

FIG. 4B