Appendix A

List of media used in this study

1. The component of PBI and M16

component	PBI (mM)	M16 (mM)
NaCl	136.00	94.66
KCl	15.42	4.78
$CaCl_2$	0.89	1.71
KH_2PO_4	1.47	1.19
$MgSO_4.7H_2O$	-	1.19
$MgCl_2.6H_2O$	0.44	-
$NaHCO_3$	-	25.00
Na_2HPO_4	1.41	-
Sodium lactate	-	23.28
Sodium pyruvate	-	0.33
Glucose	5.56	5.56
Bovine serum albumin	0.4%	0.4%
Penicillin G	100 unit	100 unit
Streptomycin sulfate	-	38.85 unit
Phenol red		
Osmolarity (mOsm/kg)	280 ± 5	280 ± 5
pH	7.35-7.40	7.35-7.40

Appendix B

List of the chemicals and materials used in this study

Chemicals/Materials	Source
0.2m filtered unit	Satorius, Germany
7x cleaning solution	ICN Biomedical, USA
Bovine serum albumin	Sigma chemical Co., USA
Calcium chloride	Sigma chemical Co., USA
D(+)-Glucose	Sigma chemical Co., USA
Lactic acid	Sigma chemical Co., USA
Magnesium chloride 6-hydrate	Sigma chemical Co., USA
Magnesium sulfate 7-hydrate	Sigma chemical Co., USA
Mineral oil	Sigma chemical Co., USA
Penicillin G sodium salt	Sigma chemical Co., USA
Phenol red	Sigma chemical Co., USA
Plastic petri dish	Nunclon, Denmark
Potassium chloride	Sigma chemical Co., USA
Potassium phosphate monobasic anhydrous	Sigma chemical Co., USA
Pyruvic acid	Sigma chemical Co., USA
Sodium bicarbonate	Sigma chemical Co., USA

Sodium chloride	Sigma chemical Co., USA
Streptomycin sulfate	Sigma chemical Co., USA
Syringe	Nipro, Thailand

Appendix C

1. Preperation of capillary pipette

In constructing capillary pipettes, the thin portion of a Pasteur pipette was held in a gas flame and rotated for a few seconds. When the glass became soft, it was quickly removed from the flame and immediately pulls out a predetermined distance without breaking the capillary segment. The ends were held steady for a few seconds, then bent it and broken at about 2 cm from the shoulder of pipette. Examination of the pipette under the stereomicroscope was made to be certain broken cleanly to give a perfect flat tip. Aperture diameter was controlled by initial pull when the glass was soft. For 2-cell mouse embryos, an aperture of approximately 120 μm was most desirable. This was achieved with an initial pull of about 12 inches.

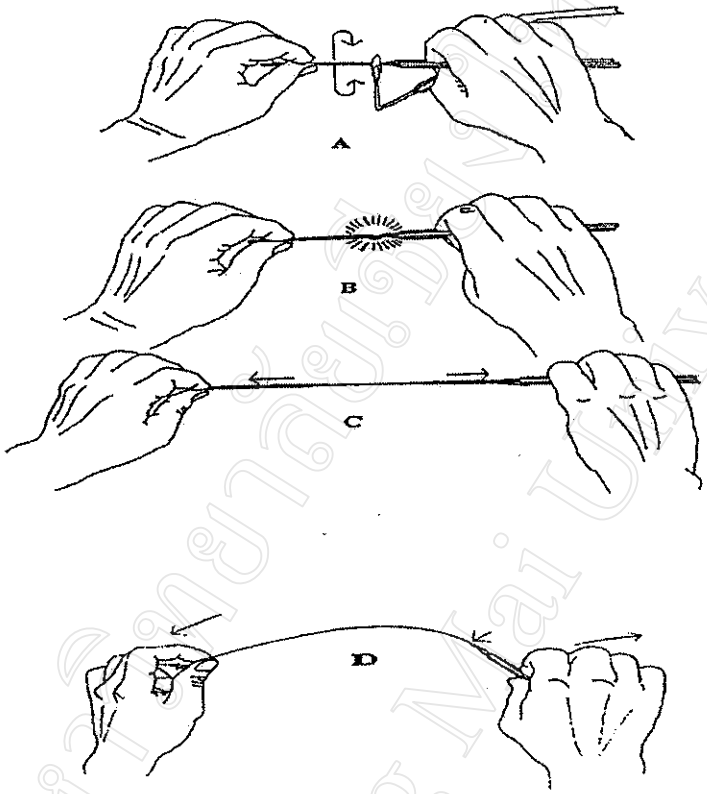

Figure 21 Procedure for drawing Pasture pipette. A Pasture pipette was rotated in a gas flame (A) Until it was softened locally and quite easy to deform. It was pulled from the flame (B) and immediately drawn out a predetermined distance (C)The ends were held steady for a few seconds, then bent the capillary segment and broken at about 2 centimeters from the shoulder of of pipette (D) (Keen and Rafferty, 1970)

Appendix D

List of instruments used in this study

Instrument	**Source**
Beam balance	Satorius, Germany
Dissecting microscope	Olympus, Japan
Laminar flow work station	Gelman Sciences, USA
Lyophilizer	Leybold-Heraeus, Germany
Osmometer	Gonotec, Germany
pH meter	Orion, England
CO_2Water-jacketed incubator	Nuair, USA

Curriculum vitae

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March, 1987	Certificate of Junior High School, Uthaiwitayakom School, Uthaitani
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