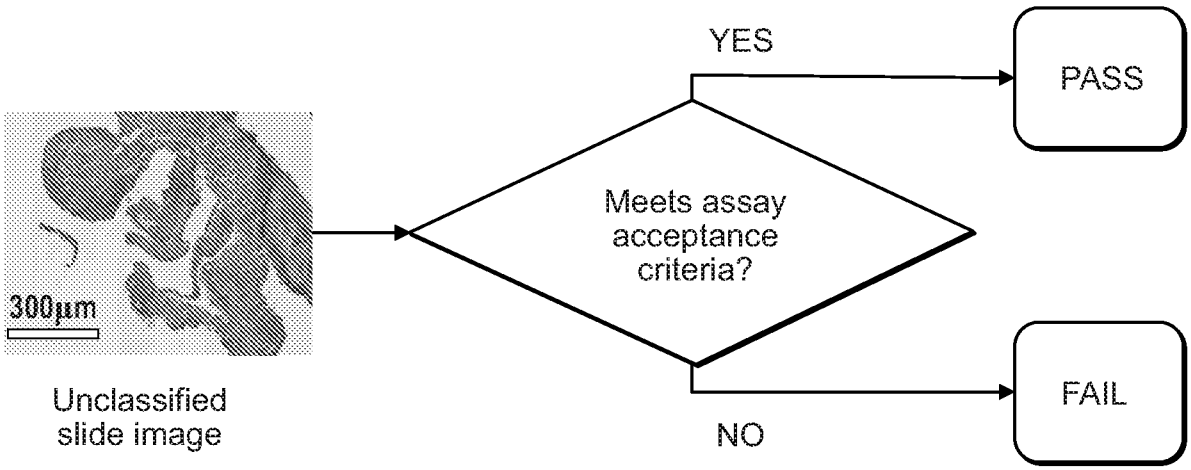

300µm
Unclassified slide image
Meets assay acceptance criteria?
YES
PASS
NO
FAIL

FIG. 1

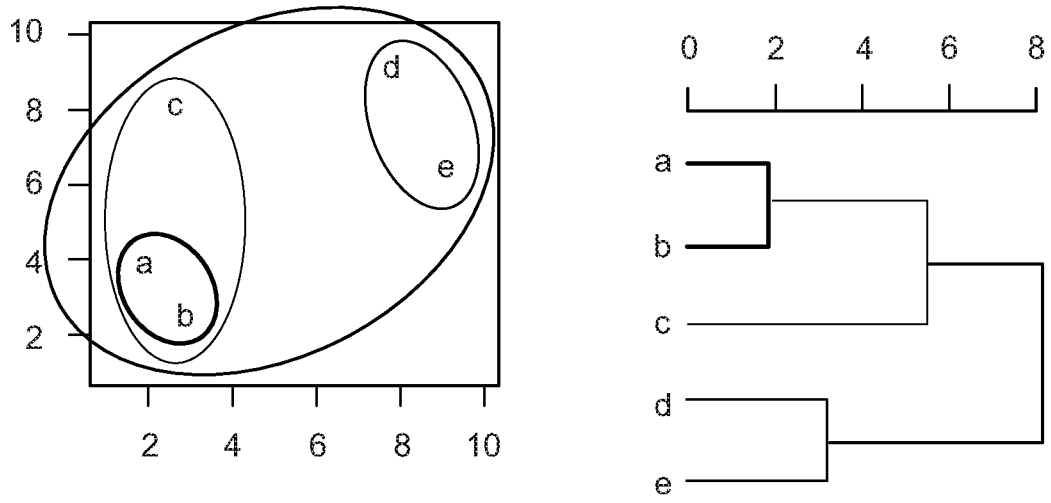

10
8
6
4
2
2
4
6
8
10
a
b
c
d
e
0
2
4
6
8
a
b
c
d
e

FIG. 2

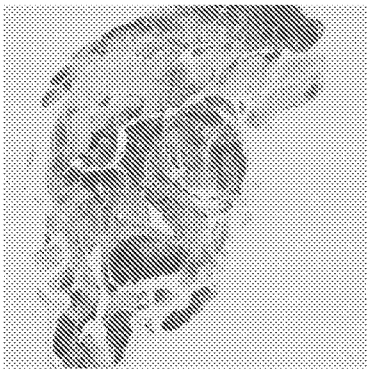


FIG. 3A

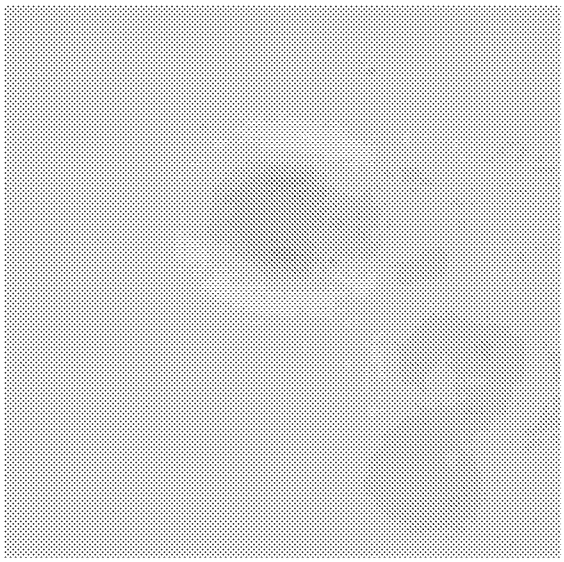


FIG. 3B

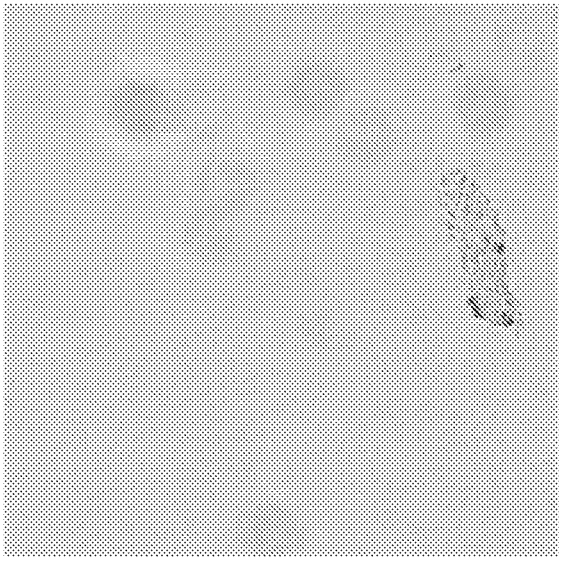


FIG. 3C

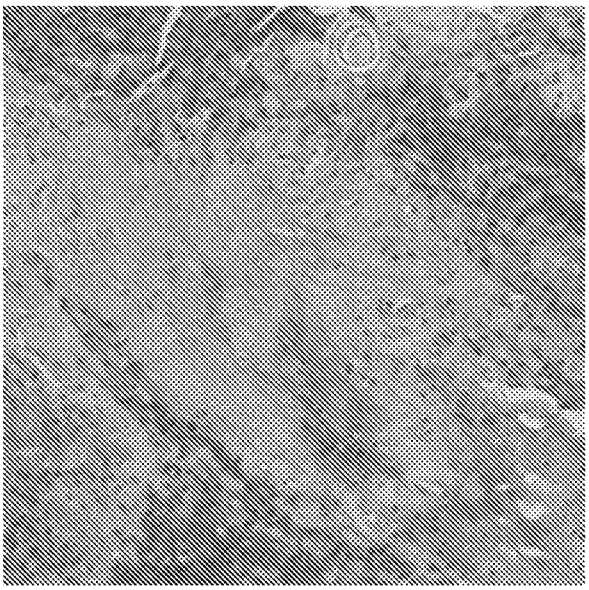


FIG. 3D

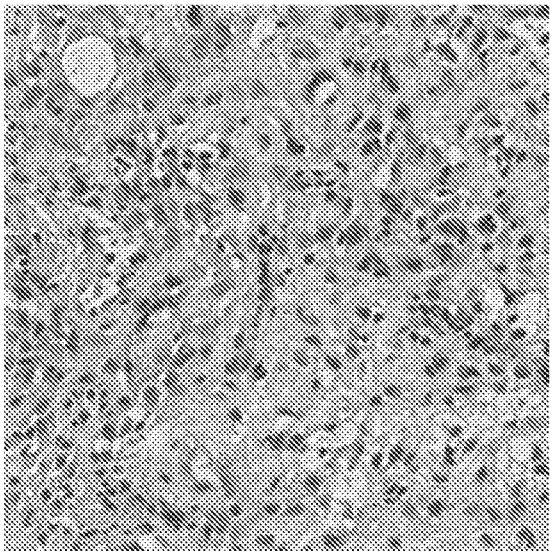


FIG. 4A

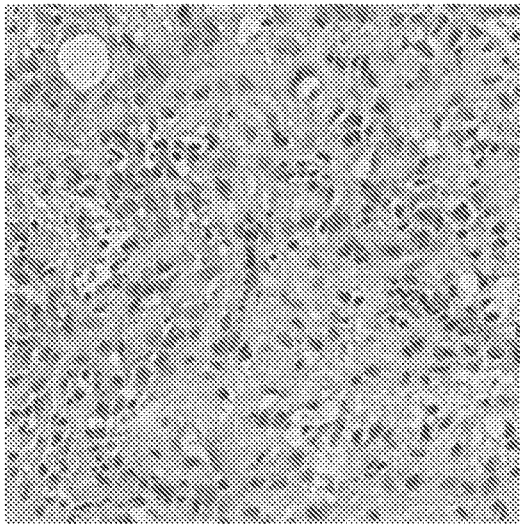


FIG. 4B

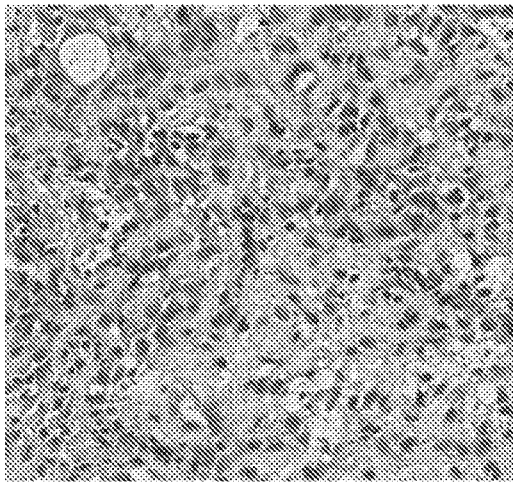


FIG. 4C

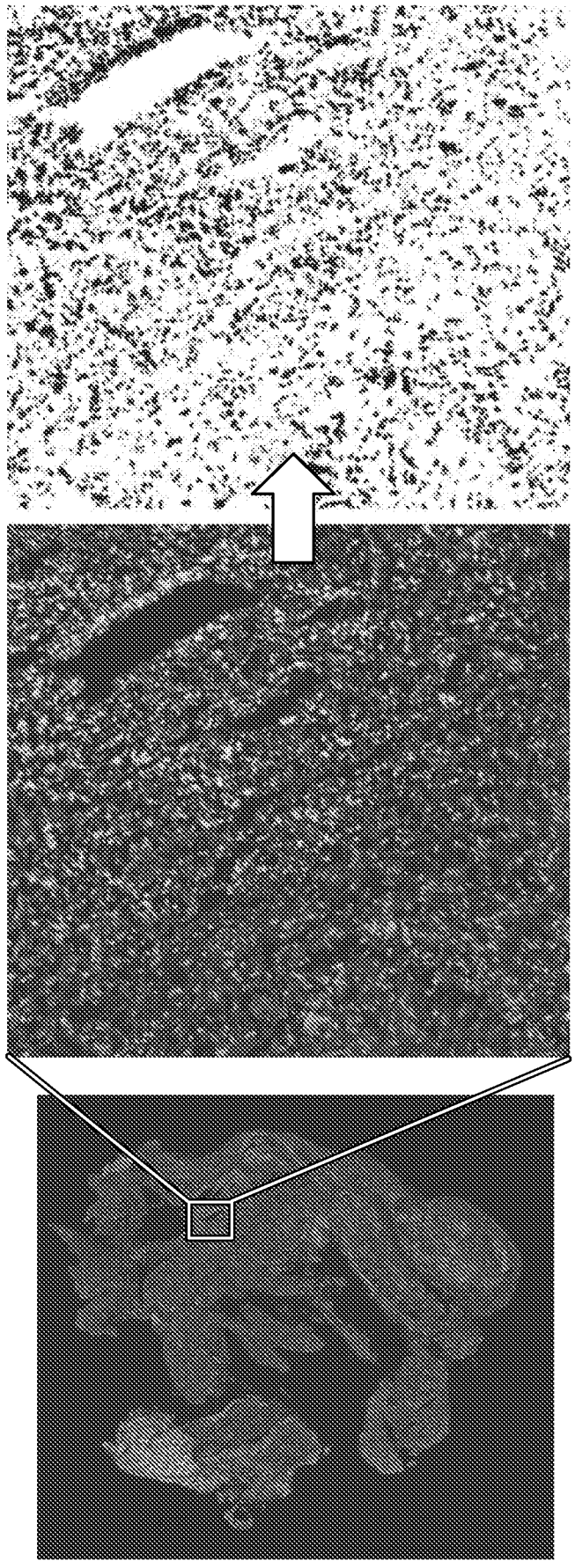


FIG. 5

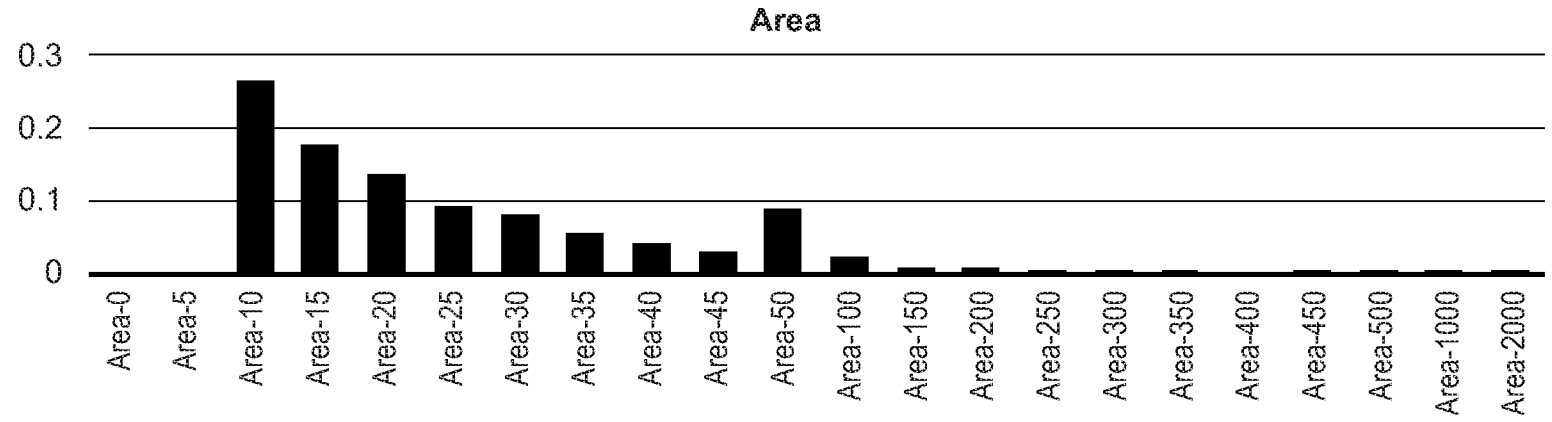

Area
0.3
0.2
0.1
0
Area-0
Area-5
Area-10
Area-15
Area-20
Area-25
Area-30
Area-35
Area-40
Area-45
Area-50
Area-100
Area-150
Area-200
Area-250
Area-300
Area-350
Area-400
Area-450
Area-500
Area-1000
Area-2000
Series1

FIG. 6A

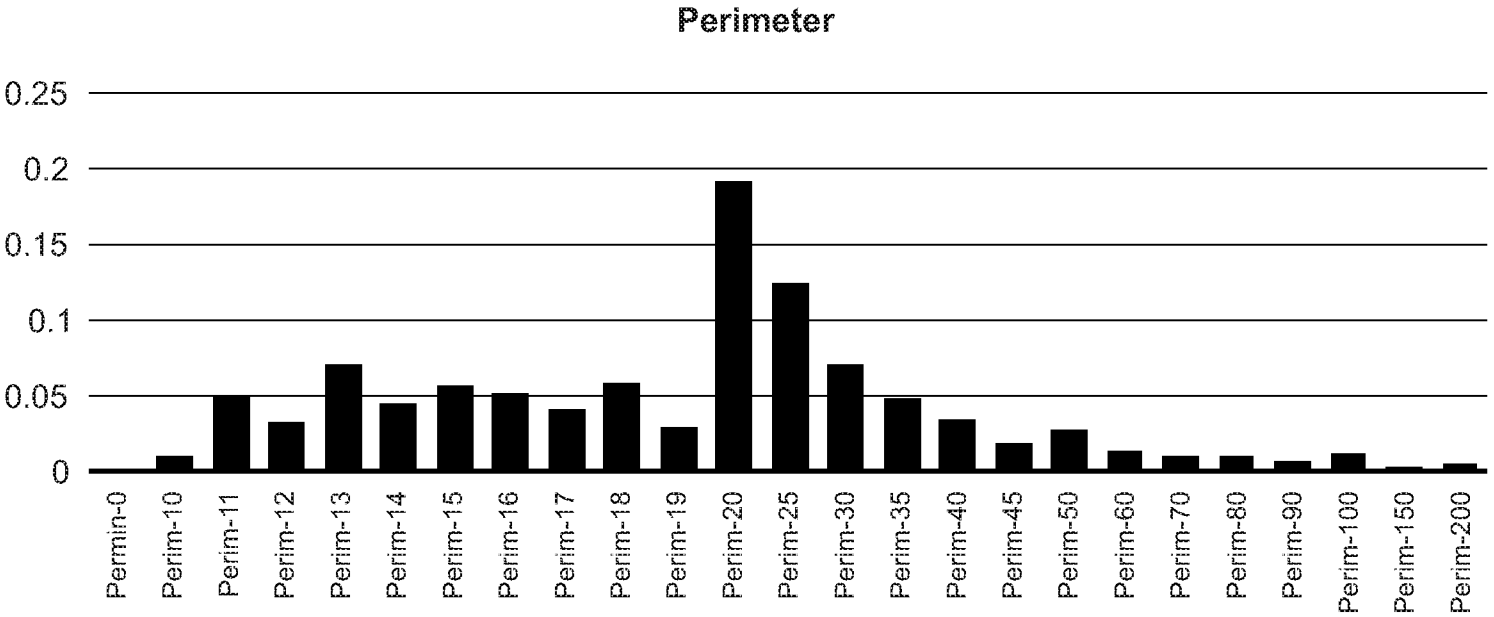

Perimeter
0.25
0.2
0.15
0.1
0.05
0
Permin-0
Perim-10
Perim-11
Perim-12
Perim-13
Perim-14
Perim-15
Perim-16
Perim-17
Perim-18
Perim-19
Perim-20
Perim-25
Perim-30
Perim-35
Perim-40
Perim-45
Perim-50
Perim-60
Perim-70
Perim-80
Perim-90
Perim-100
Perim-150
Perim-200

FIG. 6B

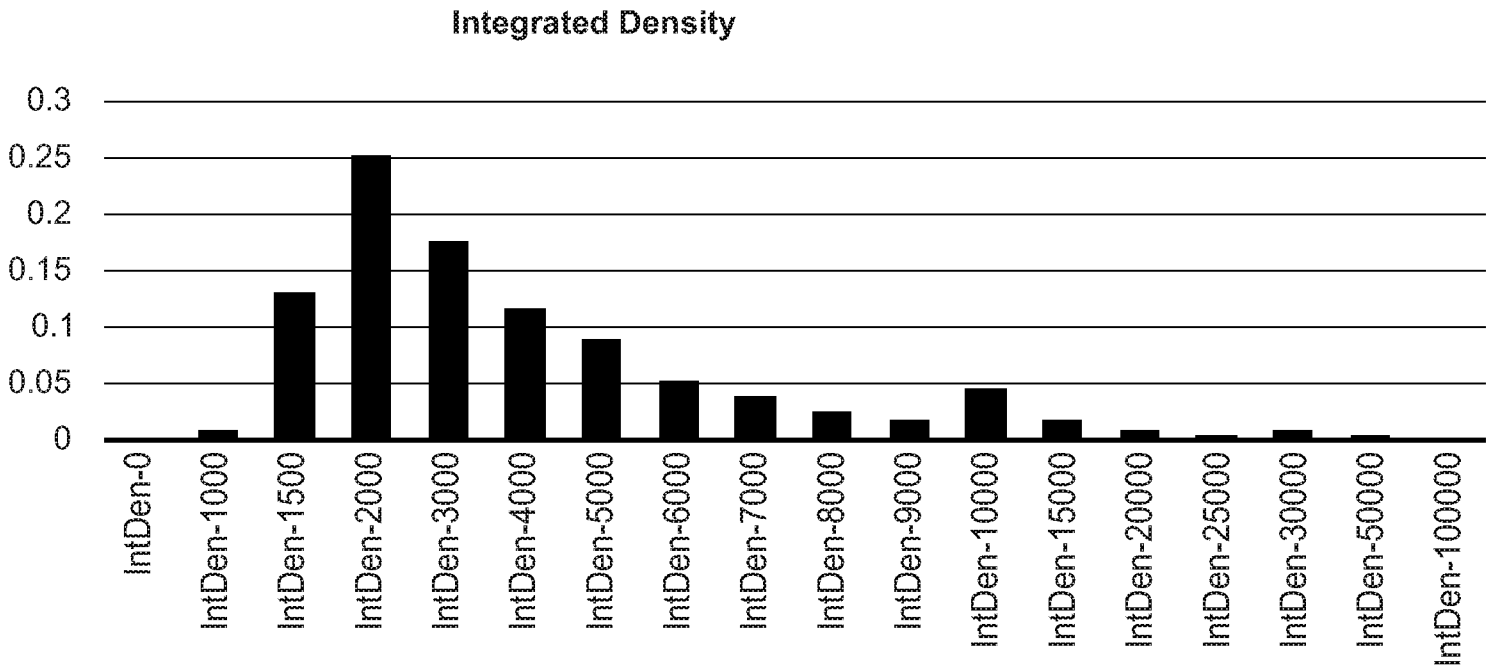

Integrated Density
0.3
0.25
0.2
0.15
0.1
0.05
0
IntDen-0
IntDen-1000
IntDen-1500
IntDen-2000
IntDen-3000
IntDen-4000
IntDen-5000
IntDen-6000
IntDen-7000
IntDen-8000
IntDen-9000
IntDen-10000
IntDen-15000
IntDen-20000
IntDen-25000
IntDen-30000
IntDen-50000
IntDen-100000

FIG. 6C

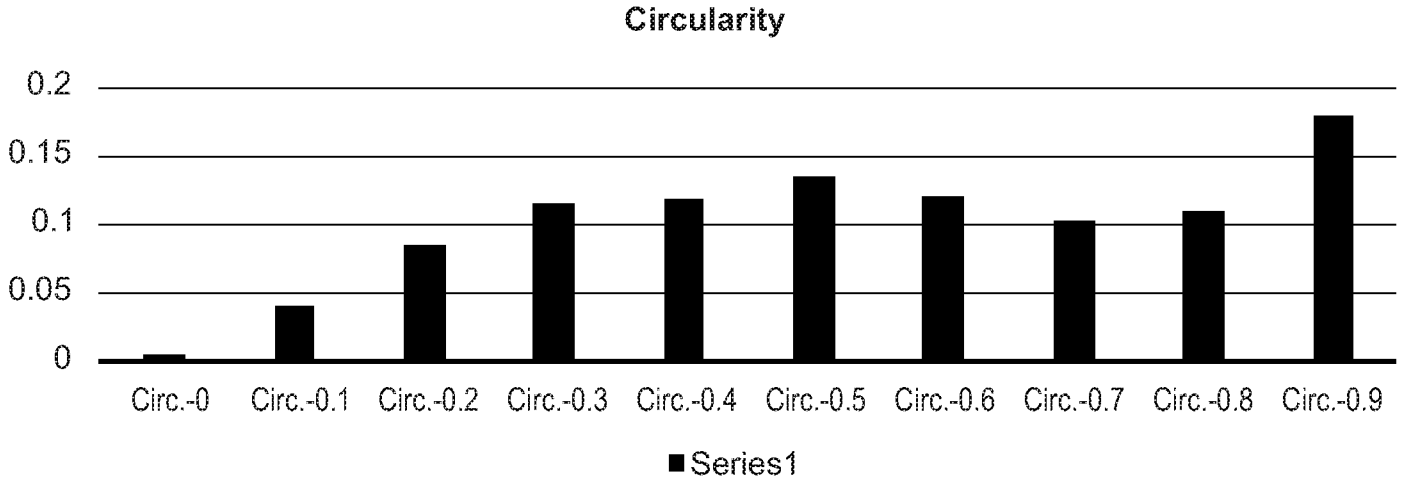

Circularity
0.2
0.15
0.1
0.05
0
Circ.-0
Circ.-0.1
Circ.-0.2
Circ.-0.3
Circ.-0.4
Circ.-0.5
Circ.-0.6
Circ.-0.7
Circ.-0.8
Circ.-0.9
Series1

FIG. 6D

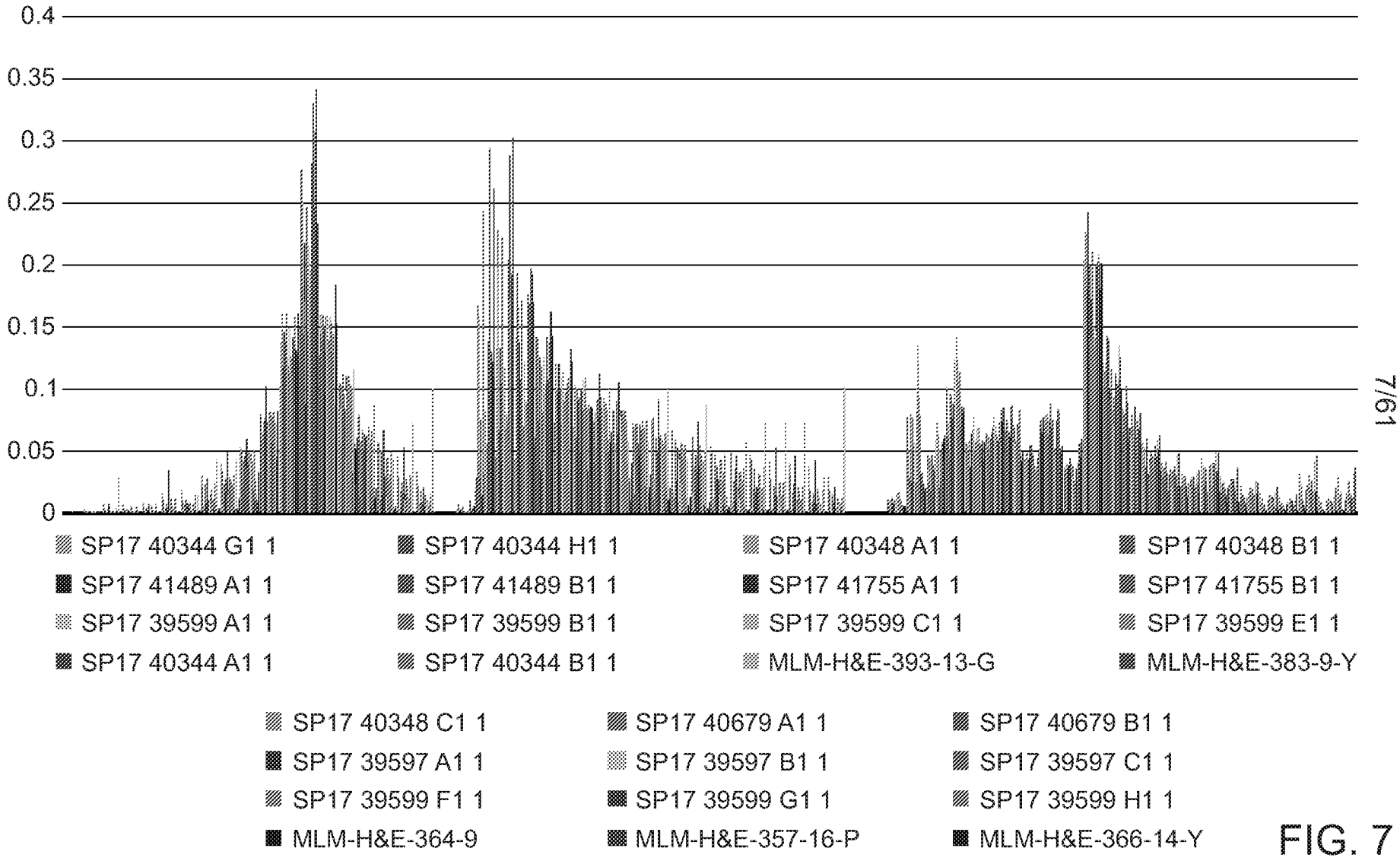

0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
SP17 40344 G1 1
SP17 40344 H1 1
SP17 40348 A1 1
SP17 40348 B1 1
SP17 41489 A1 1
SP17 41489 B1 1
SP17 41755 A1 1
SP17 41755 B1 1
SP17 39599 A1 1
SP17 39599 B1 1
SP17 39599 C1 1
SP17 39599 E1 1
SP17 40344 A1 1
SP17 40344 B1 1
MLM-H&E-393-13-G
MLM-H&E-383-9-Y
SP17 40348 C1 1
SP17 40679 A1 1
SP17 40679 B1 1
SP17 39597 A1 1
SP17 39597 B1 1
SP17 39597 C1 1
SP17 39599 F1 1
SP17 39599 G1 1
SP17 39599 H1 1
MLM-H&E-364-9
MLM-H&E-357-16-P
MLM-H&E-366-14-Y

FIG. 7

FIG. 8

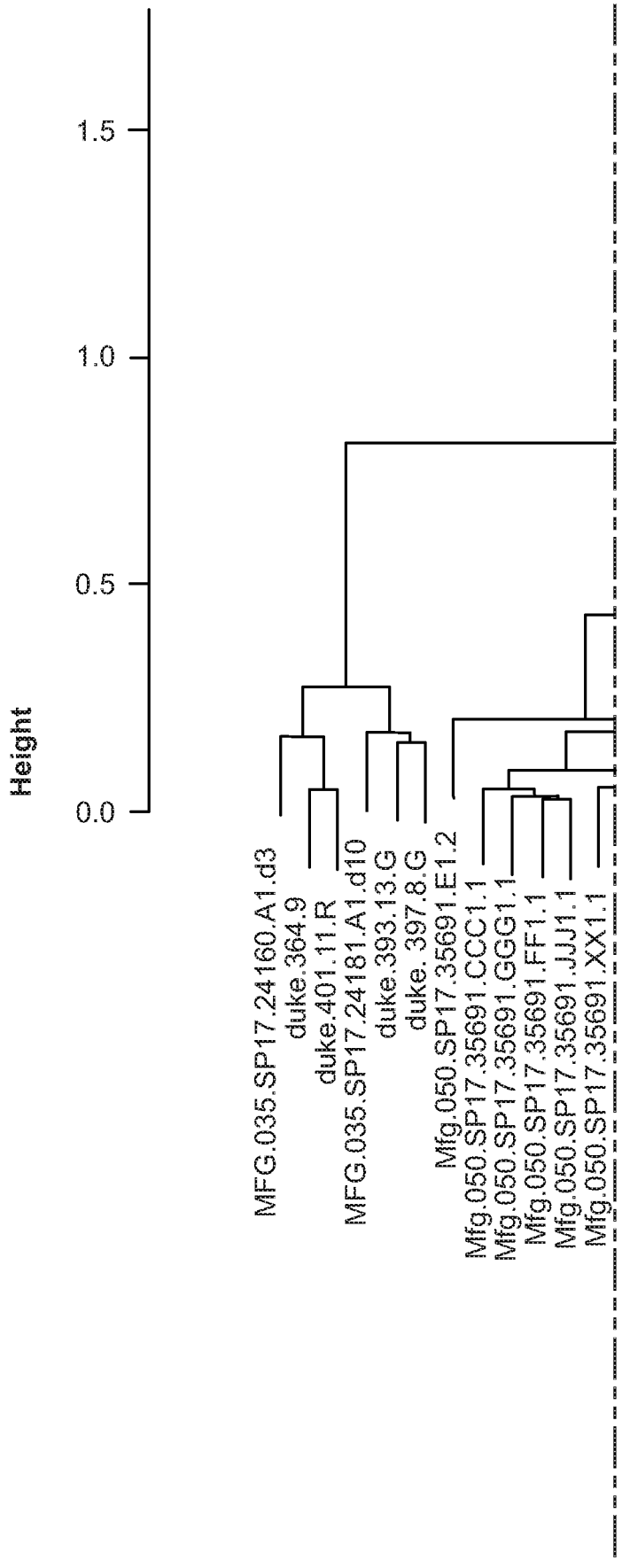

Height
1.5
1.0
0.5
0.0
MFG.035.SP17.24160.A1.d3
duke.364.9
duke.401.11.R
MFG.035.SP17.24181.A1.d10
duke.393.13.G
duke. 397.8.G
Mfg.050.SP17.35691.E1.2
Mfg.050.SP17.35691.CCC1.1
Mfg.050.SP17.35691.GGG1.1
Mfg.050.SP17.35691.FF1.1
Mfg.050.SP17.35691.JJJ1.1
Mfg.050.SP17.35691.XX1.1

FIG. 8 (cont.)

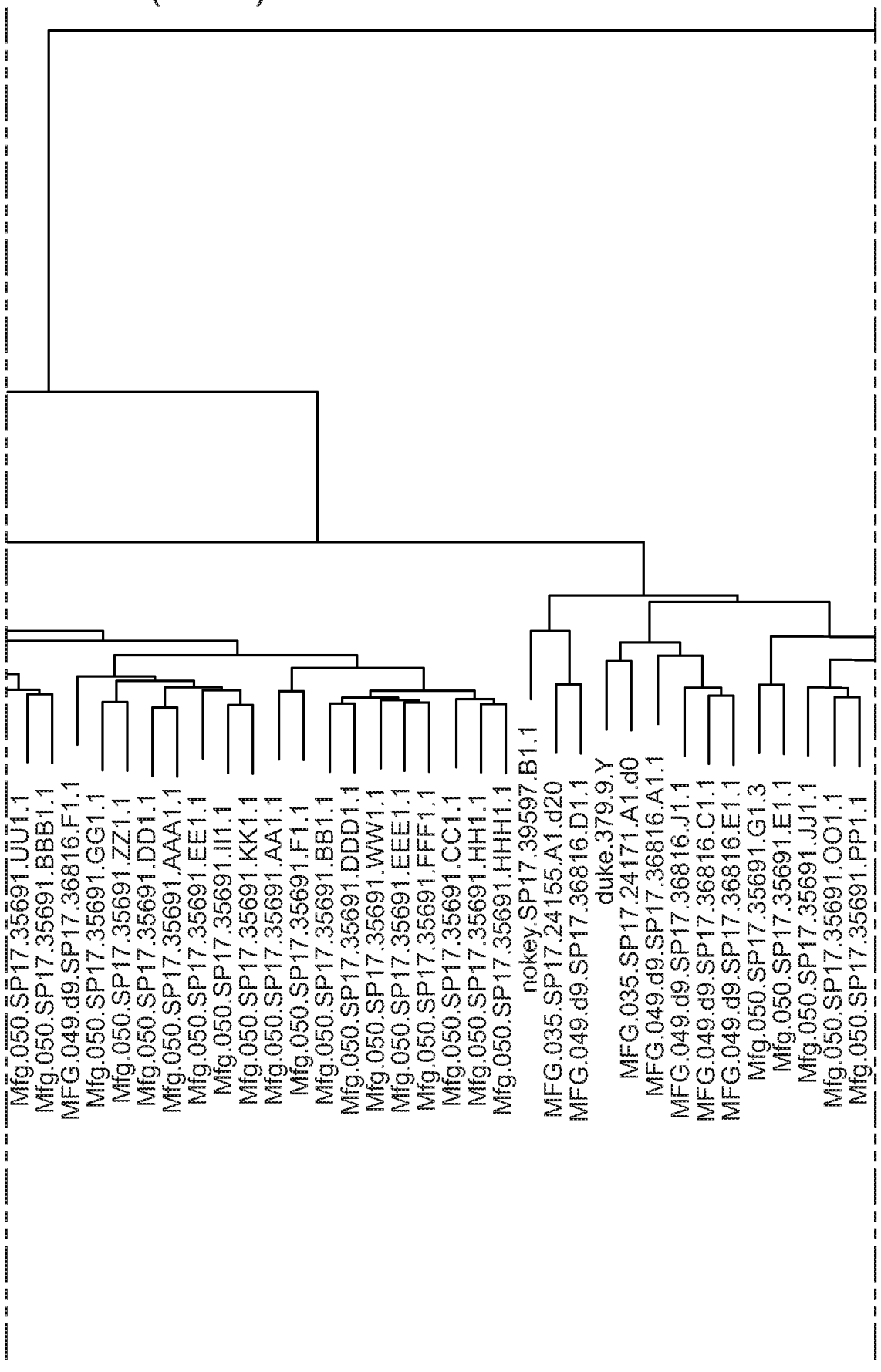

Mfg.050.SP17.35691.UU1.1
Mfg.050.SP17.35691.BBB1.1
MFG.049.d9.SP17.36816.F1.1
Mfg.050.SP17.35691.GG1.1
Mfg.050.SP17.35691.ZZ1.1
Mfg.050.SP17.35691.DD1.1
Mfg.050.SP17.35691.AAA1.1
Mfg.050.SP17.35691.EE1.1
Mfg.050.SP17.35691.II1.1
Mfg.050.SP17.35691.KK1.1
Mfg.050.SP17.35691.AA1.1
Mfg.050.SP17.35691.F1.1
Mfg.050.SP17.35691.BB1.1
Mfg.050.SP17.35691.DDD1.1
Mfg.050.SP17.35691.WW1.1
Mfg.050.SP17.35691.EEE1.1
Mfg.050.SP17.35691.FFF1.1
Mfg.050.SP17.35691.CC1.1
Mfg.050.SP17.35691.HH1.1
Mfg.050.SP17.35691.HHH1.1
nokey.SP17.39597.B1.1
MFG.035.SP17.24155.A1.d20
MFG.049.d9.SP17.36816.D1.1
duke.379.9.Y
MFG.035.SP17.24171.A1.d0
MFG.049.d9.SP17.36816.A1.1
MFG.049.d9.SP17.36816.J1.1
MFG.049.d9.SP17.36816.C1.1
MFG.049.d9.SP17.36816.E1.1
Mfg.050.SP17.35691.G1.3
Mfg.050.SP17.35691.E1.1
Mfg.050.SP17.35691.JJ1.1
Mfg.050.SP17.35691.OO1.1
Mfg.050.SP17.35691.PP1.1

FIG. 8 (cont.)

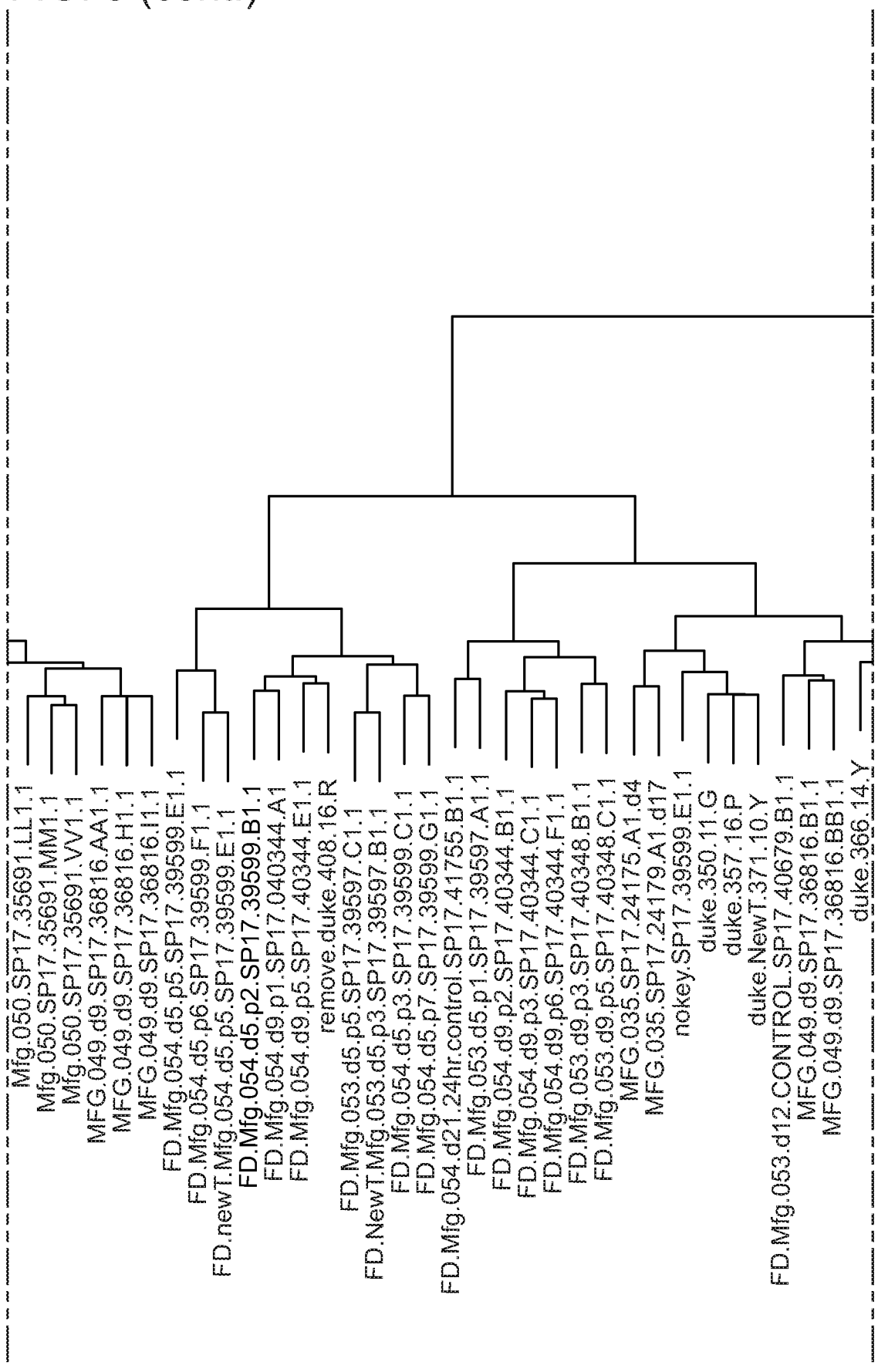

Mfg.050.SP17.35691.LL1.1
Mfg.050.SP17.35691.MM1.1
Mfg.050.SP17.35691.VV1.1
MFG.049.d9.SP17.36816.AA1.1
MFG.049.d9.SP17.36816.H1.1
MFG.049.d9.SP17.36816.I1.1
FD.Mfg.054.d5.p5.SP17.39599.E1.1
FD.Mfg.054.d5.p6.SP17.39599.F1.1
FD.newT.Mfg.054.d5.p5.SP17.39599.E1.1
FD.Mfg.054.d5.p2.SP17.39599.B1.1
FD.Mfg.054.d9.p1.SP17.040344.A1
FD.Mfg.054.d9.p5.SP17.40344.E1.1
remove.duke.408.16.R
FD.Mfg.053.d5.p5.SP17.39597.C1.1
FD.NewT.Mfg.053.d5.p3.SP17.39597.B1.1
FD.Mfg.054.d5.p3.SP17.39599.C1.1
FD.Mfg.054.d5.p7.SP17.39599.G1.1
FD.Mfg.054.d21.24hr.control.SP17.41755.B1.1
FD.Mfg.053.d5.p1.SP17.39597.A1.1
FD.Mfg.054.d9.p2.SP17.40344.B1.1
FD.Mfg.054.d9.p3.SP17.40344.C1.1
FD.Mfg.054.d9.p6.SP17.40344.F1.1
FD.Mfg.053.d9.p3.SP17.40348.B1.1
FD.Mfg.053.d9.p5.SP17.40348.C1.1
MFG.035.SP17.24175.A1.d4
MFG.035.SP17.24179.A1.d17
nokey.SP17.39599.E1.1
duke.350.11.G
duke.357.16.P
duke.NewT.371.10.Y
FD.Mfg.053.d12.CONTROL.SP17.40679.B1.1
MFG.049.d9.SP17.36816.B1.1
MFG.049.d9.SP17.36816.BB1.1
duke.366.14.Y

FIG. 8 (cont.)

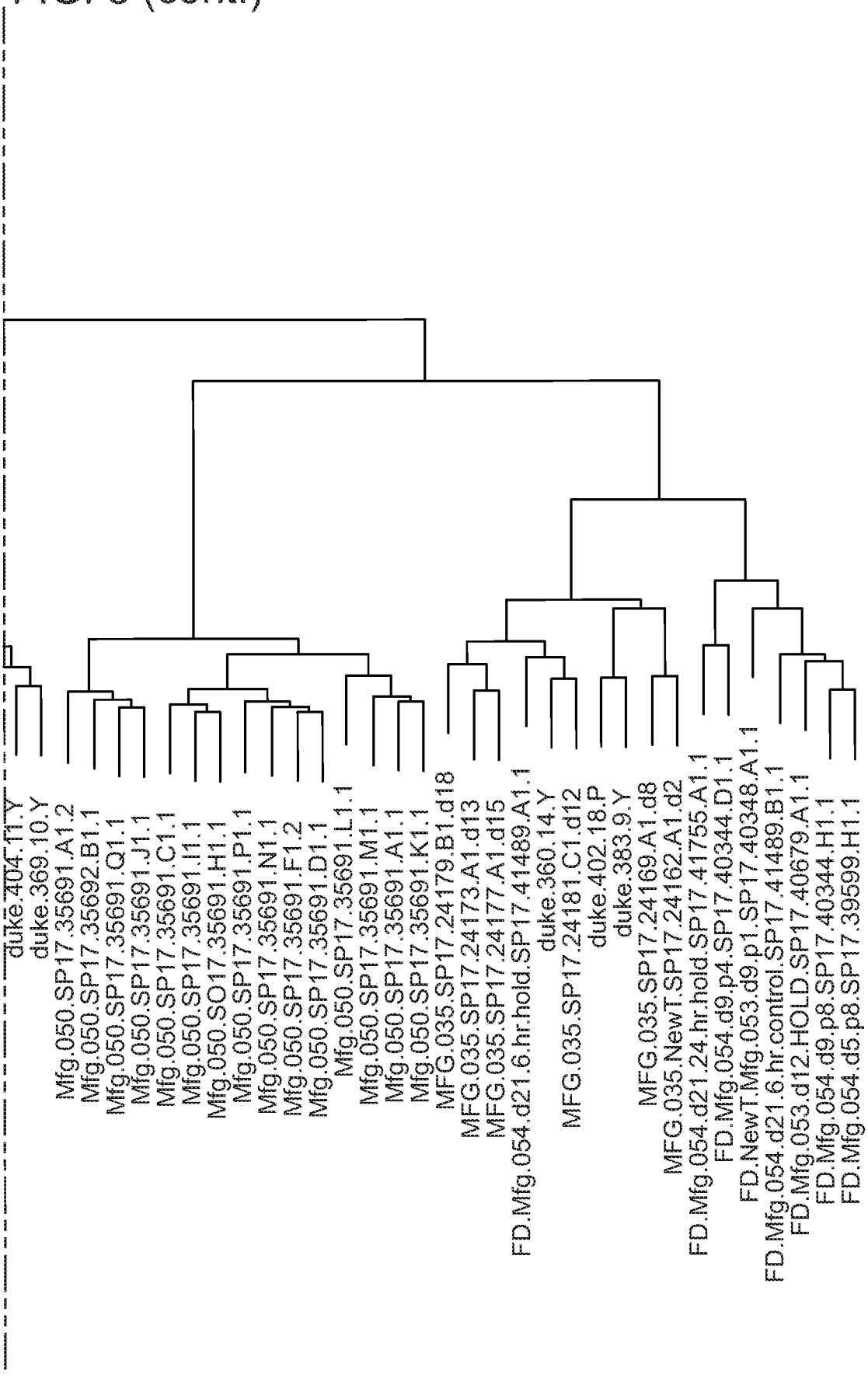

duke.404.T1.Y
duke.369.10.Y
Mfg.050.SP17.35691.A1.2
Mfg.050.SP17.35692.B1.1
Mfg.050.SP17.35691.Q1.1
Mfg.050.SP17.35691.J1.1
Mfg.050.SP17.35691.C1.1
Mfg.050.SP17.35691.I1.1
Mfg.050.SO17.35691.H1.1
Mfg.050.SP17.35691.P1.1
Mfg.050.SP17.35691.N1.1
Mfg.050.SP17.35691.F1.2
Mfg.050.SP17.35691.D1.1
Mfg.050.SP17.35691.L1.1
Mfg.050.SP17.35691.M1.1
Mfg.050.SP17.35691.A1.1
Mfg.050.SP17.35691.K1.1
MFG.035.SP17.24179.B1.d18
MFG.035.SP17.24173.A1.d13
MFG.035.SP17.24177.A1.d15
FD.Mfg.054.d21.6.hr.hold.SP17.41489.A1.1
duke.360.14.Y
MFG.035.SP17.24181.C1.d12
duke.402.18.P
duke.383.9.Y
MFG.035.SP17.24169.A1.d8
MFG.035.NewT.SP17.24162.A1.d2
FD.Mfg.054.d21.24.hr.hold.SP17.41755.A1.1
FD.Mfg.054.d9.p4.SP17.40344.D1.1
FD.NewT.Mfg.053.d9.p1.SP17.40348.A1.1
FD.Mfg.054.d21.6.hr.control.SP17.41489.B1.1
FD.Mfg.053.d12.HOLD.SP17.40679.A1.1
FD.Mfg.054.d9.p8.SP17.40344.H1.1
FD.Mfg.054.d5.p8.SP17.39599.H1.1

FIG. 9

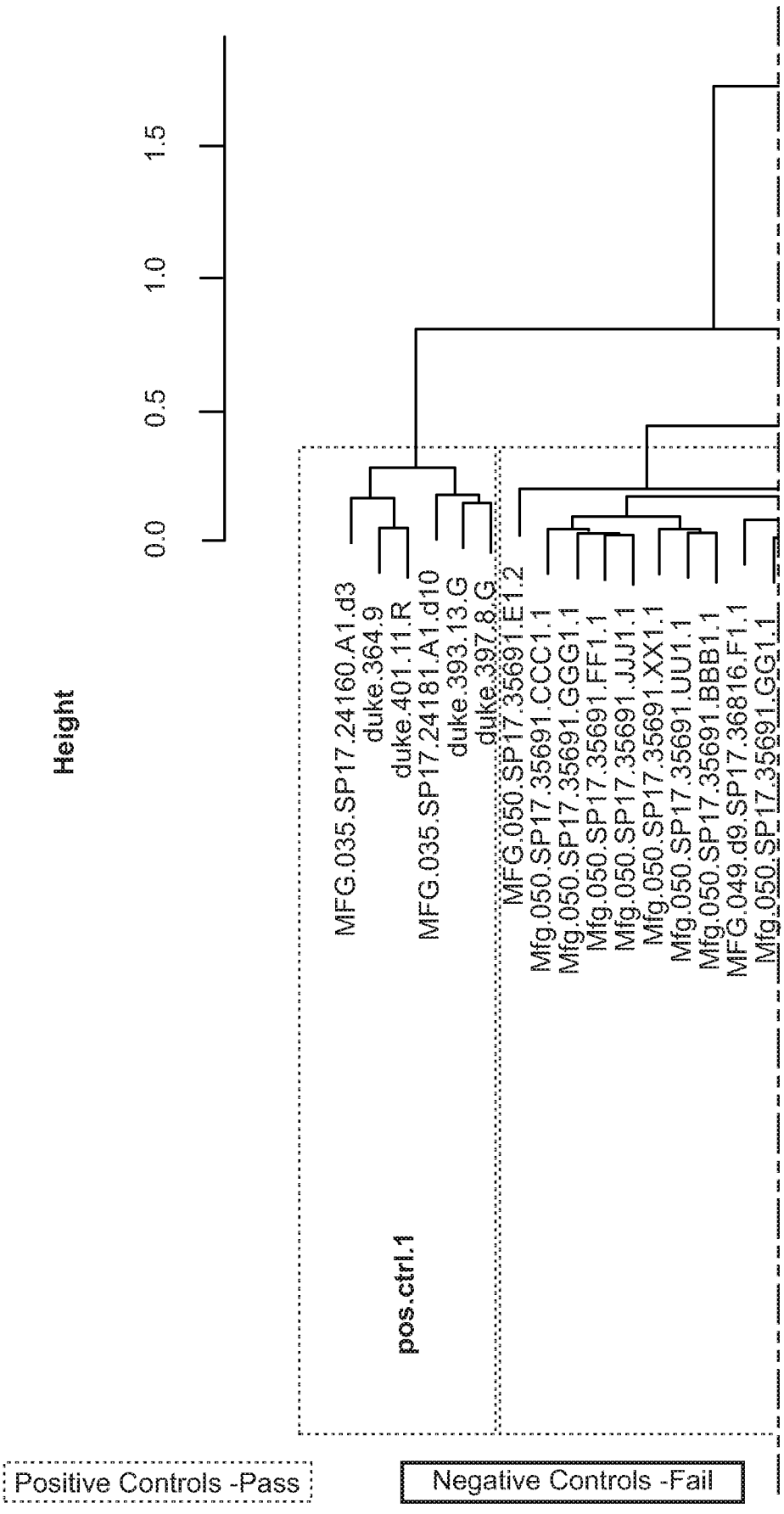

Height
0.0
0.5
1.0
1.5
pos.ctrl.1
MFG.035.SP17.24160.A1.d3
duke.364.9
duke.401.11.R
MFG.035.SP17.24181.A1.d10
duke.393.13.G
duke.397.8.G
MFG.050.SP17.35691.E1.2
Mfg.050.SP17.35691.CCC1.1
Mfg.050.SP17.35691.GGG1.1
Mfg.050.SP17.35691.FF1.1
Mfg.050.SP17.35691.JJJ1.1
Mfg.050.SP17.35691.XX1.1
Mfg.050.SP17.35691.UU1.1
Mfg.050.SP17.35691.BBB1.1
MFG.049.d9.SP17.36816.F1.1
Mfg.050.SP17.35691.GG1.1
Positive Controls -Pass
Negative Controls -Fail

FIG. 9 (cont.)

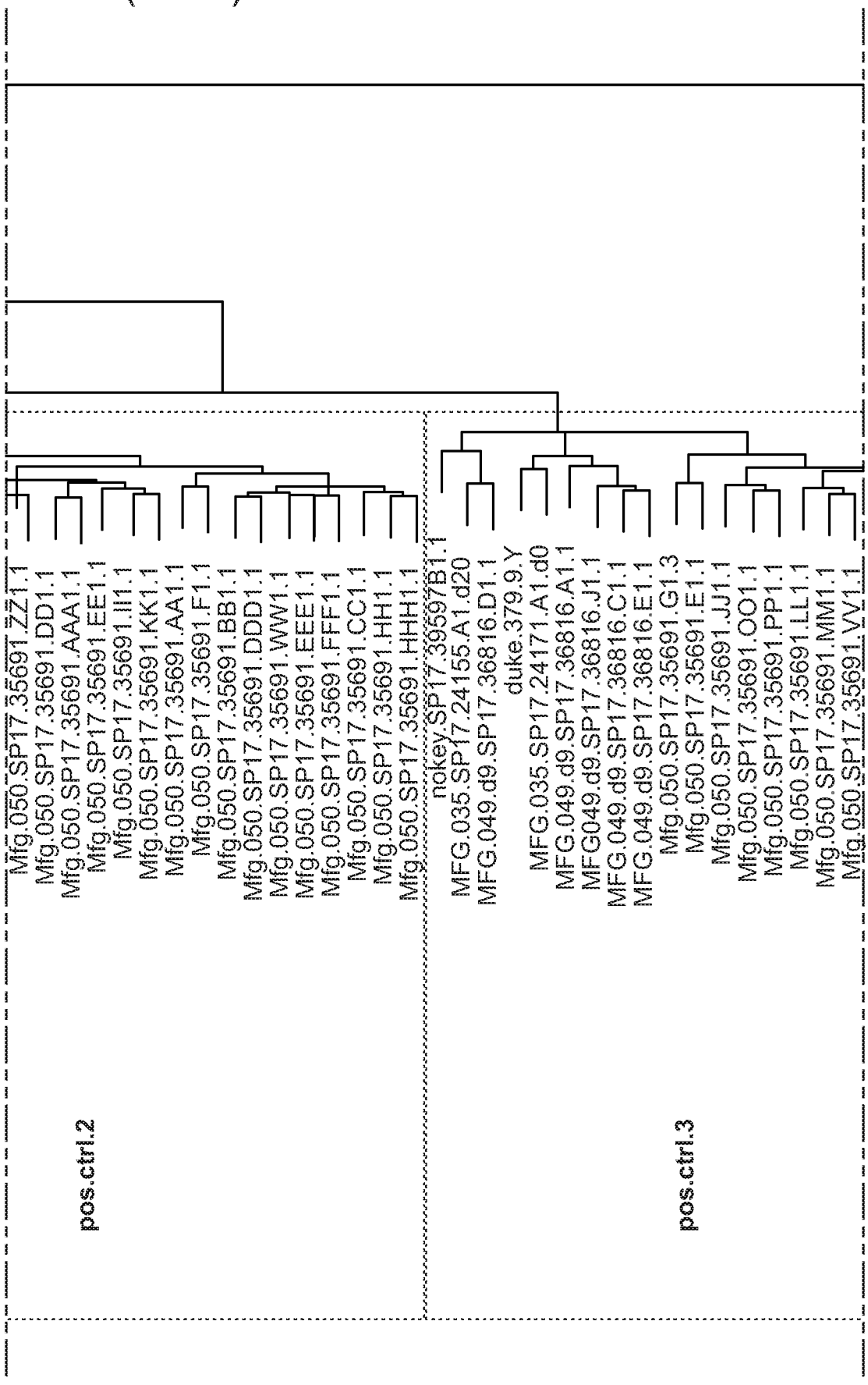

pos.ctrl.2
Mfg.050.SP17.35691.ZZ1.1
Mfg.050.SP17.35691.DD1.1
Mfg.050.SP17.35691.AAA1.1
Mfg.050.SP17.35691.EE1.1
Mfg.050.SP17.35691.II1.1
Mfg.050.SP17.35691.KK1.1
Mfg.050.SP17.35691.AA1.1
Mfg.050.SP17.35691.F1.1
Mfg.050.SP17.35691.BB1.1
Mfg.050.SP17.35691.DDD1.1
Mfg.050.SP17.35691.WW1.1
Mfg.050.SP17.35691.EEE1.1
Mfg.050.SP17.35691.FFF1.1
Mfg.050.SP17.35691.CC1.1
Mfg.050.SP17.35691.HH1.1
Mfg.050.SP17.35691.HHH1.1
pos.ctrl.3
nokey.SP17.39597B1.1
MFG.035.SP17.24155.A1.d20
MFG.049.d9.SP17.36816.D1.1
duke.379.9.Y
MFG.035.SP17.24171.A1.d0
MFG.049.d9.SP17.36816.A1.1
MFG049.d9.SP17.36816.J1.1
MFG.049.d9.SP17.36816.C1.1
MFG.049.d9.SP17.36816.E1.1
Mfg.050.SP17.35691.G1.3
Mfg.050.SP17.35691.E1.1
Mfg.050.SP17.35691.JJ1.1
Mfg.050.SP17.35691.OO1.1
Mfg.050.SP17.35691.PP1.1
Mfg.050.SP17.35691.LL1.1
Mfg.050.SP17.35691.MM1.1
Mfg.050.SP17.35691.VV1.1

FIG. 9 (cont.)

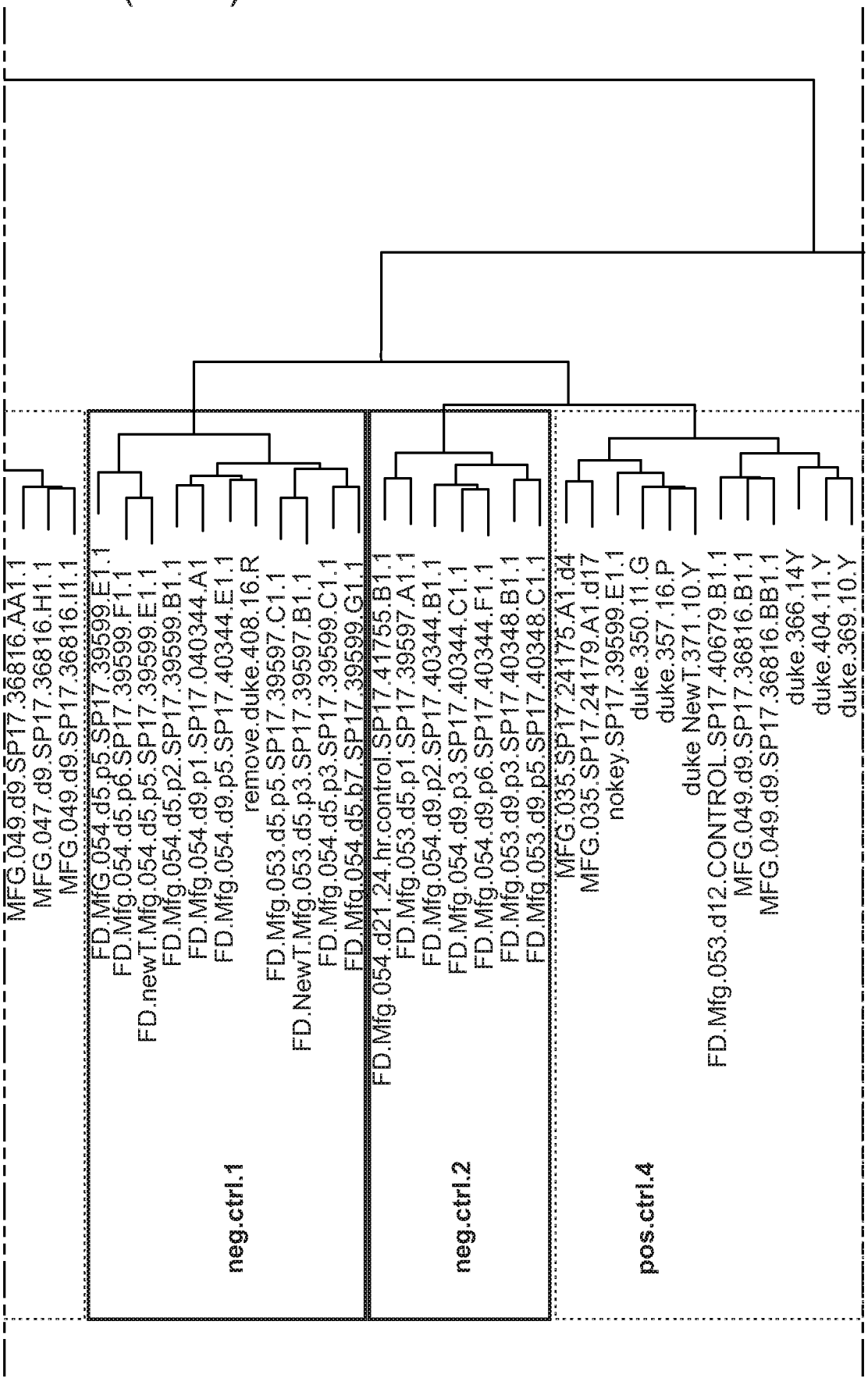
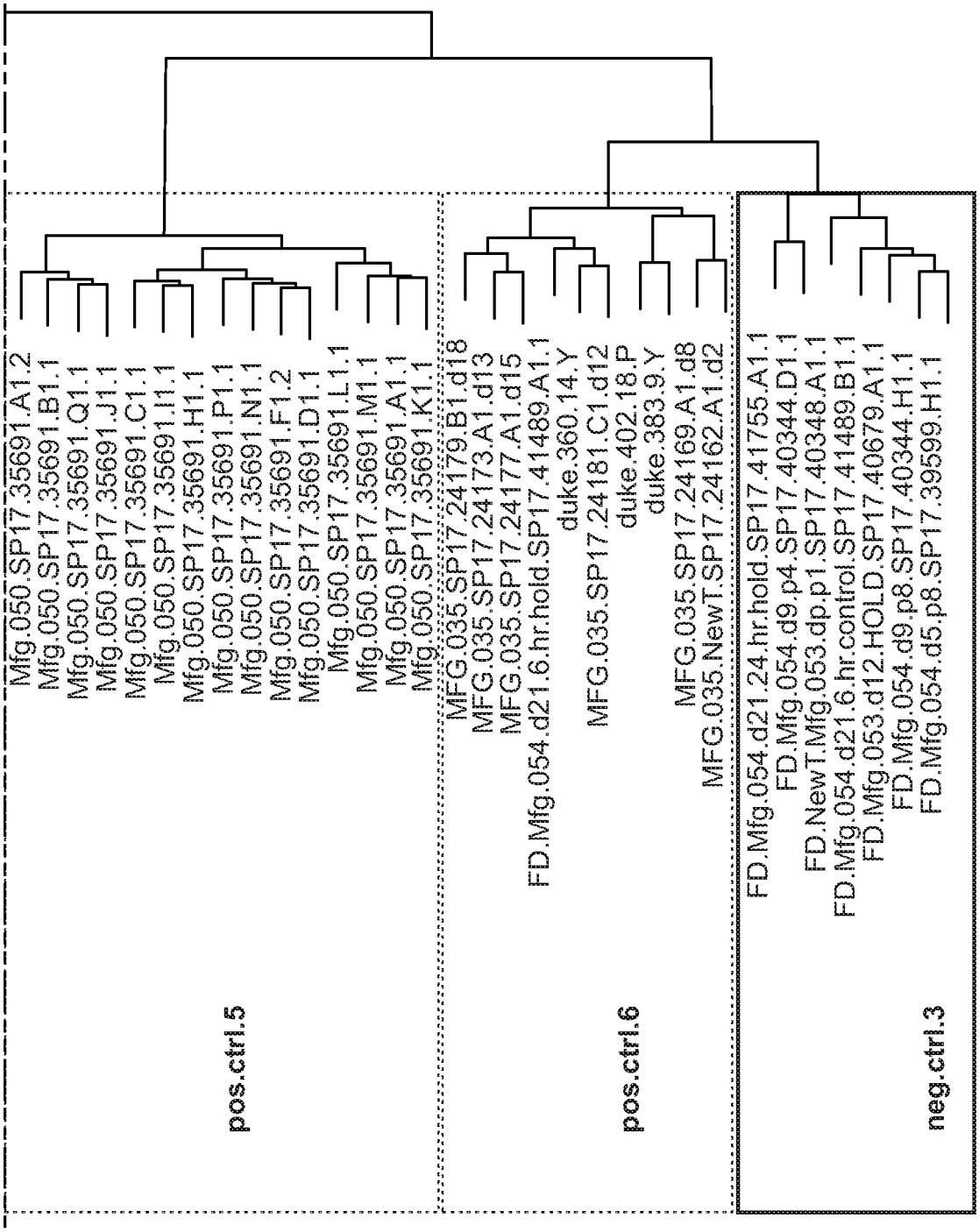

MFG.049.d9.SP17.36816.AA1.1
MFG.047.d9.SP17.36816.H1.1
MFG.049.d9.SP17.36816.I1.1
FD.MfG.054.d5.p5.SP17.39599.E1.1
FD.Mfg.054.d5.p6.SP17.39599.F1.1
FD.newT.Mfg.054.d5.p5.SP17.39599.E1.1
FD.Mfg.054.d5.p2.SP17.39599.B1.1
FD.Mfg.054.d9.p1.SP17.040344.A1
FD.Mfg.054.d9.p5.SP17.40344.E1.1
remove.duke.408.16.R
FD.Mfg.053.d5.p5.SP17.39597.C1.1
FD.NewT.Mfg.053.d5.p3.SP17.39597.B1.1
FD.Mfg.054.d5.p3.SP17.39599.C1.1
FD.Mfg.054.d5.b7.SP17.39599.G1.1
neg.ctrl.1
FD.Mfg.054.d21.24.hr.control.SP17.41755.B1.1
FD.Mfg.053.d5.p1.SP17.39597.A1.1
FD.Mfg.054.d9.p2.SP17.40344.B1.1
FD.Mfg.054.d9.p3.SP17.40344.C1.1
FD.Mfg.054.d9.p6.SP17.40344.F1.1
FD.Mfg.053.d9.p3.SP17.40348.B1.1
FD.Mfg.053.d9.p5.SP17.40348.C1.1
neg.ctrl.2
MFG.035.SP17.24175.A1.d4
MFG.035.SP17.24179.A1.d17
nokey.SP17.39599.E1.1
duke.350.11.G
duke.357.16.P
duke NewT.371.10.Y
FD.Mfg.053.d12.CONTROL.SP17.40679.B1.1
MFG.049.d9.SP17.36816.B1.1
MFG.049.d9.SP17.36816.BB1.1
duke.366.14Y
duke.404.11.Y
duke.369.10.Y
pos.ctrl.4

FIG. 9 (cont.)


Mfg.050.SP17.35691.A1.2
Mfg.050.SP17.35691.B1.1
Mfg.050.SP17.35691.Q1.1
Mfg.050.SP17.35691.J1.1
Mfg.050.SP17.35691.C1.1
Mfg.050.SP17.35691.I1.1
Mfg.050.SP17.35691.H1.1
Mfg.050.SP17.35691.P1.1
Mfg.050.SP17.35691.N1.1
Mfg.050.SP17.35691.F1.2
Mfg.050.SP17.35691.D1.1
Mfg.050.SP17.35691.L1.1
Mfg.050.SP17.35691.M1.1
Mfg.050.SP17.35691.A1.1
Mfg.050.SP17.35691.K1.1
pos.ctrl.5
MFG.035.SP17.24179.B1.d18
MFG.035.SP17.24173.A1.d13
MFG.035.SP17.24177.A1.d15
FD.Mfg.054.d21.6.hr.hold.SP17.41489.A1.1
duke.360.14.Y
MFG.035.SP17.24181.C1.d12
duke.402.18.P
duke.383.9.Y
MFG.035.SP17.24169.A1.d8
MFG.035.NewT.SP17.24162.A1.d2
pos.ctrl.6
FD.Mfg.054.d21.24.hr.hold.SP17.41755.A1.1
FD.Mfg.054.d9.p4.SP17.40344.D1.1
FD.NewT.Mfg.053.dp.p1.SP17.40348.A1.1
FD.Mfg.054.d21.6.hr.control.SP17.41489.B1.1
FD.Mfg.053.d12.HOLD.SP17.40679.A1.1
FD.Mfg.054.d9.p8.SP17.40344.H1.1
FD.Mfg.054.d5.p8.SP17.39599.H1.1
neg.ctrl.3


P value from MANOVA analysis
0.0
0.2
0.4
0.6
0.8
Neg.ctrl.1
Neg.ctrl.2
Pos.ctrl.1
Pos.ctrl.2
Neg.ctrl.3
Pos.ctrl.3
Pos.ctrl.4
Pos.ctrl.5
Pos.ctrl.6

FIG. 10

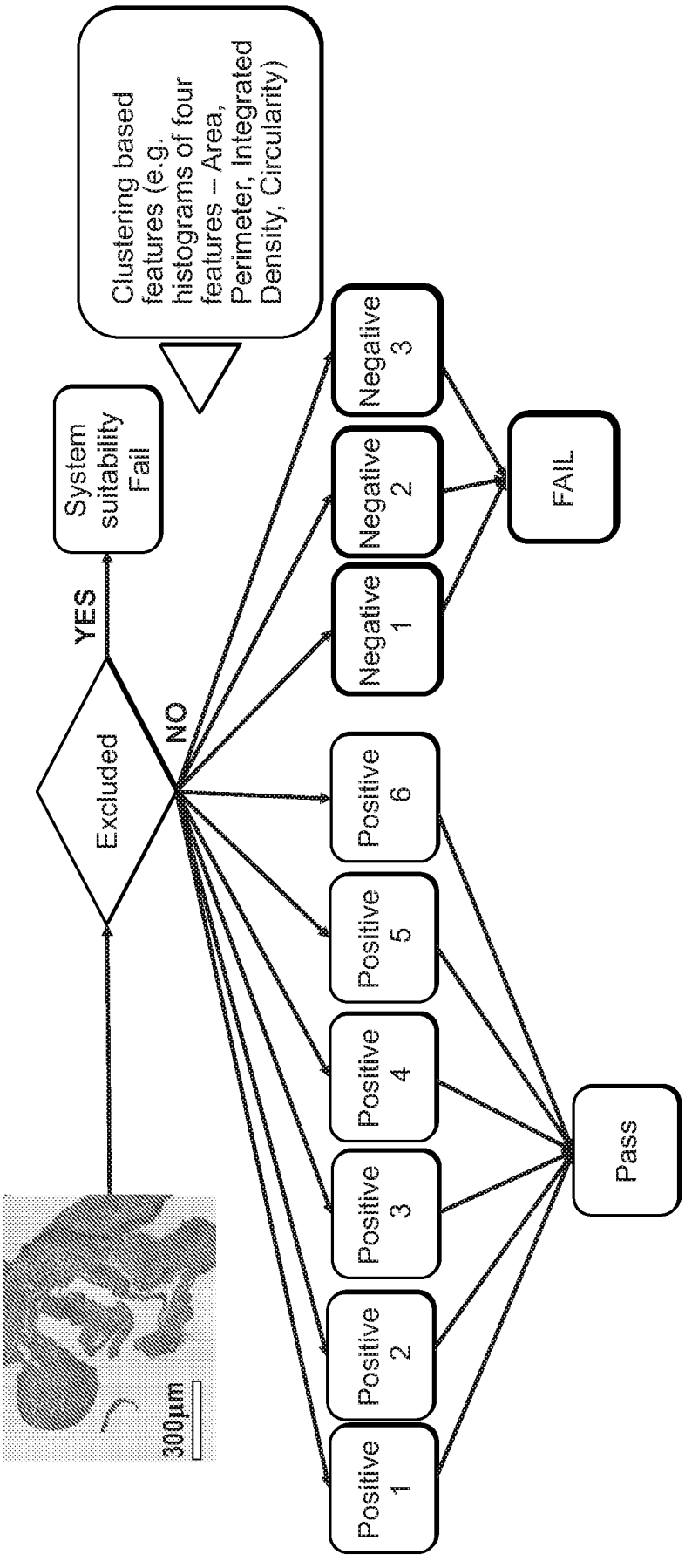

Clustering based features (e.g. histograms of four features – Area, Perimeter, Integrated Density, Circularity)
System suitability Fail
YES
Excluded
NO
Negative 3
Negative 2
Negative 1
FAIL
Positive 6
Positive 5
Positive 4
Positive 3
Positive 2
Positive 1
Pass
300µm

FIG. 11

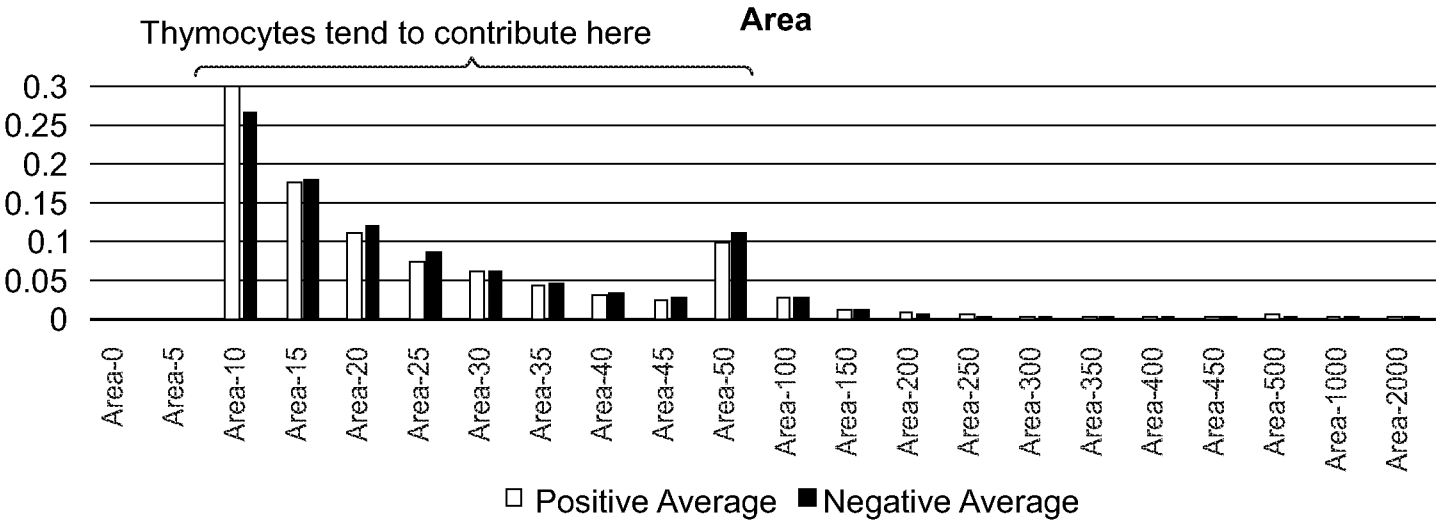


FIG. 12A

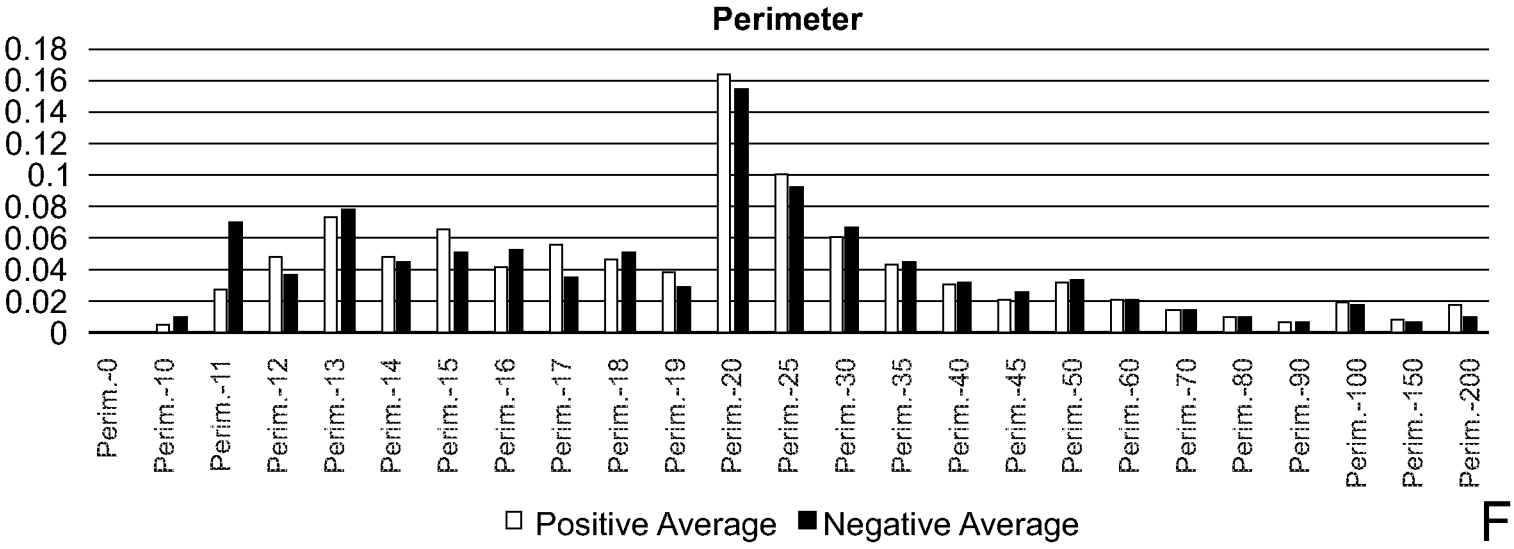


FIG. 12B

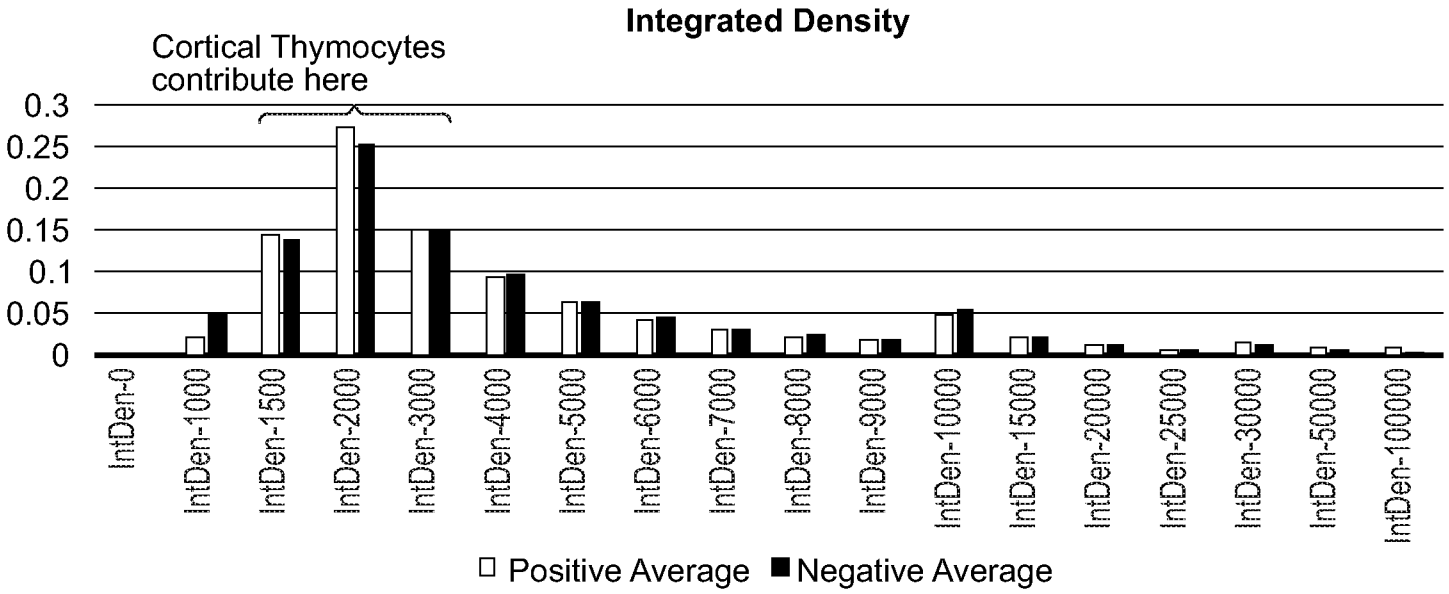


FIG. 12C

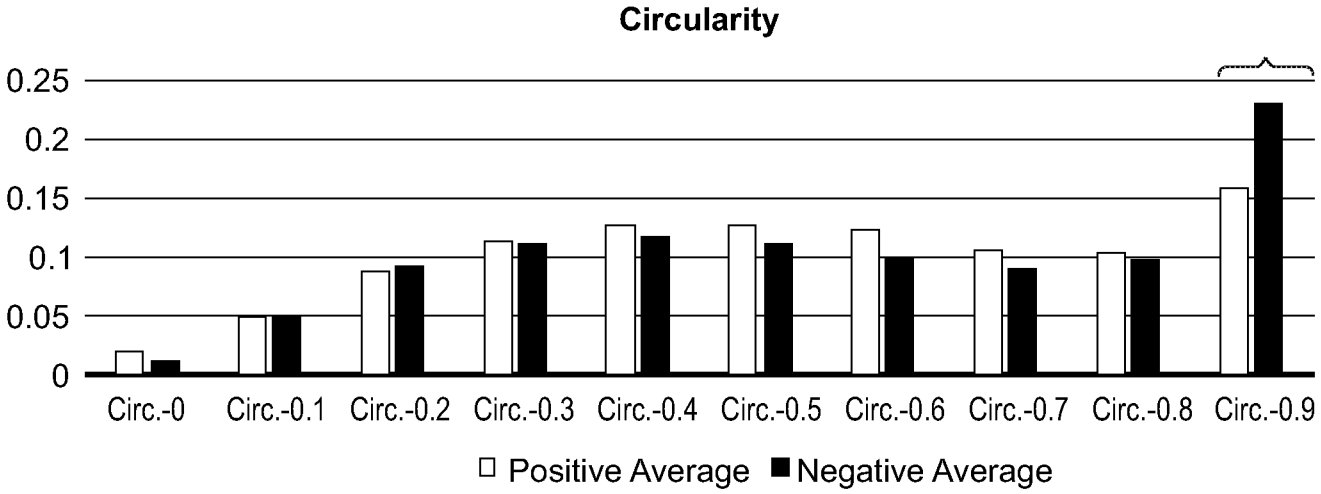


FIG. 12D

FIG. 13A

Negative Control

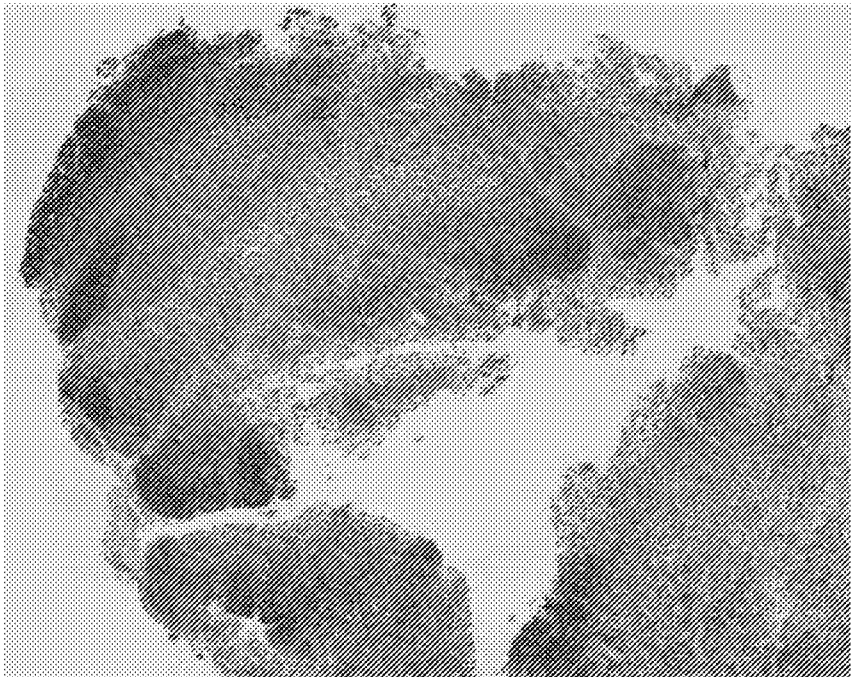


FIG. 13B

Positive Control

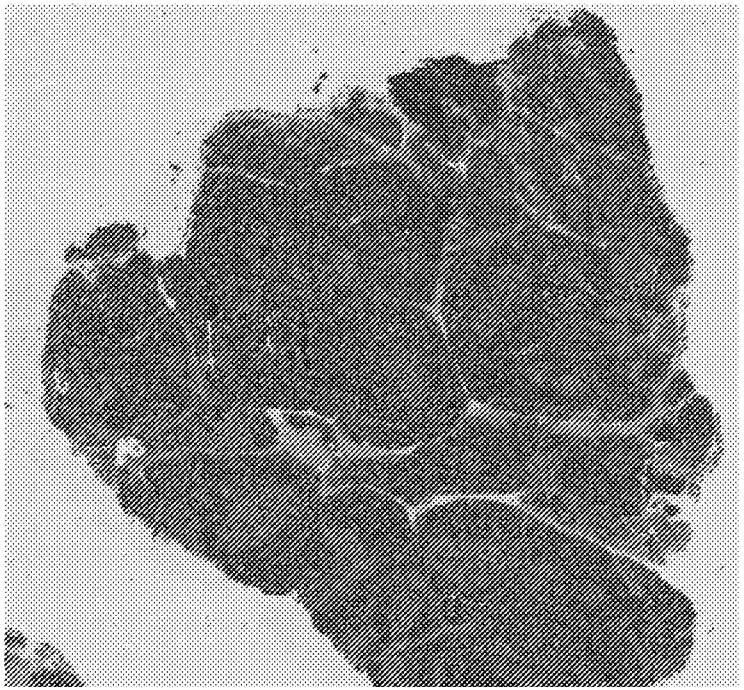


FIG. 13C

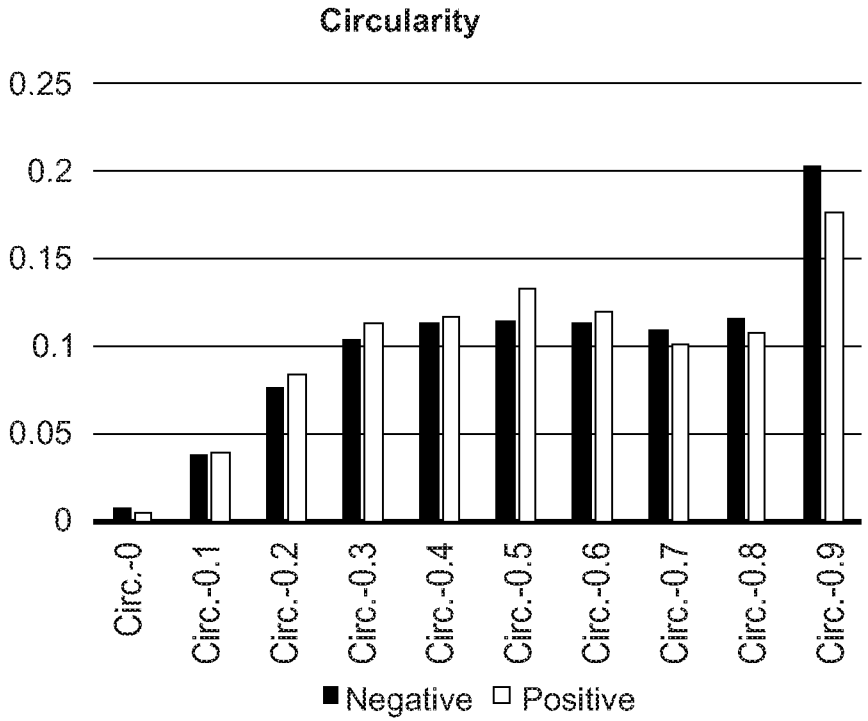


FIG. 13D

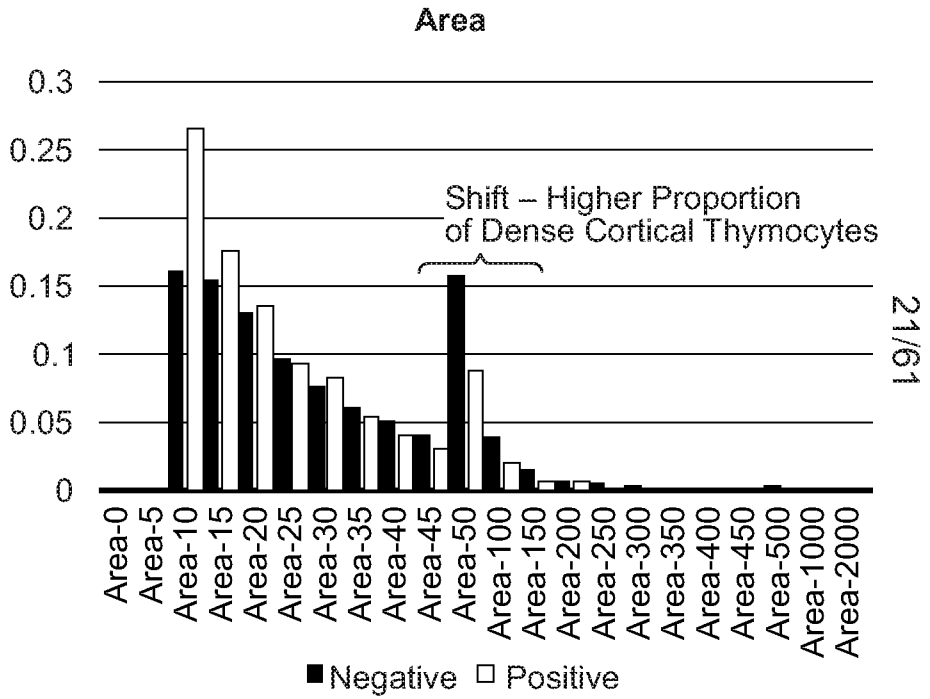


FIG. 13E

Shift – Less overall cortical thymocytes in negative control

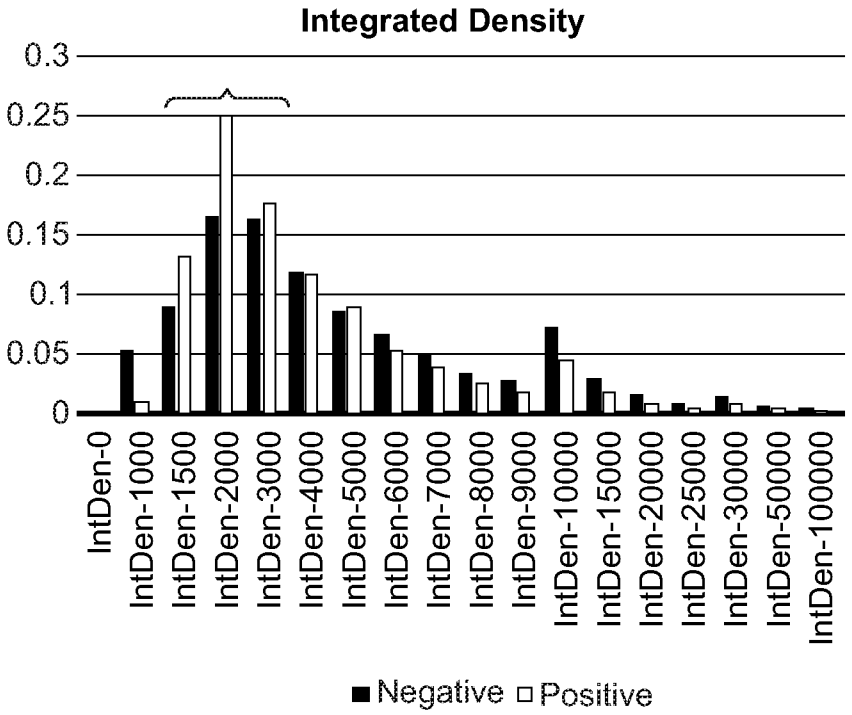


FIG. 13F

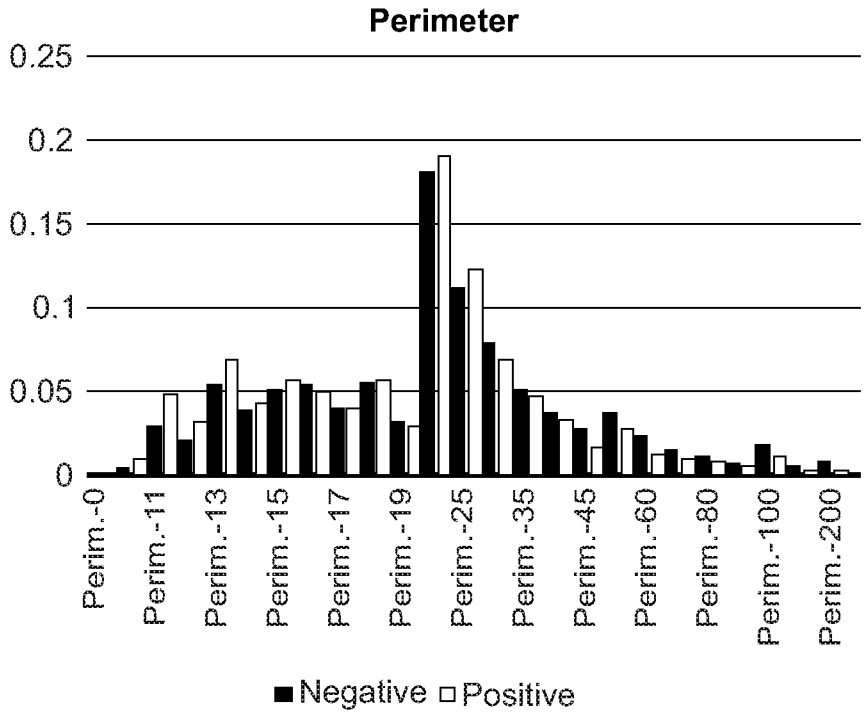


FIG. 14A

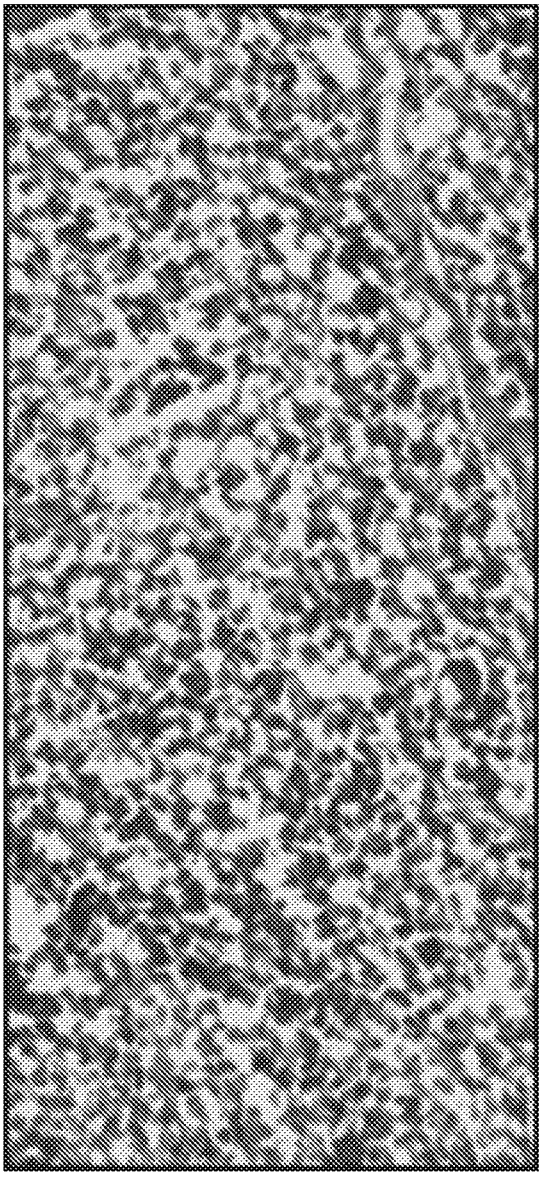


FIG. 14B

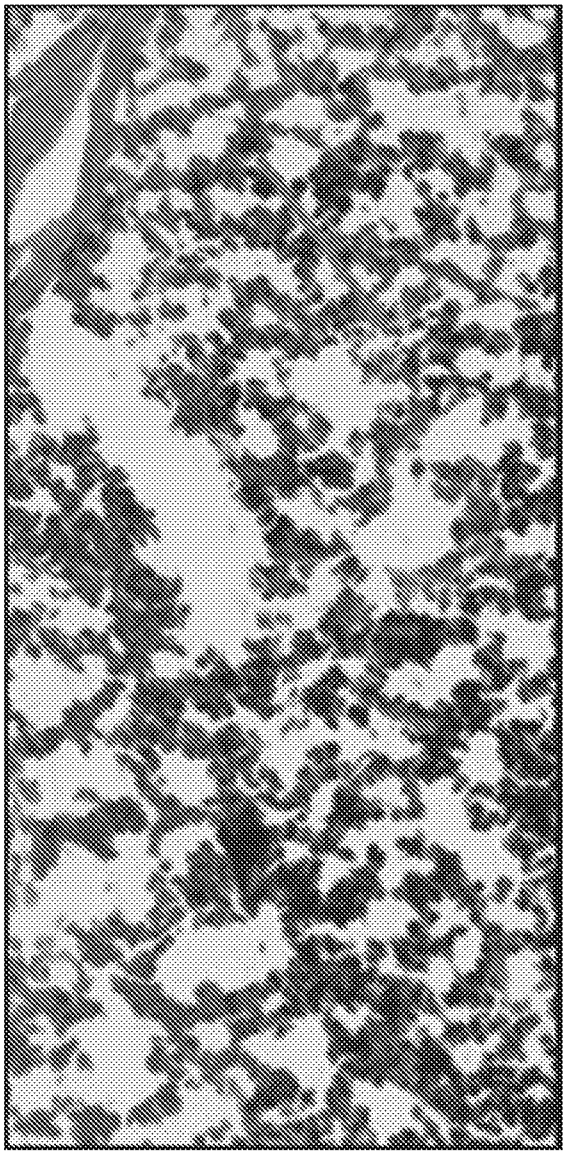


FIG. 14C

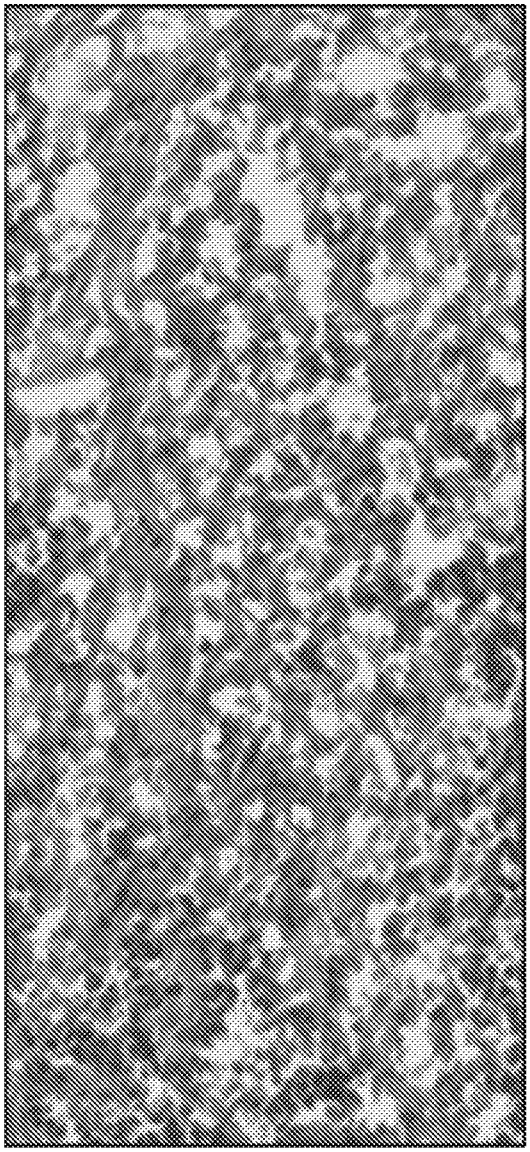
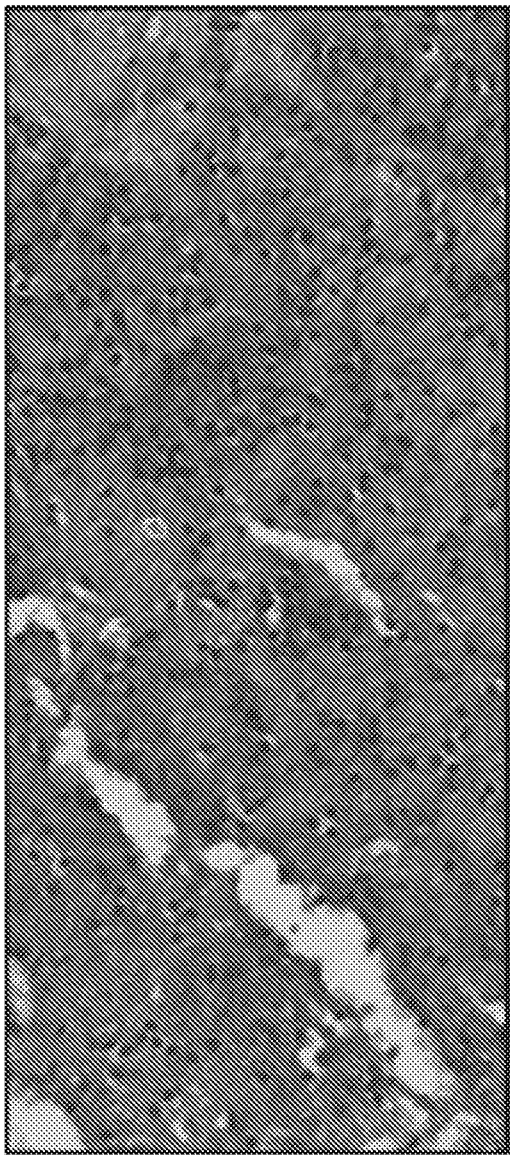


FIG. 14D



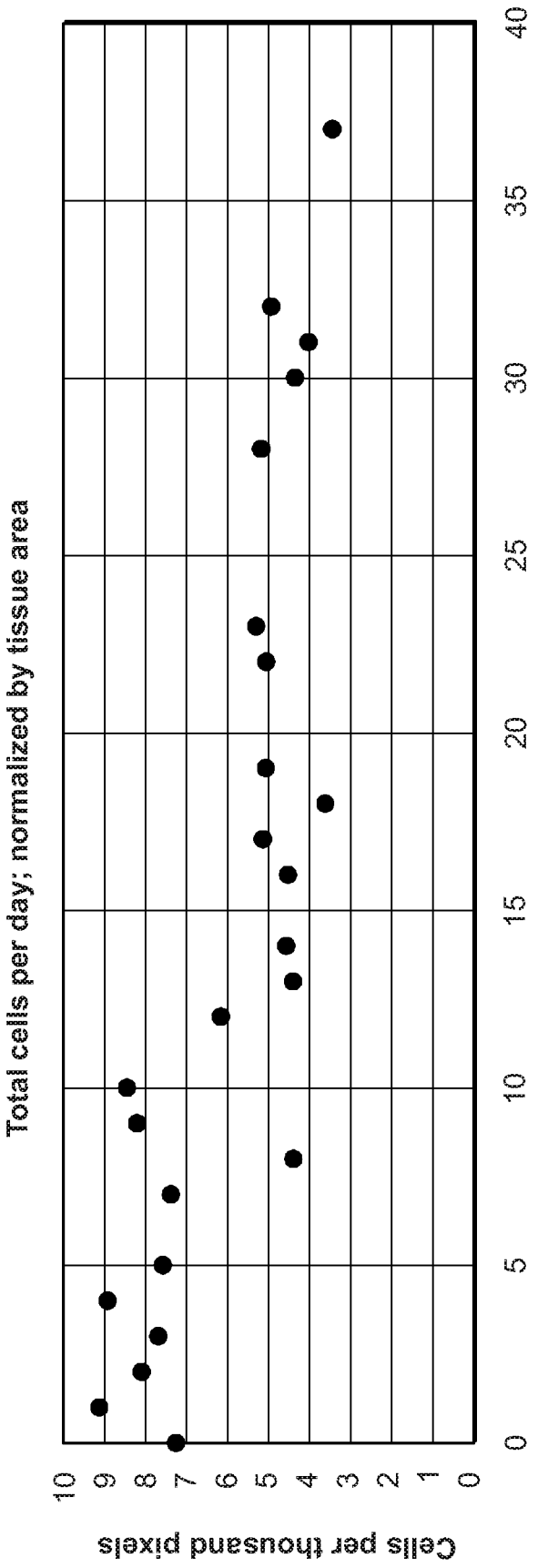

Total cells per day; normalized by tissue area
Cells per thousand pixels
0
1
2
3
4
5
6
7
8
9
10
0
5
10
15
20
25
30
35
40
Day of Harvest

FIG. 15

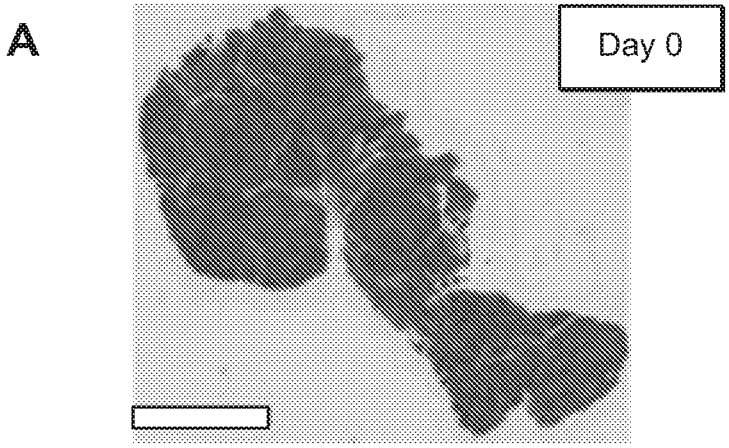


FIG. 16A

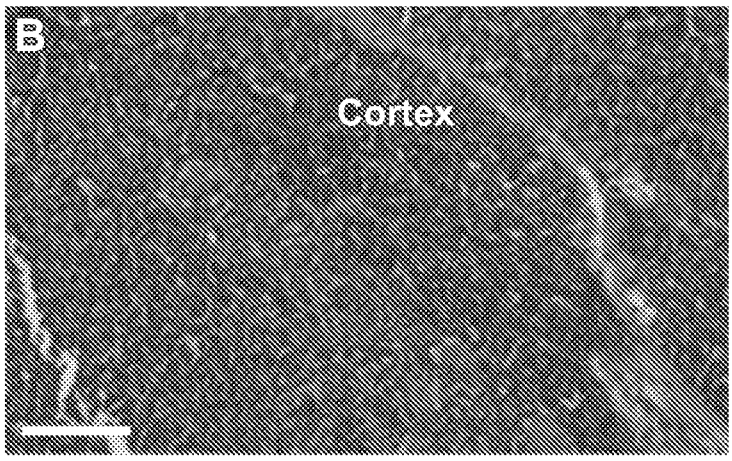


FIG. 16B

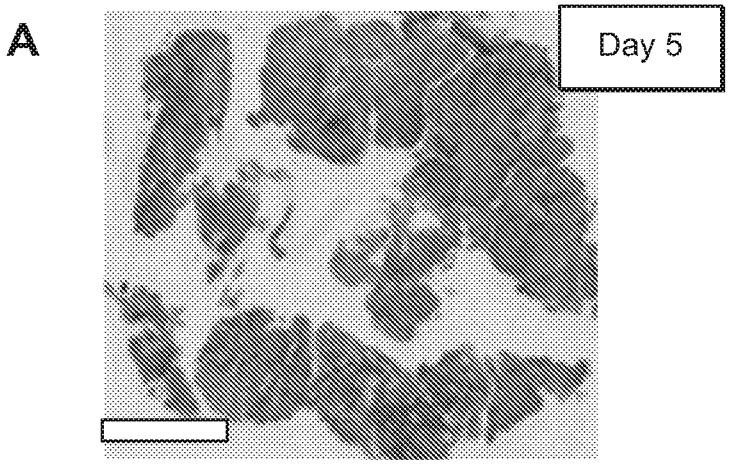


FIG. 17A

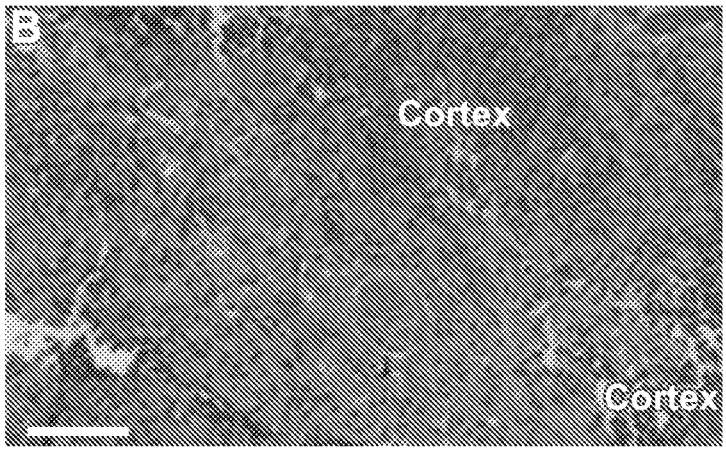


FIG. 17B

A

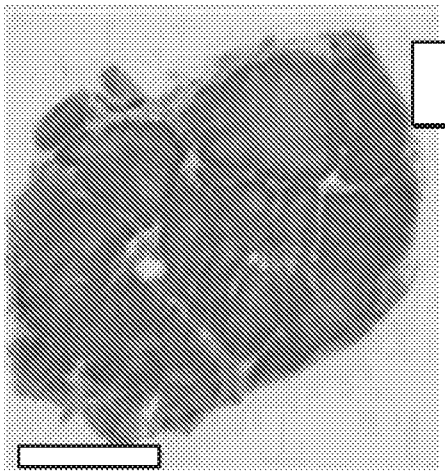


FIG. 18A

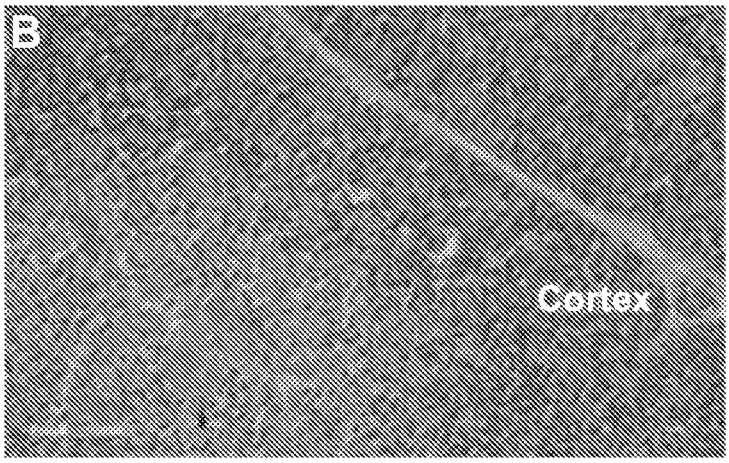


FIG. 18B

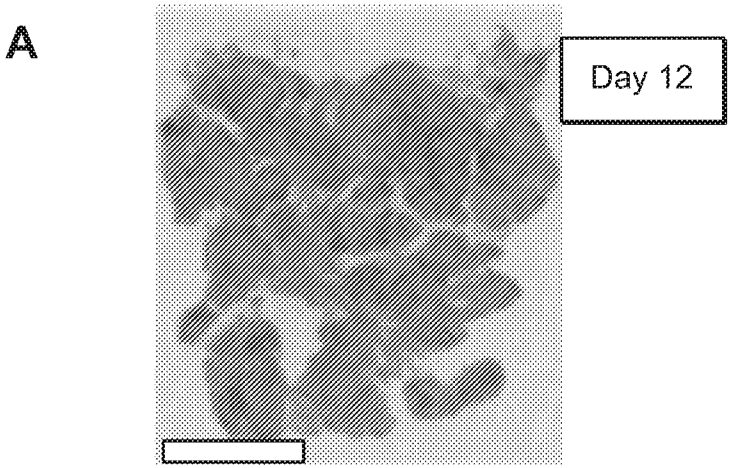


FIG. 19A

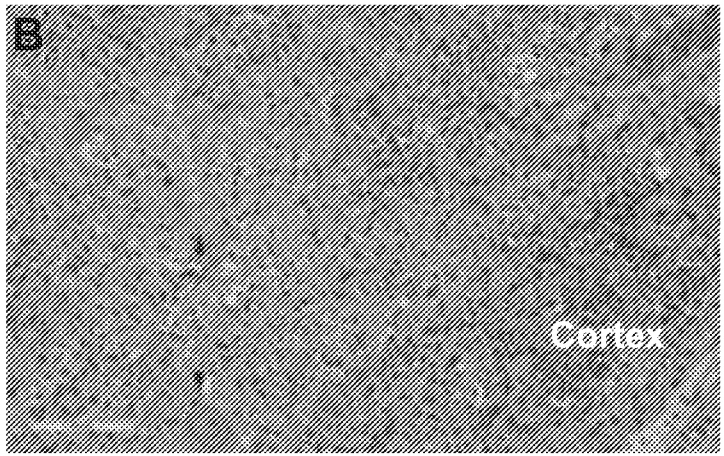


FIG. 19B

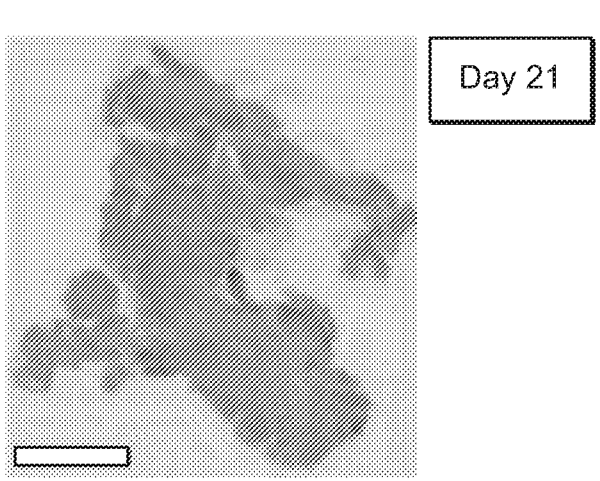


FIG. 20A

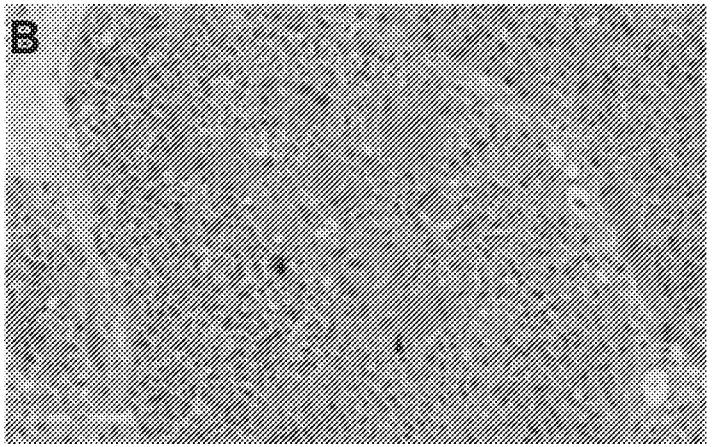


FIG. 20B

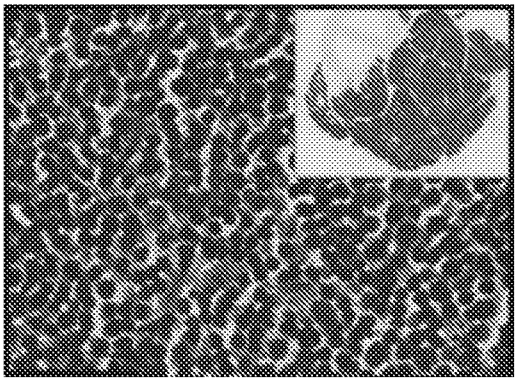


FIG. 21A

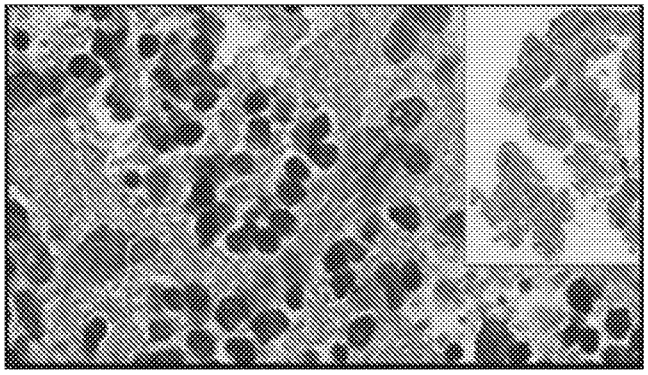


FIG. 21B

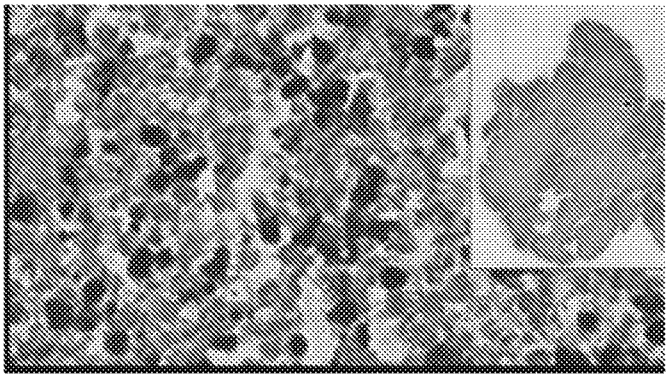


FIG. 21C.

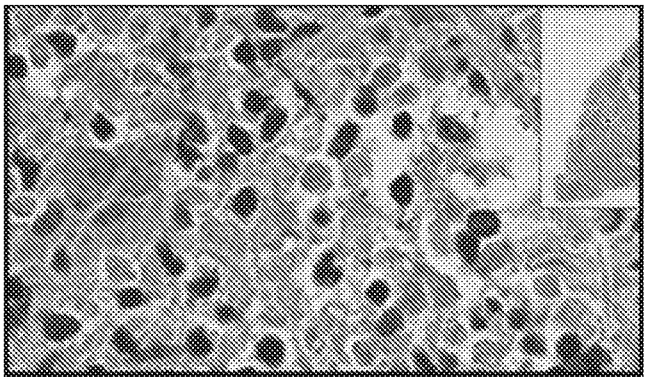


FIG. 21D

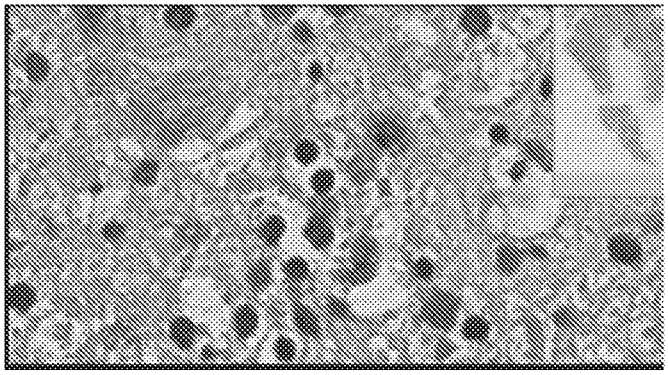


FIG. 21E

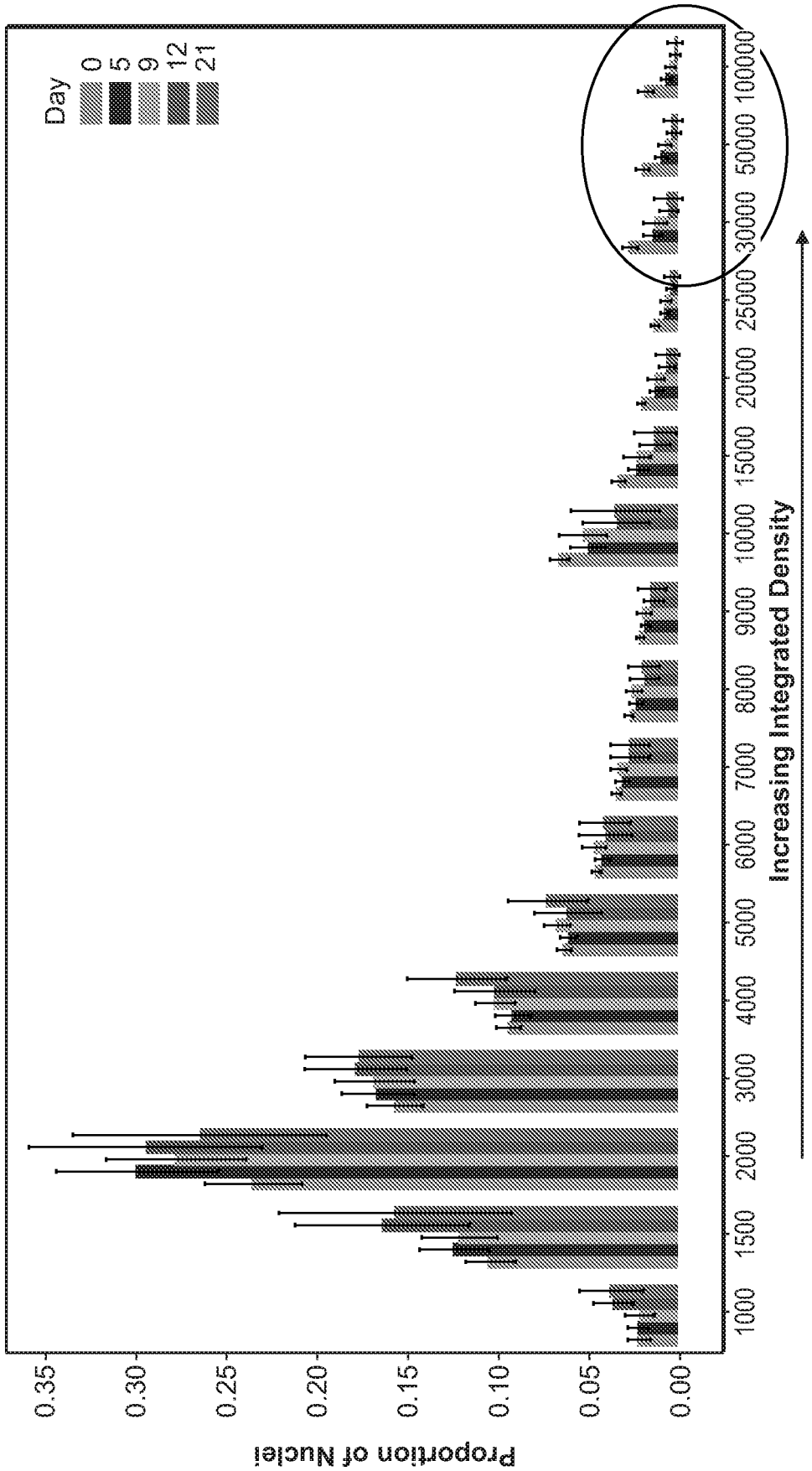

Day
0
5
9
12
21
Proportion of Nuclei
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
1000
1500
2000
3000
4000
5000
6000
7000
8000
9000
10000
15000
20000
25000
30000
50000
100000
Increasing Integrated Density

FIG. 22

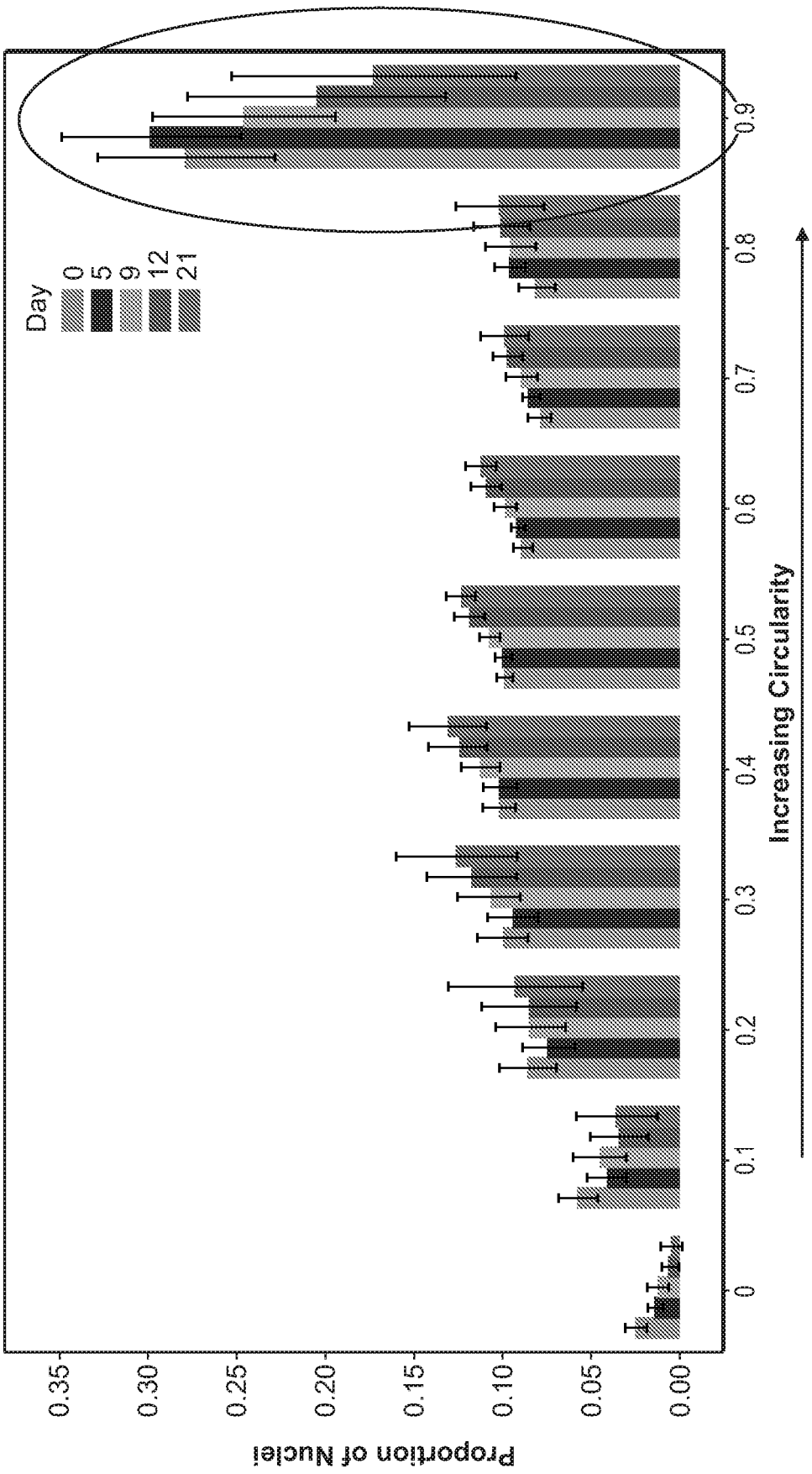

Proportion of Nuclei
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
Increasing Circularity
Day
0
5
9
12
21

FIG. 23

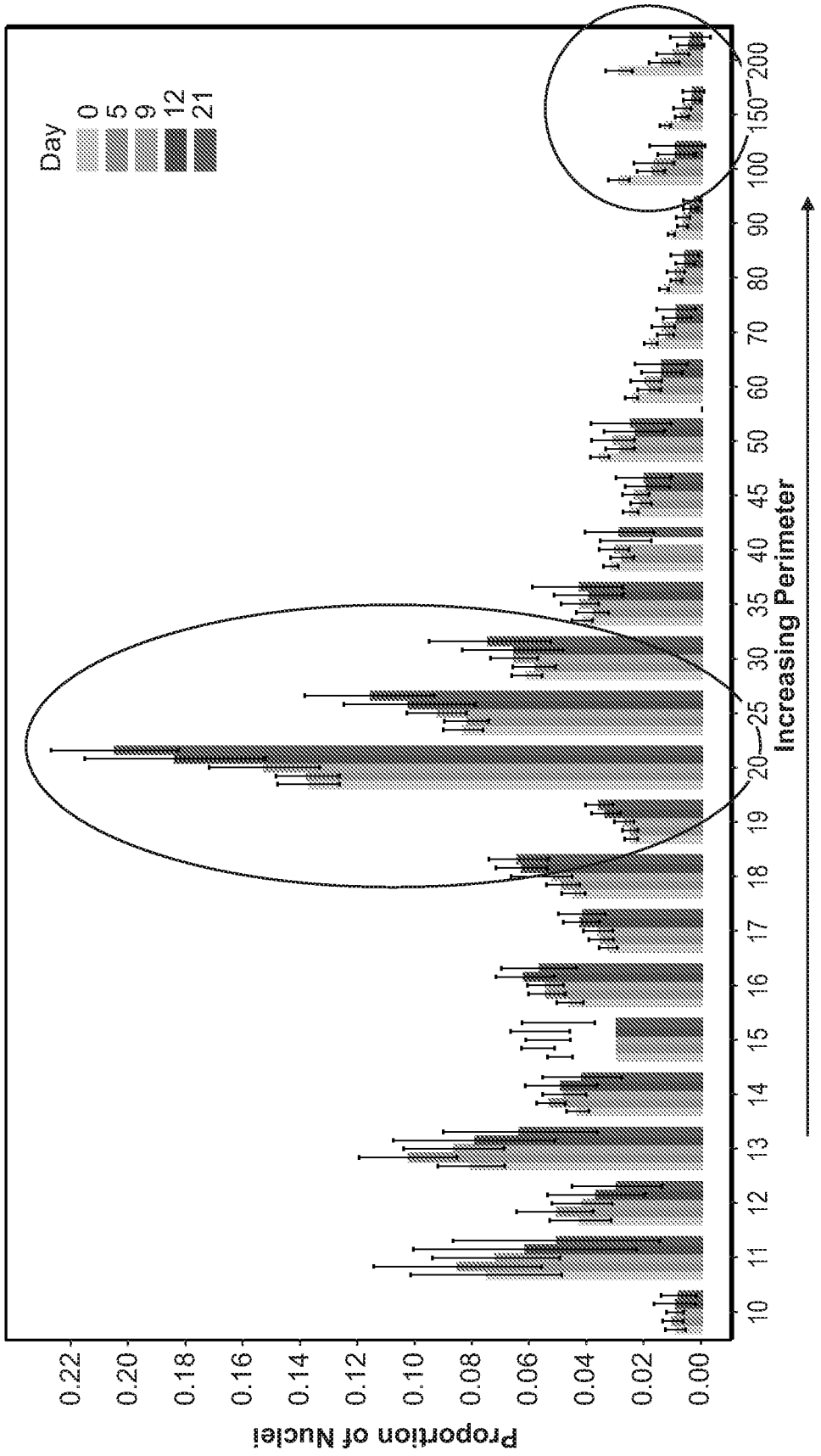

Day
0
5
9
12
21
Proportion of Nuclei
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
10
11
12
13
14
15
16
17
18
19
20
25
30
35
40
45
50
60
70
80
90
100
150
200
Increasing Perimeter

FIG. 24

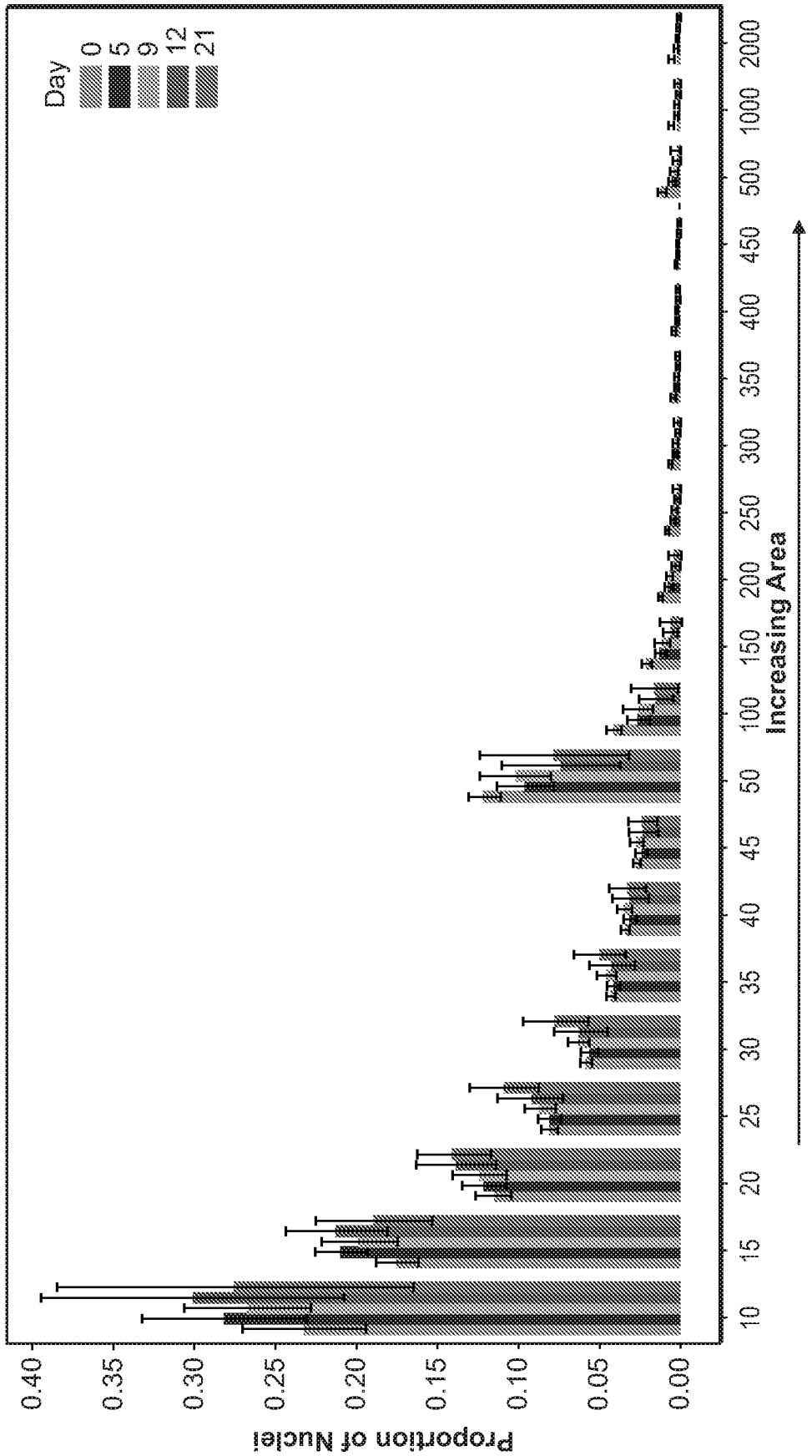

Day
0
5
9
12
21
Proportion of Nuclei
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
0.40
10
15
20
25
30
35
40
45
50
100
150
200
250
300
350
400
450
500
1000
2000
Increasing Area

FIG. 25

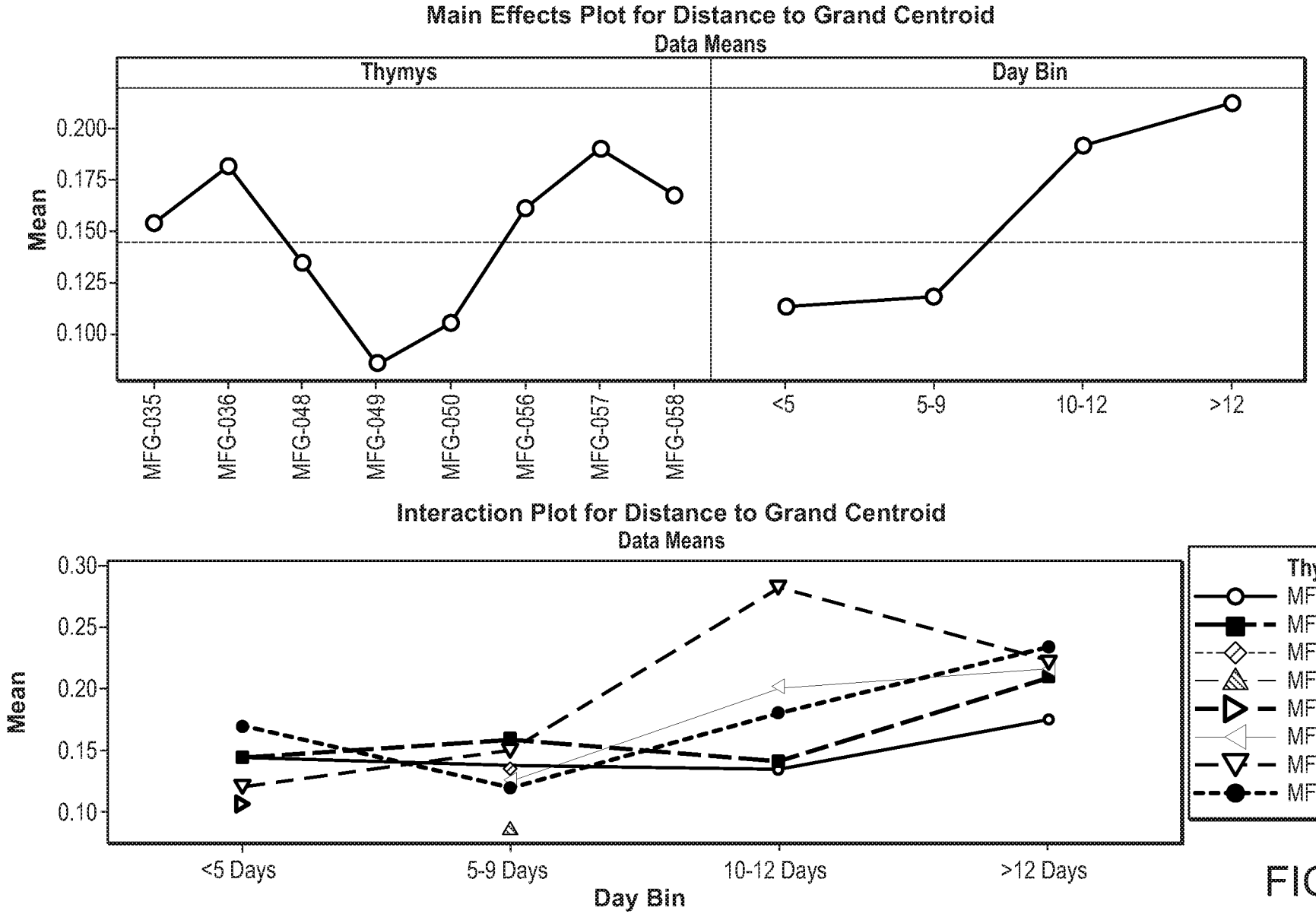
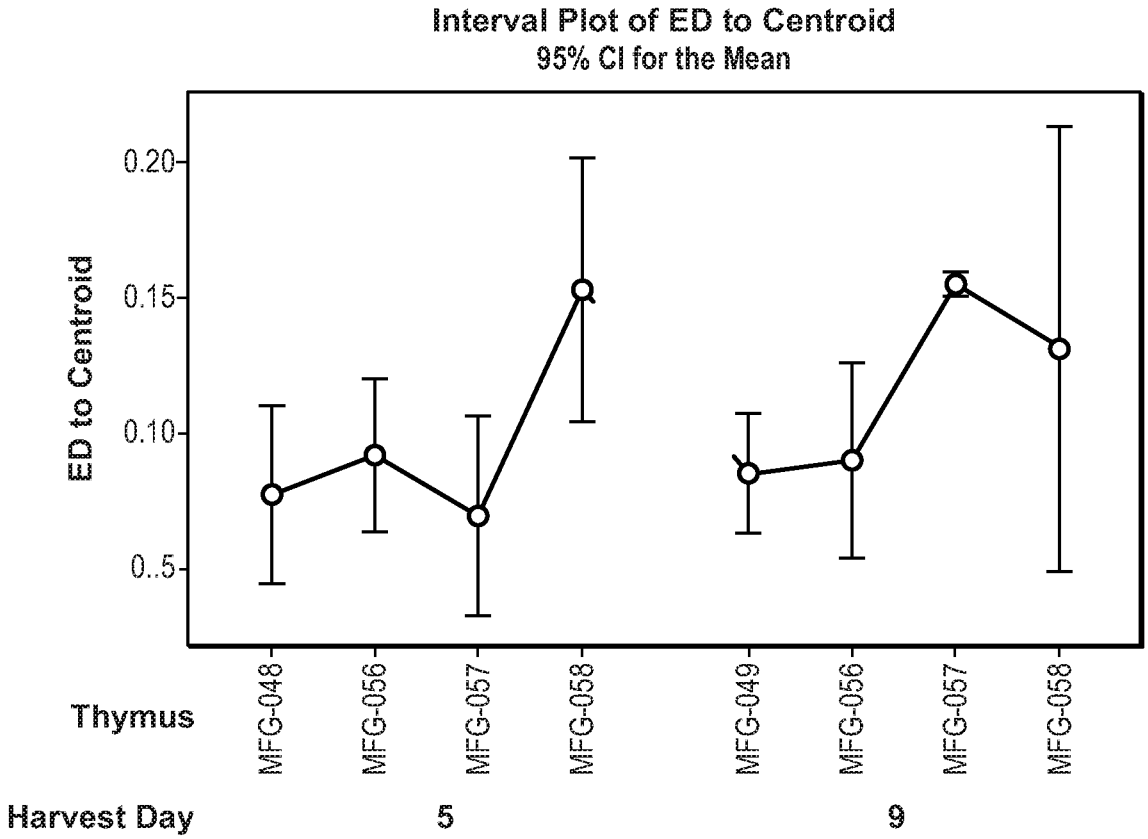

Main Effects Plot for Distance to Grand Centroid
Data Means
Thymys
Day Bin
Mean
0.200
0.175
0.150
0.125
0.100
MFG-035
MFG-036
MFG-048
MFG-049
MFG-050
MFG-056
MFG-057
MFG-058
<5
5-9
10-12
>12
Interaction Plot for Distance to Grand Centroid
Data Means
Mean
0.30
0.25
0.20
0.15
0.10
<5 Days
5-9 Days
10-12 Days
>12 Days
Day Bin
Thymys
MFG-035
MFG-036
MFG-048
MFG-049
MFG-050
MFG-056
MFG-057
MFG-058

FIG. 26



Individual standard deviations are used to calculate the intervals.

FIG. 27

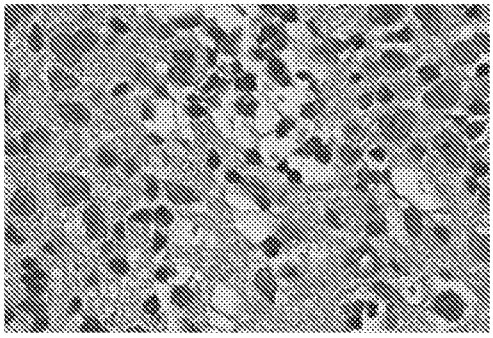


FIG. 28A

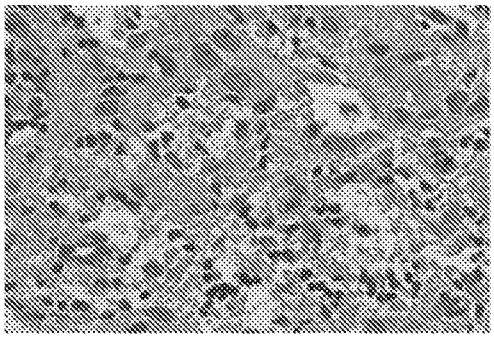


FIG. 28B

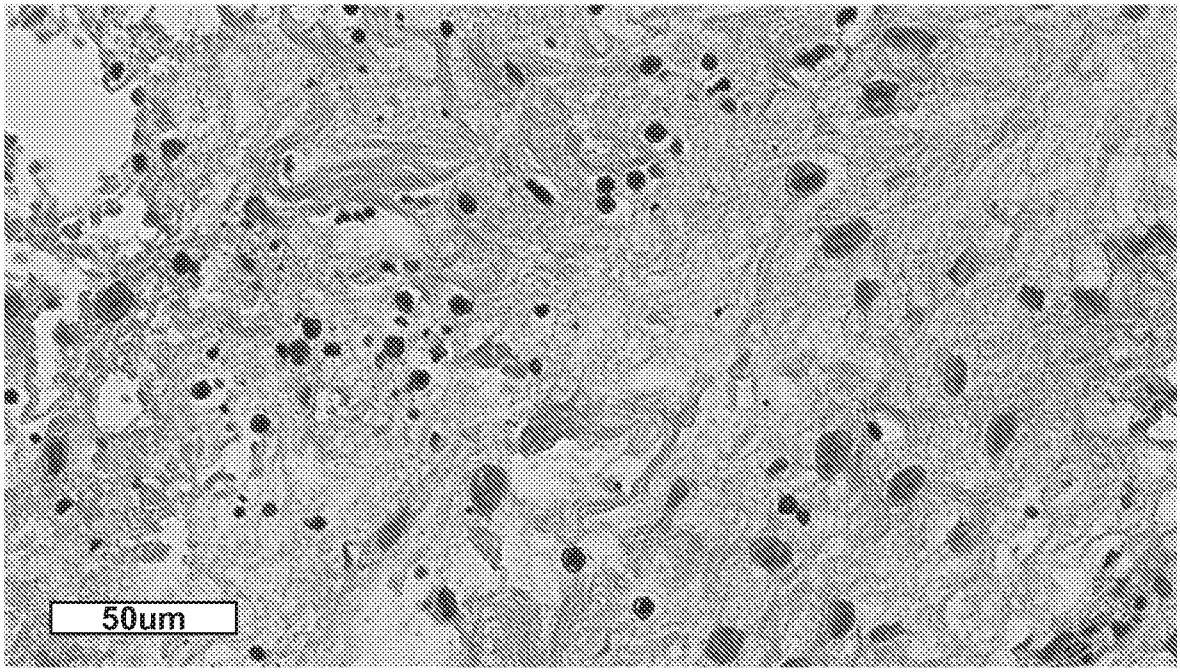


FIG. 29

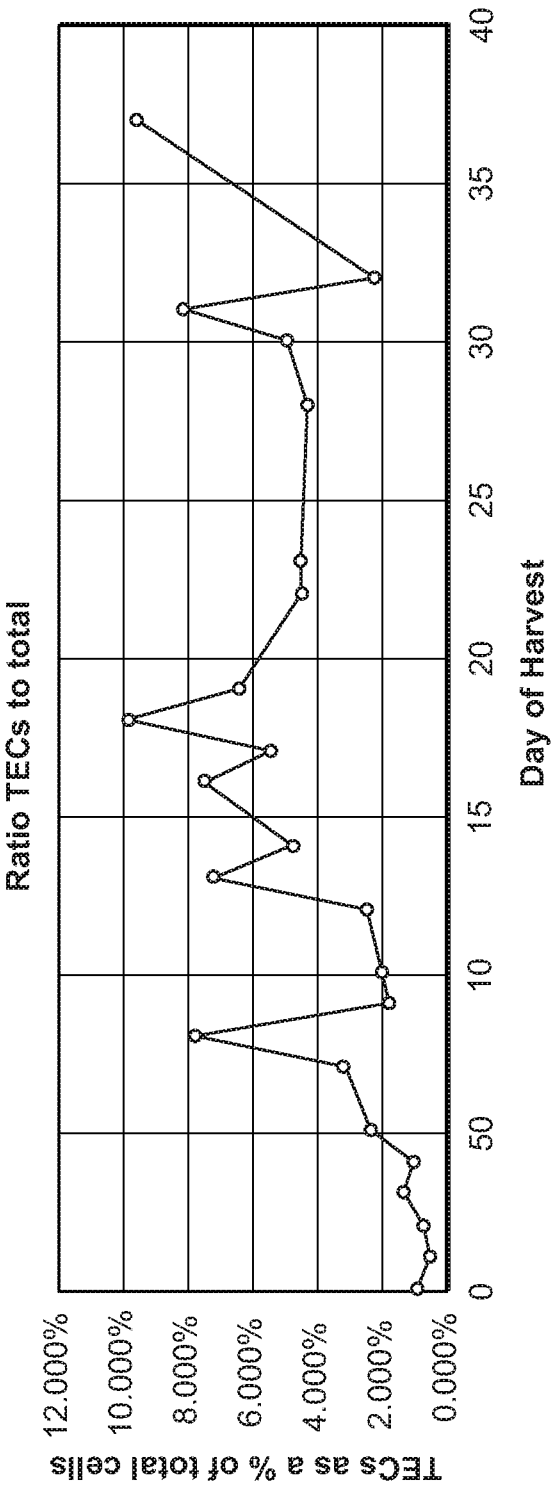

Ratio TECs to total
TECs as a % of total cells
12.000%
10.000%
8.000%
6.000%
4.000%
2.000%
0.000%
0
50
10
15
20
25
30
35
40
Day of Harvest

FIG. 30

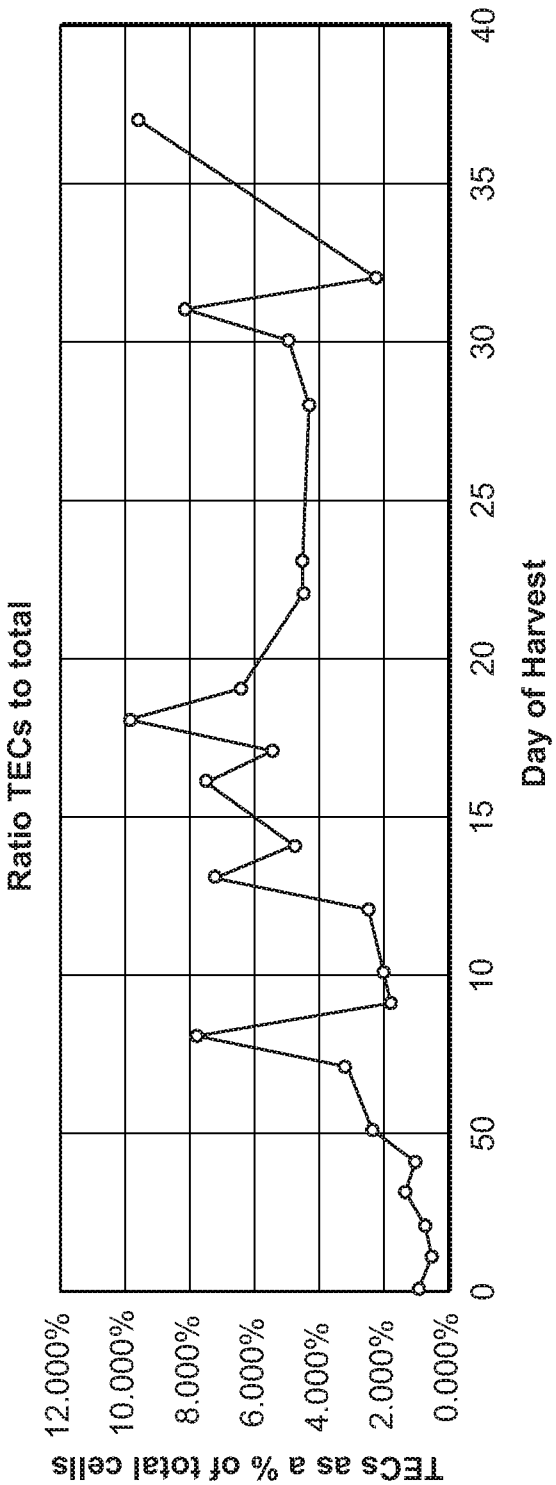

Ratio TECs to total
TECs as a % of total cells
12.000%
10.000%
8.000%
6.000%
4.000%
2.000%
0.000%
0
50
10
15
20
25
30
35
40
Day of Harvest

FIG. 31

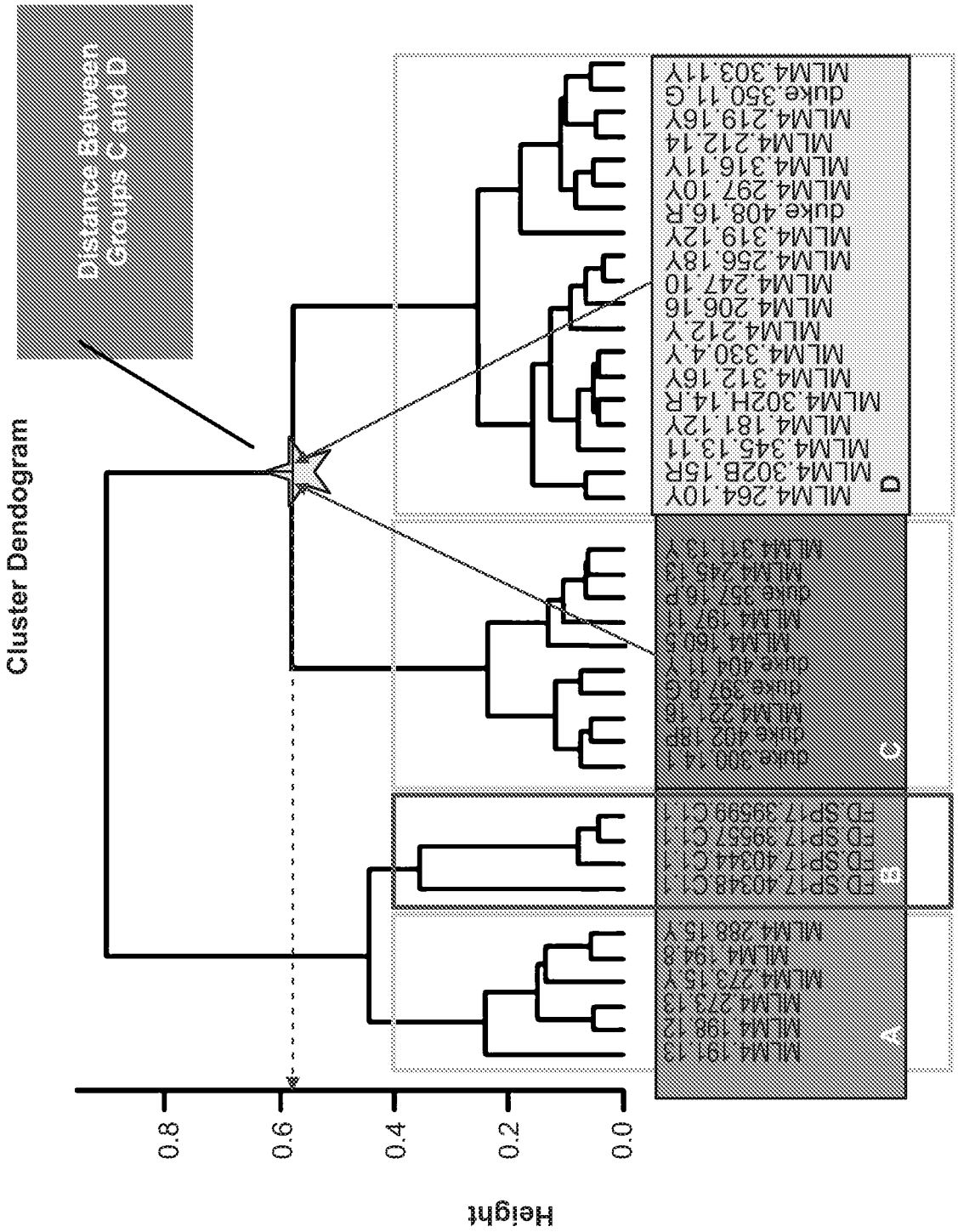

Cluster Dendogram
Distance Between Groups C and D
Height
0.0
0.2
0.4
0.6
0.8
A
B
C
D
MLM4.191.13
MLM4.198.12
MLM4.273.13
MLM4.273.15.Y
MLM4.734.8
MLM4.288.15.Y
FD.SP17.40348.C1.1
FD.SP17.40344.C1.1
FD.SP17.39557.C1.1
FD.SP17.39599.C1.1
duke.309.14.Y
duke.402.18R
MLM4.221.16
duke.397.6.C
duke.404.11.Y
MLM4.160.5
MLM4.197.11
duke.397.16.R
MLM4.245.13
MLM4.371.13.Y
MLM4.264.10Y
MLM4.302B.15R
MLM4.345.13.11
MLM4.181.12Y
MLM4.302H.14.R
MLM4.312.16Y
MLM4.330.4.Y
MLM4.212.Y
MLM4.206.16
MLM4.247.10
MLM4.256.18Y
MLM4.319.12Y
duke.408.16.R
MLM4.297.10Y
MLM4.316.11Y
MLM4.212.14
MLM4.219.16Y
duke.350.11.G
MLM4.303.11Y

FIG. 32

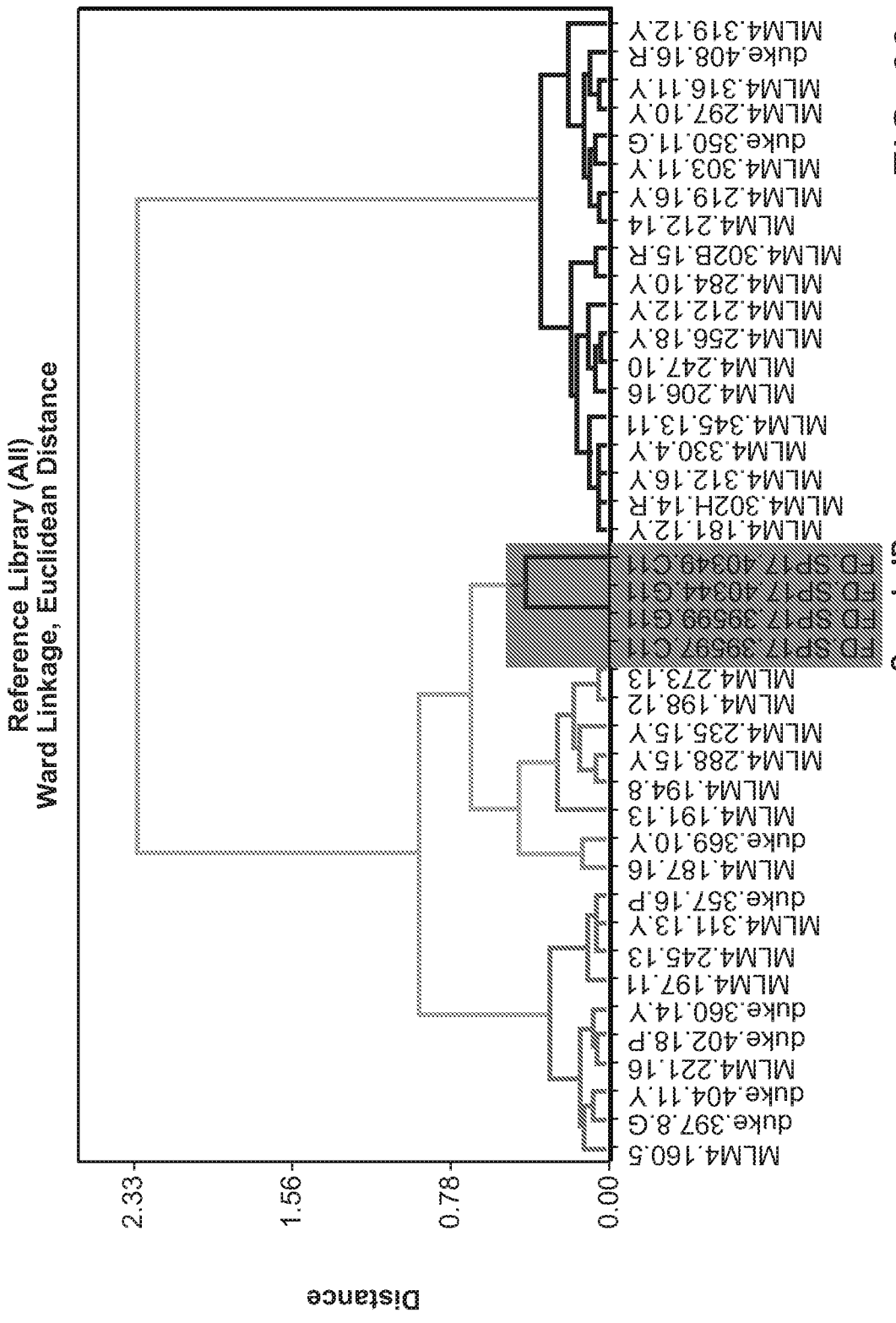

Reference Library (All)
Ward Linkage, Euclidean Distance
Distance
2.33
1.56
0.78
0.00
Sample ID
MLM4.160.5
duke.397.8.G
duke.404.11.Y
MLM4.221.16
duke.402.18.P
duke.360.14.Y
MLM4.197.11
MLM4.245.13
MLM4.311.13.Y
duke.357.16.P
MLM4.187.16
duke.369.10.Y
MLM4.191.13
MLM4.194.8
MLM4.288.15.Y
MLM4.235.15.Y
MLM4.198.12
MLM4.273.13
FD.SP17.39597.C11
FD.SP17.39599.C11
FD.SP17.40344.G11
FD.SP17.40349.C11
MLM4.181.12.Y
MLM4.302H.14.R
MLM4.312.16.Y
MLM4.330.4.Y
MLM4.345.13.11
MLM4.206.16
MLM4.247.10
MLM4.256.18.Y
MLM4.212.12.Y
MLM4.284.10.Y
MLM4.302B.15.R
MLM4.212.14
MLM4.219.16.Y
MLM4.303.11.Y
duke.350.11.G
MLM4.297.10.Y
MLM4.316.11.Y
duke.408.16.R
MLM4.319.12.Y

FIG. 33

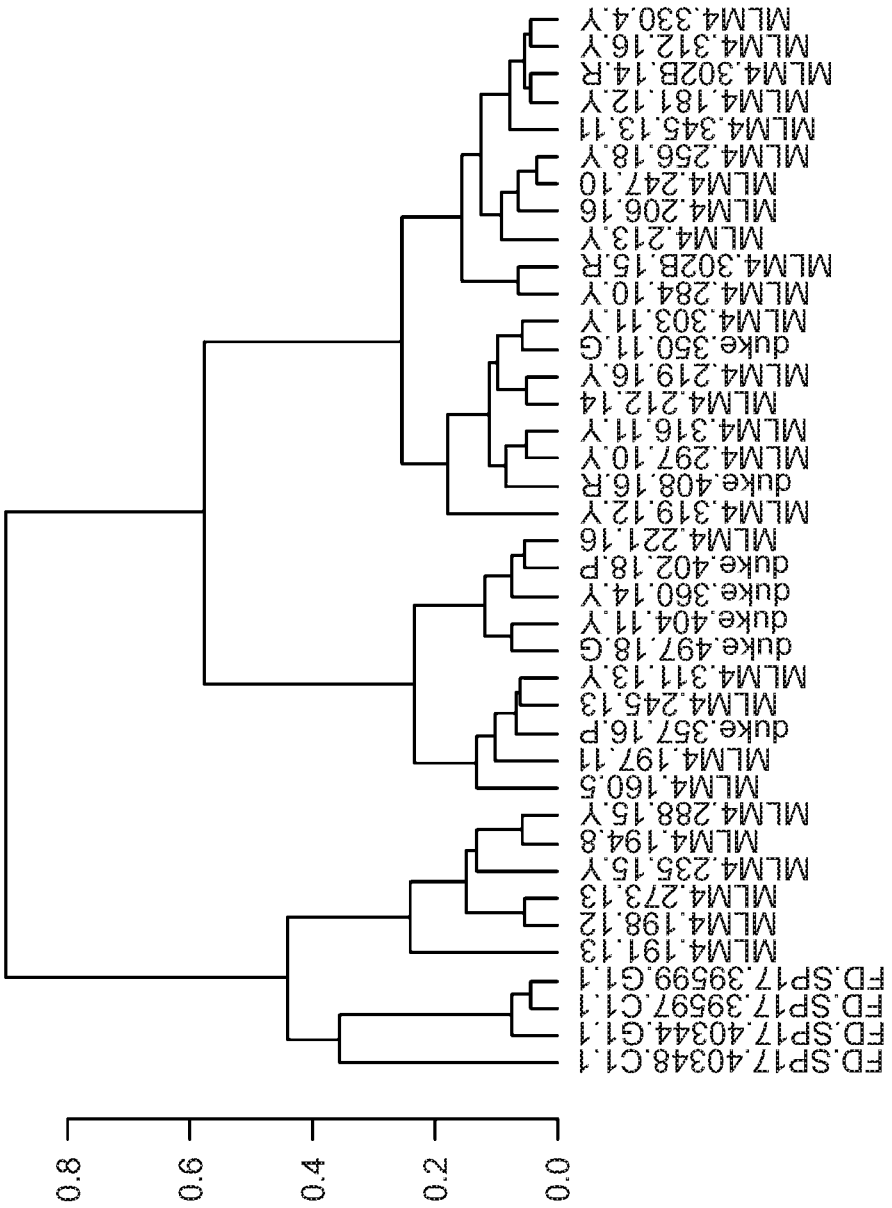

FD.SP17.40348.C1.1
FD.SP17.40344.G1.1
FD.SP17.39597.C1.1
FD.SP17.39599.G1.1
MLM4.191.13
MLM4.198.12
MLM4.273.13
MLM4.235.15.Y
MLM4.194.8
MLM4.288.15.Y
MLM4.160.5
MLM4.197.11
duke.357.16.P
MLM4.245.13
MLM4.311.13.Y
duke.497.18.G
duke.404.11.Y
duke.360.14.Y
duke.402.18.P
MLM4.221.16
MLM4.319.12.Y
duke.408.16.R
MLM4.297.10.Y
MLM4.316.11.Y
MLM4.212.14
MLM4.219.16.Y
duke.350.11.G
MLM4.303.11.Y
MLM4.284.10.Y
MLM4.302B.15.R
MLM4.213.Y
MLM4.206.16
MLM4.247.10
MLM4.256.18.Y
MLM4.345.13.11
MLM4.181.12.Y
MLM4.302B.14.R
MLM4.312.16.Y
MLM4.330.4.Y
0.8
0.6
0.4
0.2
0.0

FIG. 34

FIG. 35A FIG. 35B FIG. 35C

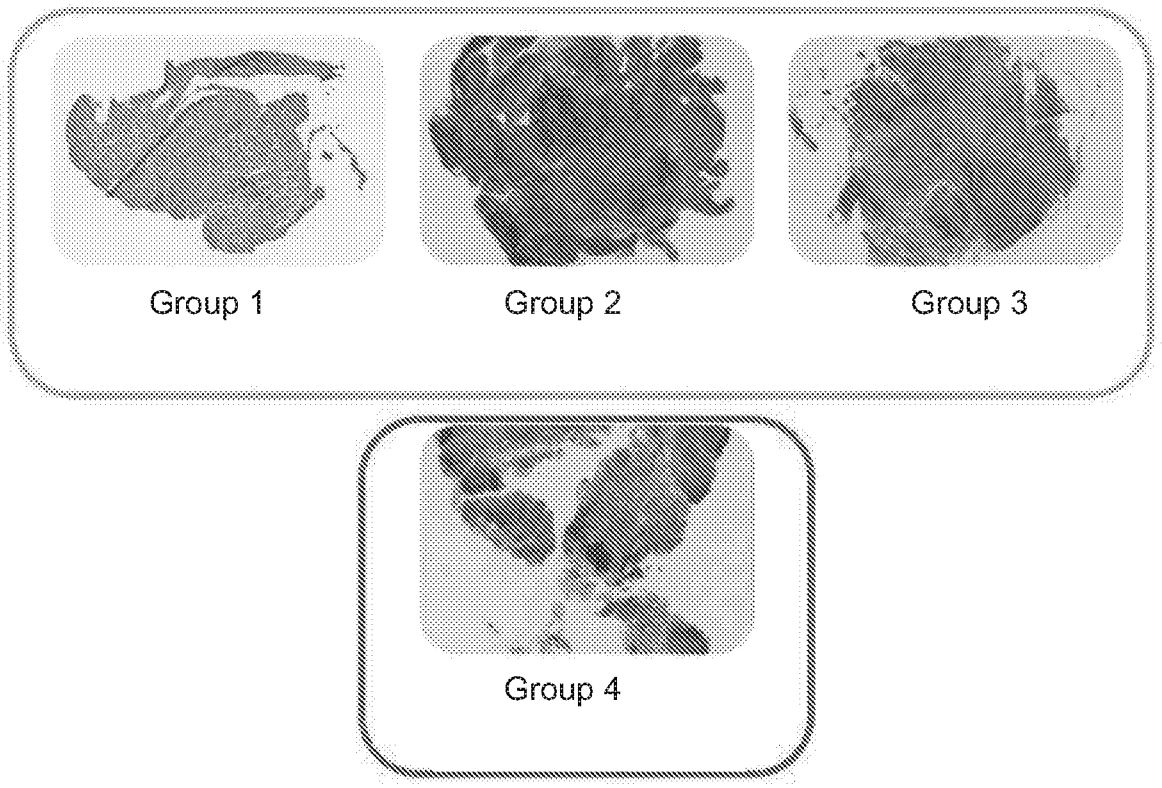


FIG. 35D

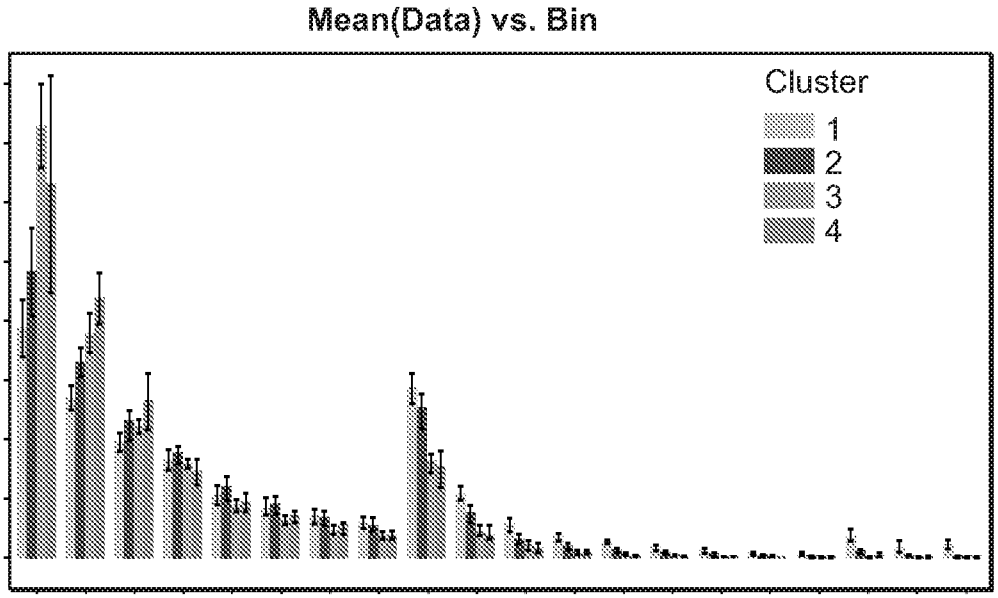


FIG. 36A

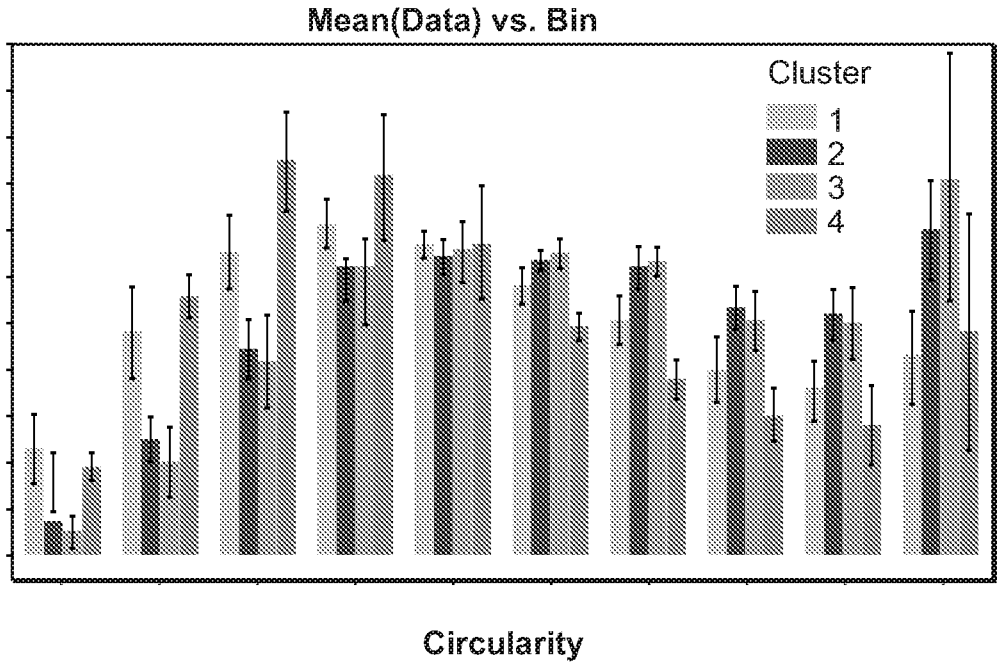


FIG. 36B

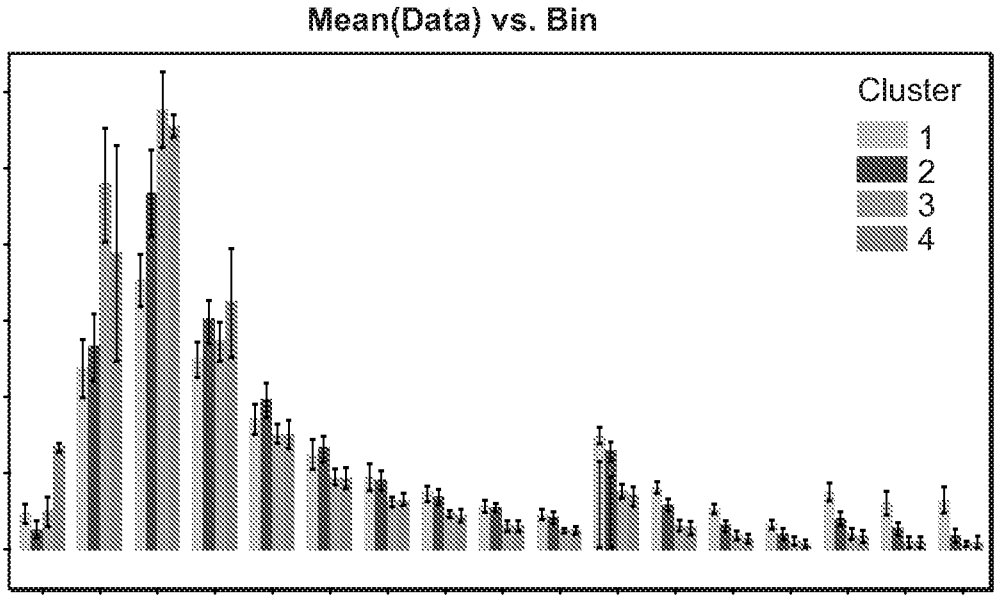


FIG. 36C

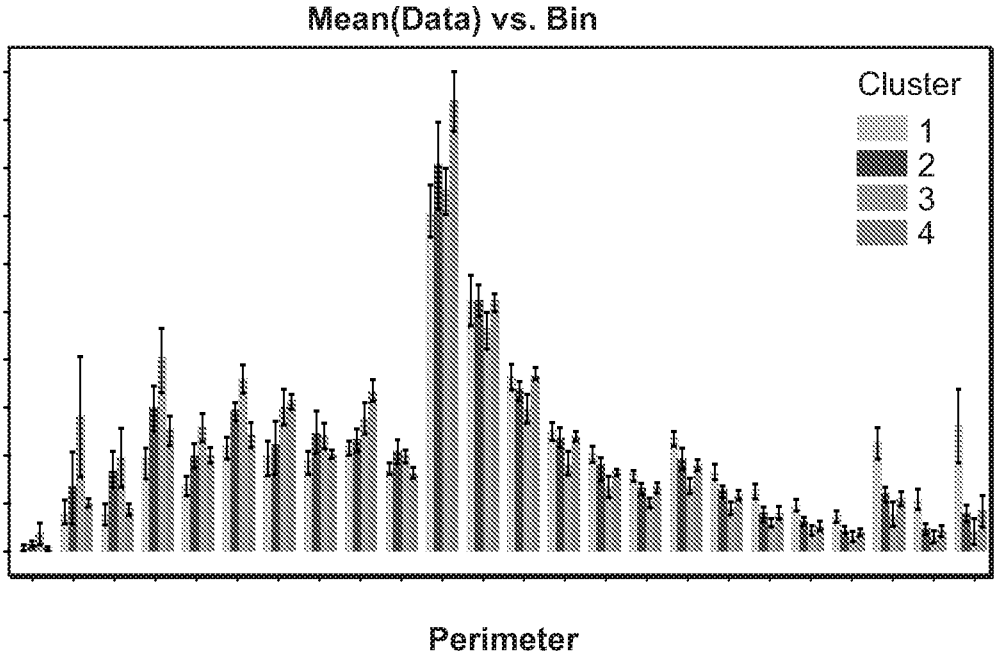


FIG. 36D

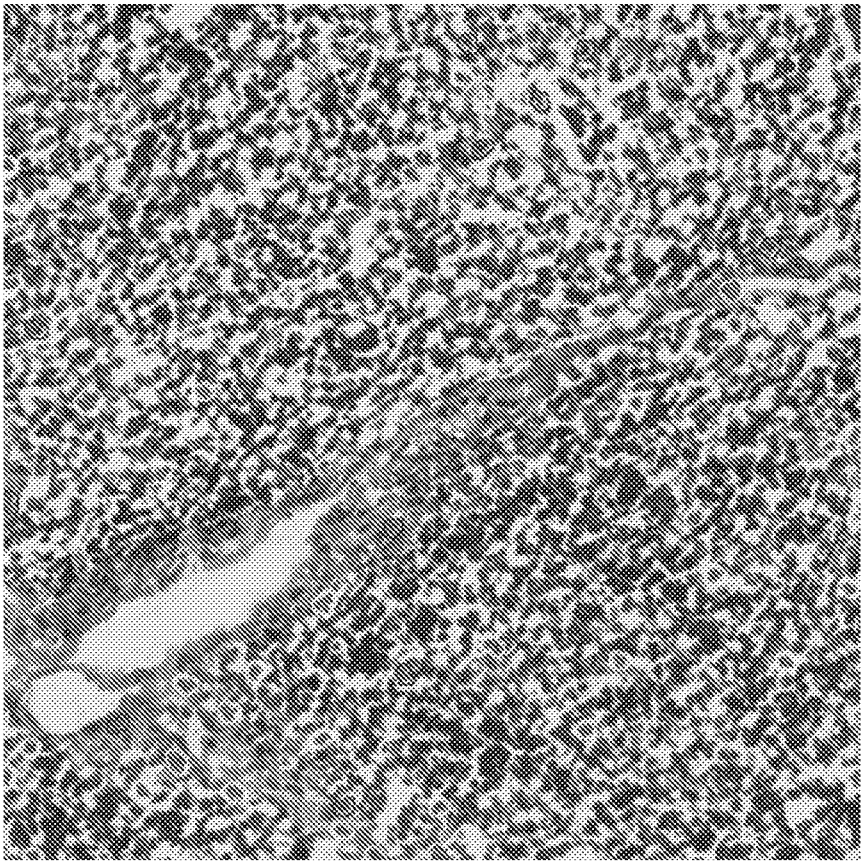


FIG. 37

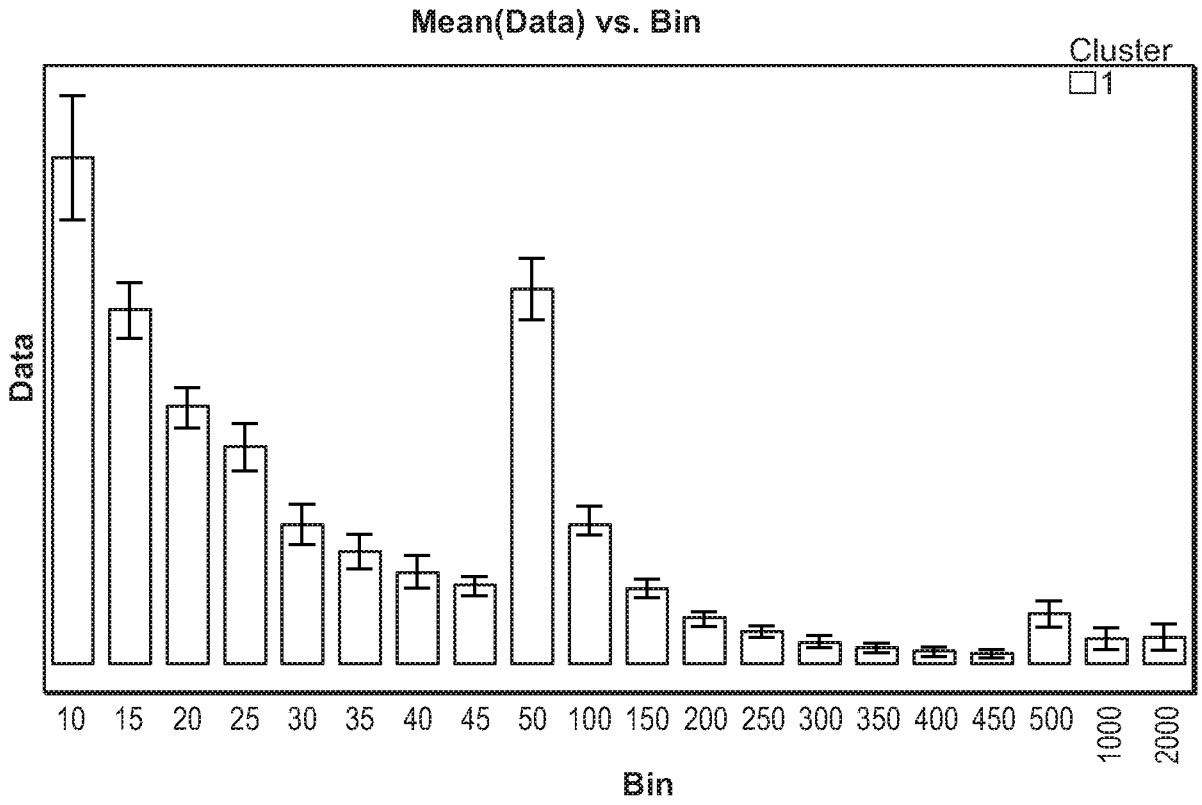

Mean(Data) vs. Bin
Cluster
1
Data
10 15 20 25 30 35 40 45 50 100 150 200 250 300 350 400 450 500 1000 2000
Bin

FIG. 38

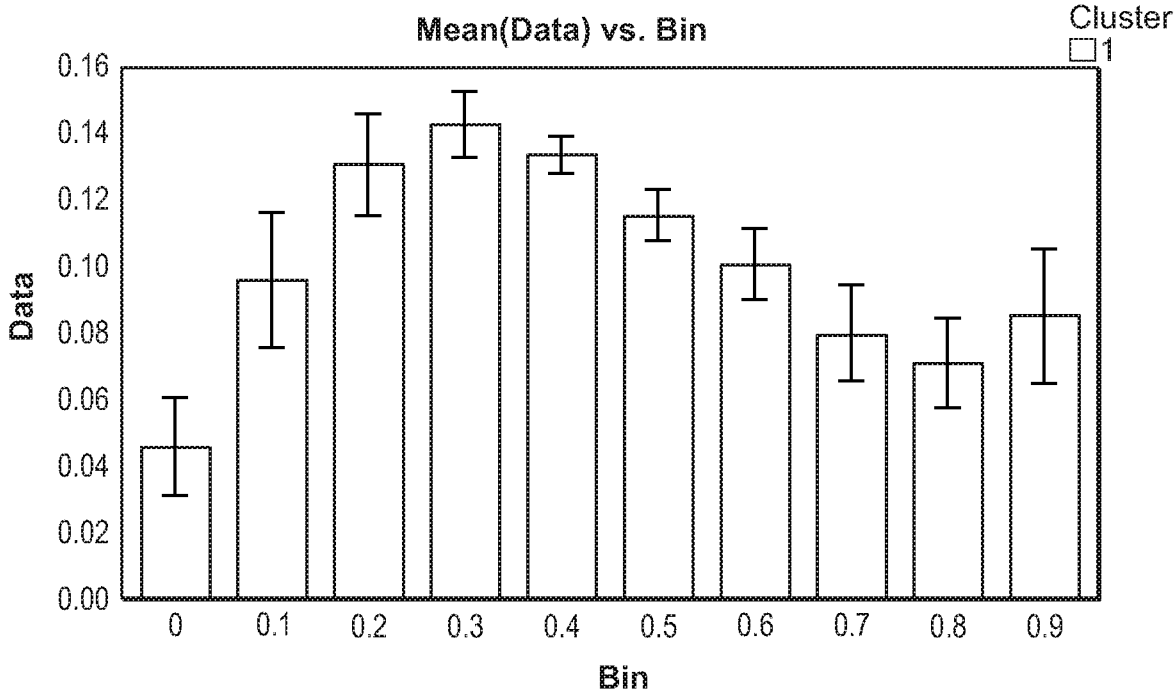

Mean(Data) vs. Bin
Cluster
1
Data
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9
Bin

FIG. 39

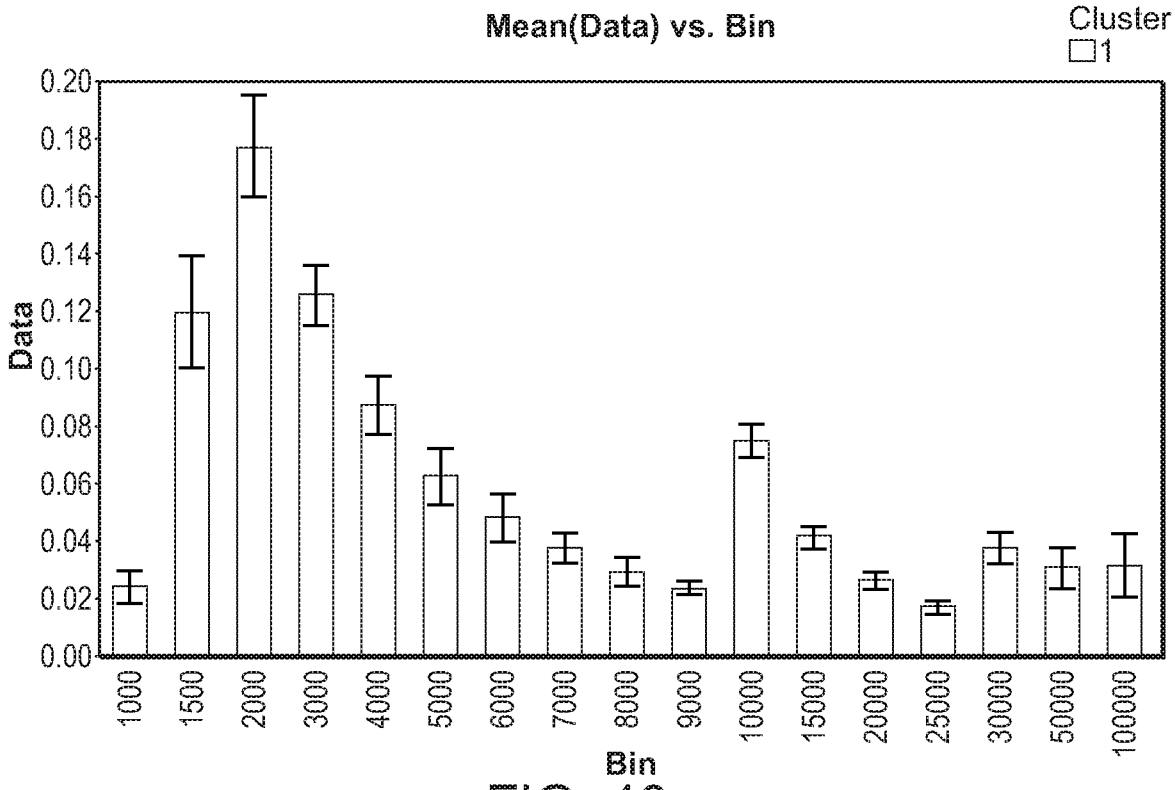

Mean(Data) vs. Bin
Cluster
1
Data
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
1000
1500
2000
3000
4000
5000
6000
7000
8000
9000
10000
15000
20000
25000
30000
50000
100000
Bin

FIG. 40

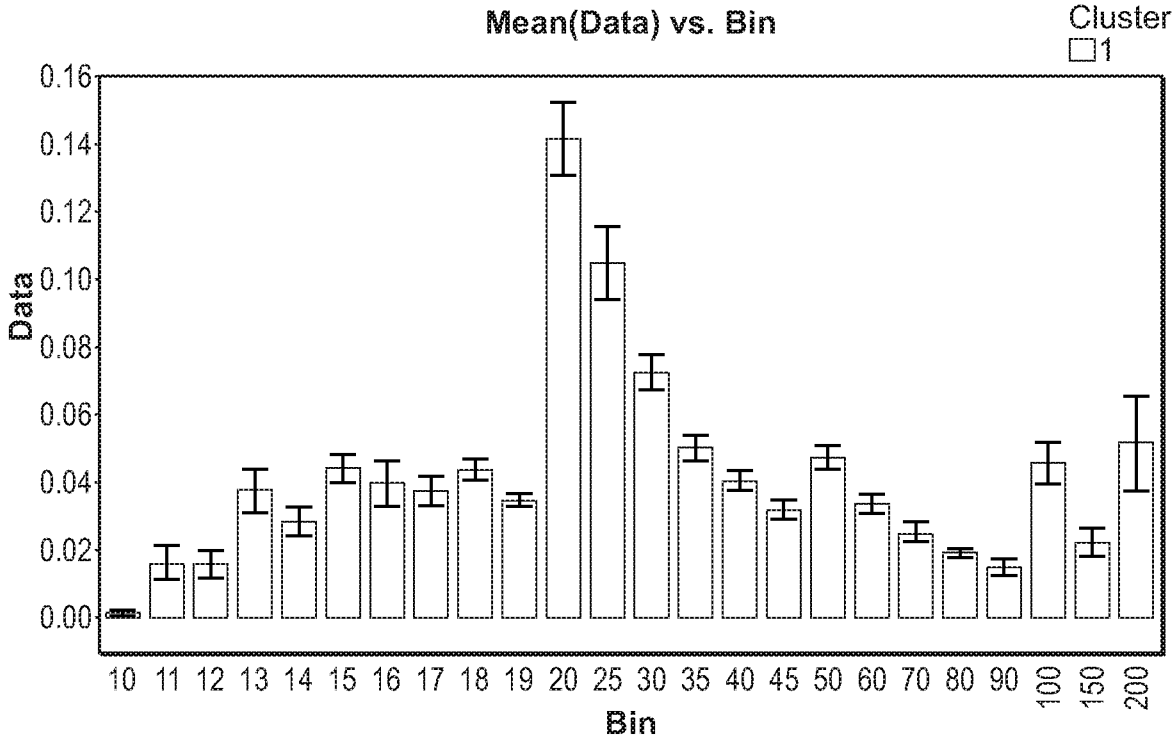

Mean(Data) vs. Bin
Cluster
1
Data
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
10
11
12
13
14
15
16
17
18
19
20
25
30
35
40
45
50
60
70
80
90
100
150
200
Bin

FIG. 41

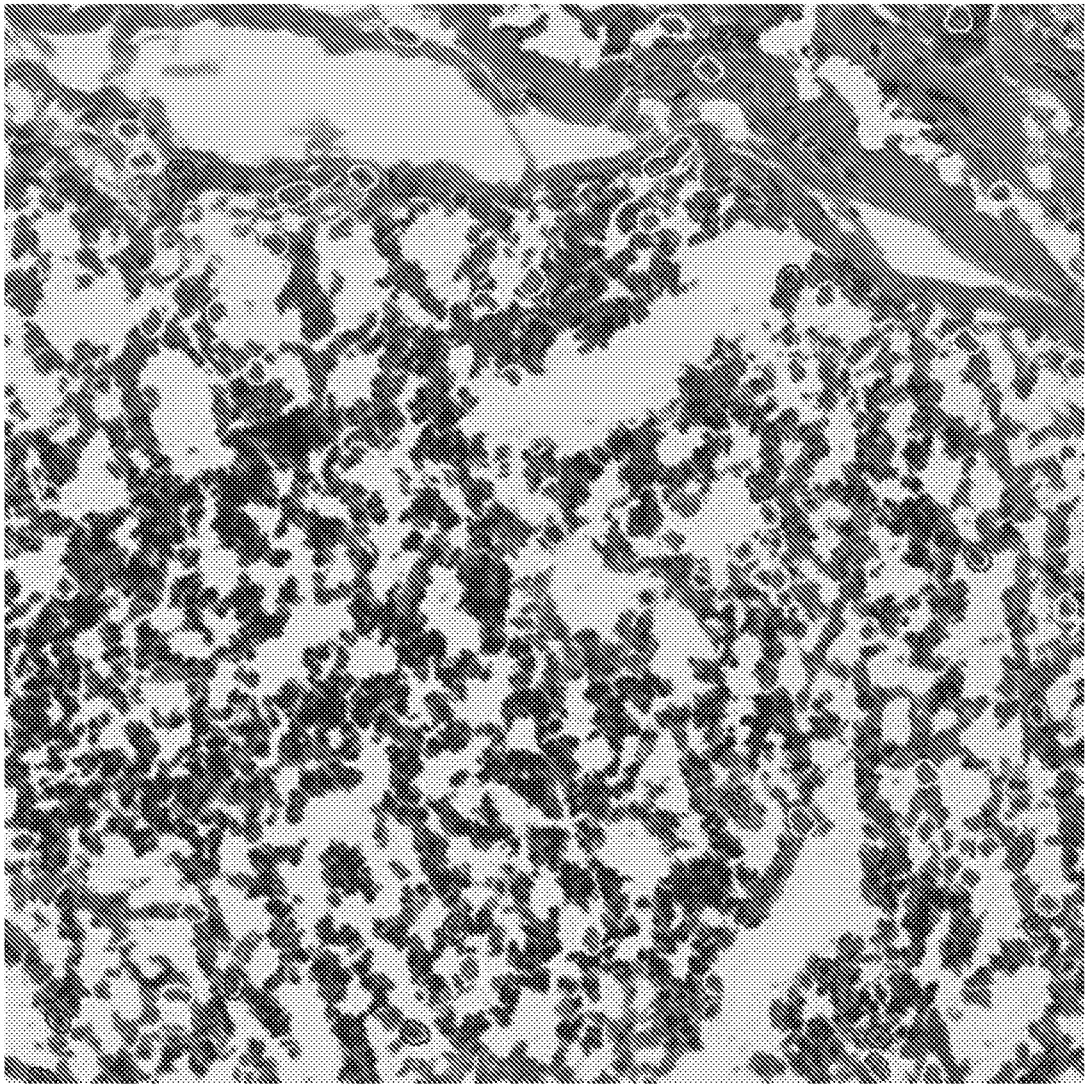


FIG. 42

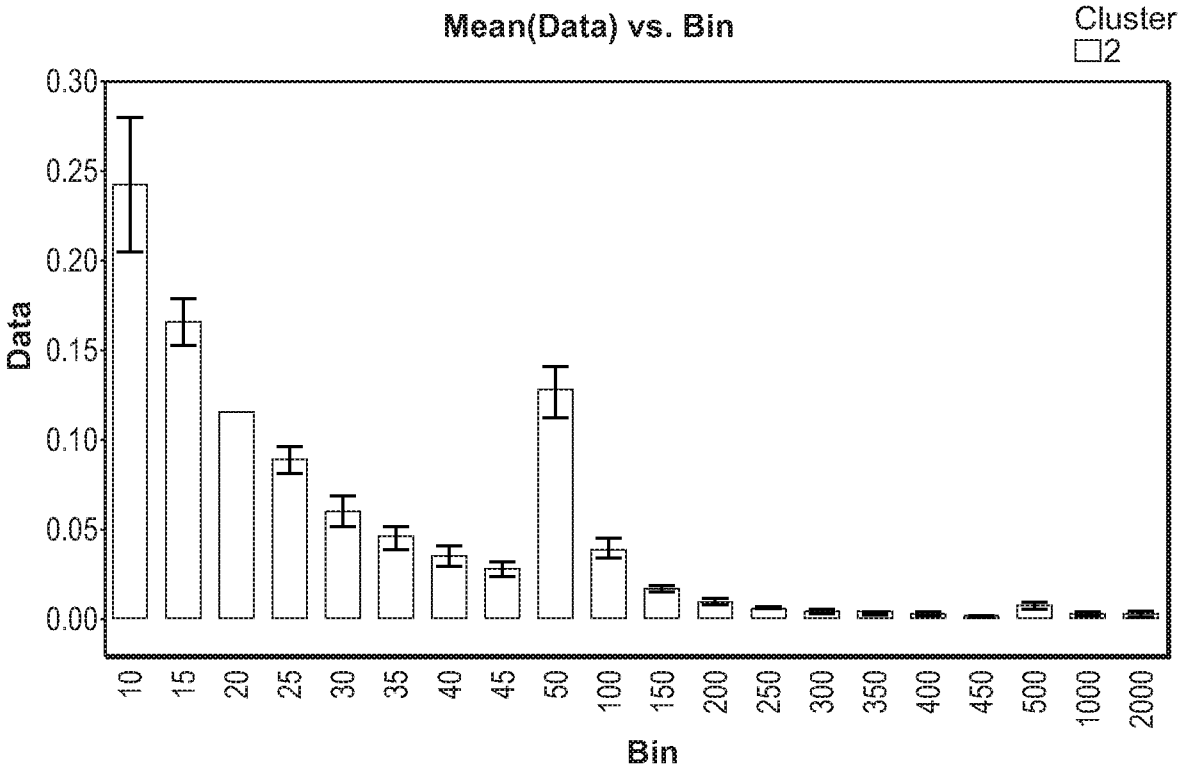

Mean(Data) vs. Bin
Cluster
2
Data
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10
15
20
25
30
35
40
45
50
100
150
200
250
300
350
400
450
500
1000
2000
Bin

FIG. 43

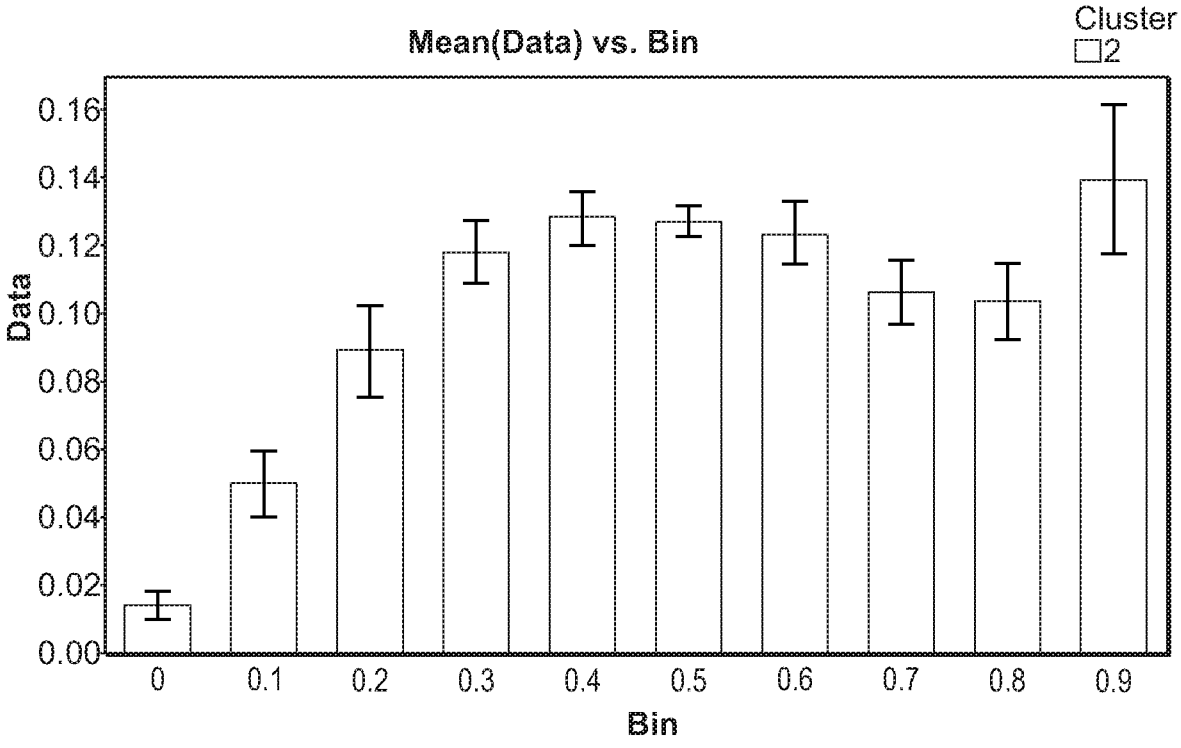

Mean(Data) vs. Bin
Cluster
2
Data
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
Bin

FIG. 44

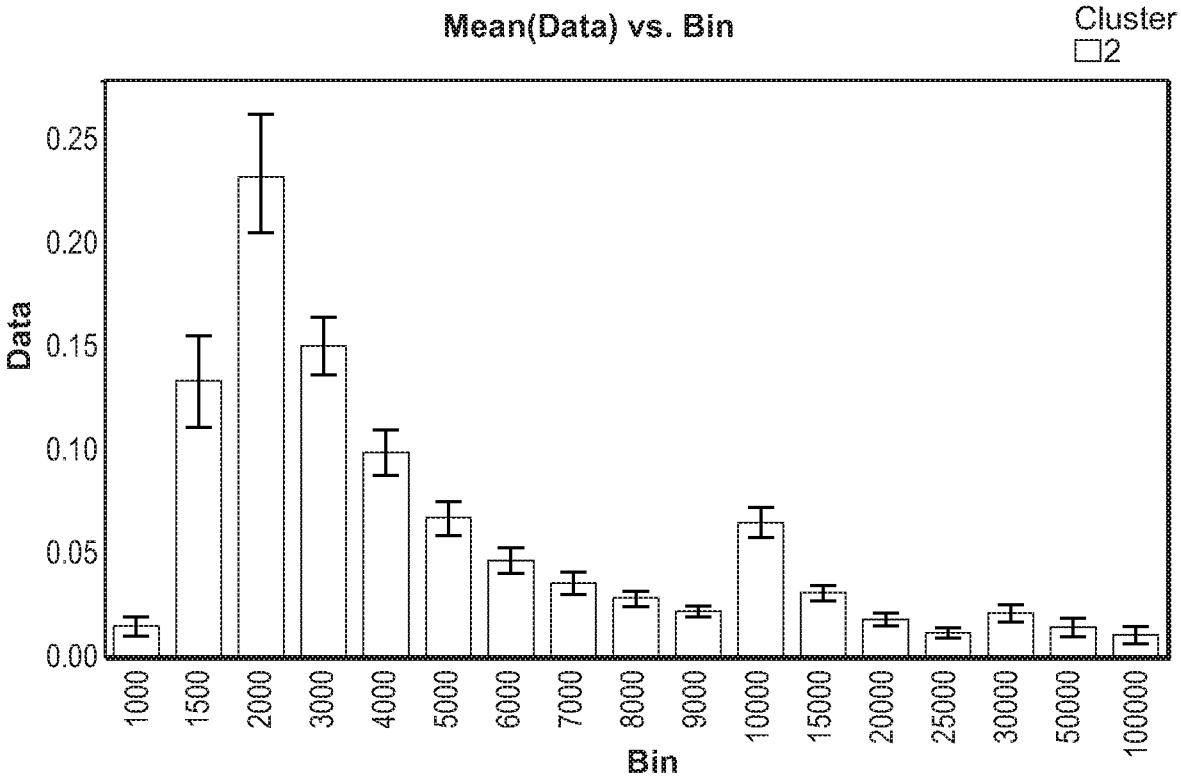

Mean(Data) vs. Bin
Cluster
2
Data
0.25
0.20
0.15
0.10
0.05
0.00
1000
1500
2000
3000
4000
5000
6000
7000
8000
9000
10000
15000
20000
25000
30000
50000
100000
Bin

FIG. 45

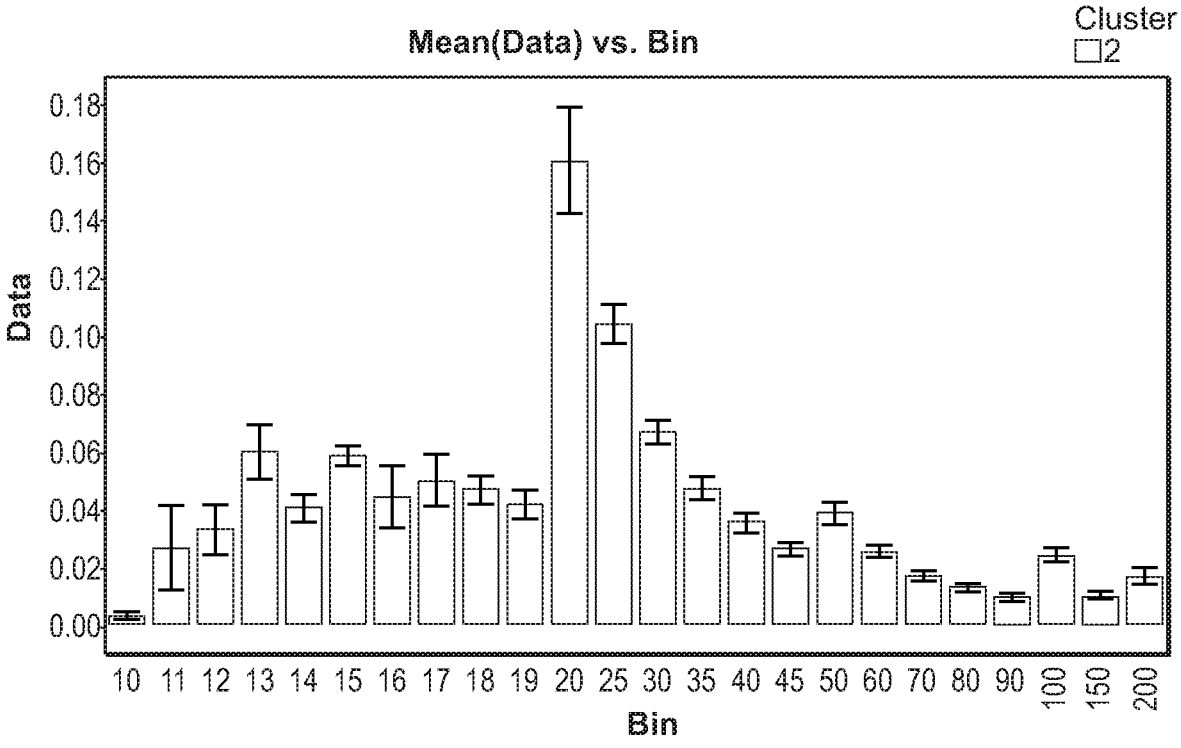

Mean(Data) vs. Bin
Cluster
2
Data
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
10
11
12
13
14
15
16
17
18
19
20
25
30
35
40
45
50
60
70
80
90
100
150
200
Bin

FIG. 46

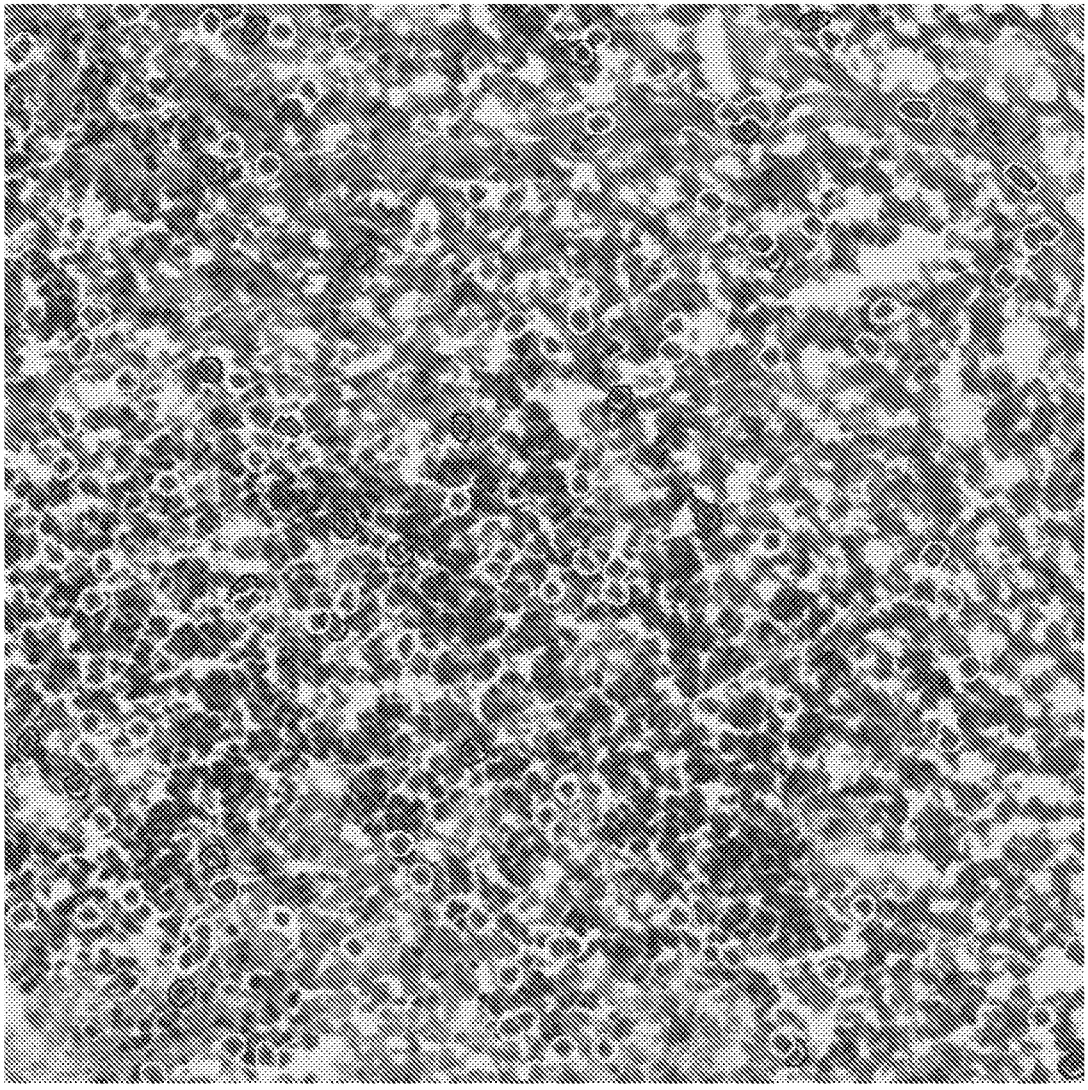


FIG. 47

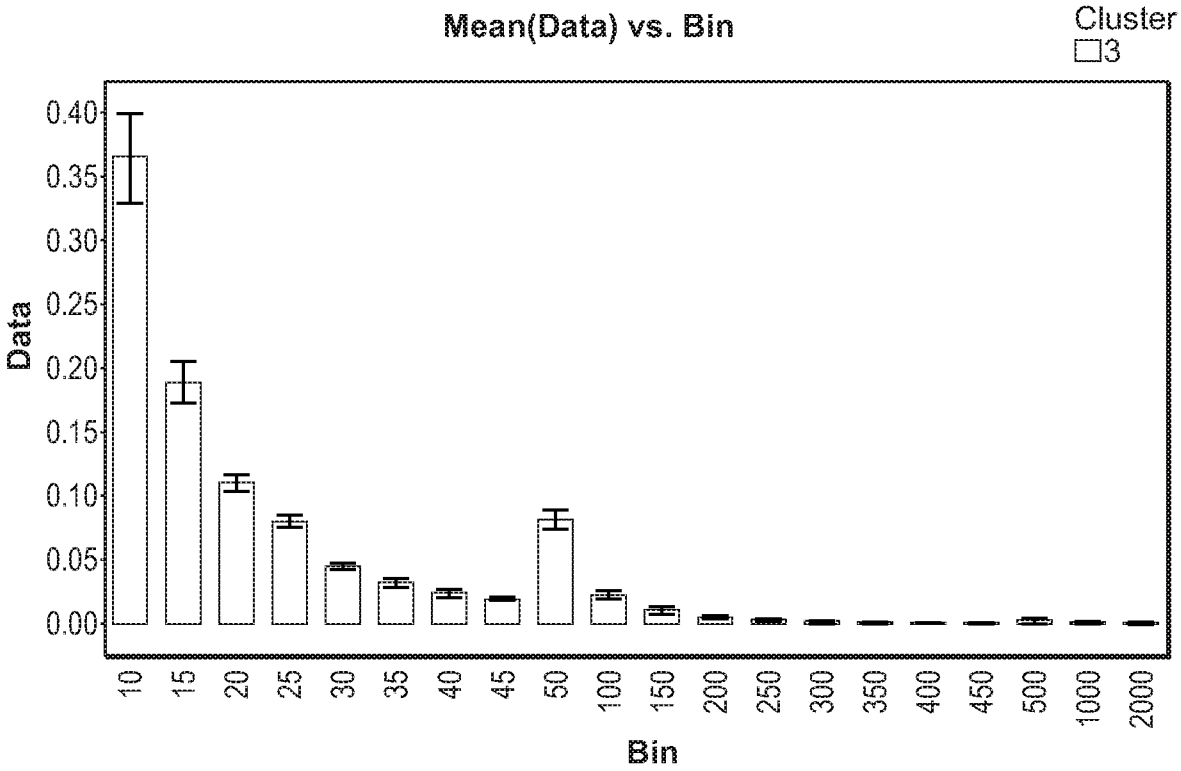

Mean(Data) vs. Bin
Cluster
3
Data
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10
15
20
25
30
35
40
45
50
100
150
200
250
300
350
400
450
500
1000
2000
Bin

FIG. 48

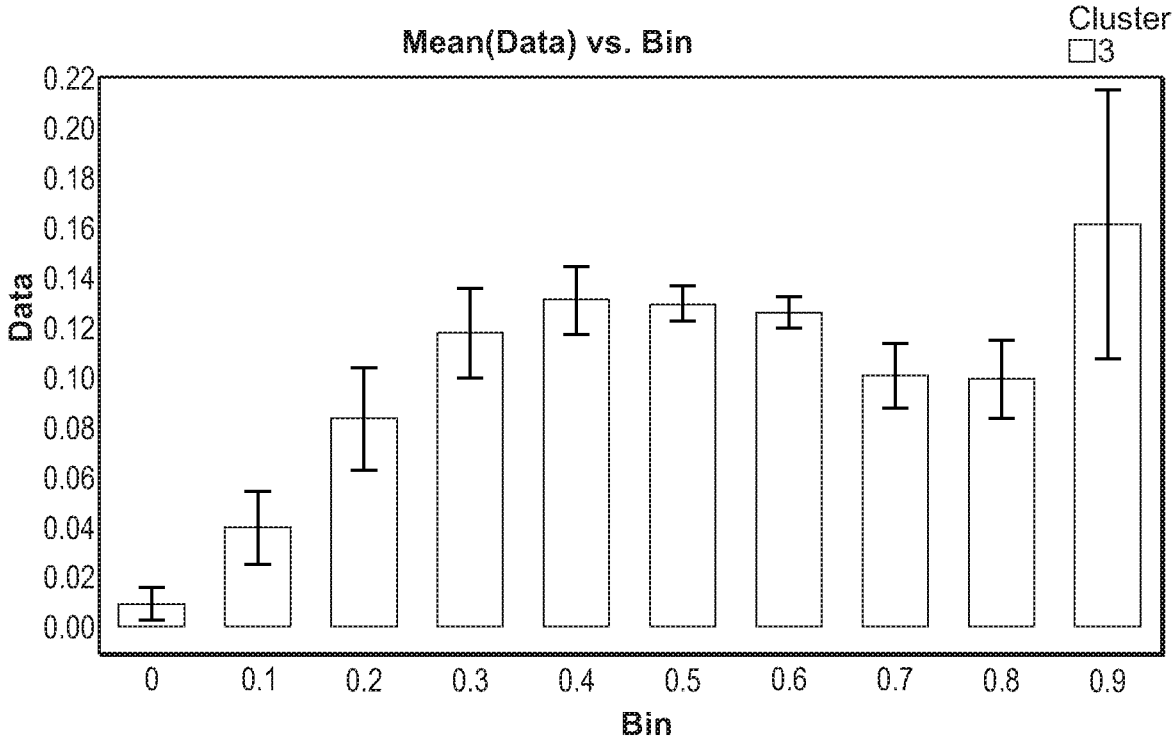

Mean(Data) vs. Bin
Cluster
3
Data
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
Bin

FIG. 49

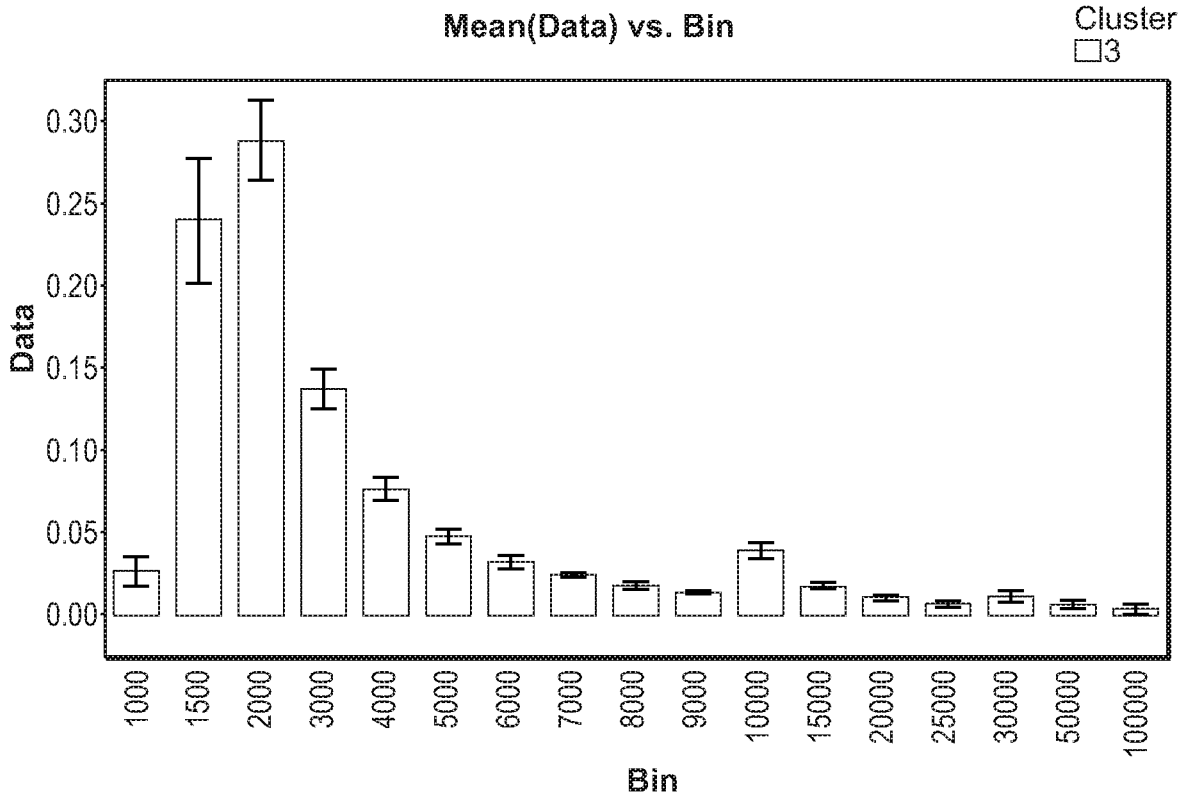

Mean(Data) vs. Bin
Cluster
3
Data
0.30
0.25
0.20
0.15
0.10
0.05
0.00
1000
1500
2000
3000
4000
5000
6000
7000
8000
9000
10000
15000
20000
25000
30000
50000
100000
Bin

FIG. 50

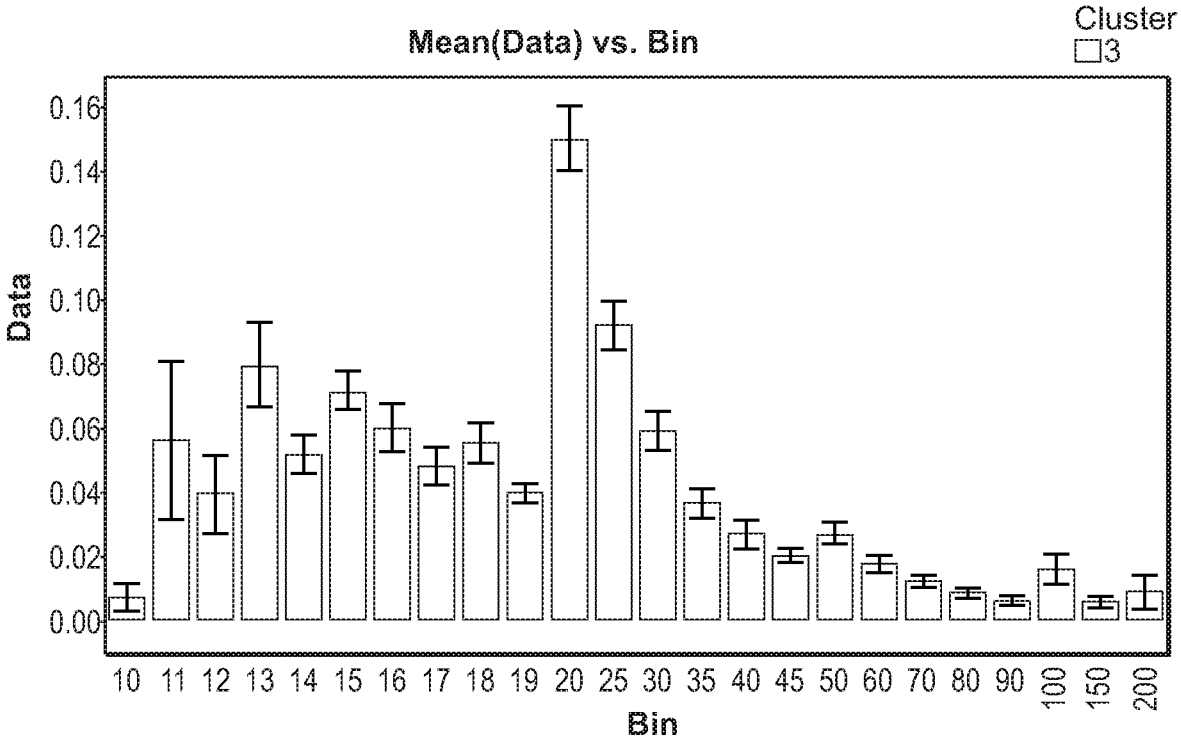

Mean(Data) vs. Bin
Cluster
3
Data
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
10
11
12
13
14
15
16
17
18
19
20
25
30
35
40
45
50
60
70
80
90
100
150
200
Bin

FIG. 51

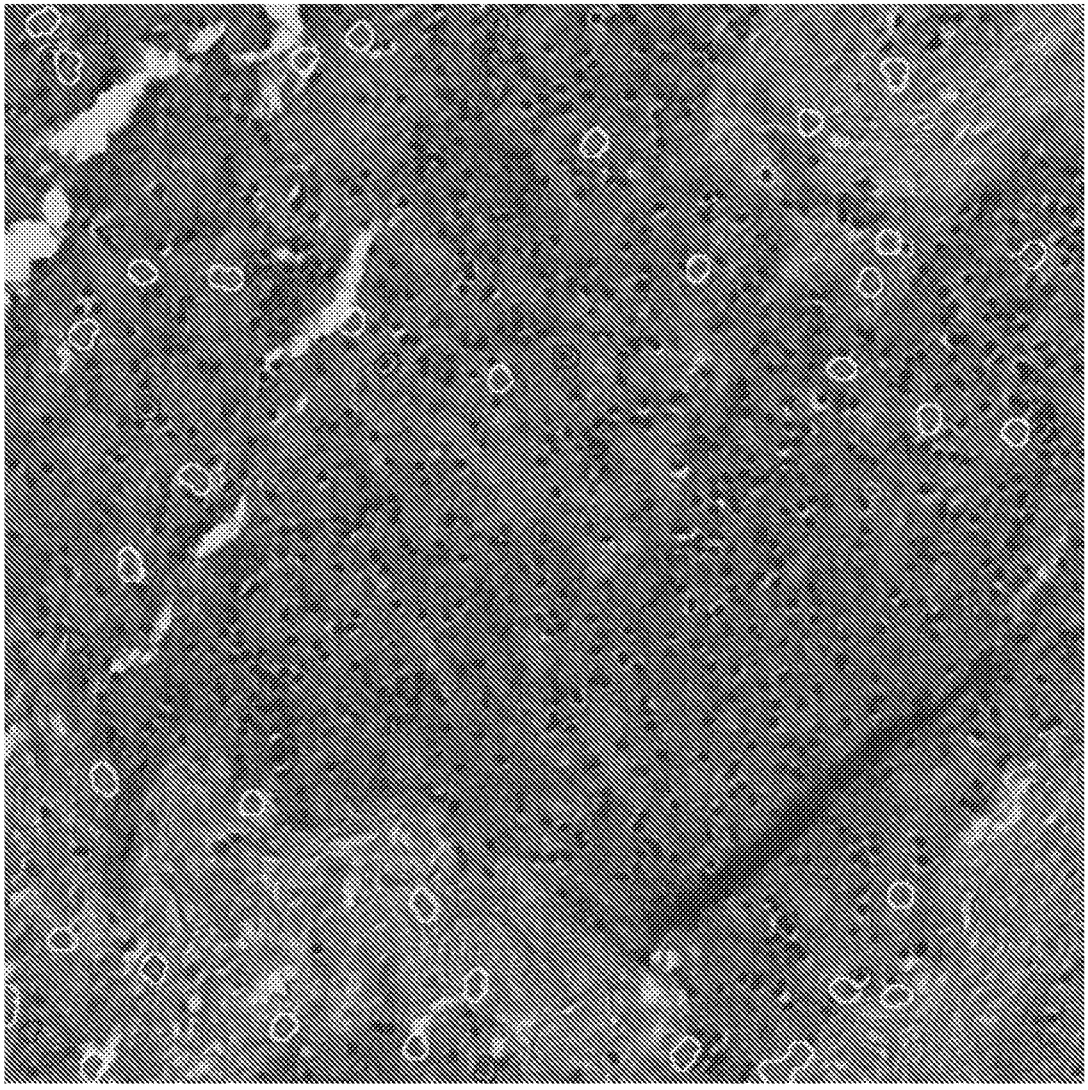


FIG. 52

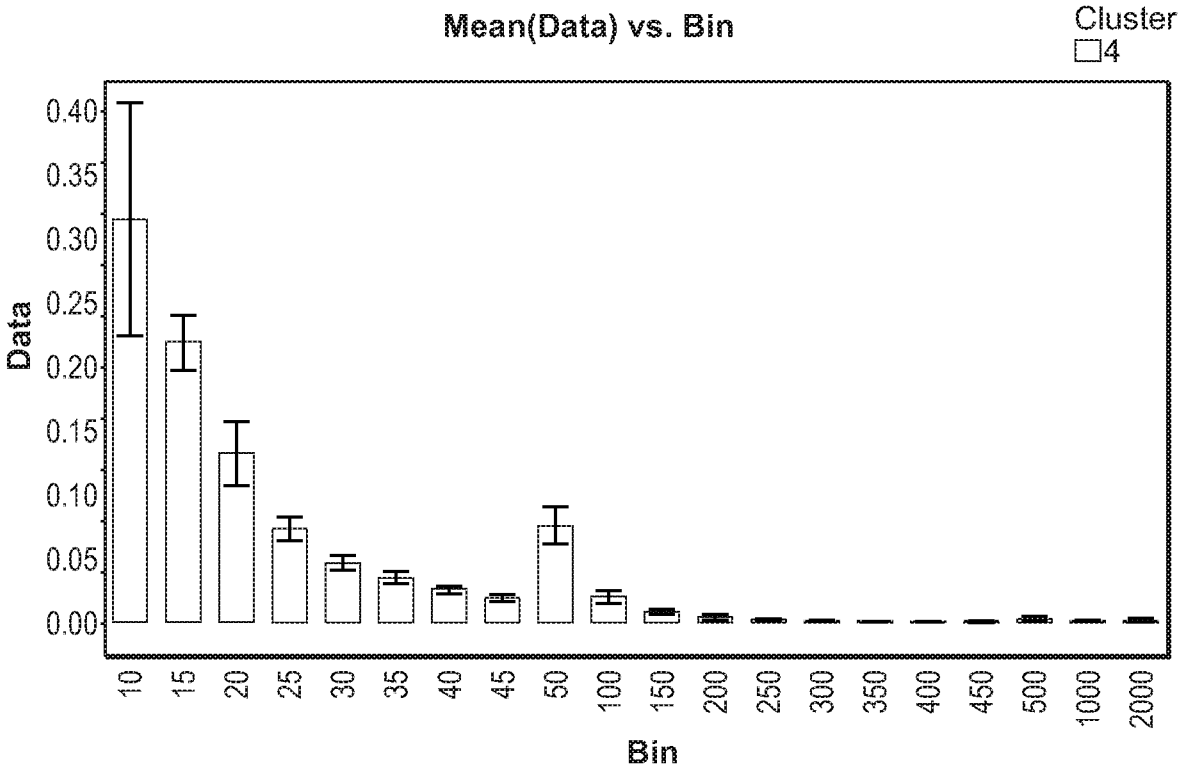

Mean(Data) vs. Bin
Cluster
4
Data
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10
15
20
25
30
35
40
45
50
100
150
200
250
300
350
400
450
500
1000
2000
Bin

FIG. 53

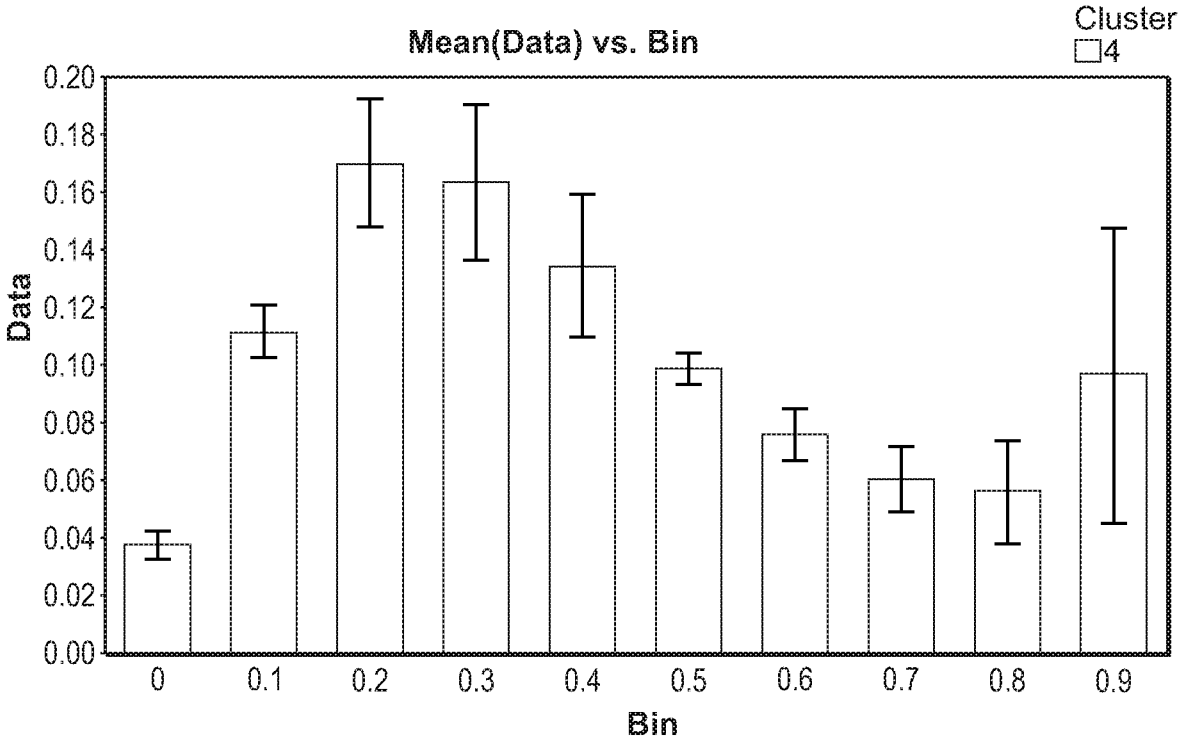

Mean(Data) vs. Bin
Cluster
4
Data
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
Bin

FIG. 54

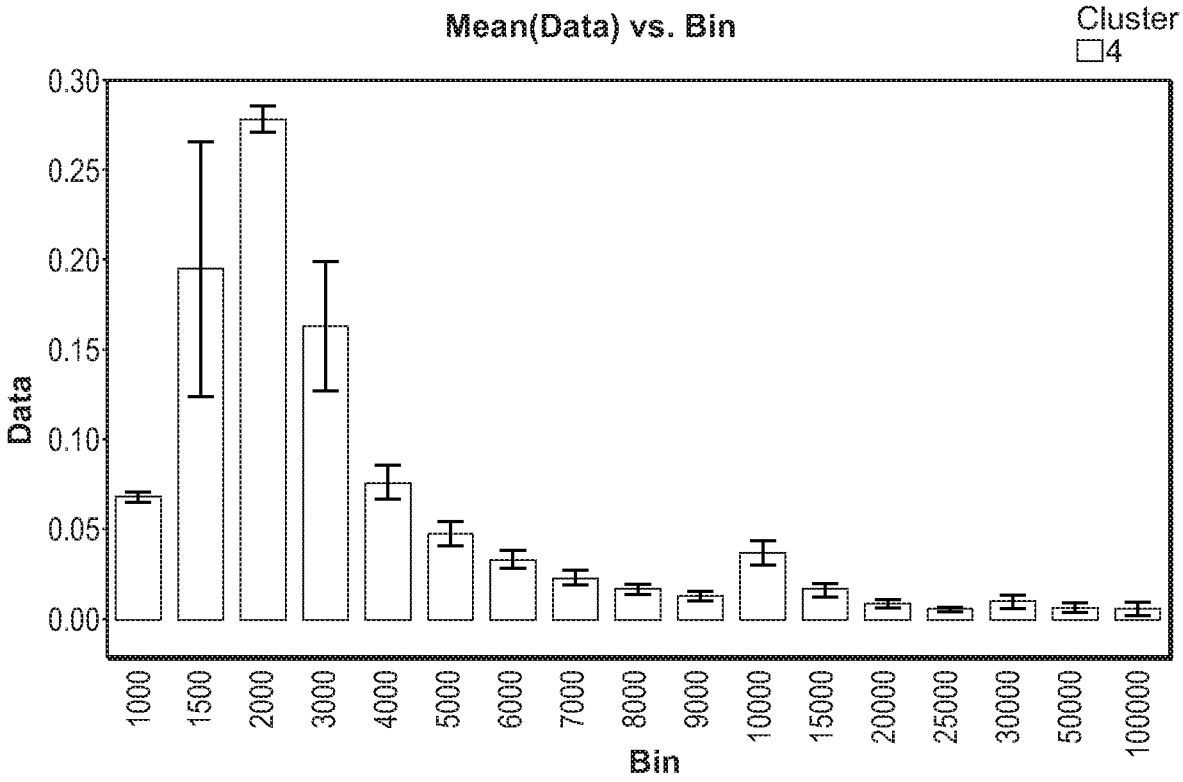

Mean(Data) vs. Bin
Cluster
4
Data
0.30
0.25
0.20
0.15
0.10
0.05
0.00
1000
1500
2000
3000
4000
5000
6000
7000
8000
9000
10000
15000
20000
25000
30000
50000
100000
Bin

FIG. 55

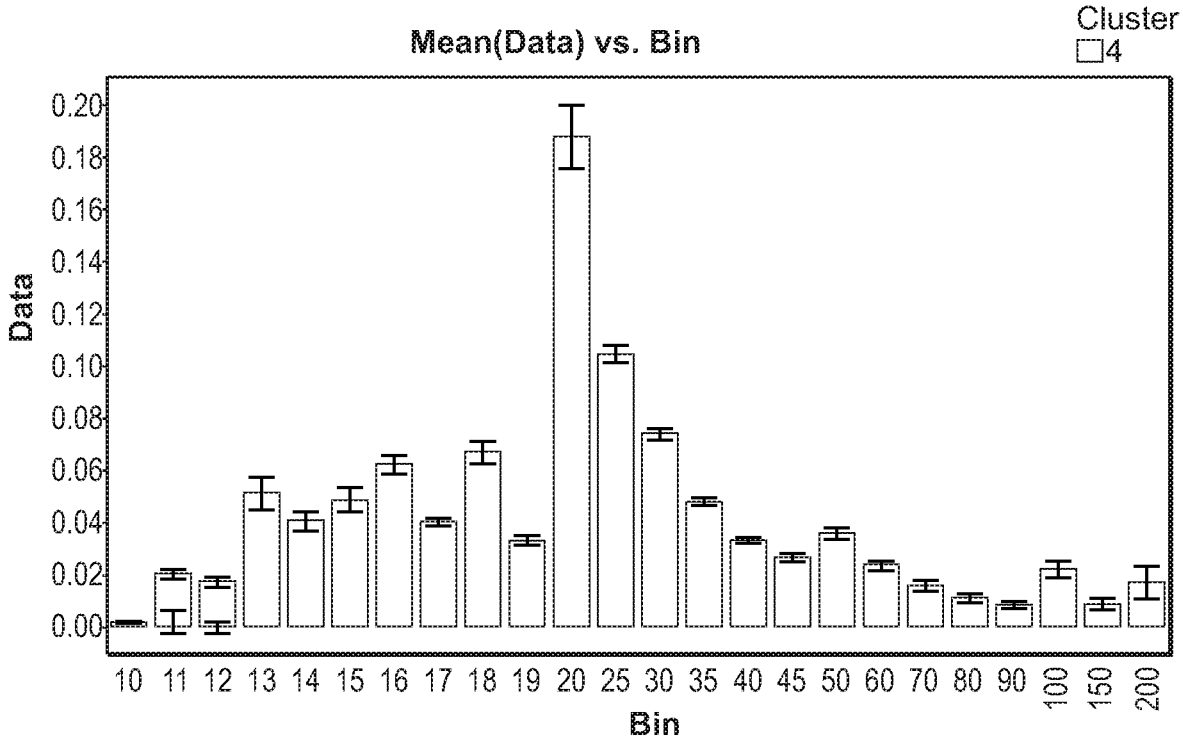

Mean(Data) vs. Bin
Cluster
4
Data
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
10
11
12
13
14
15
16
17
18
19
20
25
30
35
40
45
50
60
70
80
90
100
150
200
Bin

FIG. 56

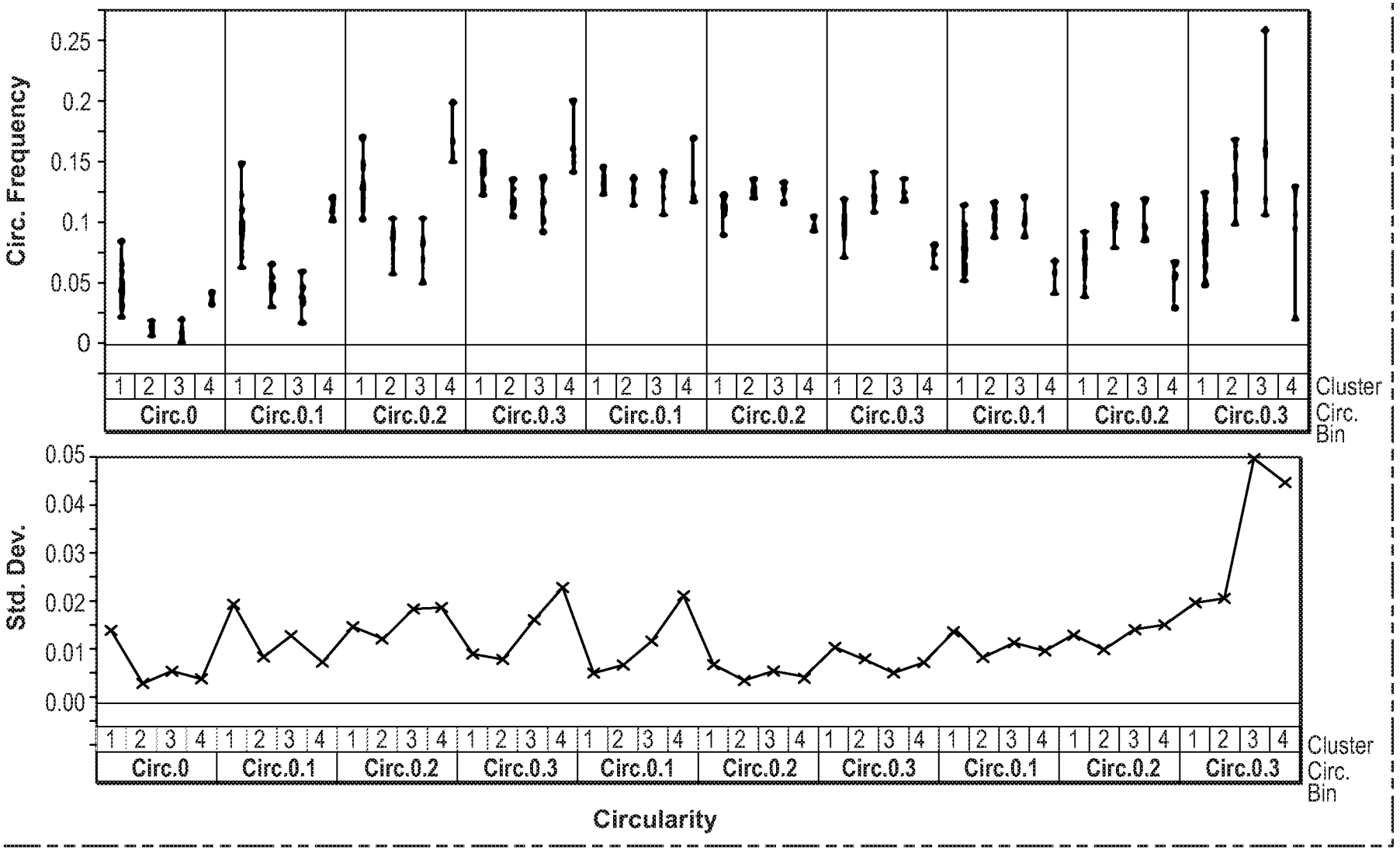

Circ. Frequency
0.25
0.2
0.15
0.1
0.05
0
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
Cluster
Circ.0 Circ.0.1 Circ.0.2 Circ.0.3 Circ.0.1 Circ.0.2 Circ.0.3 Circ.0.1 Circ.0.2 Circ.0.3
Circ. Bin
Std. Dev.
0.05
0.04
0.03
0.02
0.01
0.00
Circularity

FIG. 57

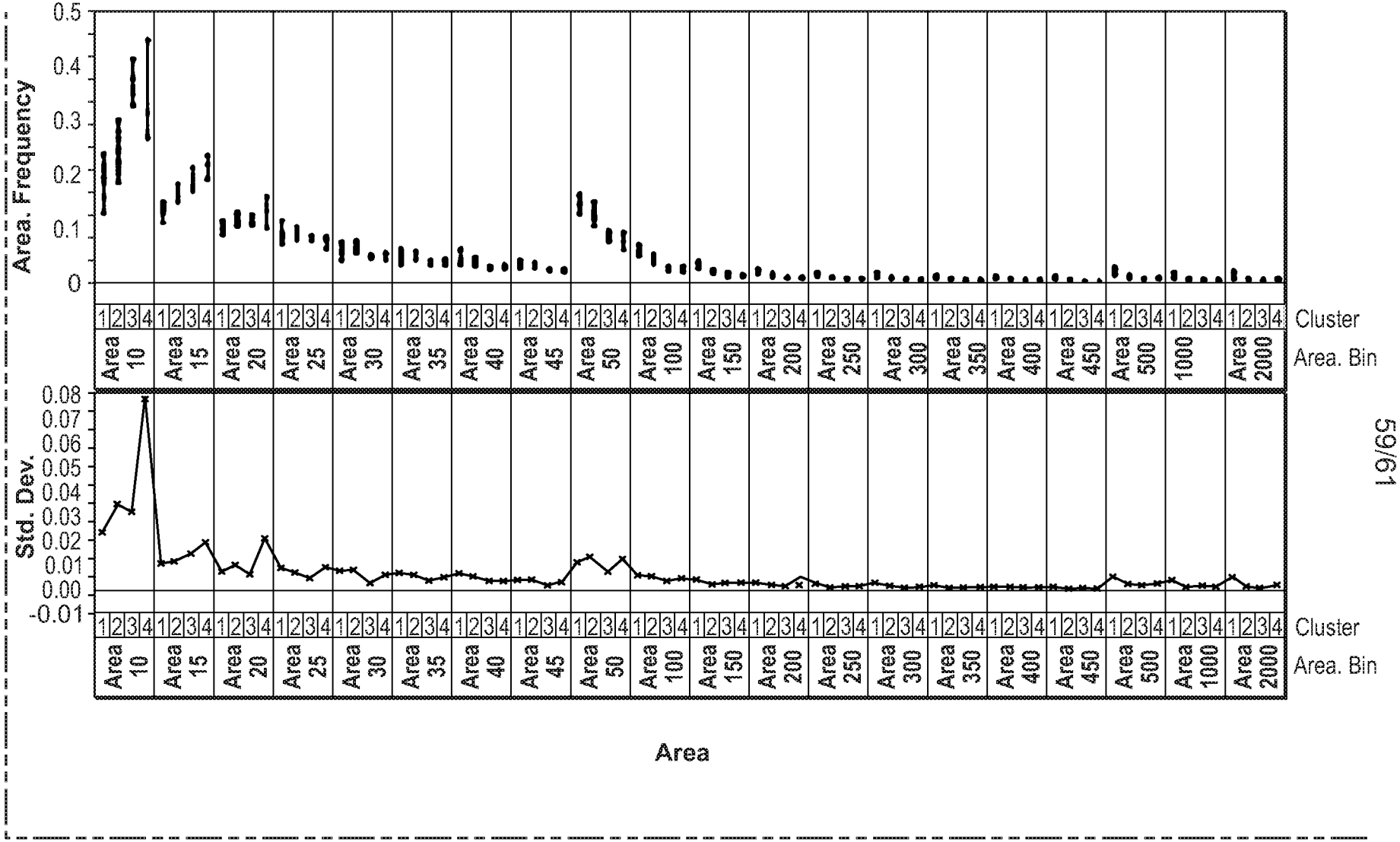

Area. Frequency
0.5
0.4
0.3
0.2
0.1
0
Std. Dev.
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
1 2 3 4
Cluster
Area. Bin
Area 10
Area 15
Area 20
Area 25
Area 30
Area 35
Area 40
Area 45
Area 50
Area 100
Area 150
Area 200
Area 250
Area 300
Area 350
Area 400
Area 450
Area 500
1000
Area 2000
Area

FIG. 57 (cont.)

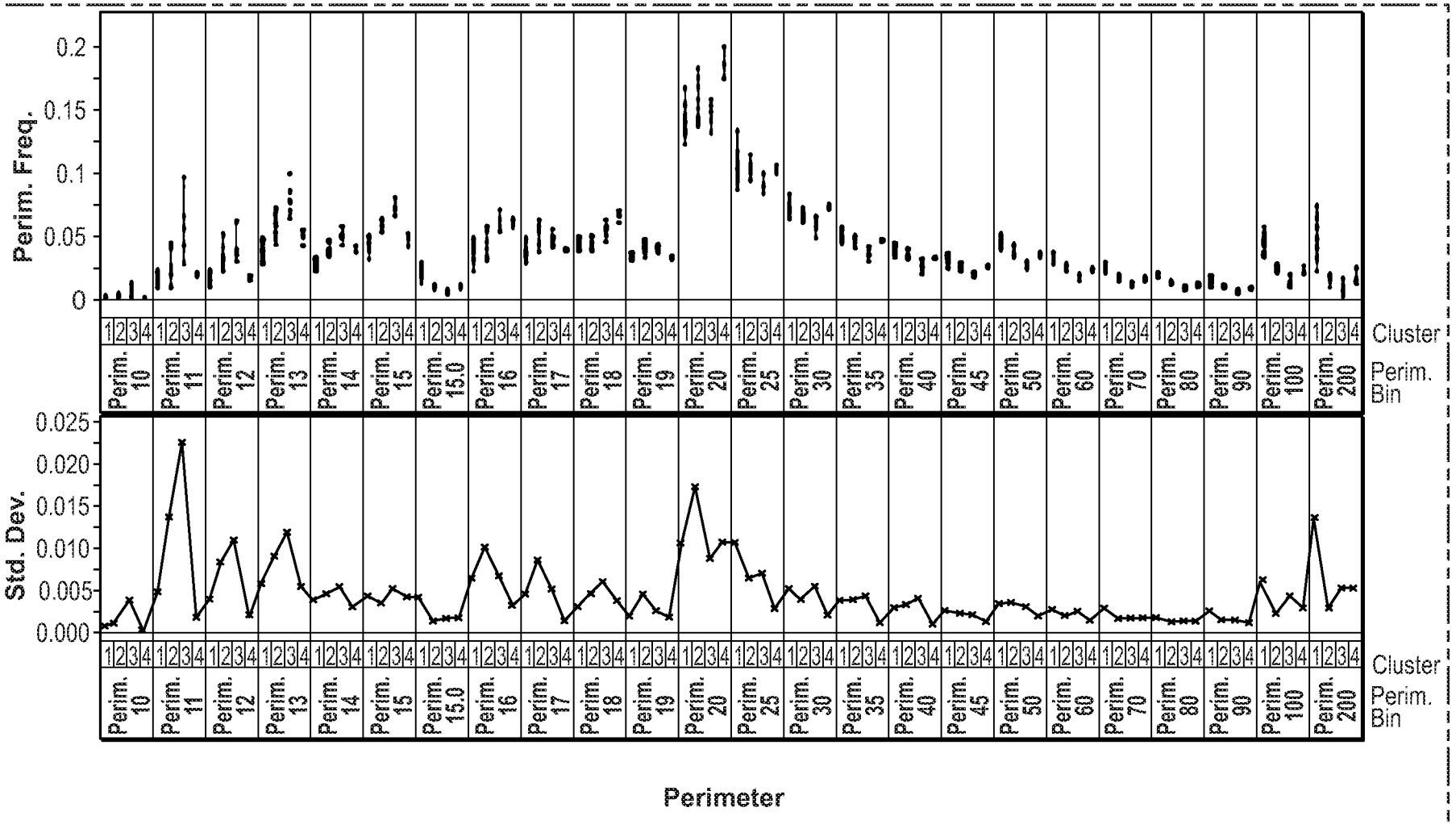

Perim. Freq.
0.2
0.15
0.1
0.05
0
Std. Dev.
0.025
0.020
0.015
0.010
0.005
0.000
1 2 3 4
Cluster
Perim. Bin
Perim. 10
Perim. 11
Perim. 12
Perim. 13
Perim. 14
Perim. 15
Perim. 15.0
Perim. 16
Perim. 17
Perim. 18
Perim. 19
Perim. 20
Perim. 25
Perim. 30
Perim. 35
Perim. 40
Perim. 45
Perim. 50
Perim. 60
Perim. 70
Perim. 80
Perim. 90
Perim. 100
Perim. 200
Perimeter

FIG. 57 (cont.)

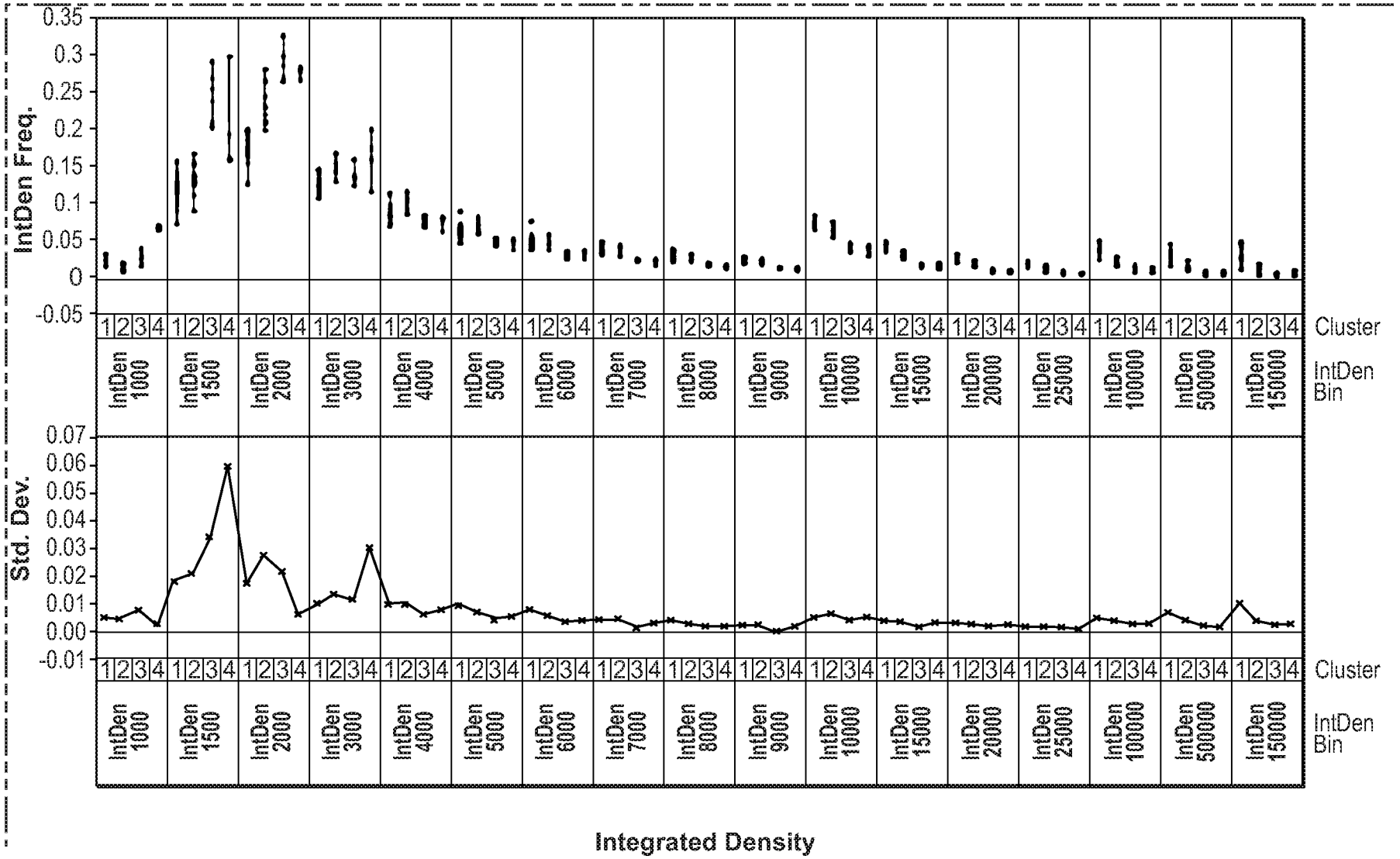

IntDen Freq.
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
-0.05
1 2 3 4
Cluster
IntDen 1000
IntDen 1500
IntDen 2000
IntDen 3000
IntDen 4000
IntDen 5000
IntDen 6000
IntDen 7000
IntDen 8000
IntDen 9000
IntDen 10000
IntDen 15000
IntDen 20000
IntDen 25000
IntDen 100000
IntDen 500000
IntDen 150000
IntDen Bin
Std. Dev.
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
Integrated Density

FIG. 57 (cont.)