

1/49

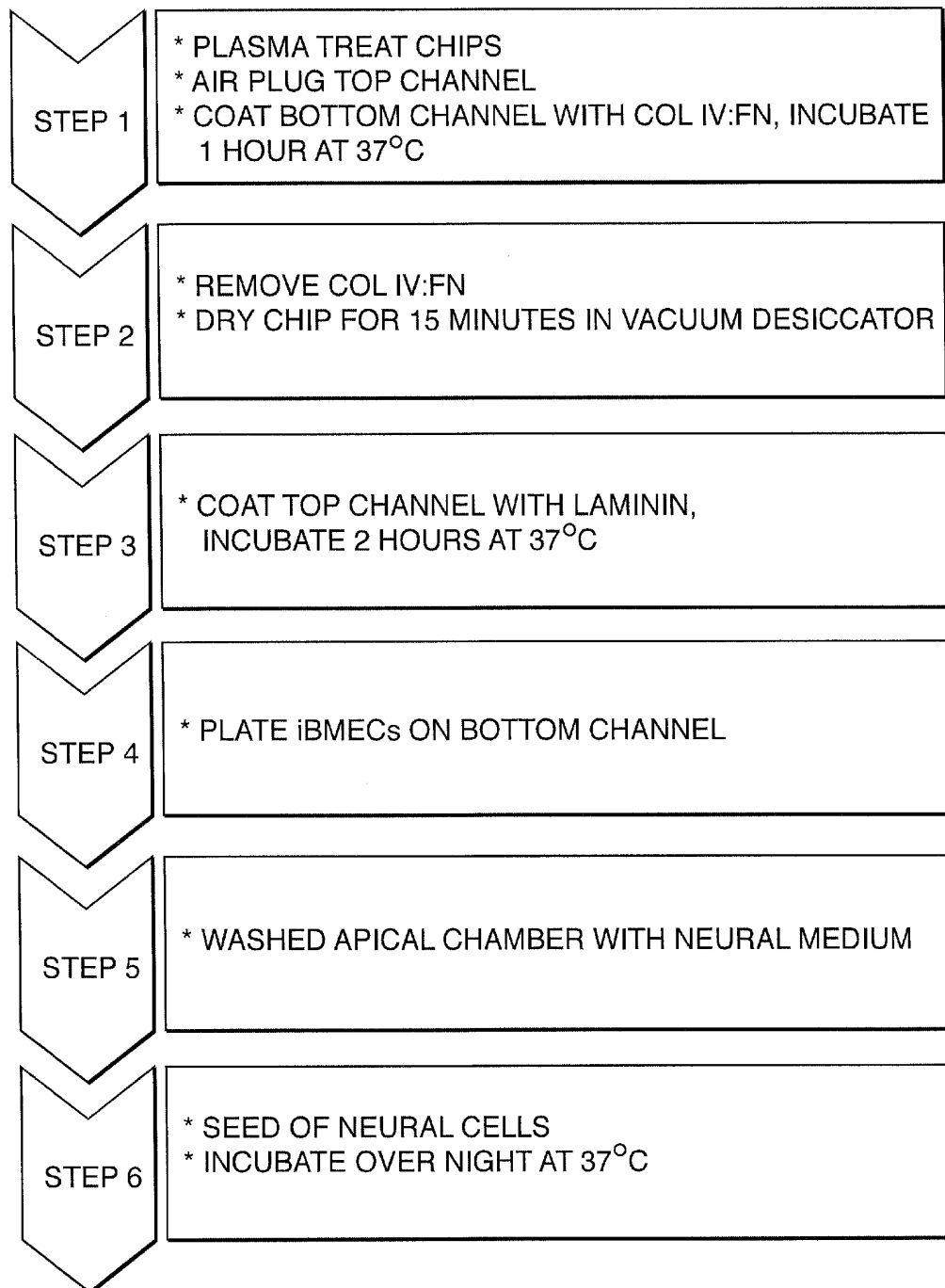


FIG. 1

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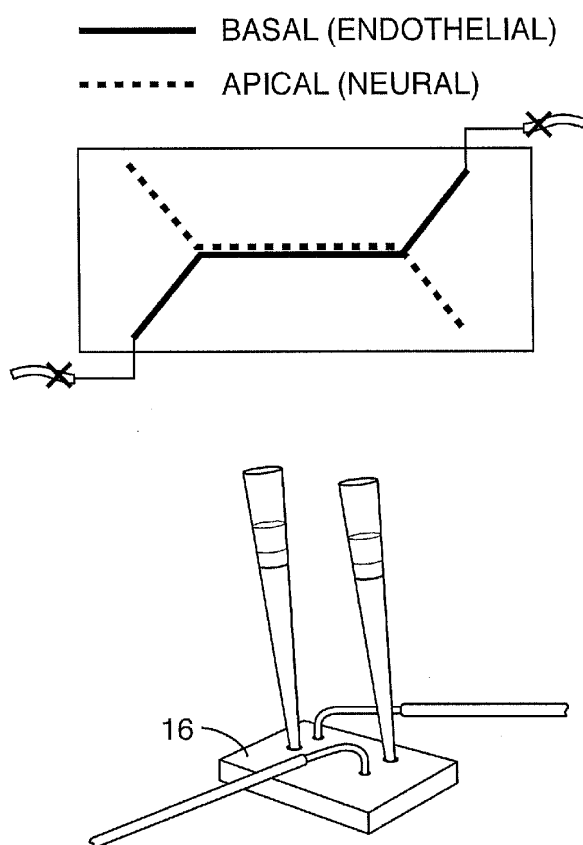


FIG. 2

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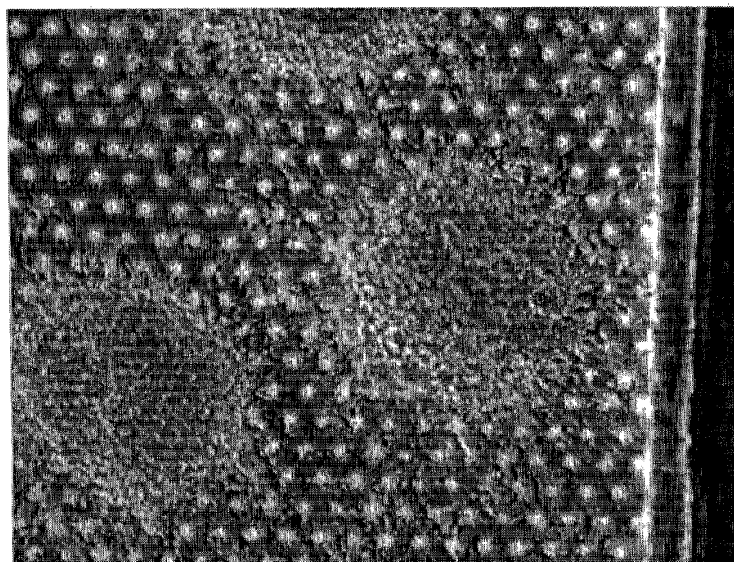


FIG. 3A



FIG. 3B

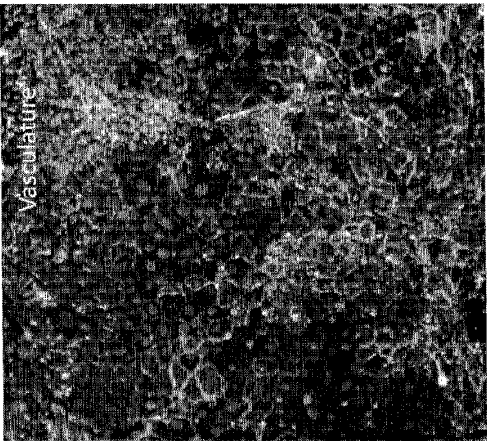


FIG. 4B

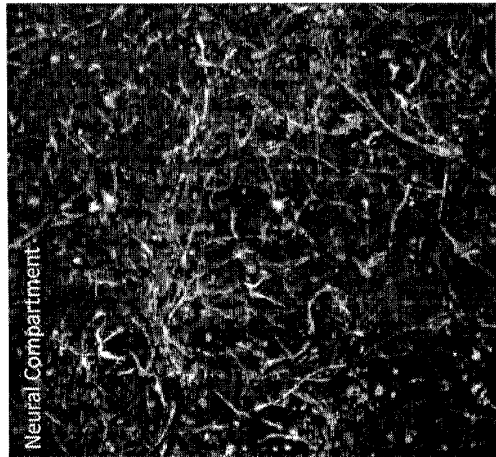


FIG. 4A

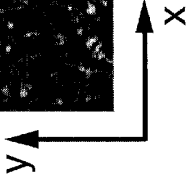
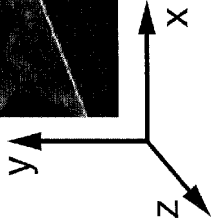


FIG. 4C



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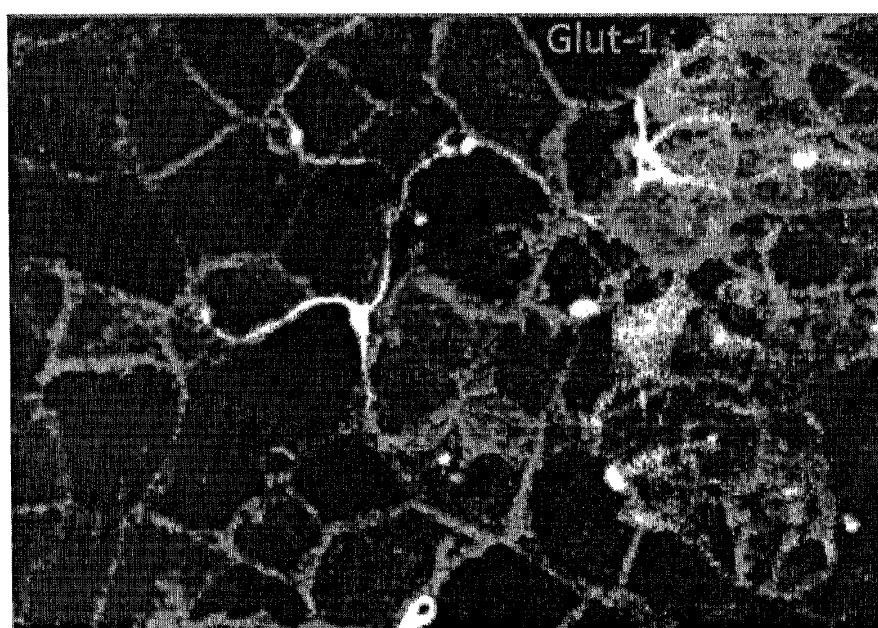


FIG. 5

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FIG. 6A

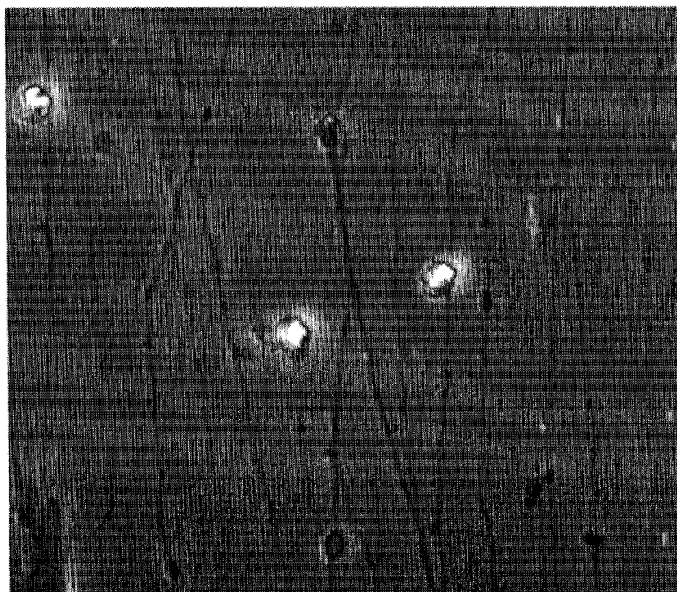


FIG. 6B

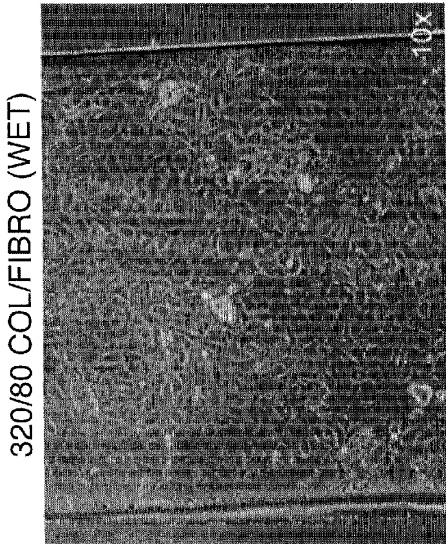


FIG. 7B

LAMININ (20X)

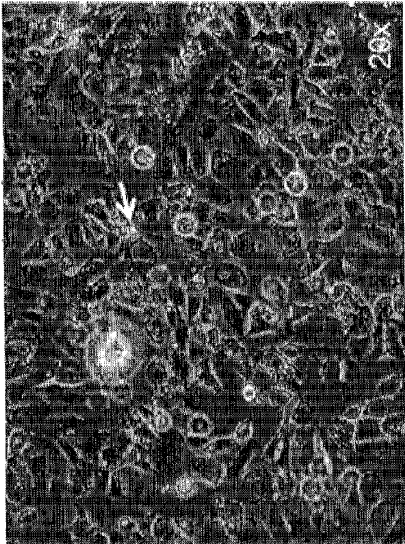


FIG. 7D

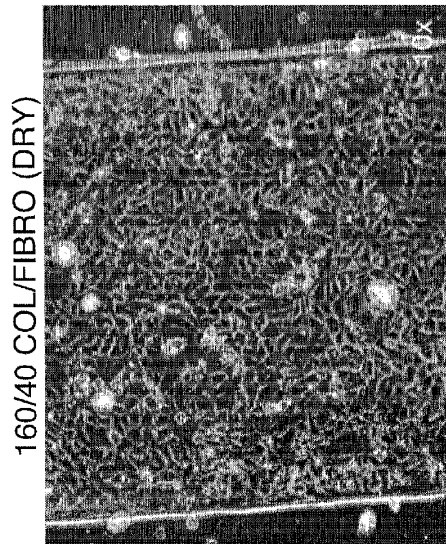


FIG. 7A

LAMININ (10X)

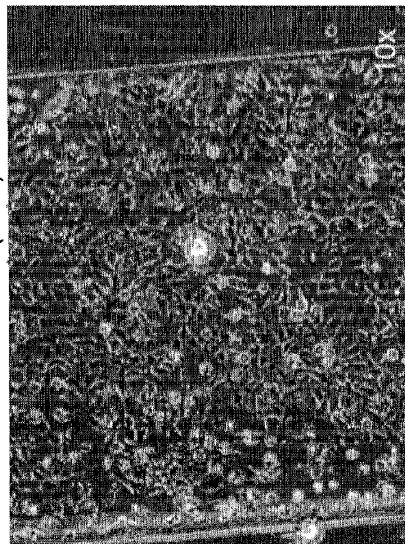


FIG. 7C

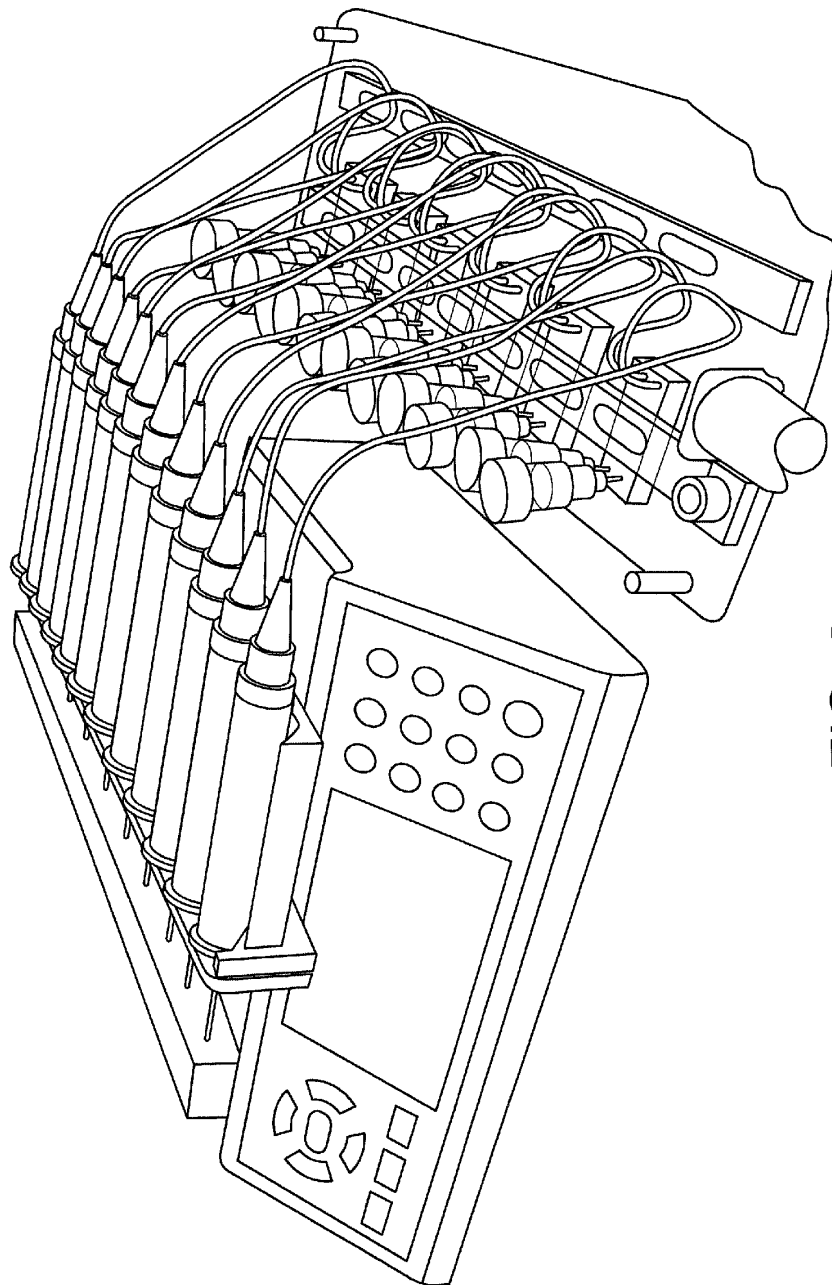


FIG. 8

663 LAM:LAM iMPs (APICAL)

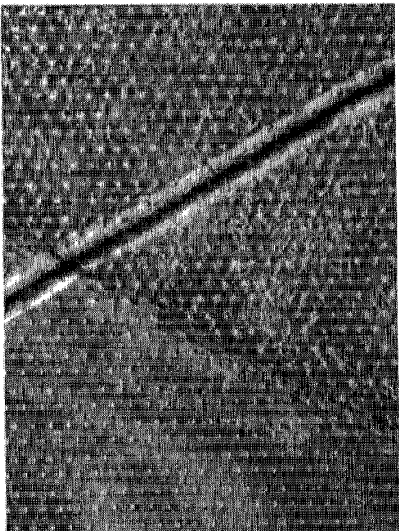


FIG. 9B

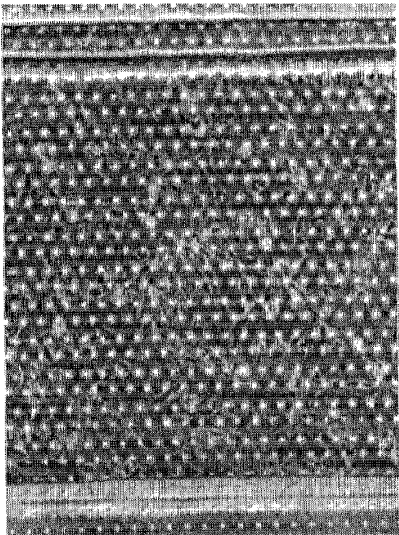


FIG. 9D

664 LAM:WET COL:FIB BMEC + iMPs

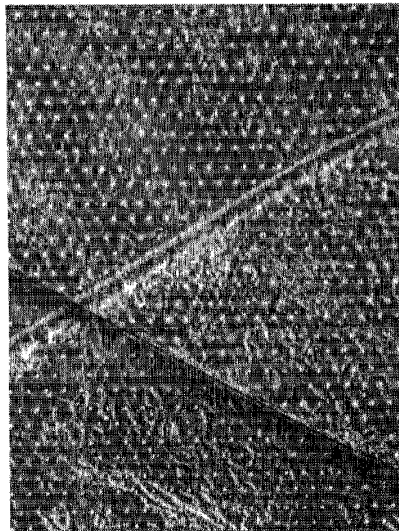


FIG. 9A

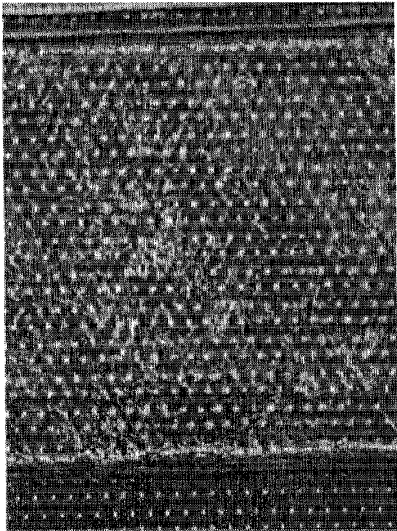


FIG. 9C

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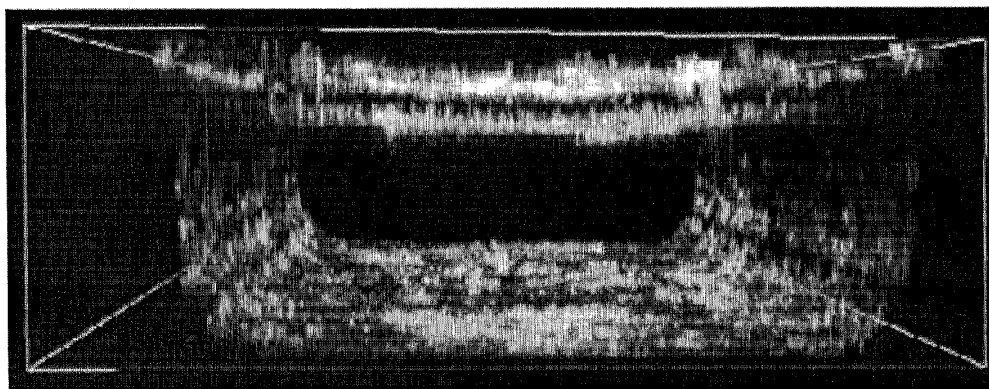


FIG. 10

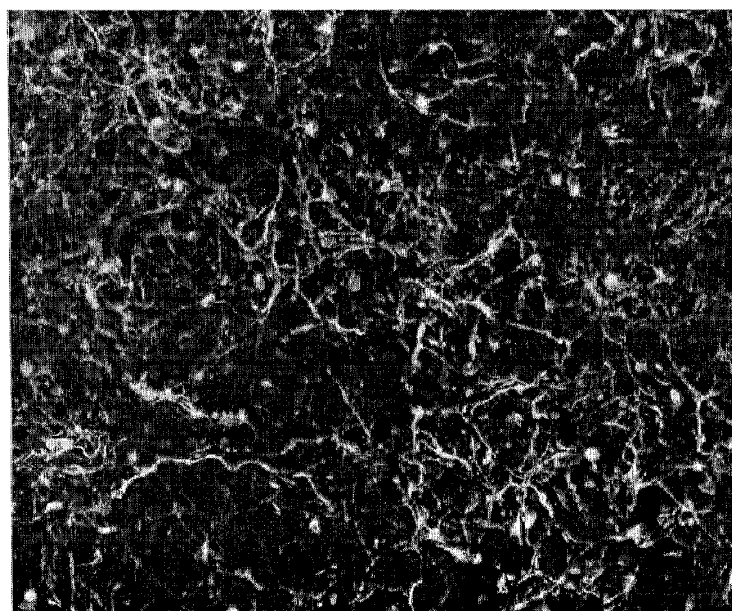


FIG. 11

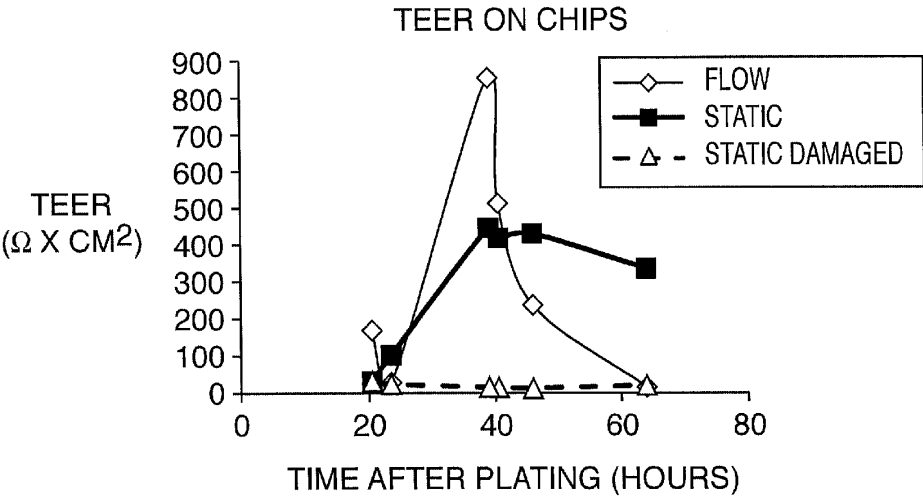


FIG. 12A

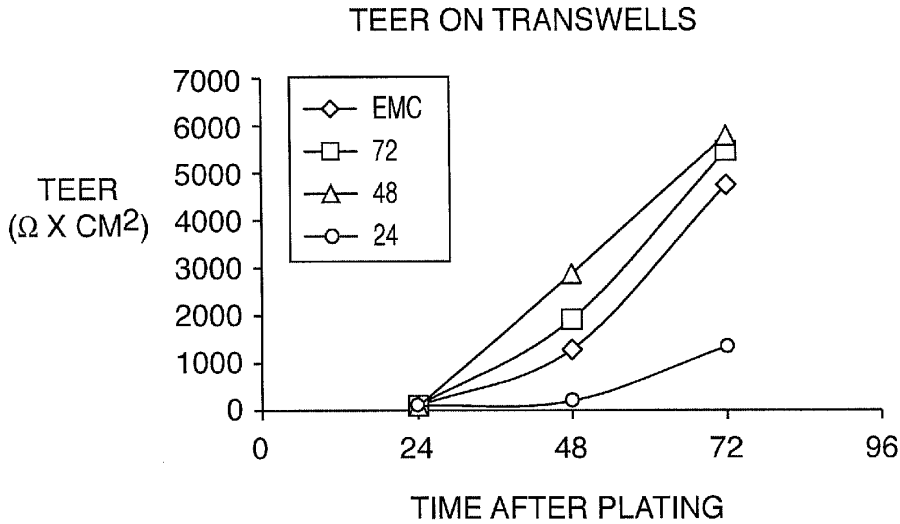


FIG. 12B

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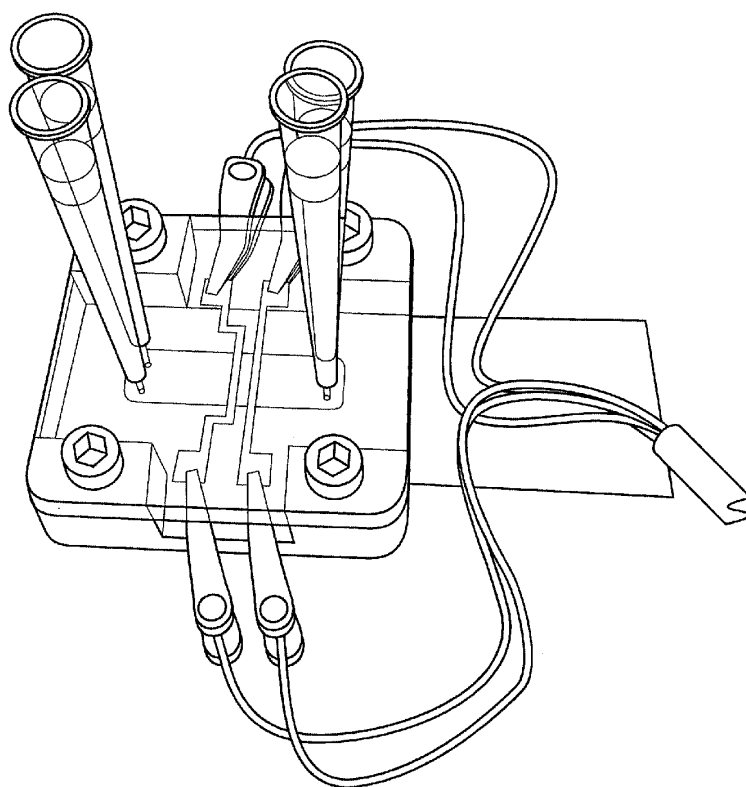


FIG. 13A

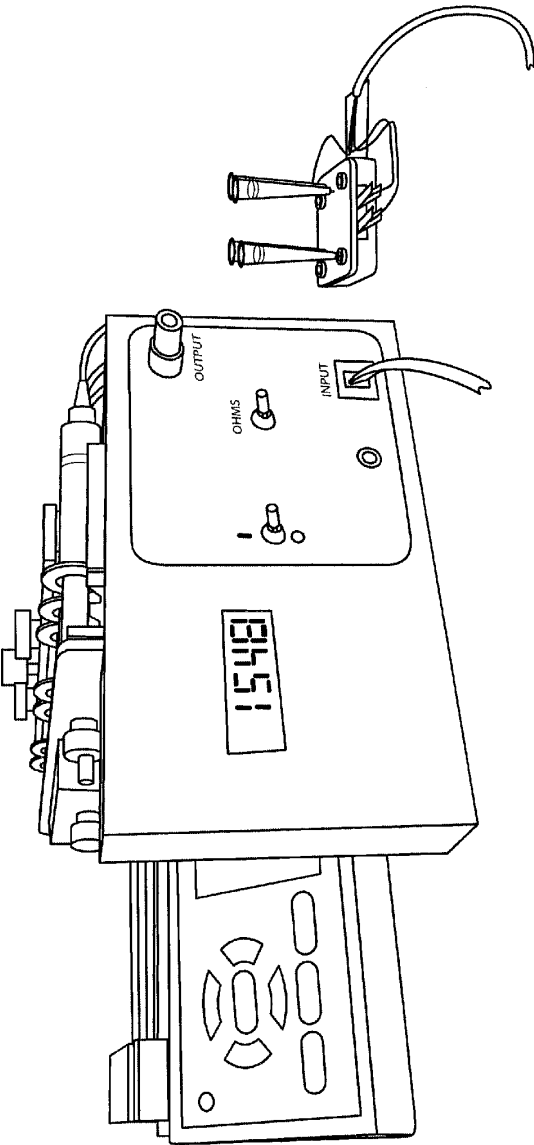


FIG. 13B

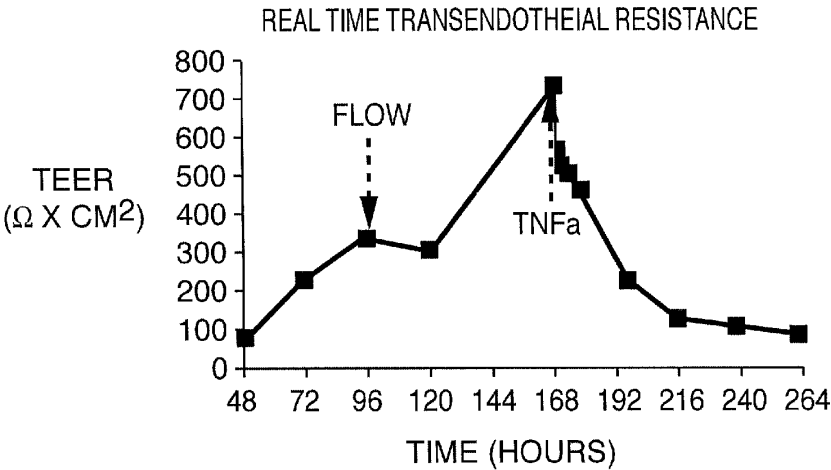


FIG. 14A

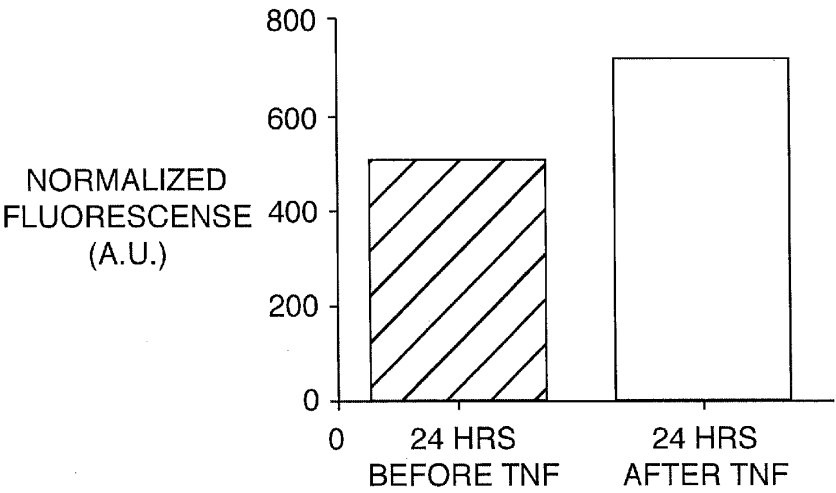
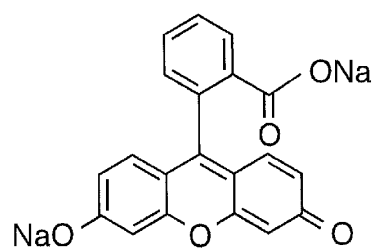


FIG. 14B

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FLUORESCCEIN SODIUM

Mw: 376.27 g/mol

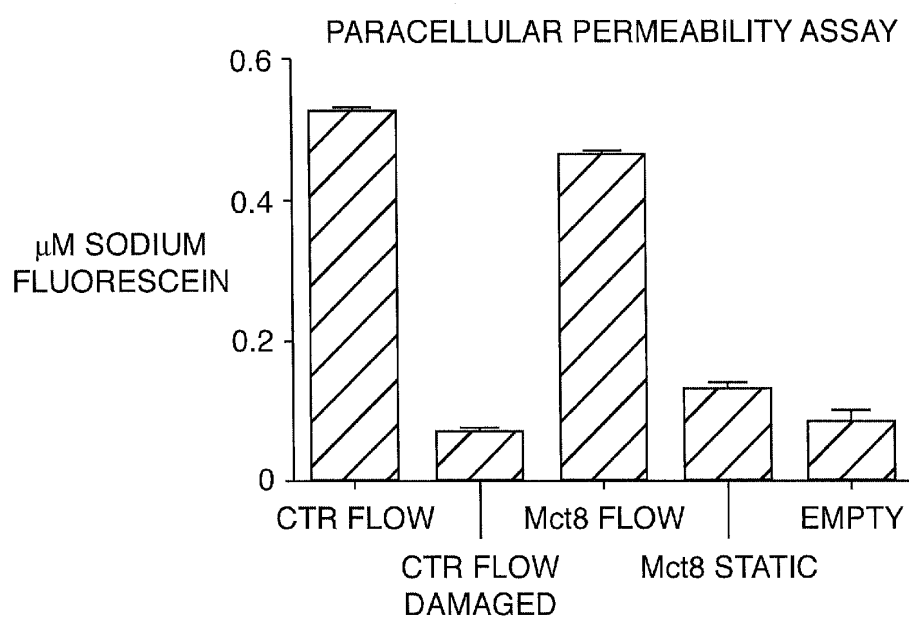


FIG. 15

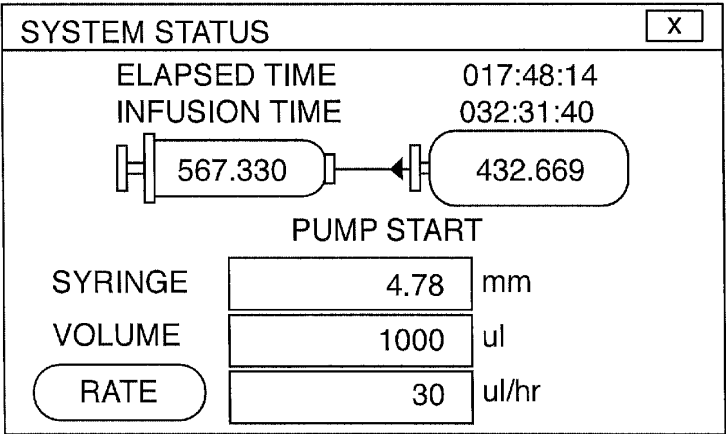


FIG. 16A

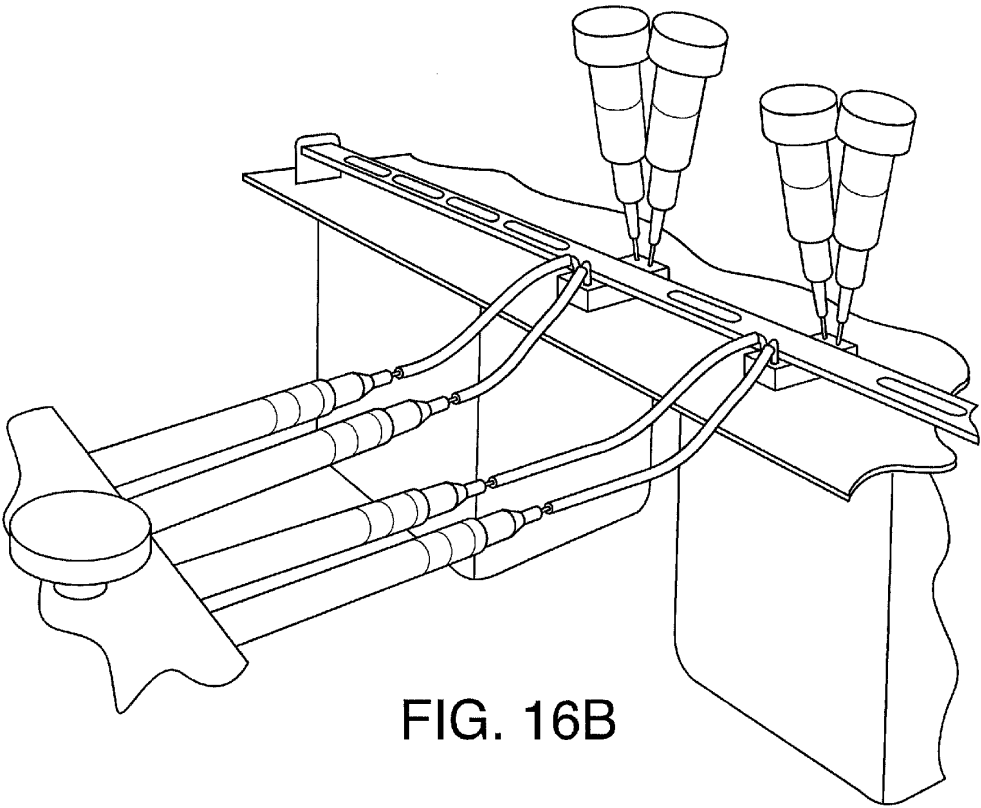


FIG. 16B

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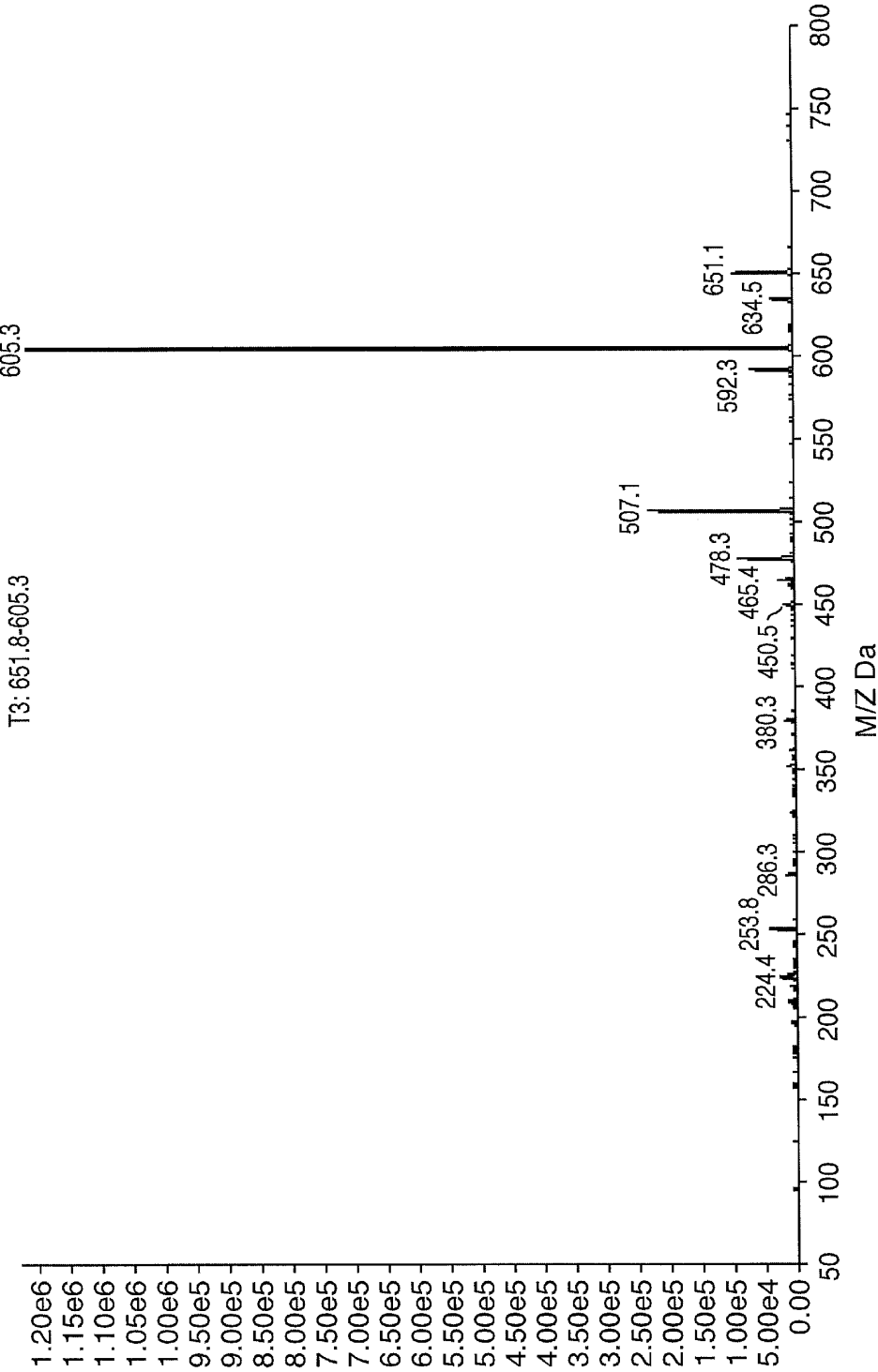
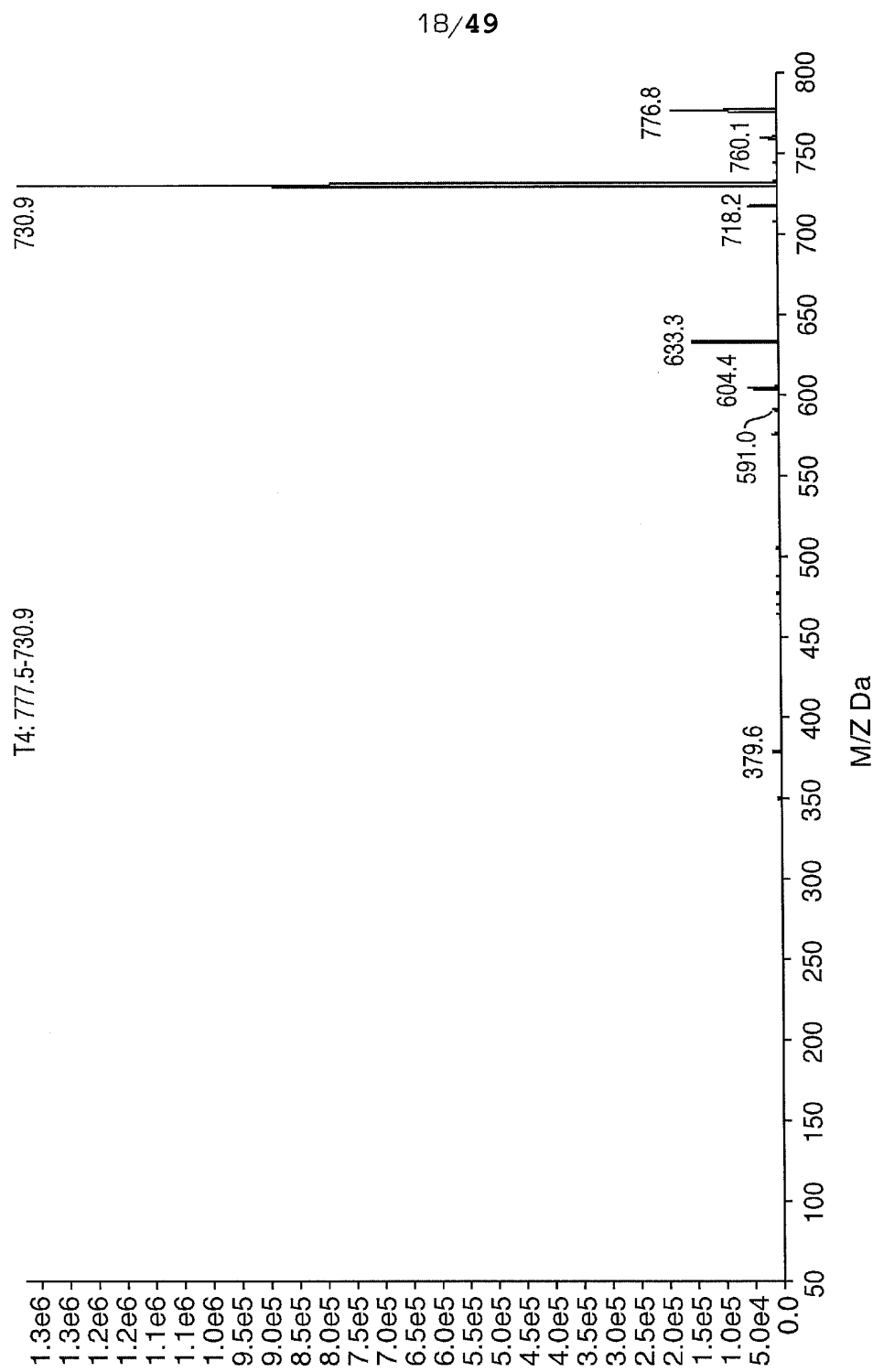


FIG. 17A



M/Z Da
FIG. 17B

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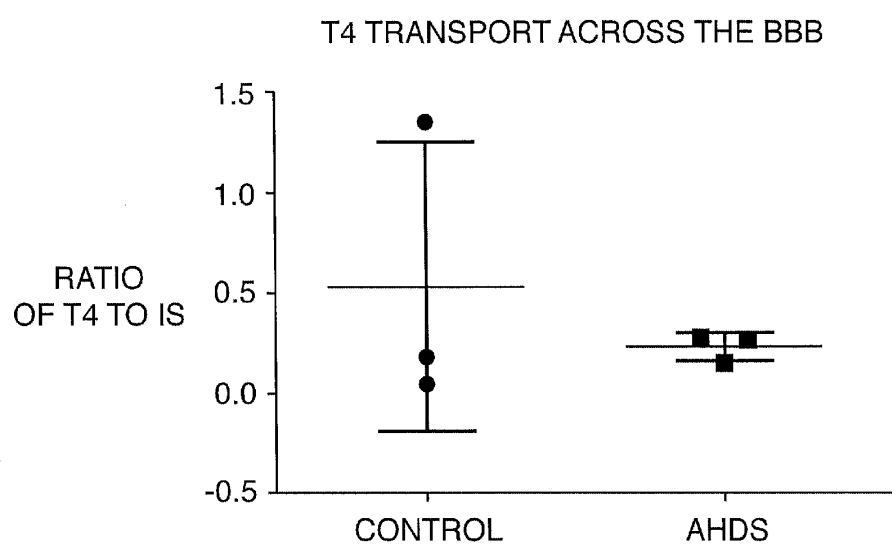


FIG. 17C

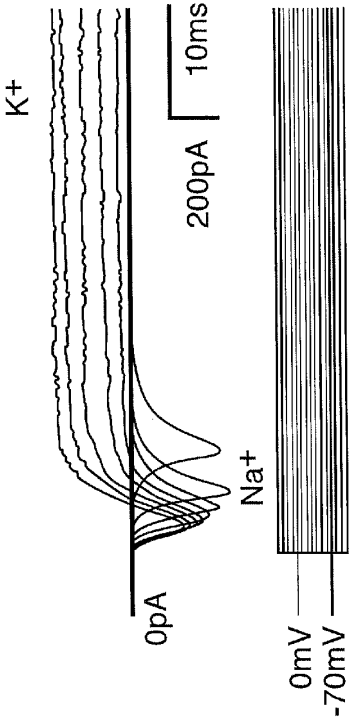


FIG. 18B

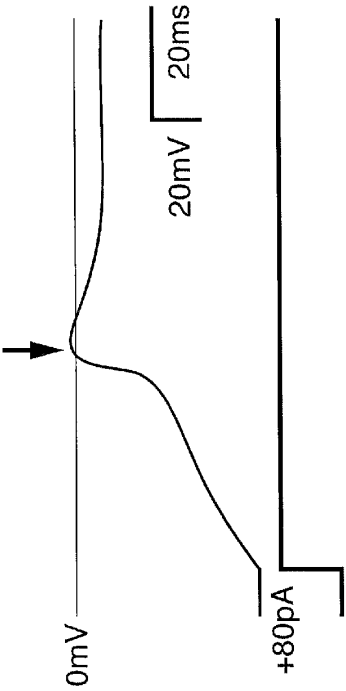


FIG. 18A

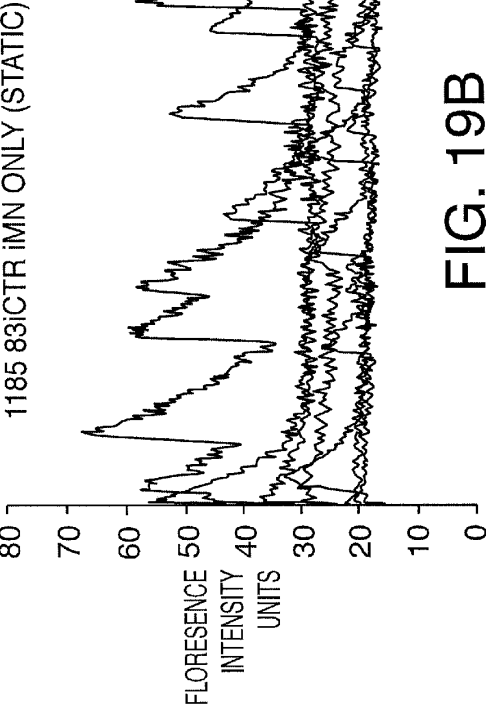
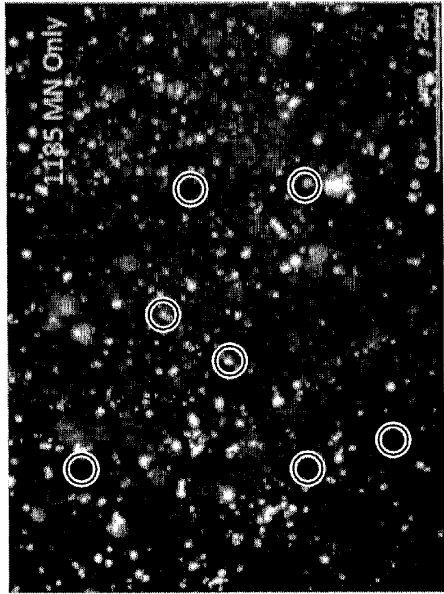


FIG. 19B

FIG. 19A

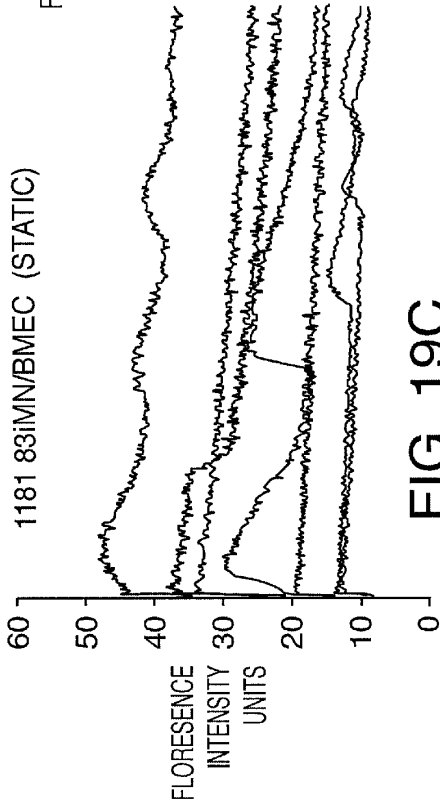


FIG. 19C

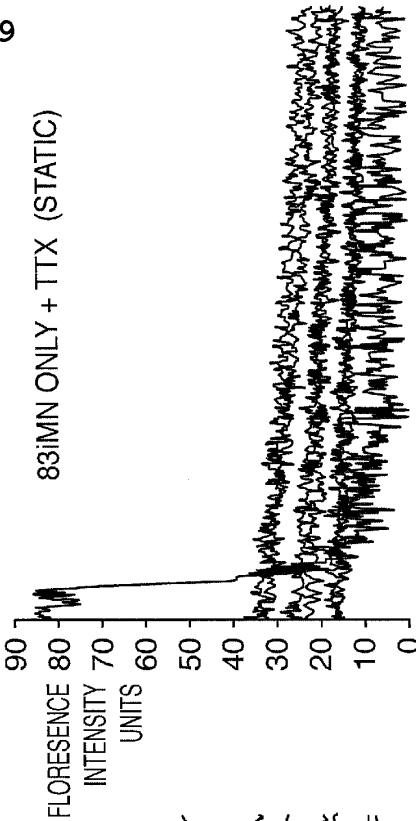


FIG. 19D

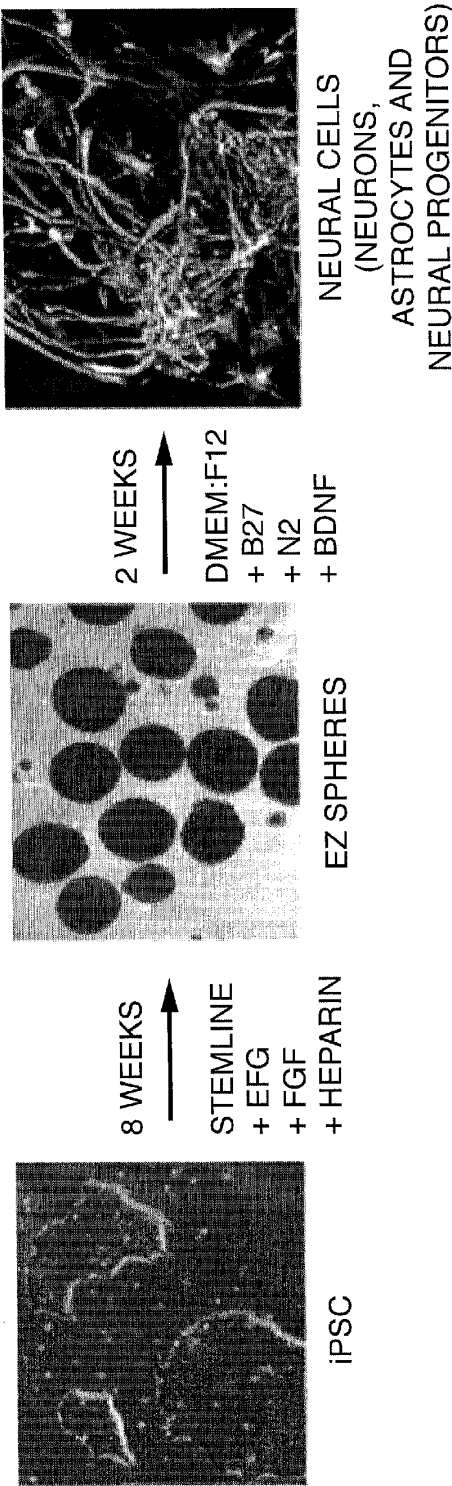


FIG. 20

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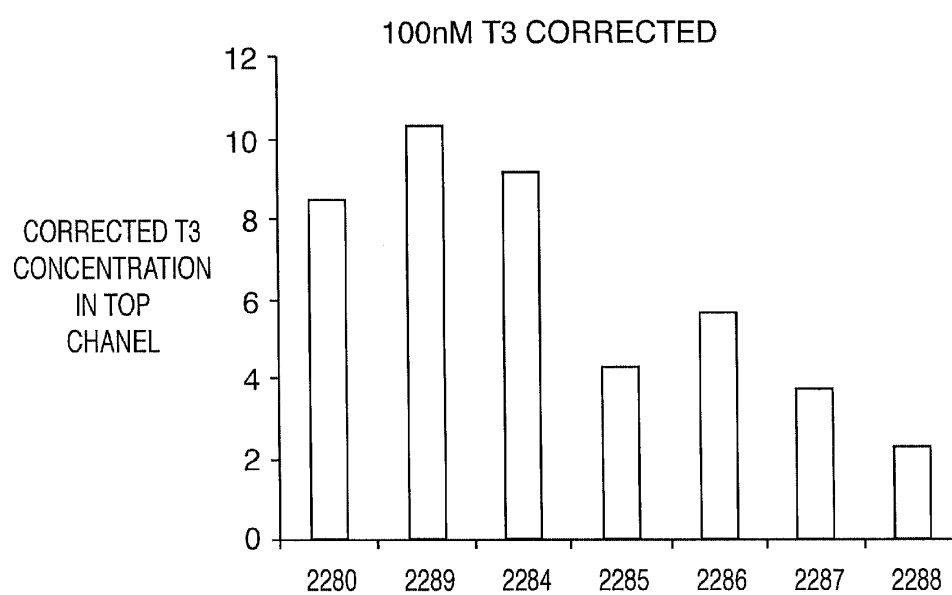


FIG. 21

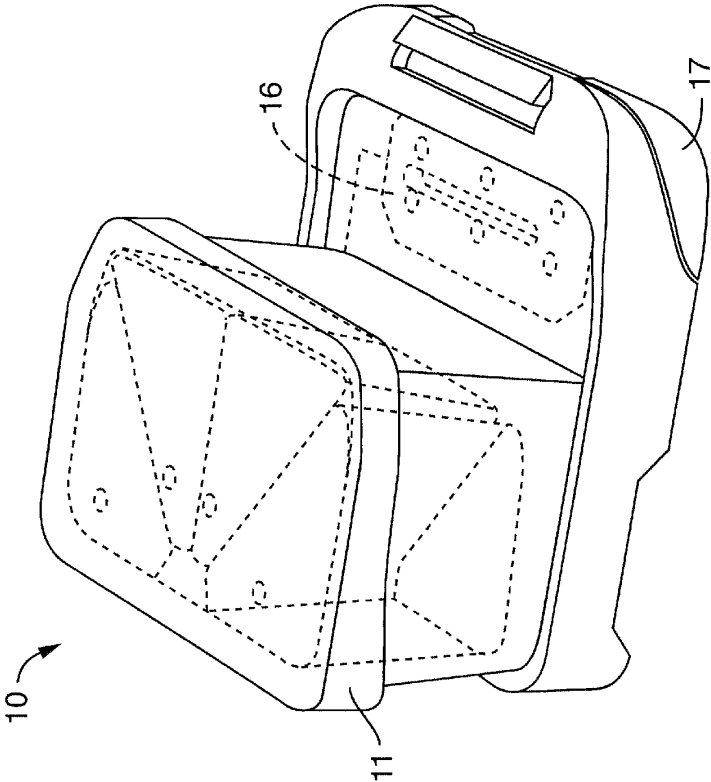


FIG. 22B

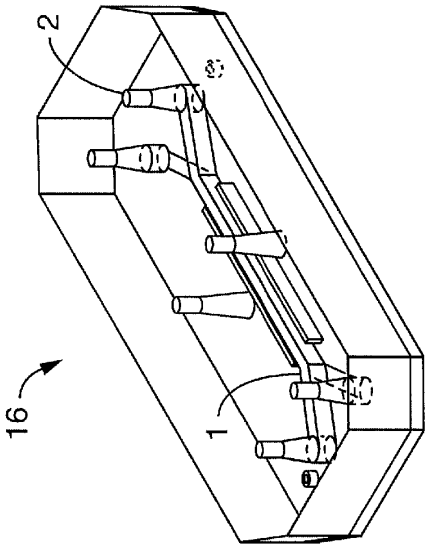


FIG. 22A

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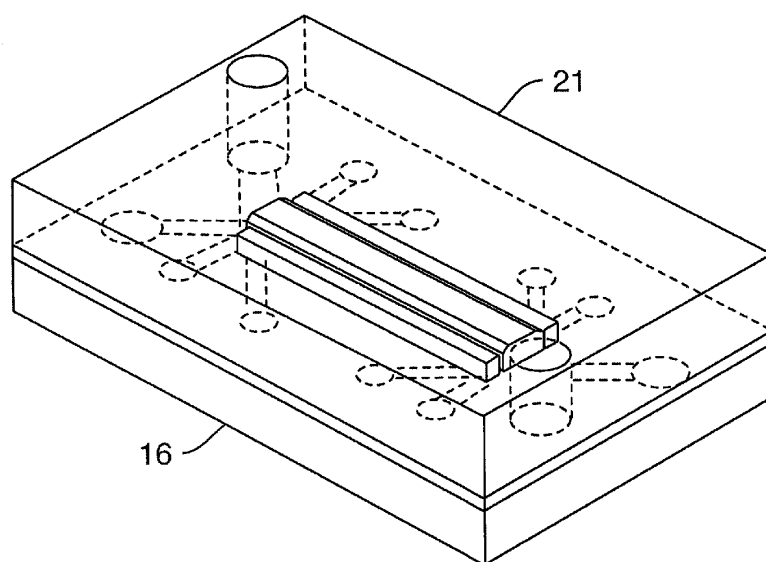


FIG. 23A

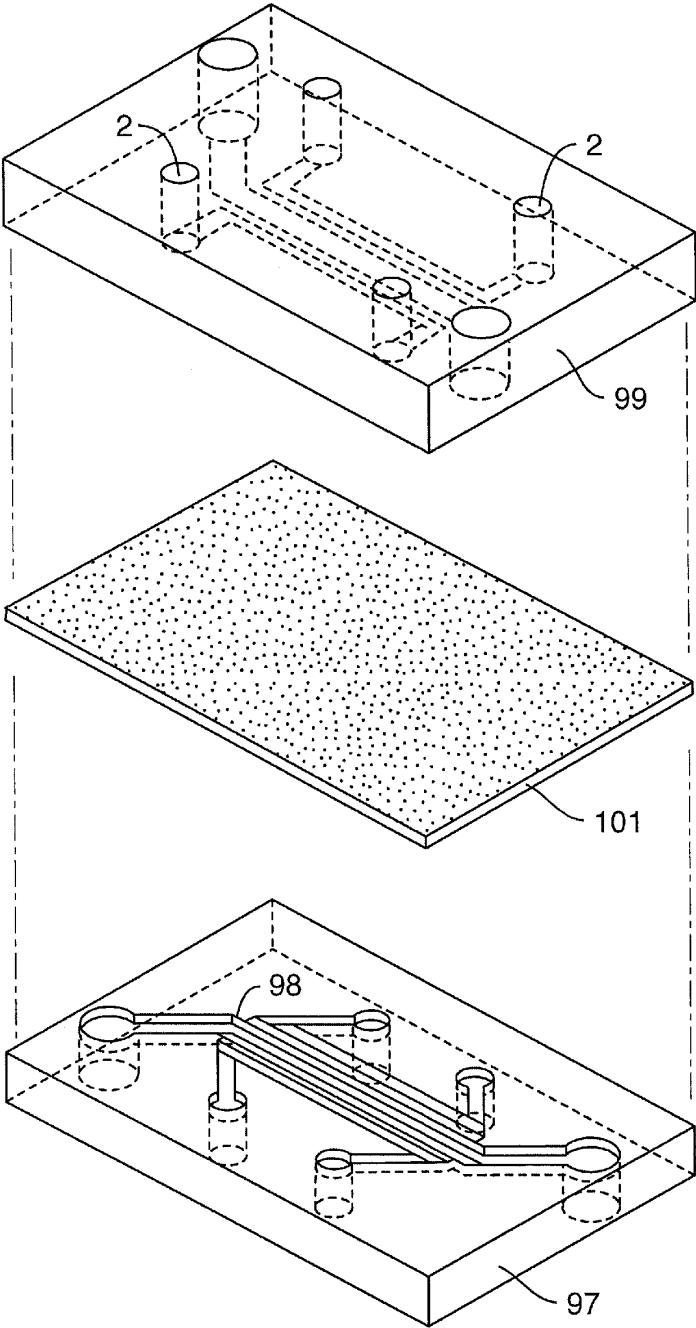


FIG. 23B

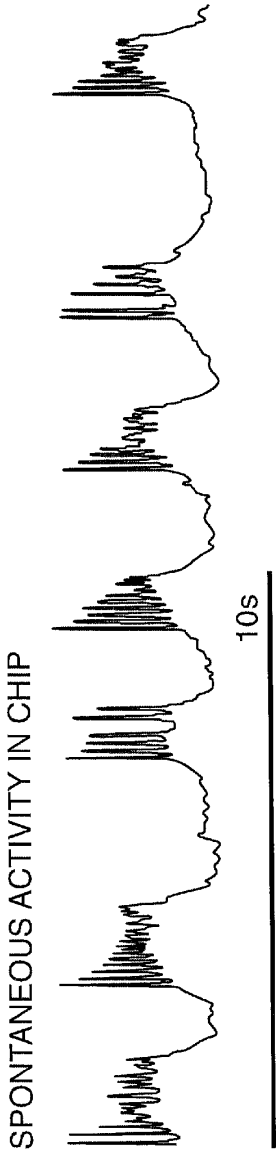


FIG. 24

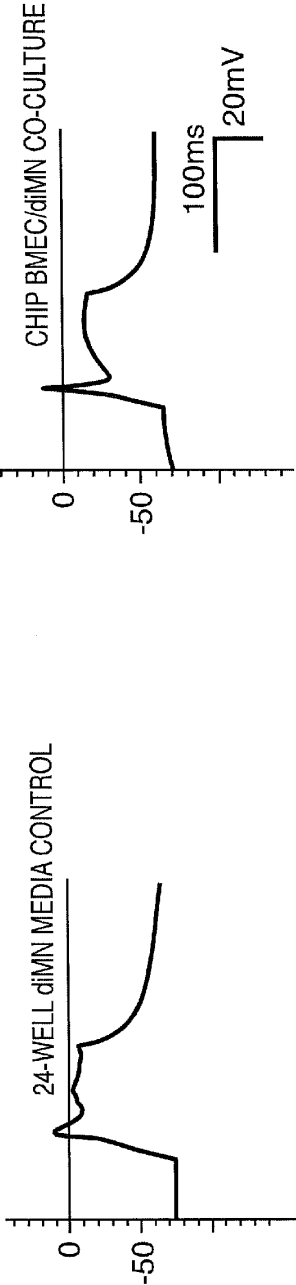


FIG. 25B

FIG. 25A

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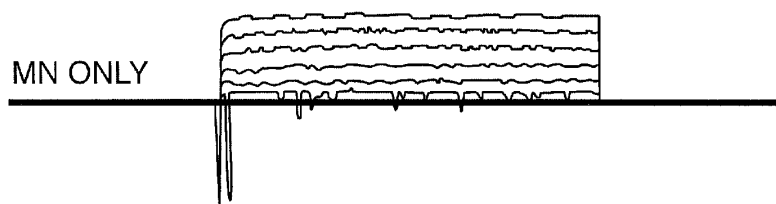


FIG. 26A

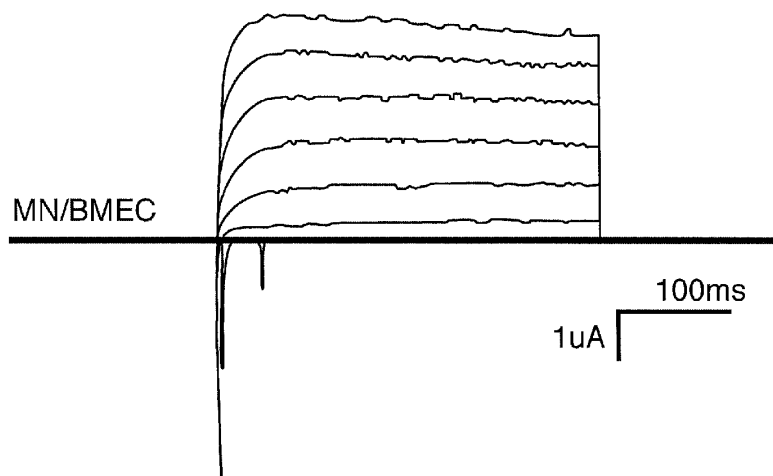


FIG. 26B

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N = 3 (40-50 NEURONS EA.)

CTRL 96

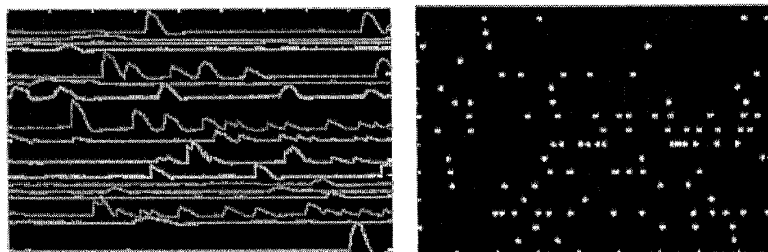


FIG. 27A

ECCM 96

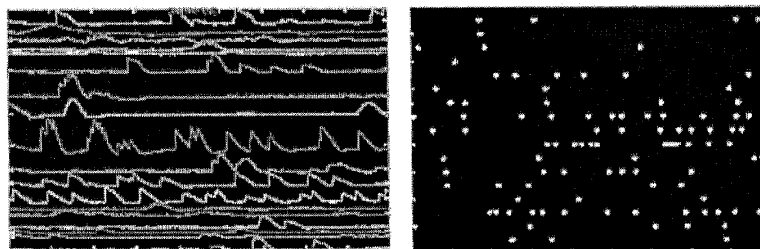


FIG. 27B

MN CHIP

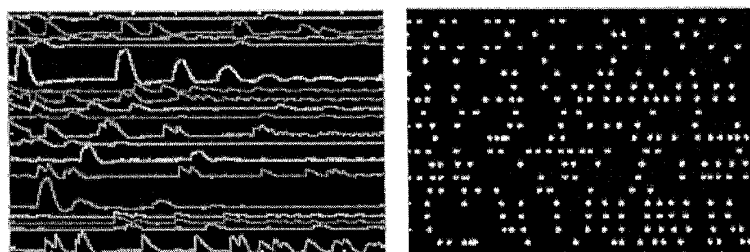


FIG. 27C

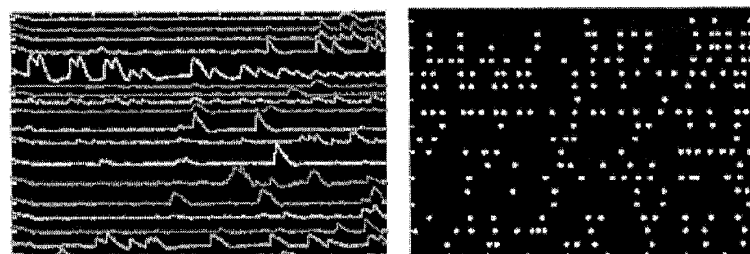
MN/BMEC
CHIP

FIG. 27D

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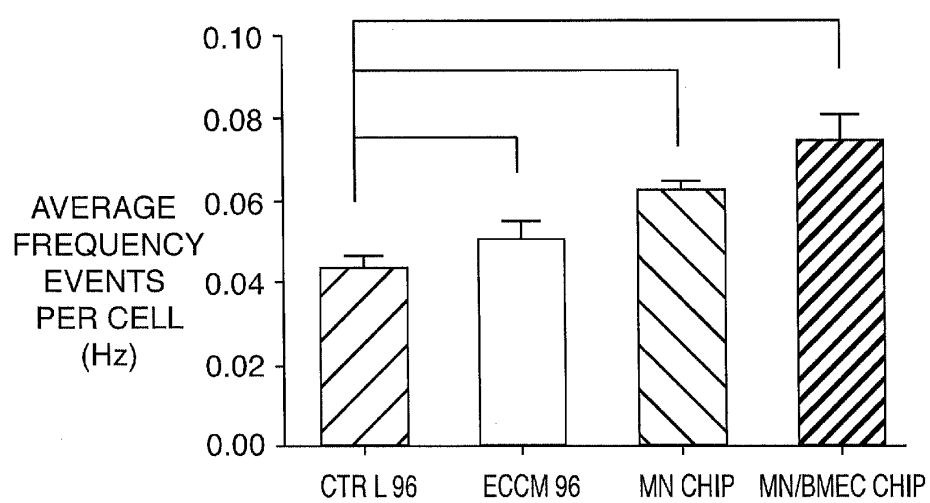


FIG. 28

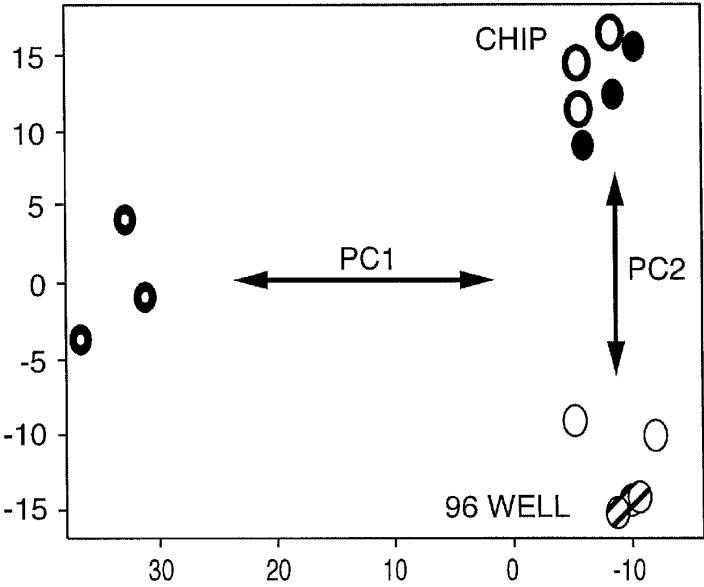


FIG. 29A

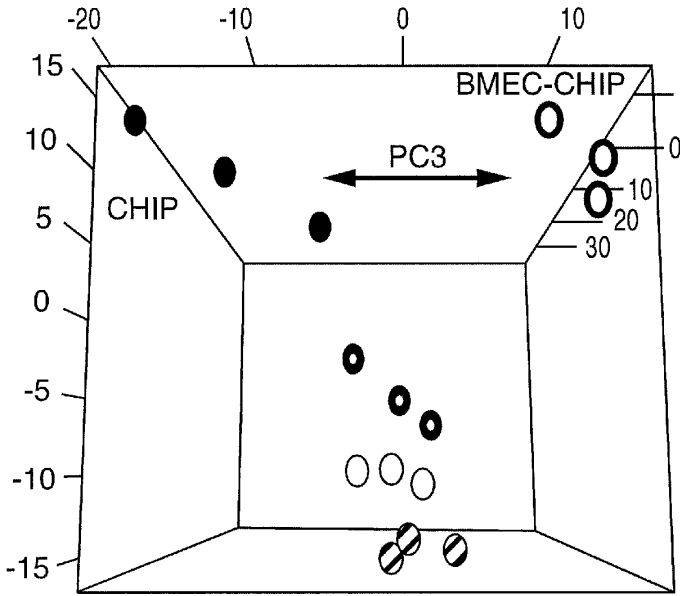


FIG. 29B

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PC1: NEURAL DEVELOPMENT GENES	COUNT	BONFERRONI
NEURON DIFFERENTIATION	25	2.46E-07
DEVELOPMENTAL PROTEIN	30	7.26E-08
NEURON PROJECTION	21	9.45E-08
NEUROGENESIS	14	3.89E-07
AXON	14	2.60E-06
NEURON DEVELOPMENT	19	8.85E-05
CELL PROJECTION	24	1.98E-04
GROWTH CONE	8	3.23E-04
SITE OF POLARIZED GROWTH	8	3.67E-04
CELL MOTION	20	2.88E-03
BASIC HELIX-LOOP-HELIX DIMERISATION	10	1.01E-03
REGULATION NEURON DIFFERENTIATION	11	3.90E-03
PC2: CHIP INDUCED GENES	COUNT	BONFERRONI
RESPONSE TO PROTEIN STIMULUS	9	0.0011
NEURON DIFFERENTIATION	15	0.0030
CHROMOSOMAL PROTEIN	8	0.0068
NUCLEOSOME	6	0.0082
DNA-BINDING	27	0.0139
ID PROTEINS: GO-TO-S CELL CYCLE	3	0.0260
DEVELOPMENTAL PROTEIN	16	0.0199
HOMEBOX	9	0.0271
PROTEIN-DNA COMPLEX	6	0.0358
EPITHELIUM DEVELOPMENT	10	0.0393
HOMEBOX, CONSERVED SITE	9	0.0435
CHROMATIN	8	0.0450
PC3: VASCULAR INTERACTION GENES	COUNT	BONFERRONI
SIGNAL PEPTIDE	65	2.68E-08
EXTRACELLULAR REGION PART	36	2.42E-08
EXTRACELLULAR MATRIX	22	3.23E-08
SECRETED	42	2.59E-07
PROTEINOUS EXTRACELLULAR MATRIX	20	4.07E-07
REGULATION OF CELL PROLIFERATION	30	5.37E-06
GLYCOPROTEIN	71	3.68E-06
VASCULATURE DEVELOPMENT	15	7.06E-04
EXTRACELLULAR MATRIX PART	11	1.40E-04
RESPONSE TO ORGANIC SUBSTANCE	25	9.32E-04
BLOOD VESSEL DEVELOPMENT	14	3.21E-03
EXTRACELLULAR MATRIX STRUCTURE	9	7.91E-04

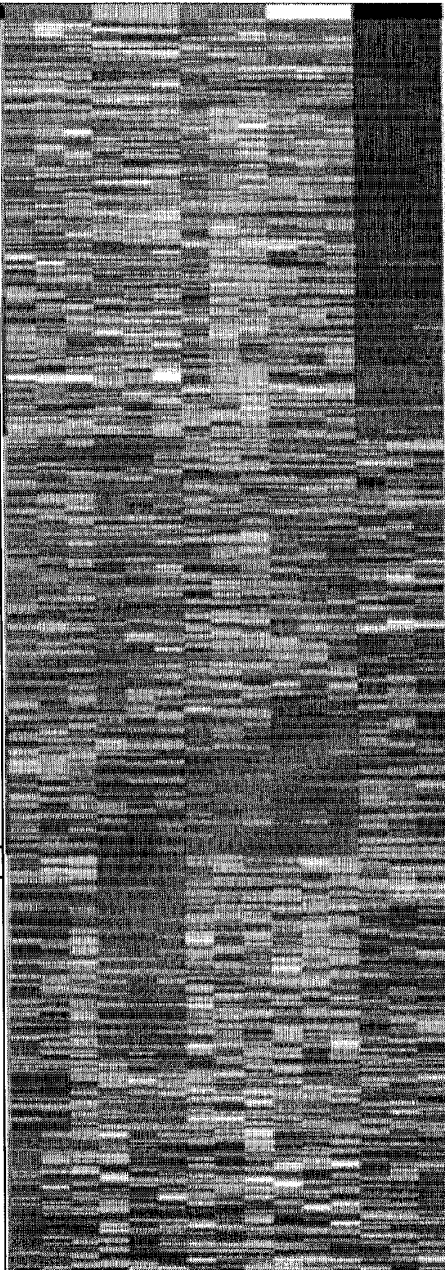


FIG. 30

Calcium Transient Activity in Chip

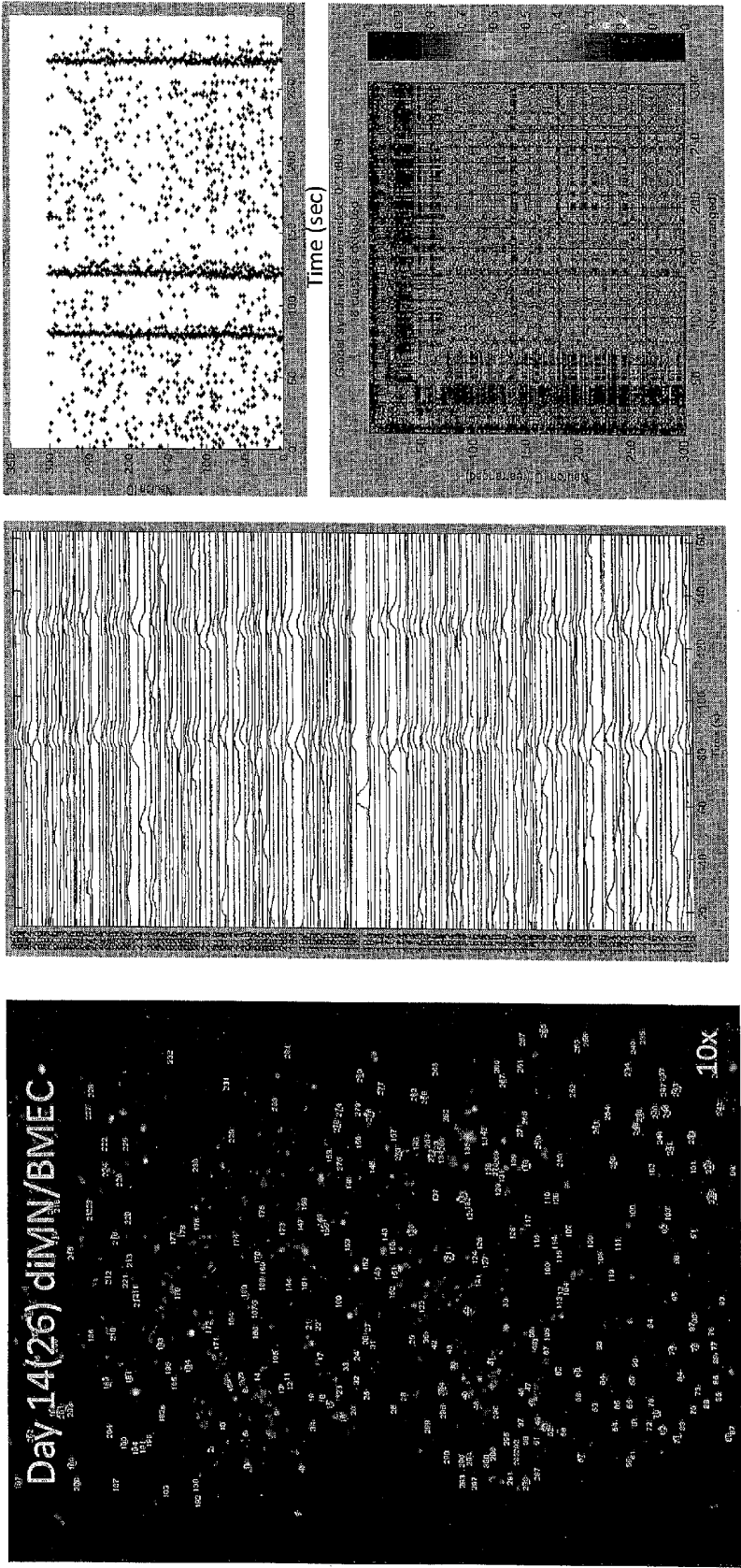


FIG. 31

Fig. 32

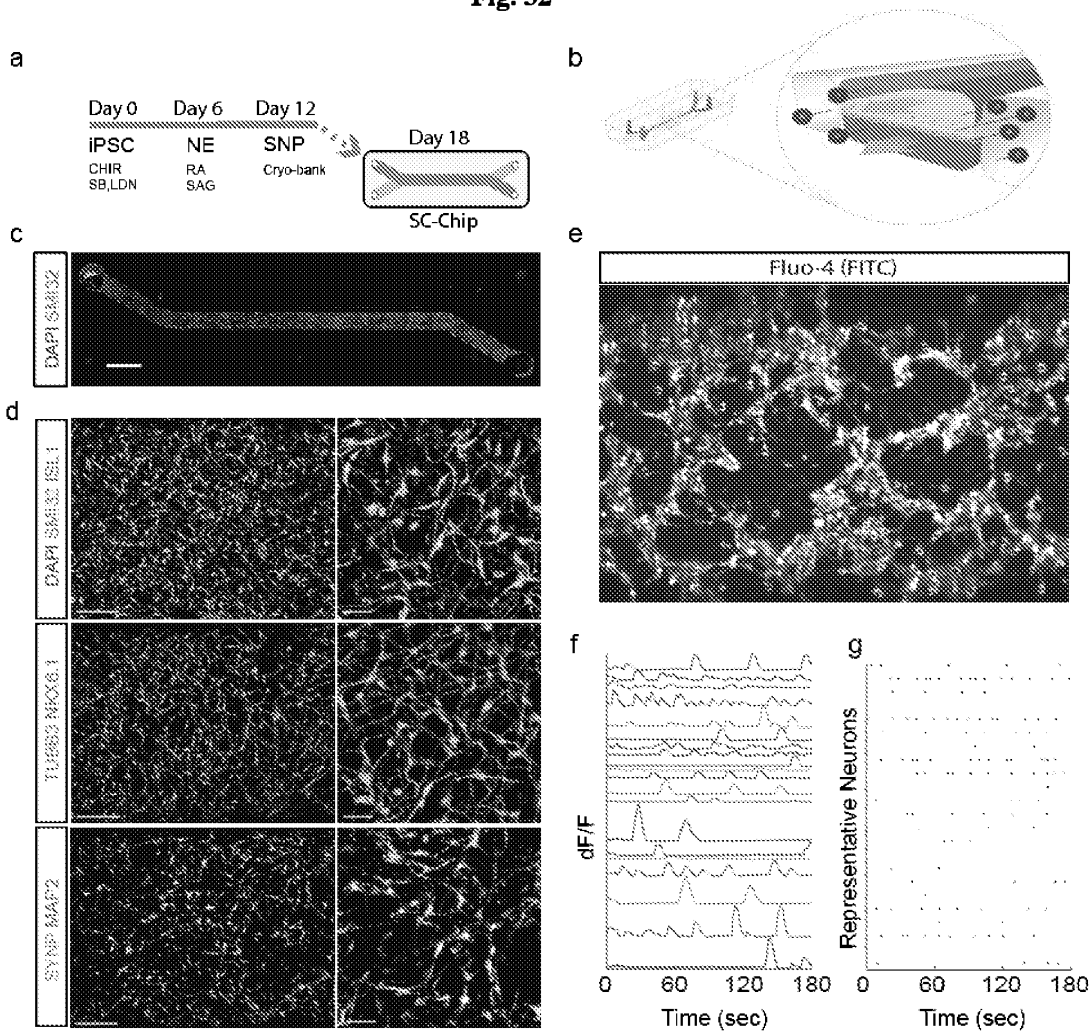
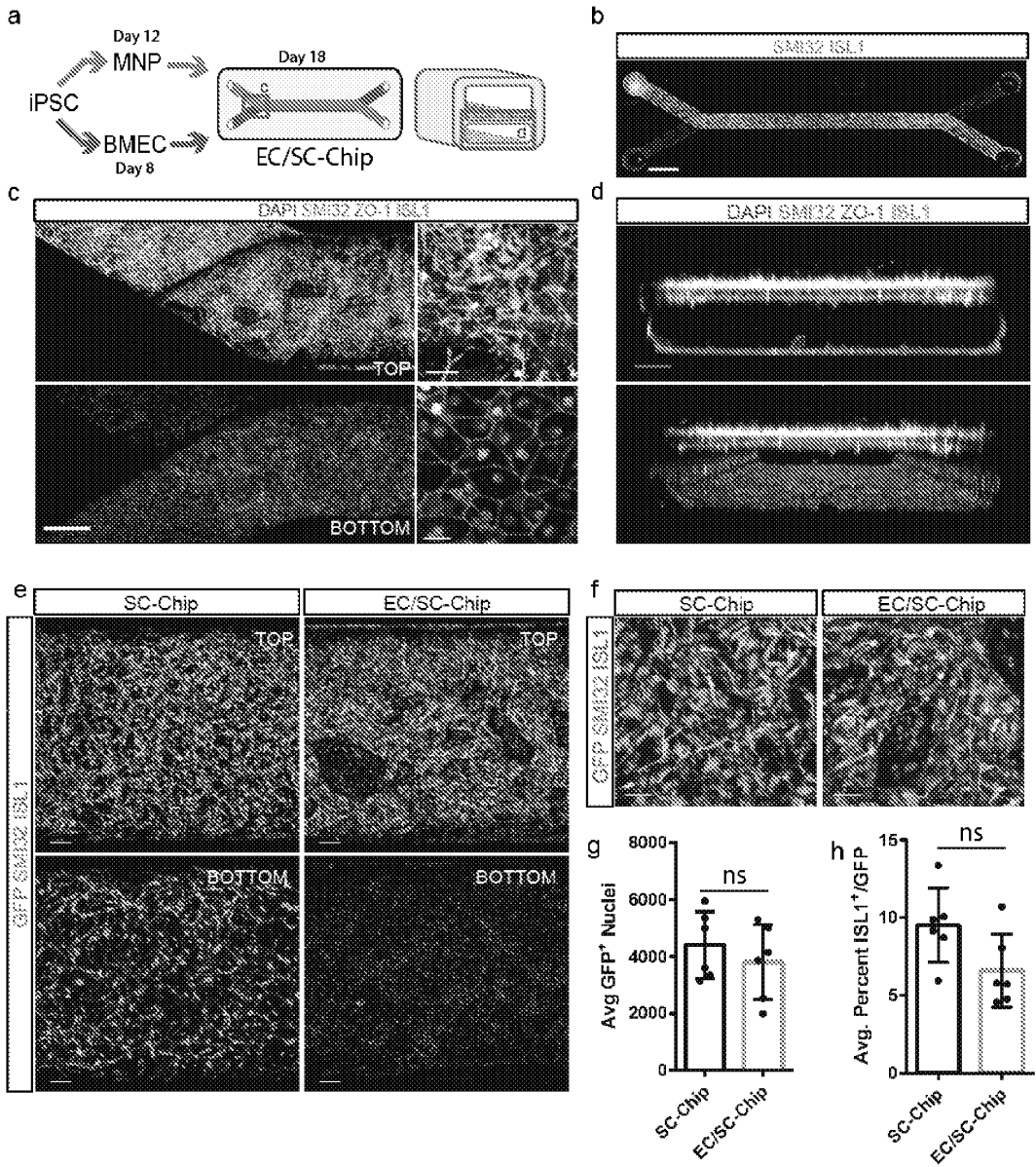


Fig. 33



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Fig. 34

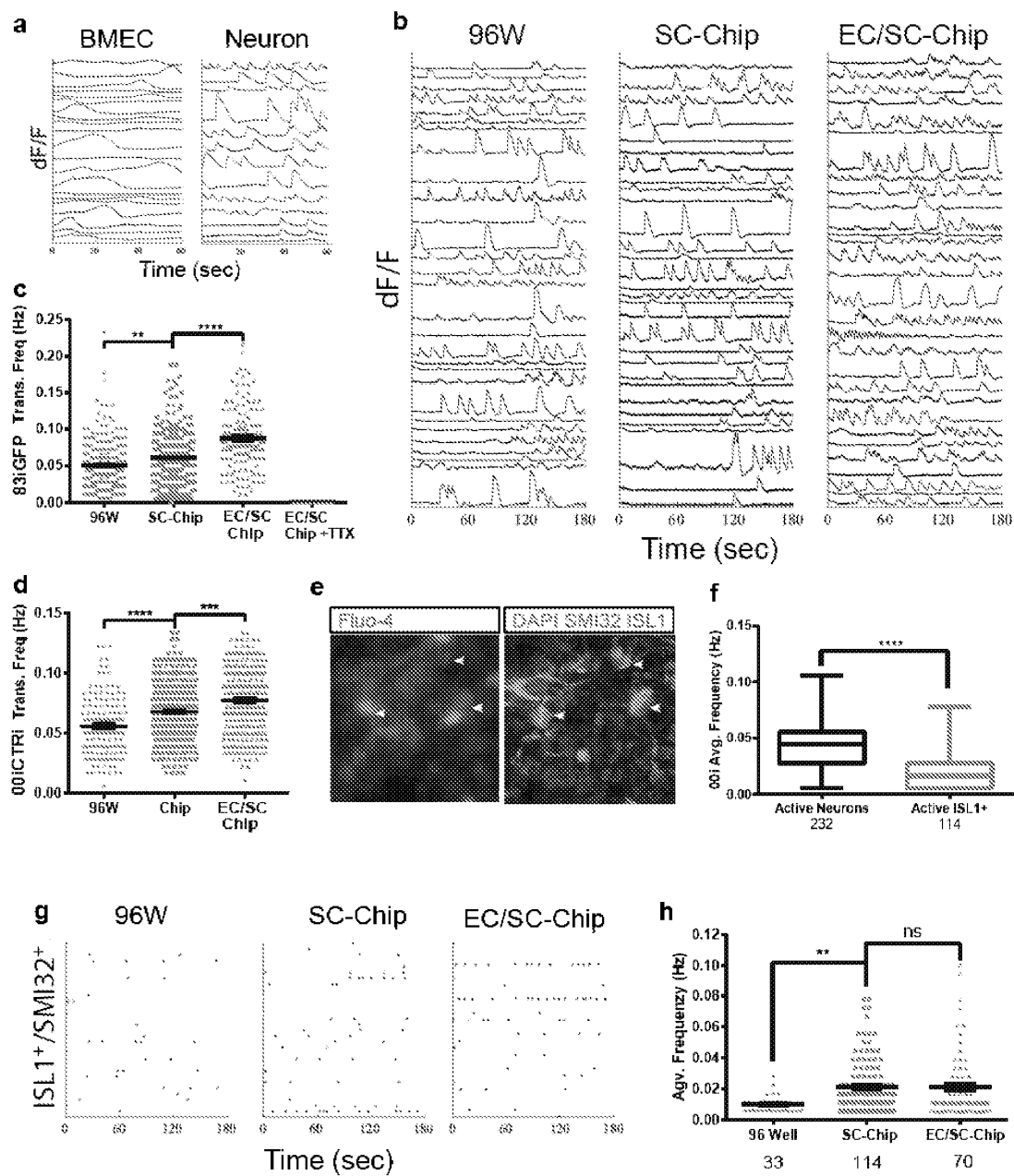


Fig. 35

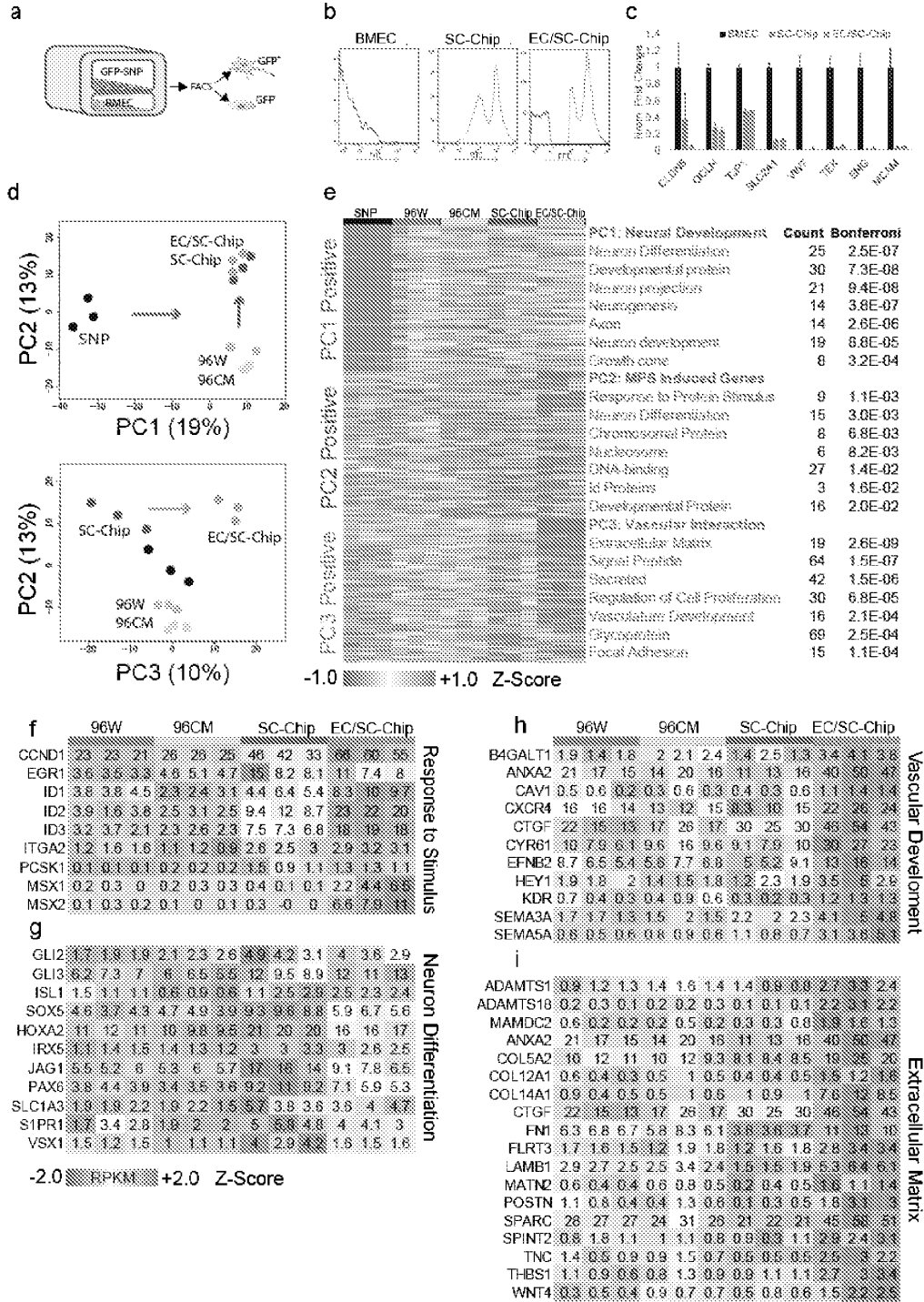


Fig. 36

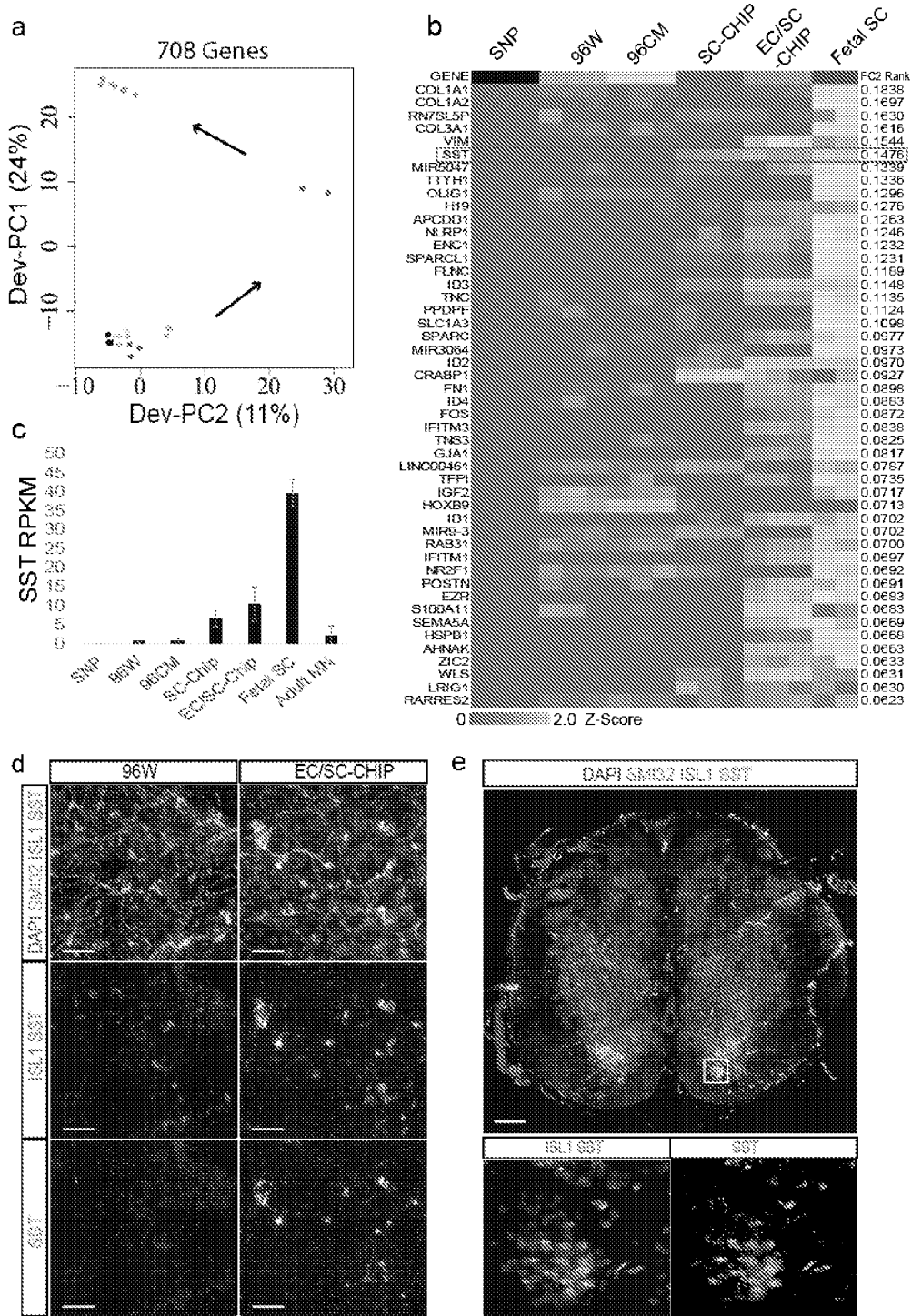


Fig. 37

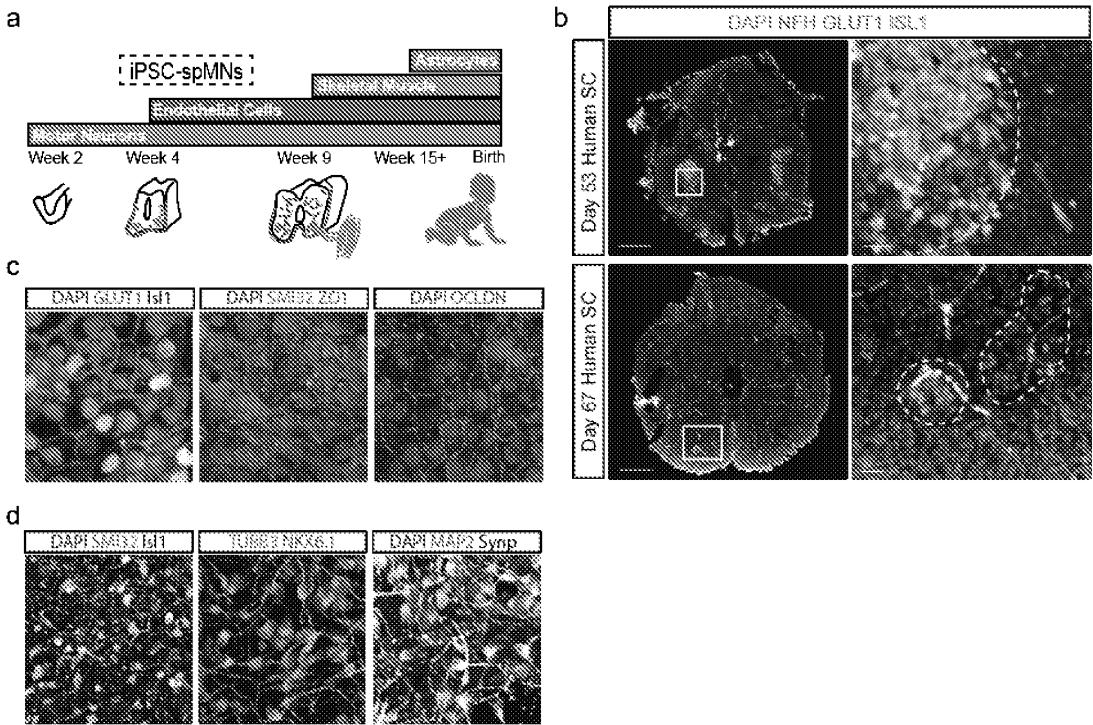


Fig. 38

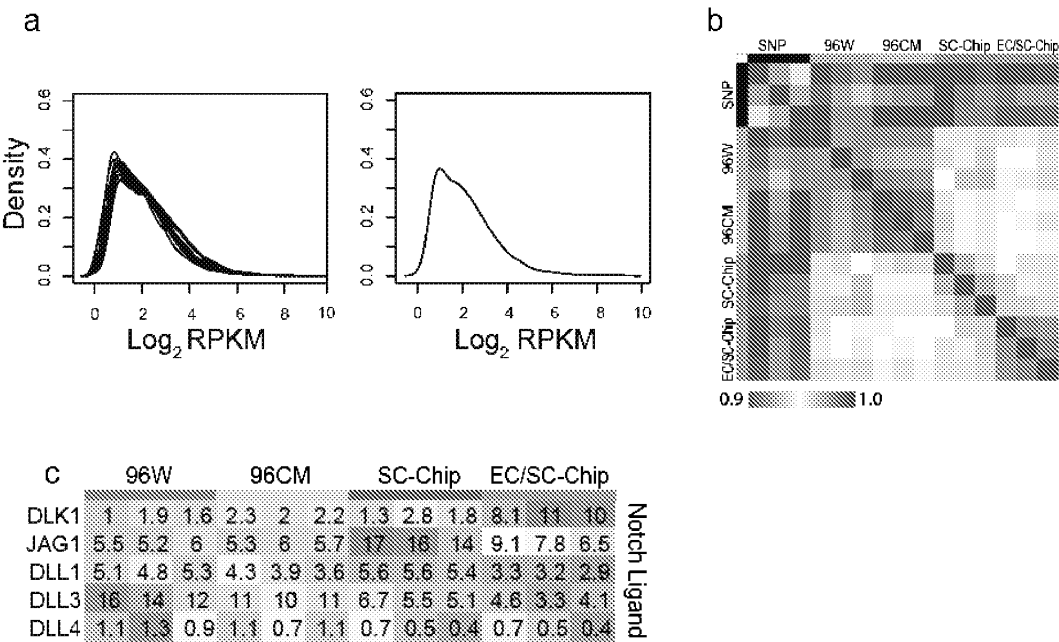
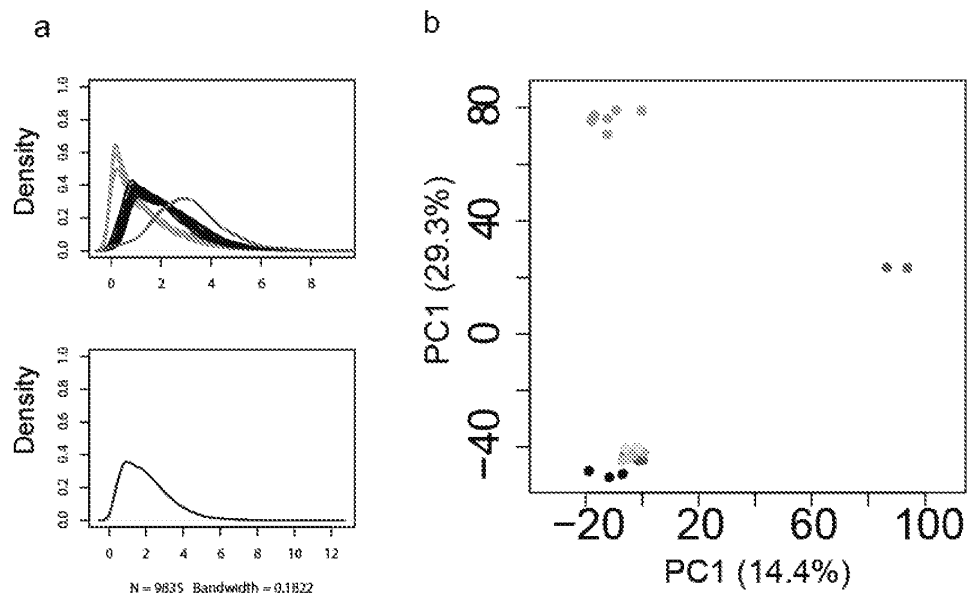


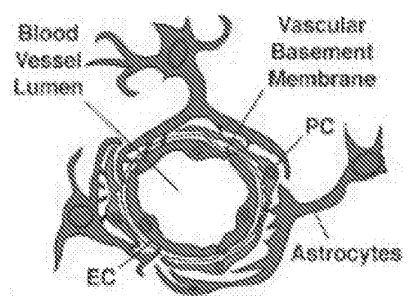
Fig. 39



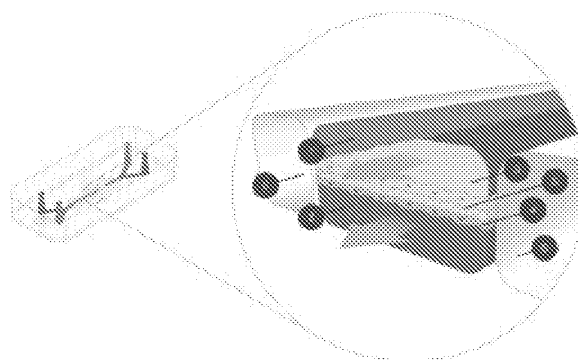
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Fig. 40

A



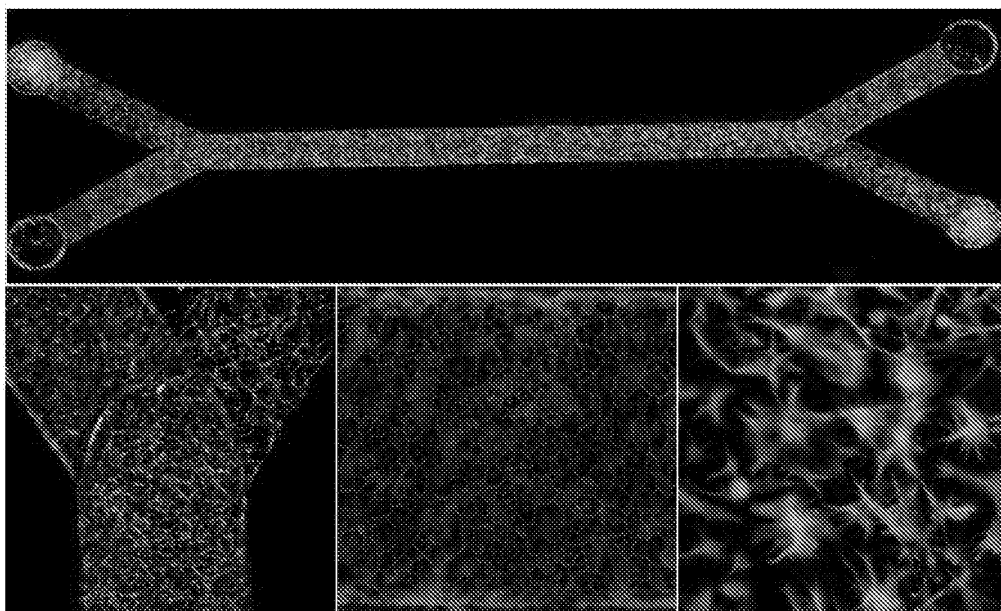
B



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Fig. 41

A

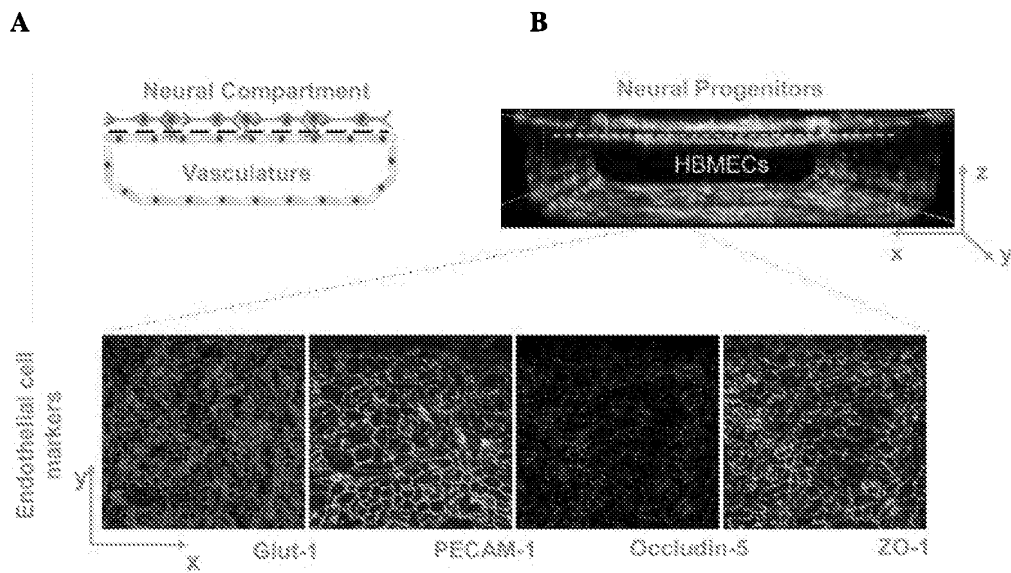


B

C

D

Fig. 42



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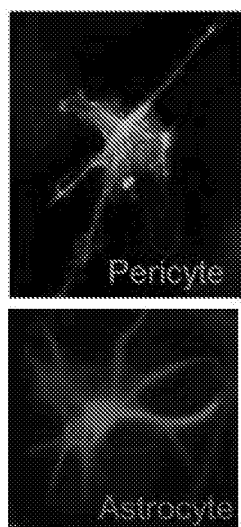
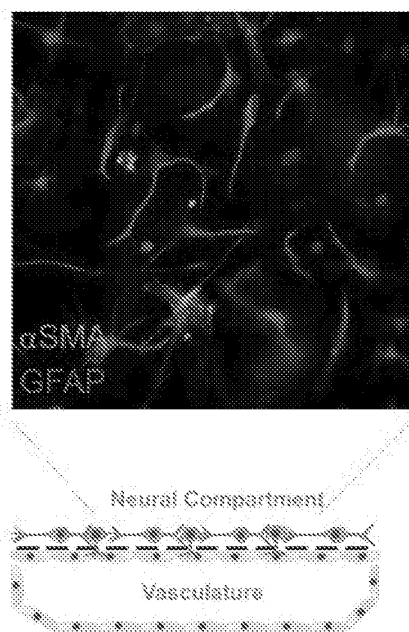
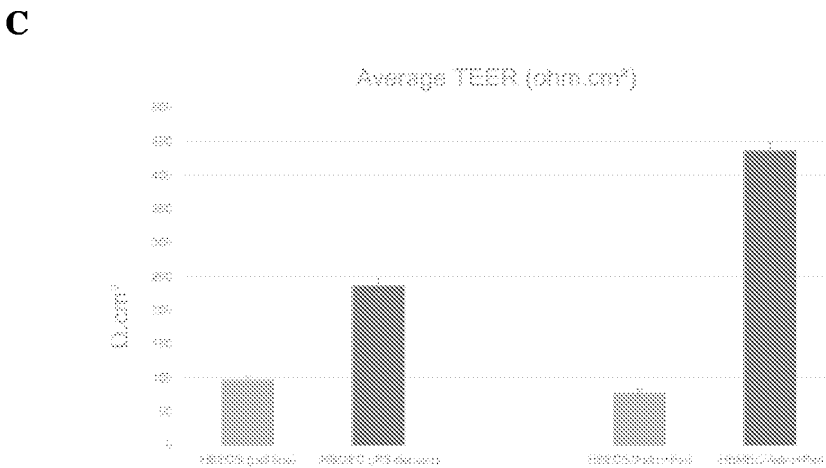
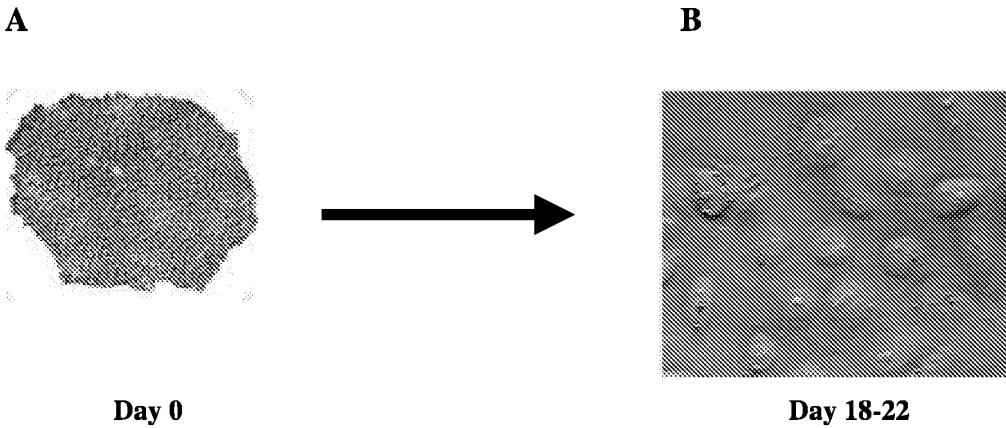
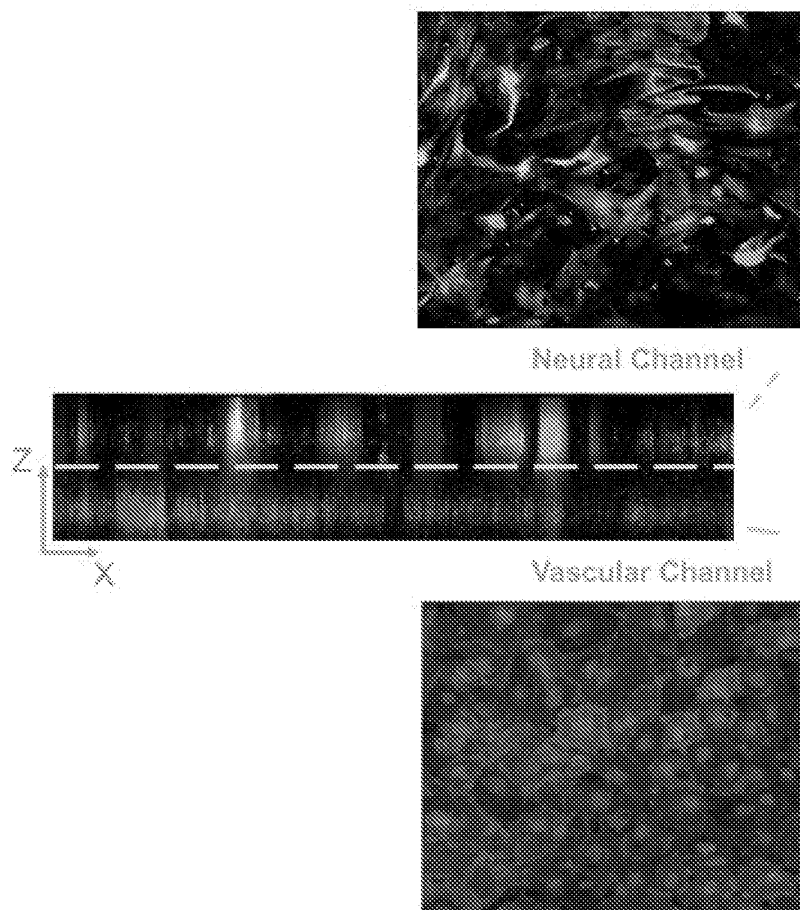
Fig. 43**A****B**

Fig. 44



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Fig. 45



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Fig. 46

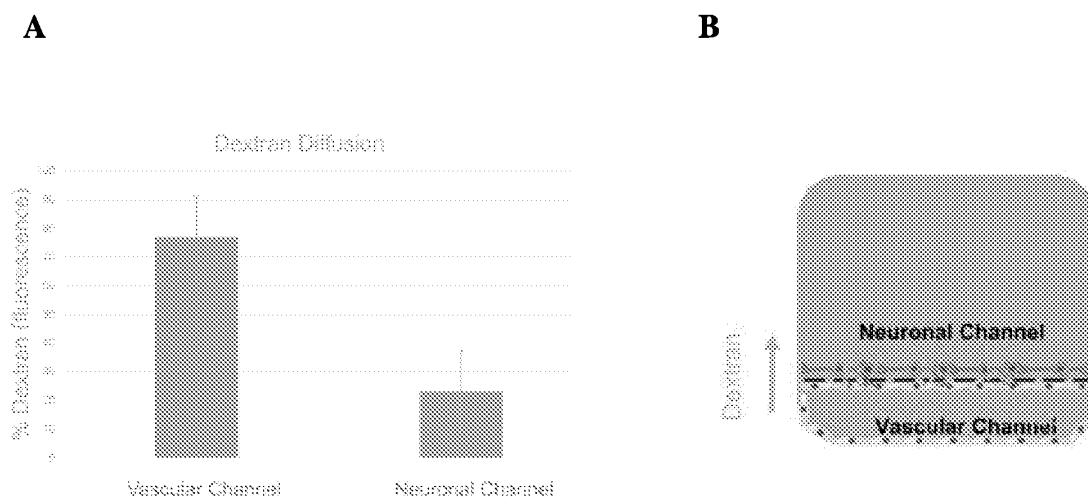


Fig. 47

