applied sciences

MDPI

Article

Supplementary Materials: Plasma Treatment of Fish Cells: The Importance of Defining Cell Culture Conditions in Comparative Studies

Henrike Rebl [1,*], Claudia Bergemann [1], Sebastian Rakers [2], Barbara Nebe [1] and Alexander Rebl [3]

[1] Department of Cell Biology, Rostock University Medical Center, Schillingallee 69, 18057 Rostock, Germany; claudia.bergemann@med.uni-rostock.de (C.B.); barbara.nebe@med.uni-rostock.de (B.N.)
[2] Fraunhofer-Research Institution for Marine Biotechnology and Cell Technology, Mönkhofer Weg 239a, 23562 Lübeck, Germany; sebastian@bluu.bio
[3] Institute of Genome Biology, Leibniz Institute for Farm Animal Biology (FBN), Wilhelm-Stahl-Allee 2, 18196 Dummerstorf, Germany; rebl@fbn-dummerstorf.de
* Correspondence: henrike.rebl@med.uni-rostock.de; Tel.: +49-381-494-7773
† Recent address: Bluu GmbH, Schönhauser Allee 176, Building 21, 10119 Berlin, Germany.

Table S1. Overview of the cell lines used in this study.

Name	Cell type	species	Culture temp
OMYleb	Liver epithelium	Fish (rainbow trout)	20 °C
OMYsd	Skin fibroblast	Fish (rainbow trout)	20 °C
RTgill-W1	Gill epithelium	Fish (rainbow trout)	20 °C
He pG2	Liver epithelium	human	37 °C
mHe p-R1	Liver epithelium	mouse	37 °C

Table S2. List of the components of the cell culture media L-15 (Leibovitz's L-15 medium; Thermo Fisher Scientific; Cat.no. 11415) and DMEM (Dulbecco's modified Eagle's medium; Thermo Fisher Scientific, Cat.no. 10569) according to the manufacturers' protocol. Potentially antioxidative compounds are printed in bold.

Component		L-15 [mg/L]	DMEM [mg/L]
amino acids			
	Glycine	200.0	30.0
	L-Alanine	225.0	
	L-Arginine	500.0	84.0
	L-Asparagine	250.0	
	L-Cysteine	120.0	63.0
	L-Glutamine	300.0	
	L-Histidine	250.0	42.0
	L-Isoleucine	125.0	105.0
	L-Leucine	125.0	105.0
	L-Lysine	93.7	146.0
	L-Methionine	75.0	30.0
	L-Phenylalanine	125.0	66.0
	L-Serine	200.0	42.0
	L-Threonine	300.0	95.0
	L-Tryptophan	20.0	16.0
	L-Tyrosine	300.0	104.0
	L-Valine	100.0	94.0
	L-Alanyl-Glutamine		862.0

vitamins			
	Choline chloride	1.0	4.0
	Calcium pantothenate	1.0	4.0
	Folic Acid	1.0	4.0
	Niacinamide	1.0	4.0
	Pyridoxine hydrochloride	1.0	4.0
	Riboflavin phosphate Na	0.1	0.4
	Thiamine monophosphate	1.0	4.0
	Inositol	2.0	7.2
inorganic salts			
	Calcium Chloride	185.0	200.0
	Magnesium Chloride	200.0	
	Magnesium Sulfate	97.7	97.7
	Potassium Chloride	400.0	400.0
	Potassium Phosphate	60.0	
	Sodium Chloride	8000.0	6400.0
	Sodium Phosphate	190.0	125.0
	Ferric Nitrate		0.1
	Sodium Bicarbonate		3700.0
other			
	Phenol Red	11.0	15.0
	Sodium Pyruvate	550.0	110.0
	D-Glucose (Dextrose)		4500.0
	D+ Galactose	900.0	

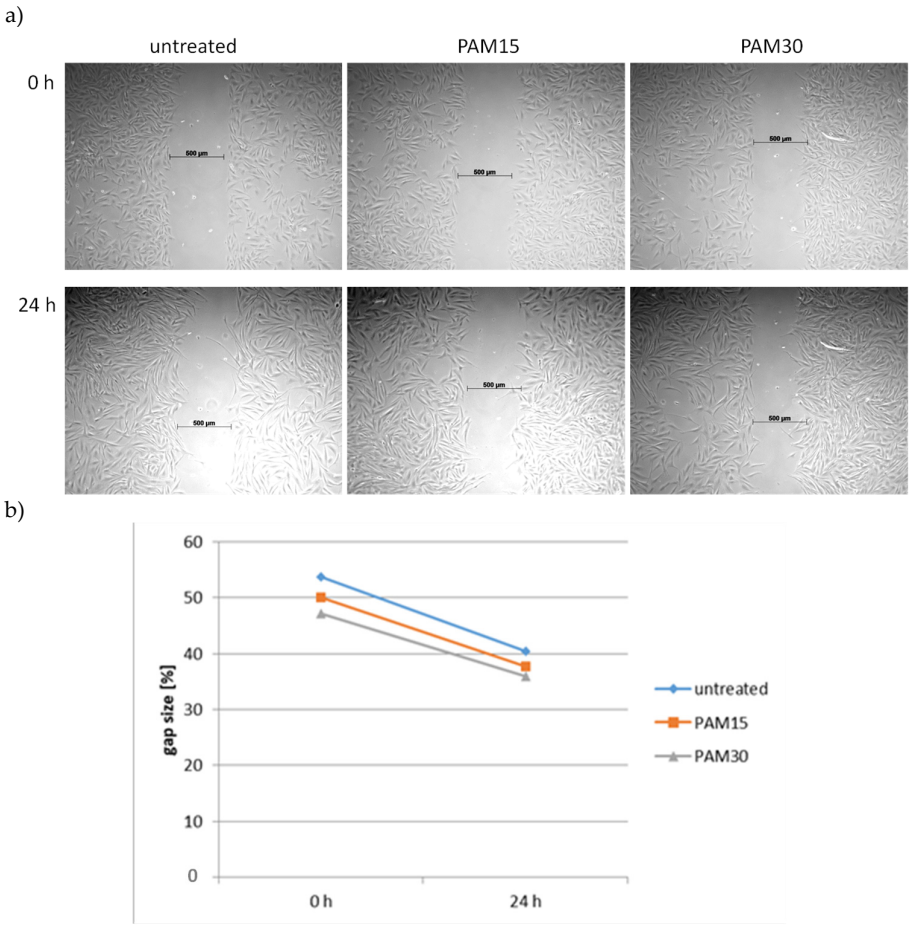

Figure S1. Wound-healing assay with OMYleb cells under the influence of short plasma treatment times. Exemplary images are shown in **a**). The size of the gap between two near-confluent cell layers reduced after 24h growth. We could not detect a difference between untreated cells or cells growing in PAM (**b**). *n*=4 independent experiments in DMEM containing 1 mM pyruvate.

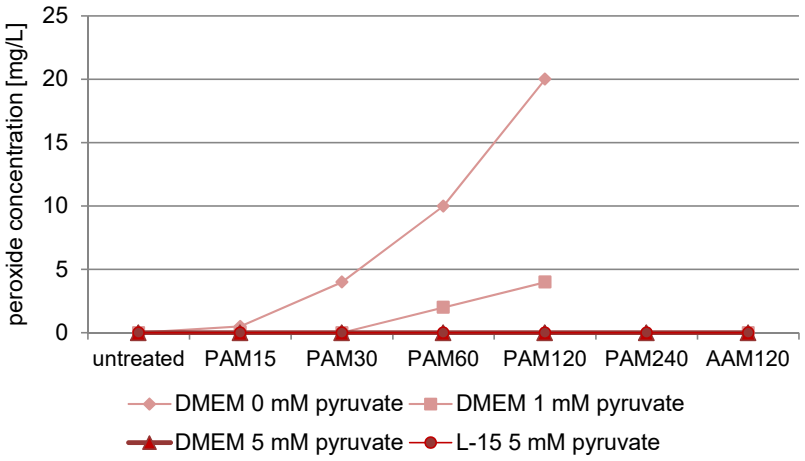

Figure S2. Measurement of hydrogen peroxide in the different media used in this study at the time they were given to the cells. Plasma treatment was performed for the indicated times. Only L-15 medium and DMEM 5 mM pyruvate medium were treated for 240 s, but even at these long treatment times no peroxide was detectable (argon-treated medium (AAM) served as control; Quantofix peroxide, Macherey Nagel, Düren, Germany).