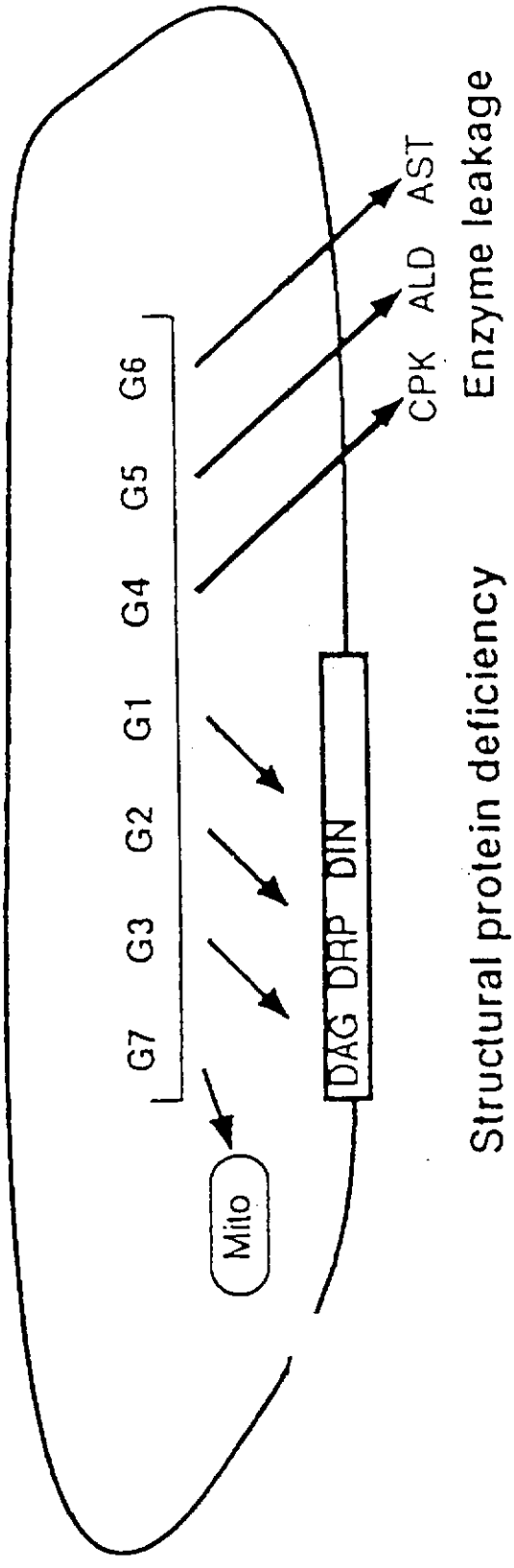

G7 G3 G2 G1 G4 G5 G6
Mito
DAG DRP DIN
CPK ALD AST
Enzyme leakage
Structural protein deficiency

FIG. 1

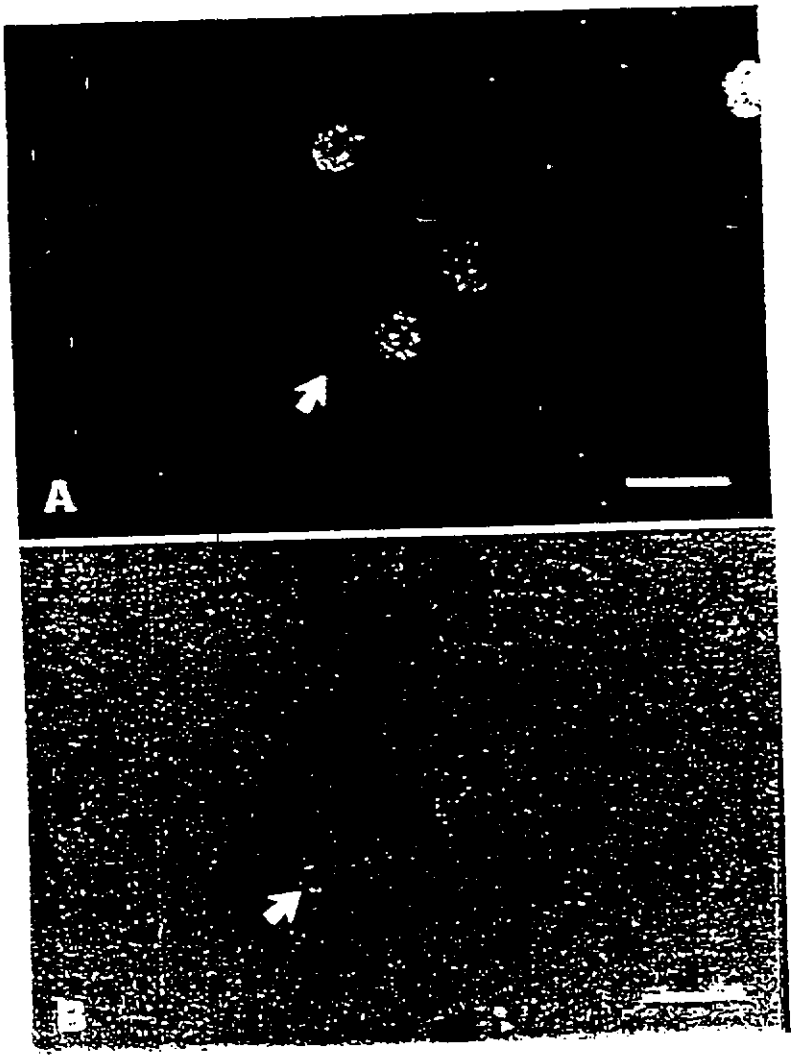


FIG. 2

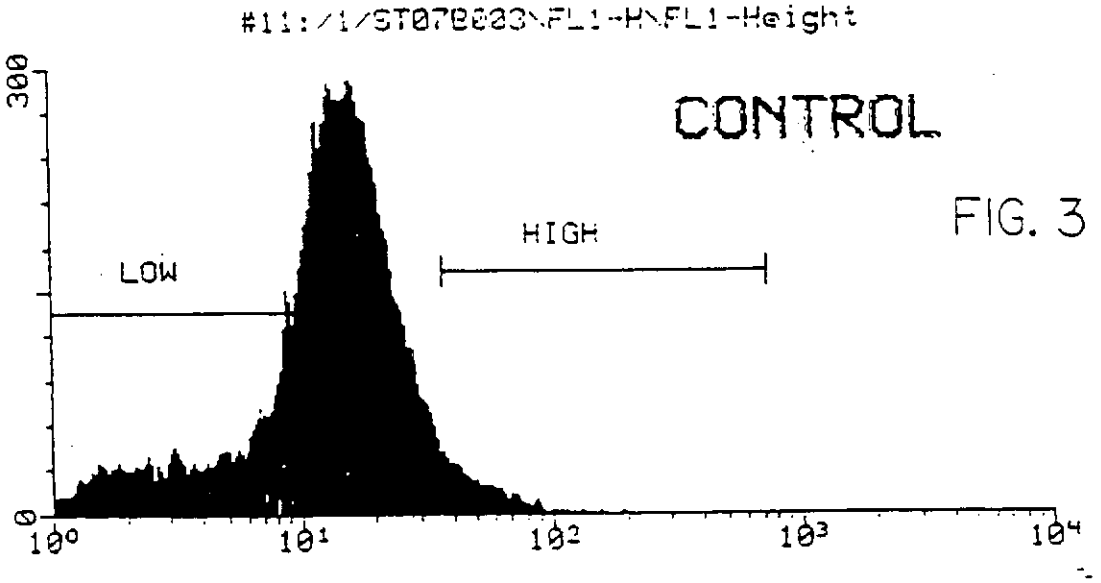
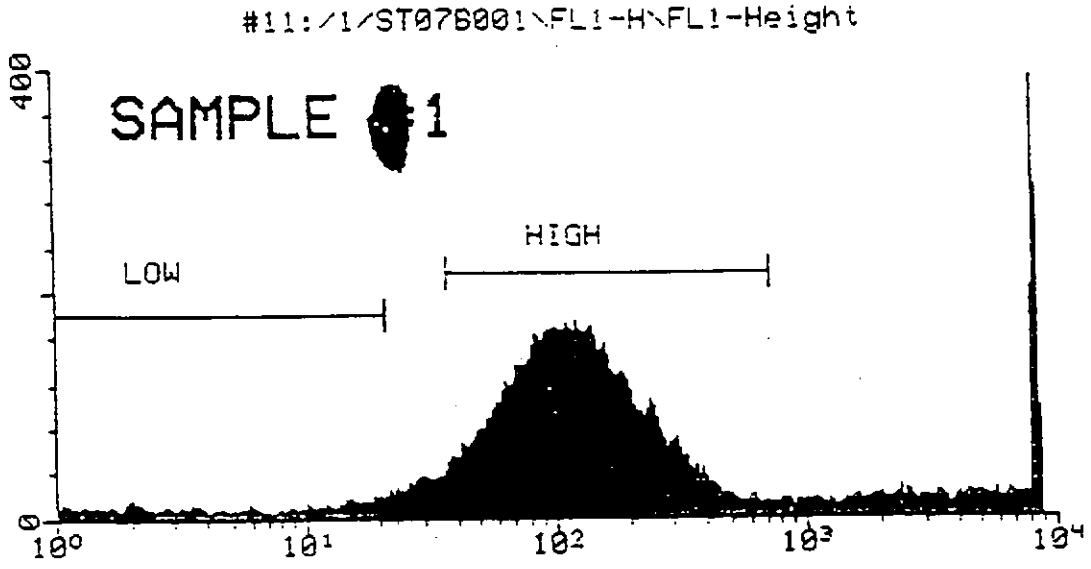
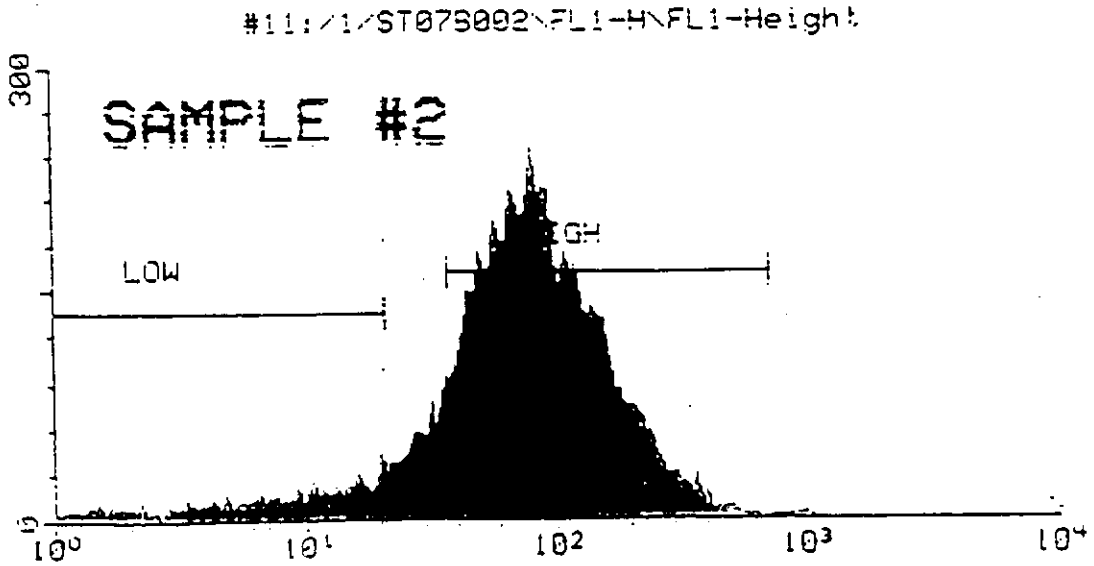

#11:/1/ST07B003\FL1-H\FL1-Height
CONTROL
300
0
LOW
HIGH
10⁰
10¹
10²
10³
10⁴

FIG. 3


#11:/1/ST07B001\FL1-H\FL1-Height
SAMPLE #1
400
0
LOW
HIGH
10⁰
10¹
10²
10³
10⁴


#11:/1/ST07S002\FL1-H\FL1-Height
SAMPLE #2
300
0
LOW
10⁰
10¹
10²
10³
10⁴

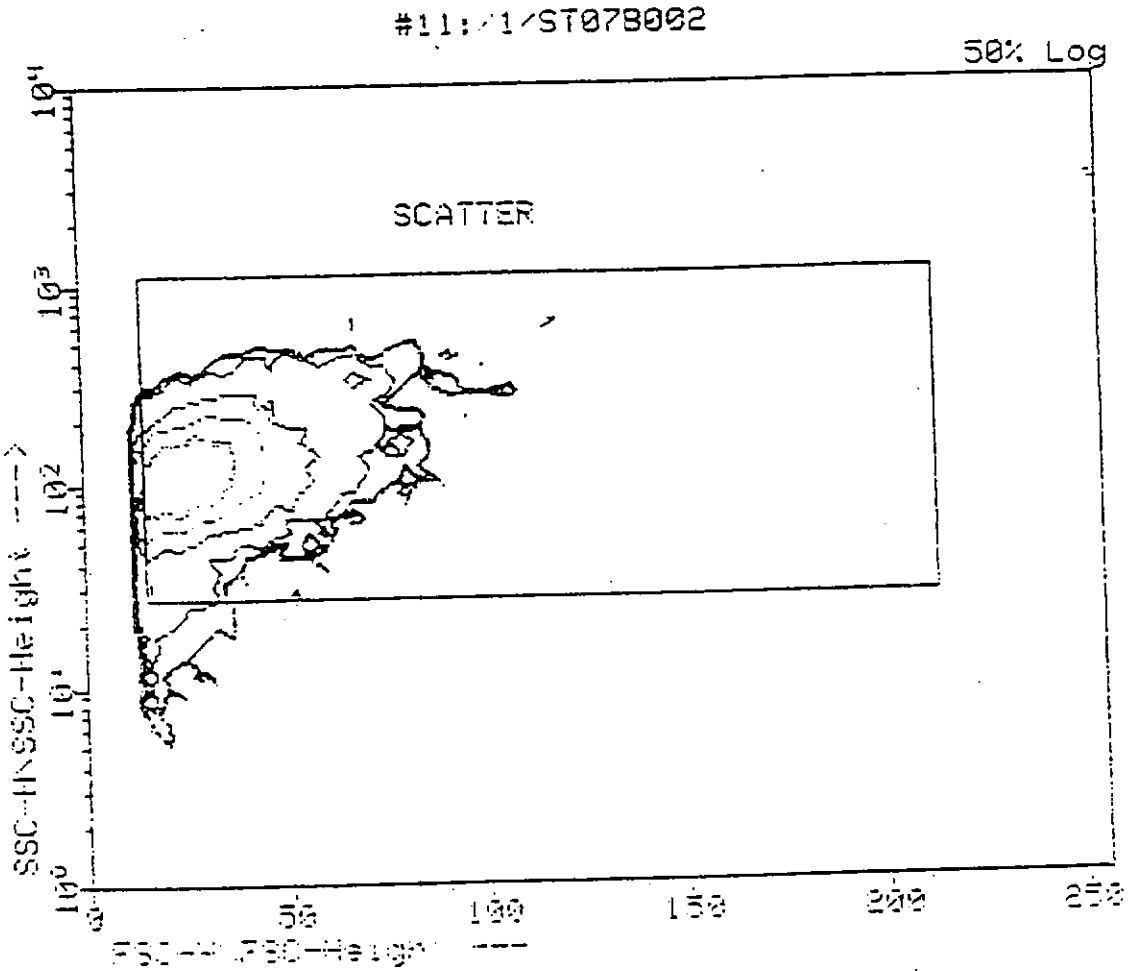

#11:/1/ST078002
50% Log
SCATTER
SSC-H\SSC-Height --->
10⁴
10³
10²
10¹
10⁰
0
50
100
150
200
250

FIG. 4

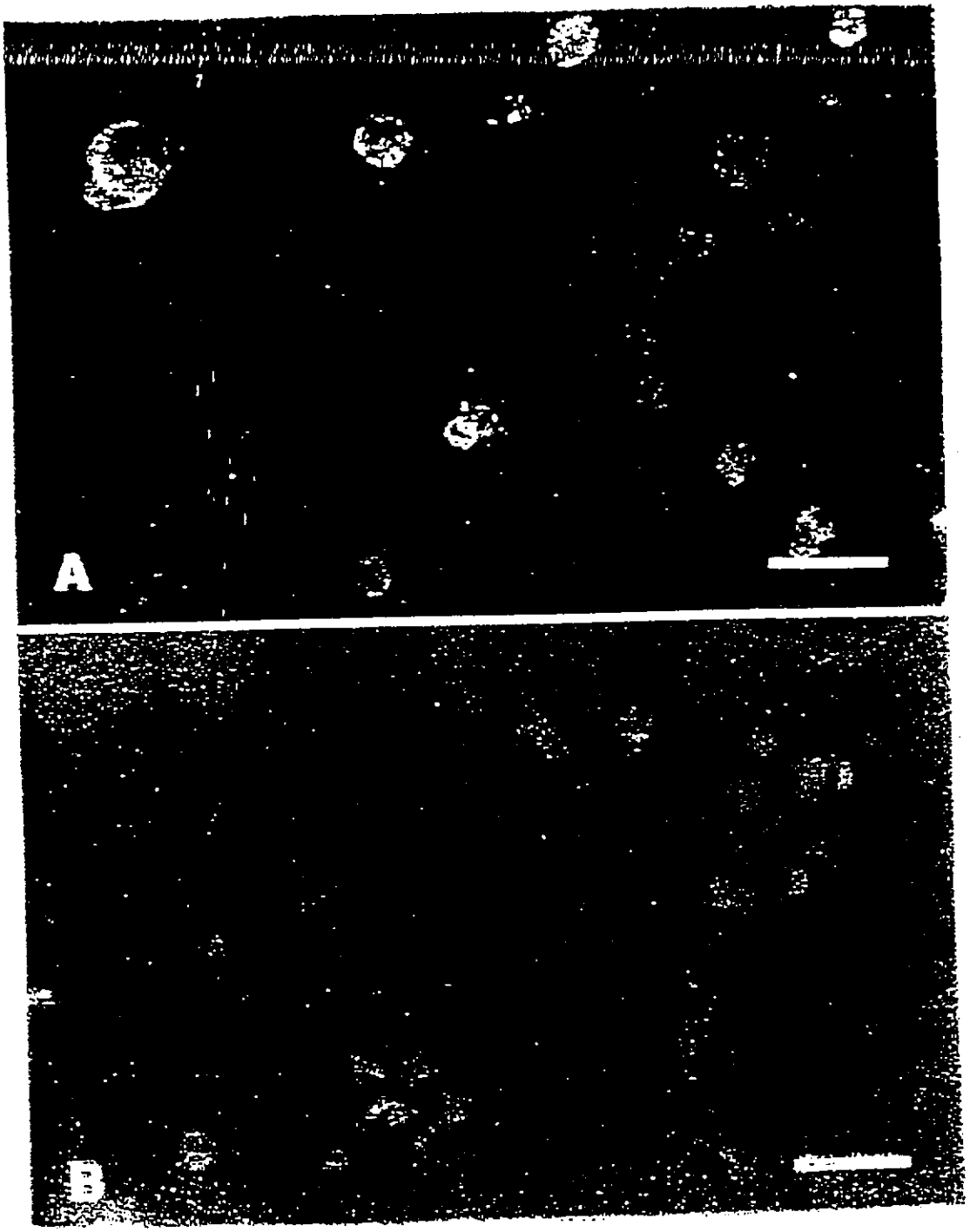


FIG. 5

ANGLE OF INJECTION DETERMINES
MYOBLAST DISTRIBUTION A>B>C>D

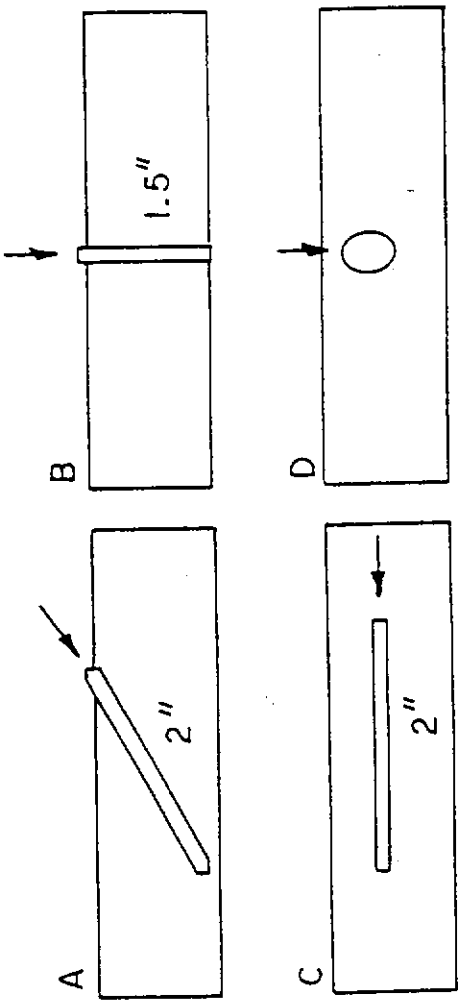


FIG. 6

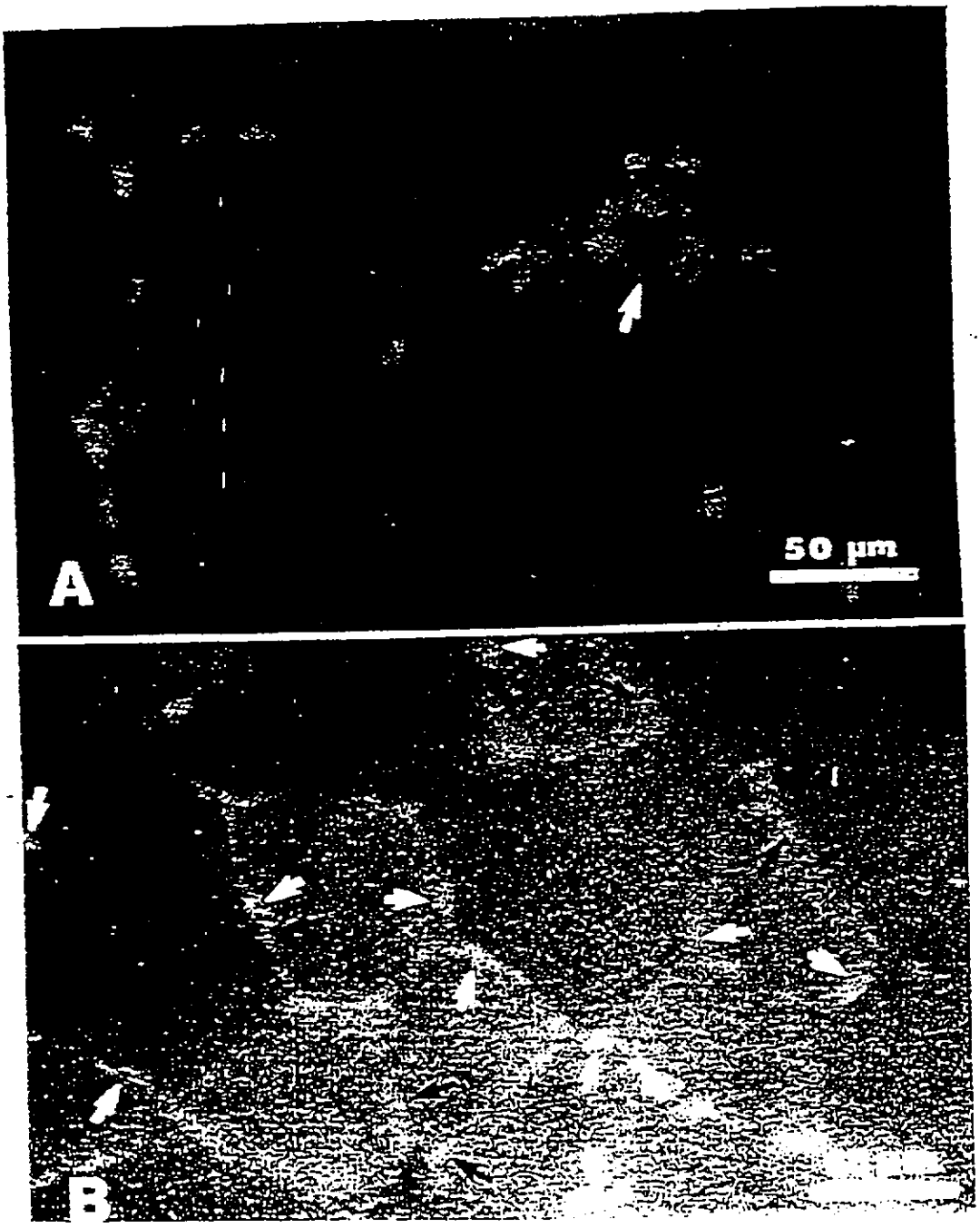


FIG. 7

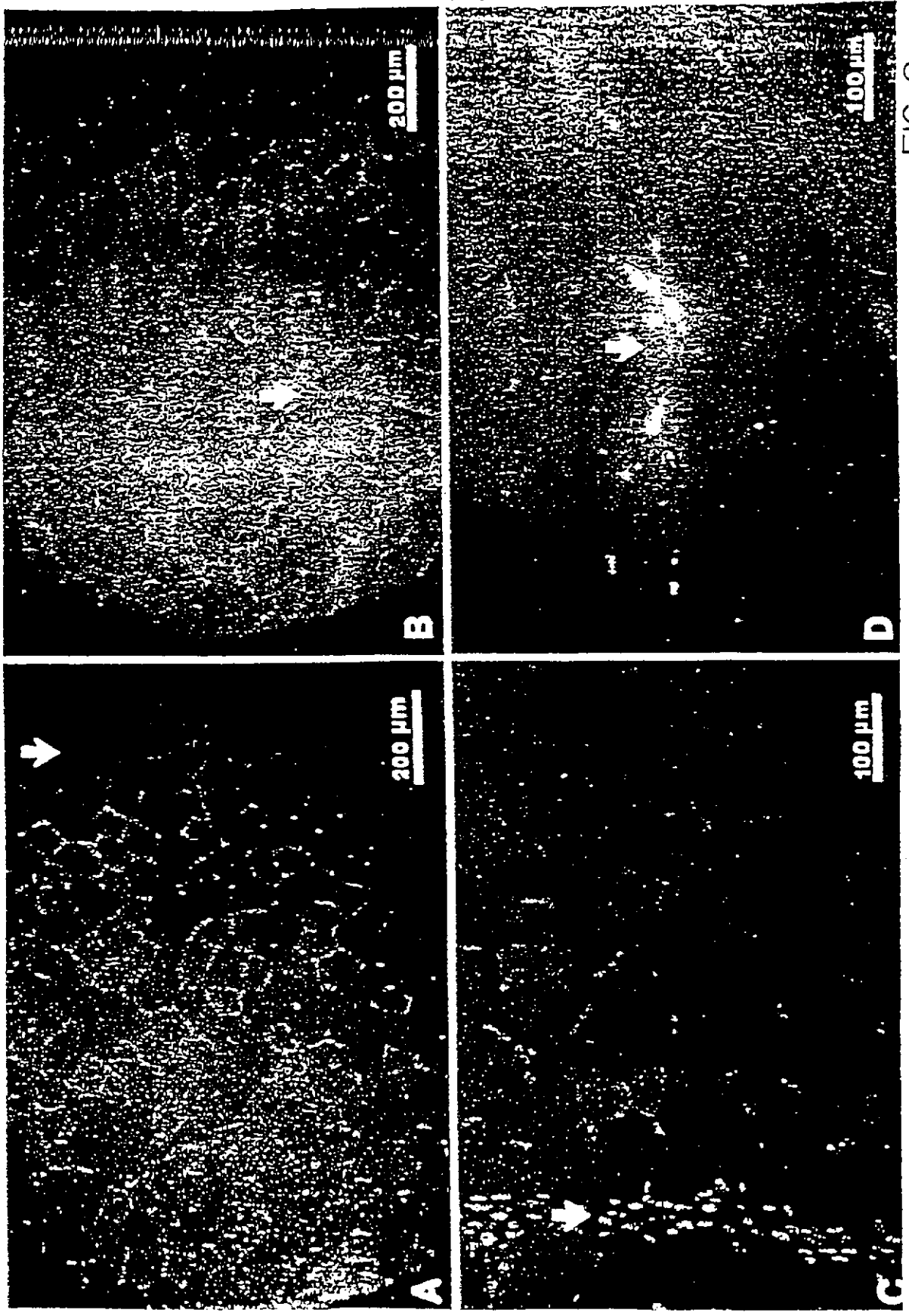


FIG. 8

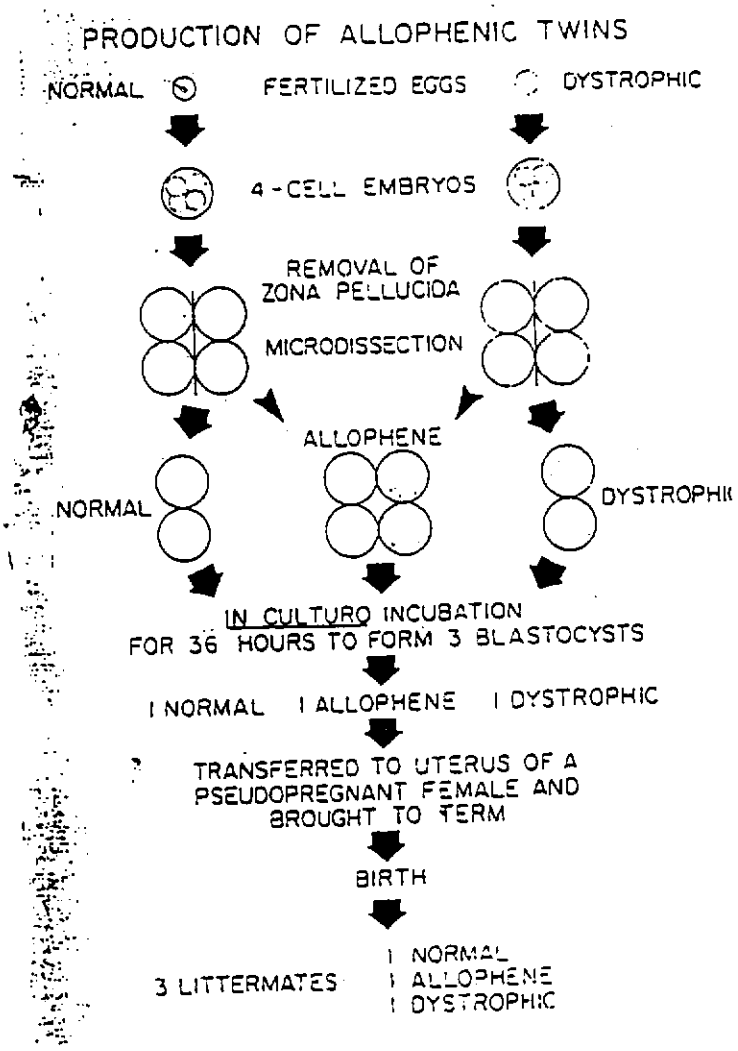

PRODUCTION OF ALLOPHENIC TWINS
NORMAL
FERTILIZED EGGS
DYSTROPHIC
4-CELL EMBRYOS
REMOVAL OF ZONA PELLUCIDA
MICRODISSECTION
ALLOPHENE
NORMAL
DYSTROPHI
IN CULTURO INCUBATION FOR 36 HOURS TO FORM 3 BLASTOCYSTS
1 NORMAL 1 ALLOPHENE 1 DYSTROPHIC
TRANSFERRED TO UTERUS OF A PSEUDOPREGNANT FEMALE AND BROUGHT TO TERM
BIRTH
3 LITTERMATES
1 NORMAL
1 ALLOPHENE
1 DYSTROPHIC

FIG. 9



FIG. 10

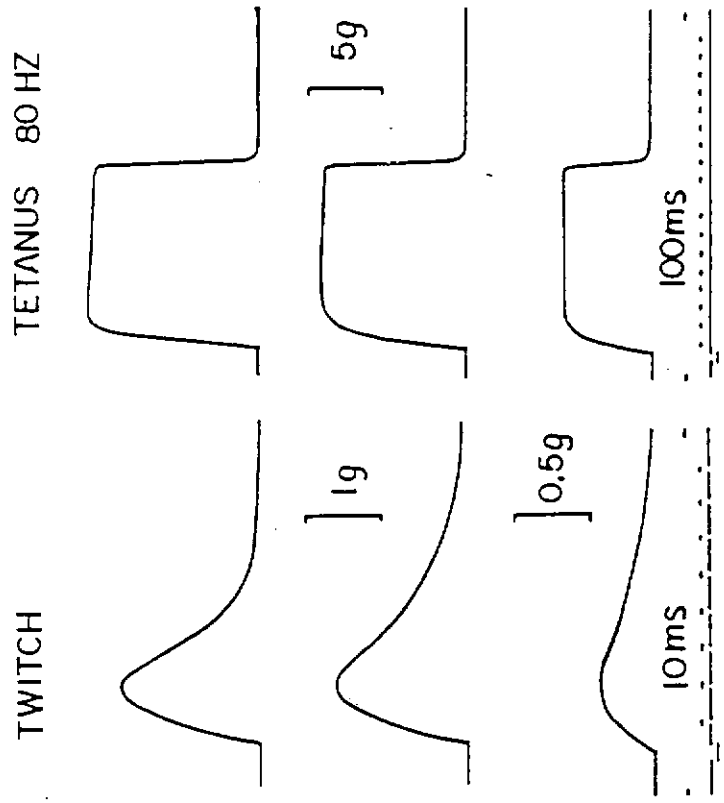

TWITCH
TETANUS 80 HZ
1g
5g
0.5g
10ms
100ms
NORMAL
ALLOPHENE
DYSTROPHIC

FIG. 11

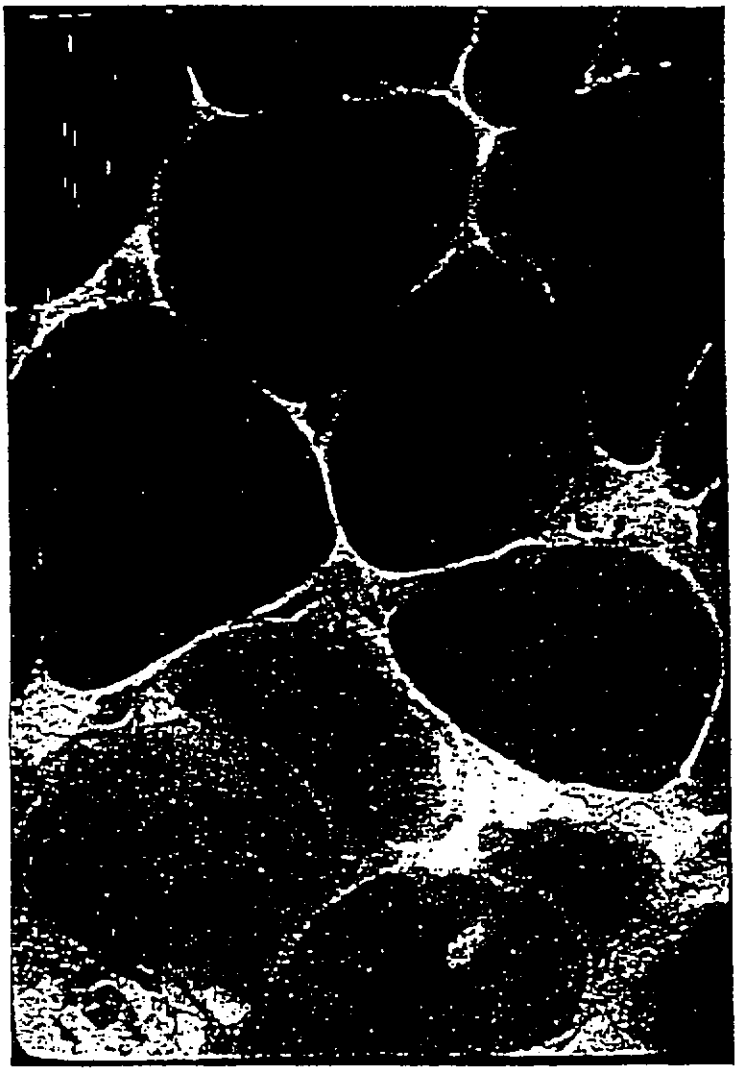


FIG. 12



FIG. 13

Instrument components

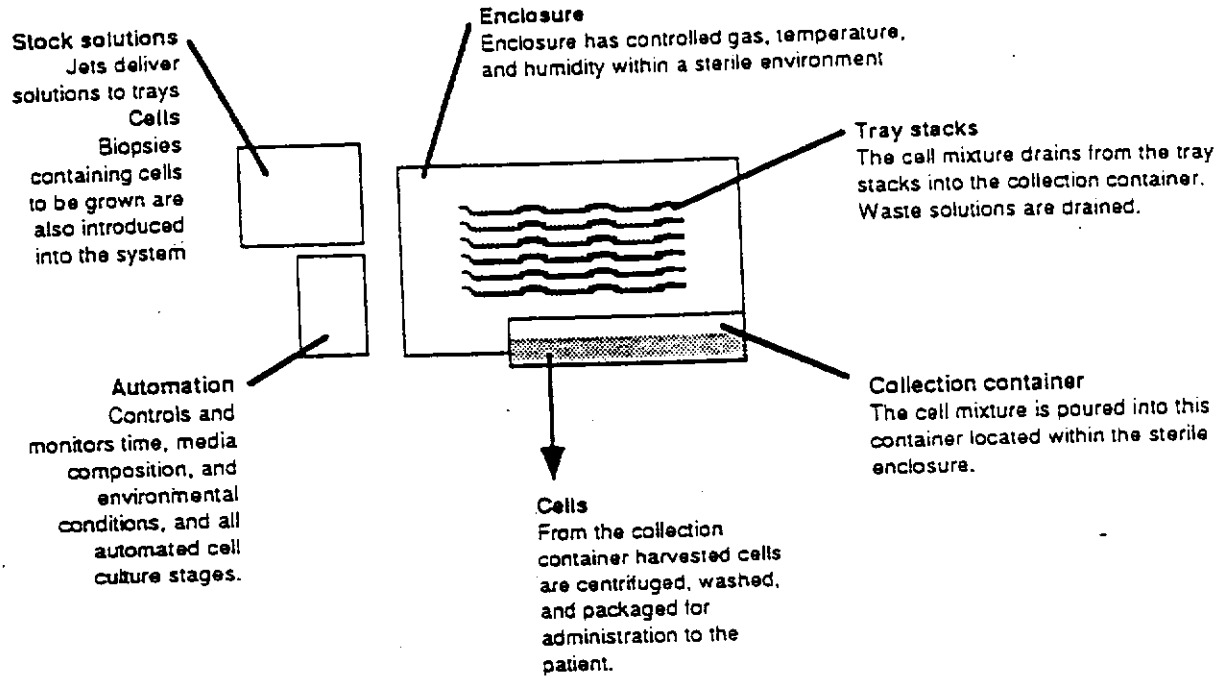
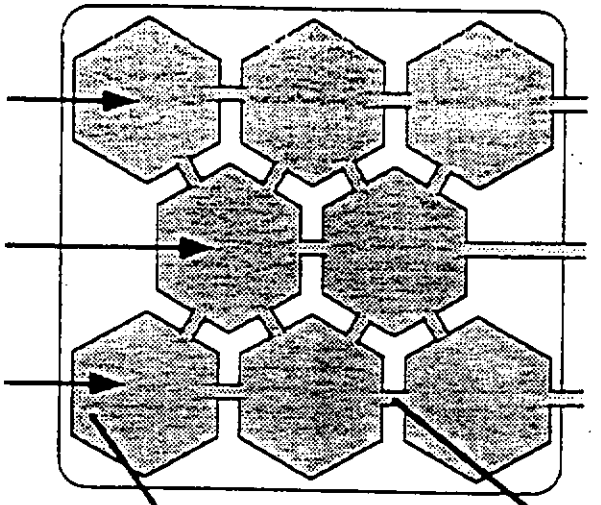


FIG.14

Culture trays

Top view



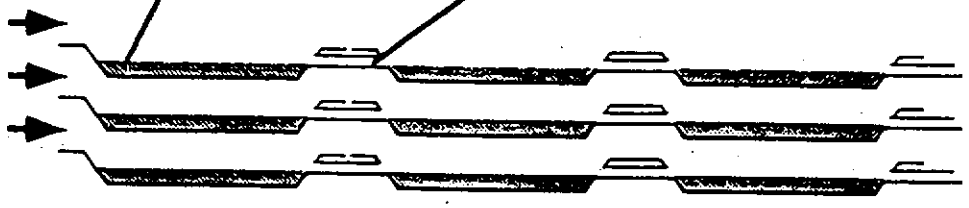
Jets
Inject solution onto culture plates

Drainage
Solutions from culture plates are either collected or discarded.

Culture plate
Each plate is 1800 cm^2. Each holds cells, media, and/or rinse solutions. Made of stainless steel that is sterilized and is coated with collagen to allow cells to adhere.

Flow duct
Keeps the solution level even throughout all the culture plates. Also allows soutions to flow between culture plates when the entire pan tilts.

Side view



Jets
Inject gases and solution onto culture plates

Tray stacks
Composed of many culture plates interconnected by flow ducts. Trays are stacked but do not touch.

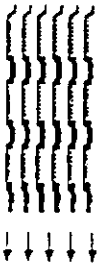
Automated actions



Fill
Jets fill trays with solution



Wash and drain
Tray stacks tilt to allow solutions to drain during washing or media changes. Jets add fresh solution to trays while wash solutions are drained and discarded. Detatched cell mixtures are collected.



Drain and collect
Tray stacks tilt to vertical to maximize detatched cell collection during harvest.

FIG.15

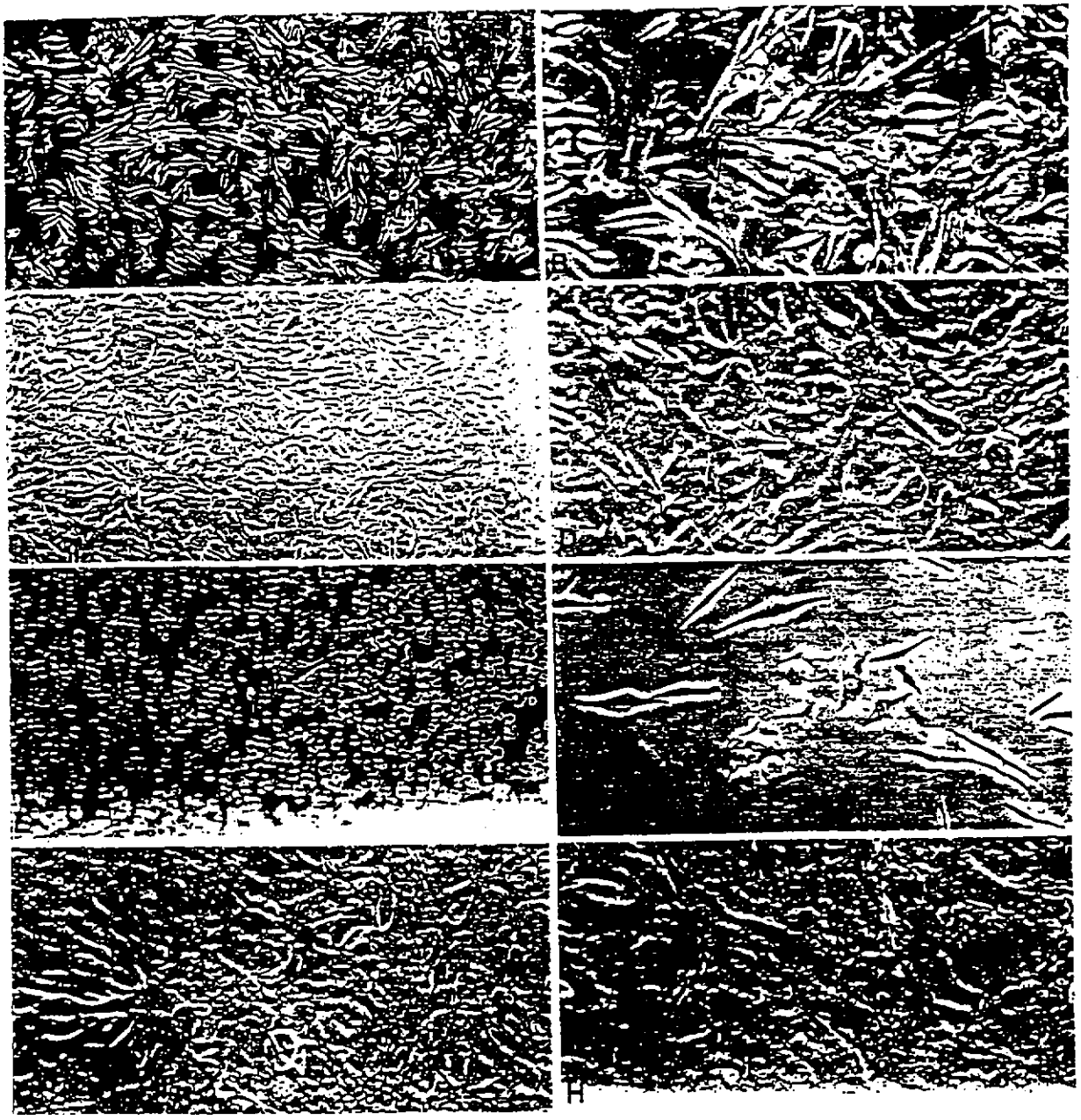


FIG.16

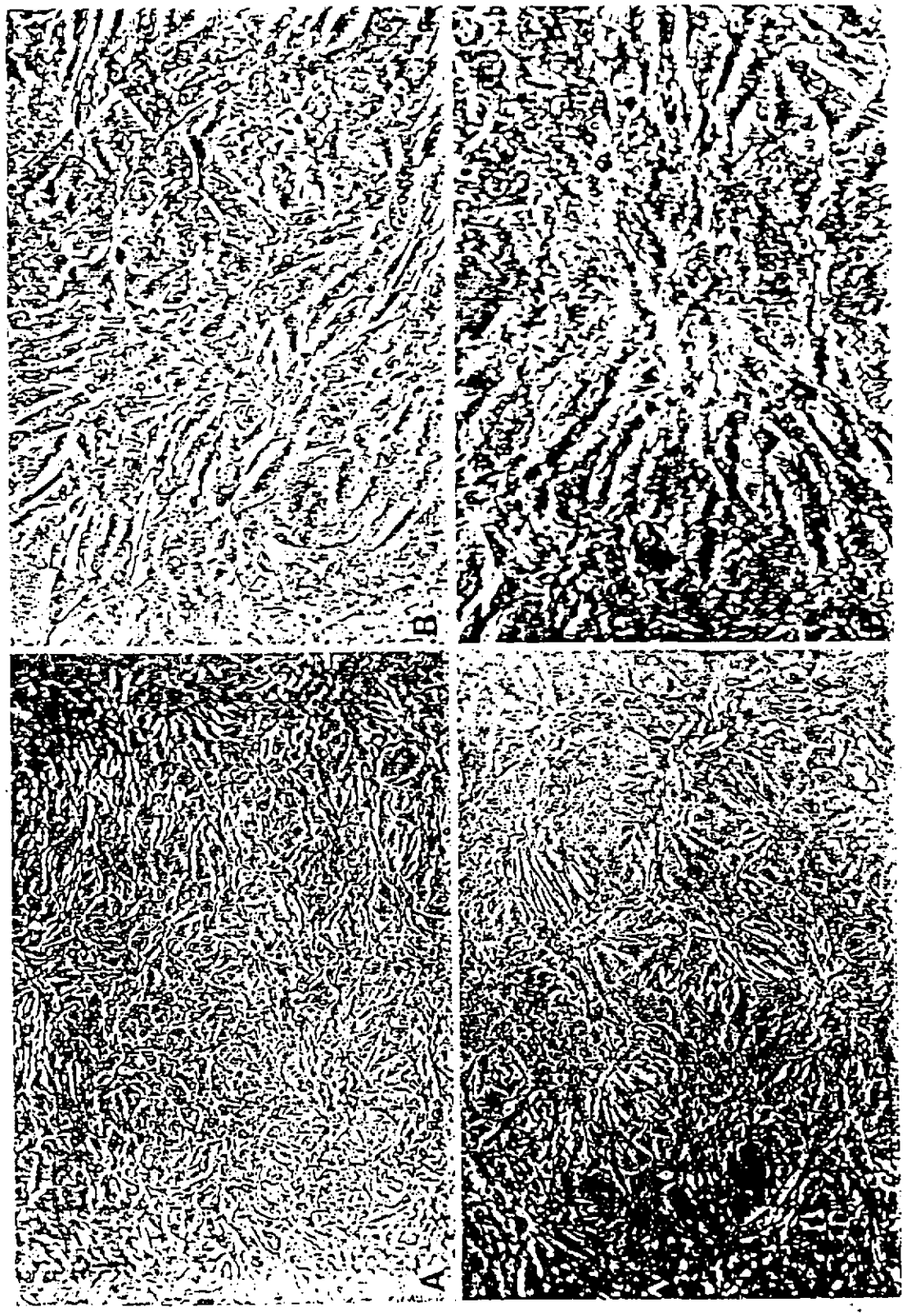


FIG.17

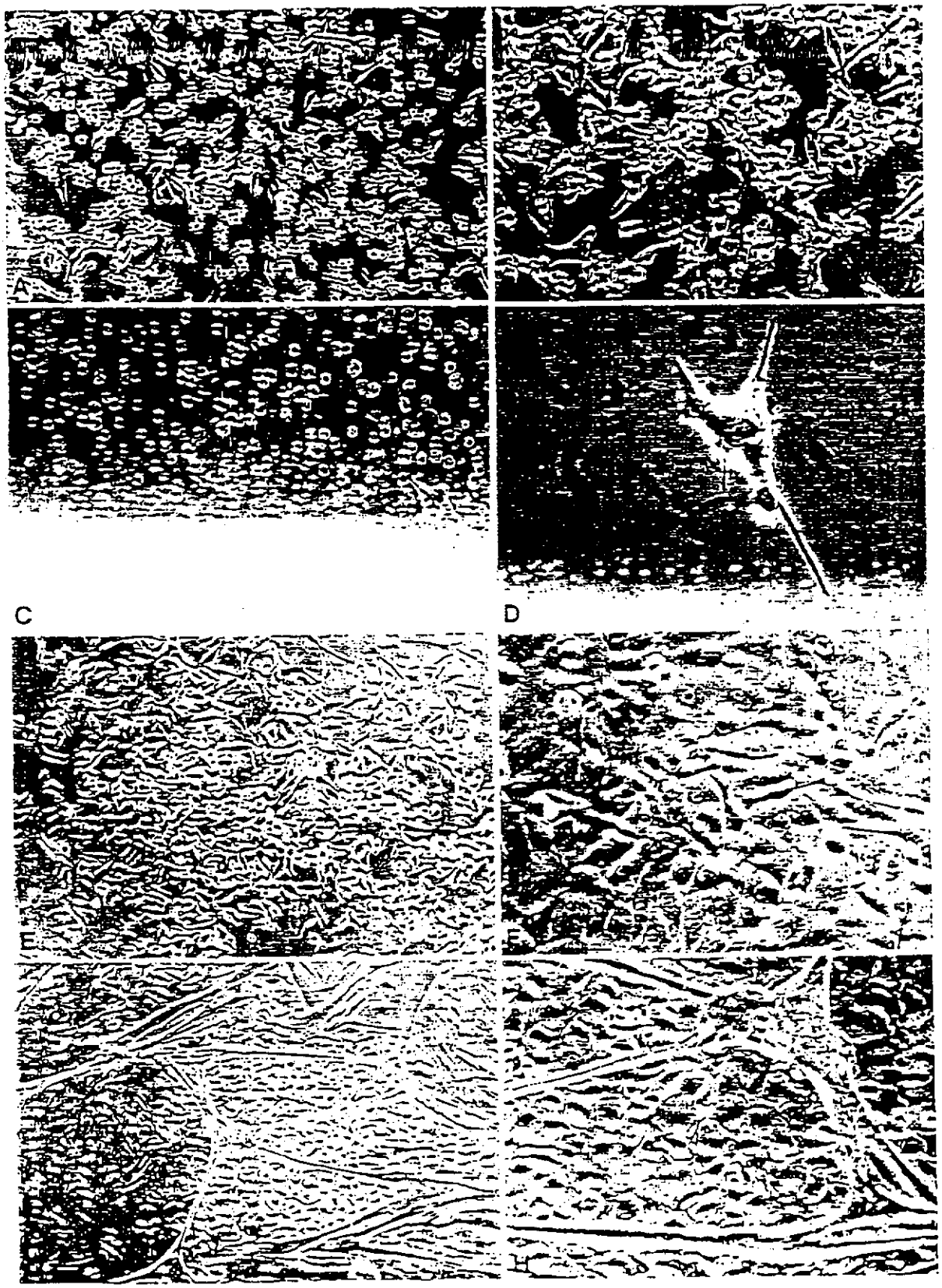


FIG.18

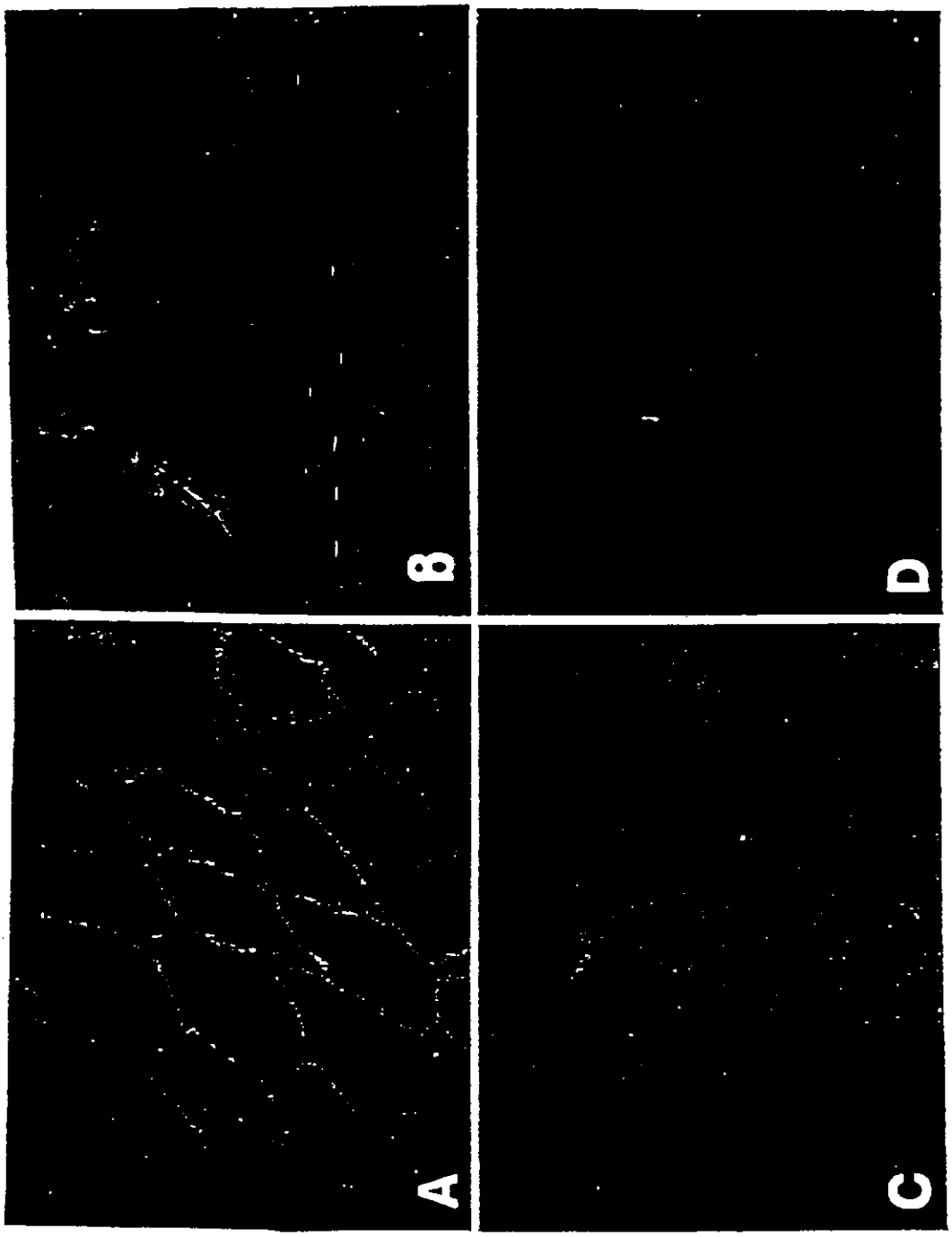


FIG.19

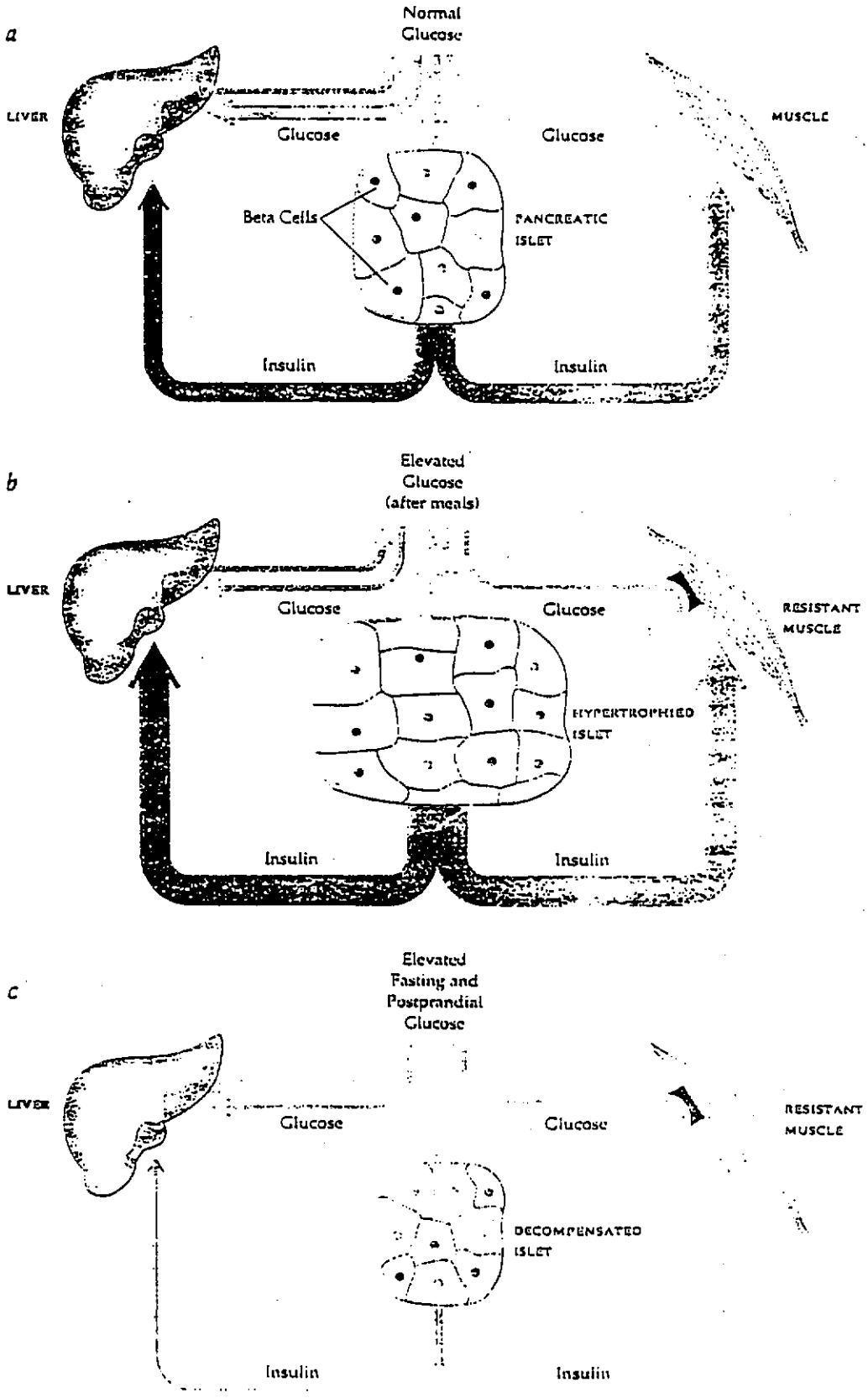

a
Normal
Glucose
LIVER
Glucose
Glucose
MUSCLE
Beta Cells
PANCREATIC
ISLET
Insulin
Insulin
b
Elevated
Glucose
(after meals)
LIVER
Glucose
Glucose
RESISTANT
MUSCLE
HYPERTROPHIED
ISLET
Insulin
Insulin
c
Elevated
Fasting and
Postprandial
Glucose
LIVER
Glucose
Glucose
RESISTANT
MUSCLE
DECOMPENSATED
ISLET
Insulin
Insulin

FIG. 20