

Key Word Index “Problems of Cryobiology”, Year 2009

α -1-proteinase inhibitor 438
 β -tubulin 431
1,2-butane diol 137
1,2-propane diol 41, 613, 177, 261
3b-hydroxysteroid dehydrogenase 63

A

activation energy 41, 137, 261
Actovegin 362
adhesion 395
age 421
aggregation of platelets 324
agrochemical preparations 283
albumin 3
alcohols, *methoxyderivatives of* 413
alkyl-b,D-glucopyranosides 449
amides 383
amphiphilic compounds 49
anaerobic processes 290
animal erythrocytes 413
antifreeze proteins 18, 121
 classification 121
 evolution 273
 occurrence in nature 121
 regulation 273
antihemolytic effect 449
antioxidative activity 254
apple cuttings 473
autoimmune thyroiditis 349

B

behaviour 421
blood of ground squirrels 254
blood plasma proteins 254
bone marrow cells
 cryopreserved syngeneic 71
 stromal 200

C

carbohydrates, *soluble* 283
cartilage 362, 481
cell(s)
 bone marrow stromal 200
 fetal nerve 431
 fetal liver 186, 349
 Leydig 63
 SPEV 25, 137
channels, *protein* 413
chondroitin sulfates 362
classification of antifreeze proteins 121
clot retraction, *platelet* 324

coefficients of permeability 25, 41, 137, 261
concentrations, *efficient* 449
cold
 effects, rhythmical 143
 stress 449
 wounds os skin 369
 thermoreception 461
cooling, *general* 421
cooling rate 63, 338, 473
cord blood 362, 481
 leukoconcentrate 93
 fraction below 5 kDa 362, 395, 481
cryoapplication 301
cryodispersion 488
cryoeffect 481
cryopreservation 273, 431, 395
 of apple and pear cuttings 473
 of cuttings of fruit-berry cultures 338
 of fetal liver cells 186
 of fetal neural cells 431
 of human fibroblasts 395
 of interstitial cell 63
 of platelets 324

cryopreserved

syngeneic bone marrow 71
 testicular tissue 88

cryoprotectant(s) 41, 163, 177, 261, 283, 383, 413, 431
 penetrative and non-penetrative 312

cryoprotective media 154

crystallization 18

cryotunnel nitrogen 4431

cryosublimation fractionation 488

culturing

of skin flaps in vitro 93

cuttings

of apple and pear 473
 of fruit-berry cultures 338

cytofluorimeter flow 431

cytotoxicity 383

D

dead bee body extract 369
denaturation, *thermal* 3
detergents 243
diethyl sulfoxide 3, 163
dimethyl sulfoxide 3, 25, 41, 56, 163, 177, 261, 312, 431
dimethyl formamide 163
diols 383
dopamine 200

E

effect, *antihemolytic* 449

efficiency 473
efficient concentrations 449
elastase 438
 endotelial 438
electron paramagnetic resonance 32, 177
electron spectroscopy 3
embryos of loach (*Misgurnus fossilis* L.) 154
empirical dependencies 163
energy of activation 41, 137, 261
endocrine organs 71
erythrocytes 10, 243, 261, 312
 equine 49
 mammalian 406, 413, 449
 hypothermal storage 10
ethylene glycol 137, 163, 413
extract
 of dead bee body 369
 of spleen 369
extraction with liquified gases 488

F

fetal
 liver cells 186, 349
 nerve cells 431
fetoplacental complex preparations, *therapeutic potential of* 349
fibroblasts of human 395
fishes, *sea* 290
flow cytofluorimeter 431
fluorescent spectroscopy 3
fractal 301
fractionation cryosublimation 488
freeze-thawing 32
frost hardiness 283
fruit-berry cultures, *cuttings of* 338

G

GFAP 431
general cooling 421
glycerol 41, 163, 177, 413
glycosaminoglycans 481
ground squirrels, *blood of* 254

H

hardiness
 frost 283
 winter 283
healing 369
heat of melting, *latent* 163
hematocrit 406
hematopoietic progenitors 186
hematosalivary barrier 301
hemolysis 243
 hypertonic 49
heparin 362
hexosamine 362

hexuronic acids 362
hormones 71
human
 cord blood leukoconcentrate 93
 erythrocytes 449
 fibroblasts 395
humidity of cuttings of fruit-berry cultures 338
hyaluronic acid 362
hyperosmotic stress 449
hypertonic
 hemolysis 49
 shock 406
hypothermal storage of erythrocytes 10
hypothermia 290
hypotonic shock reaction 324

I

immune system, *cell and humoral link of* 143
incubation 383
inhibition of respiratory chain 177
integrity, *morphological* 383
ionic strength 10
irradiation, *lethal* 71

L

Leydig cells 63
leukocytes 143
liver, *fetal, cells of* 186, 349
lymphoid organs 71

M

MAB 431
mammalian erythrocytes 406, 413
mechanism of action of antifreeze proteins 18
medium(-a)
 pH 10
 combined cryoprotective 324
 cryoprotective 154
 osmolarity 406
melting
 latent heat of 163
 temperature of 163
membrane permeability 413
methoxyderivatives of alcohols 413
metalloelastase 438
microscopy 301
mitochondria 32, 177
Misgurnus fossilis L. 154
modification of proteins, *oxidative* 254
morphofunctional activity 93
morphological
 integrity 383
 study 88
mud loach (*Misgurnus fossilis* L.) 154
muscles, skeletal 290
myeloid organs 71

N

nitrogen
liquid 362
 nitrogen
cryotunnel 488
 nestin 431

O

"open field" test 421
 osmolarity of medium 406
 osmotic factor 243
 overcooling 63
 oxidative modification of proteins 254
 oxygen tension 290
 oxyproline 362

P

pH of medium 10
 PEG-1500 312
 PEO-100 163
 PEO-1500 163, 283, 406
 "packing" effect 312
 Parkinson-like syndrome 200
 parodontium 301
 pear cuttings 473
 penumbra 301
 permeability
coefficients 25, 41, 137, 261
of membrane 413
 phenotypic markers 143
 platelet(-s) 324
clot retraction 324
 proliferation 395
 propidium iodide 431
 propylene glycol 41
 protein(-s)
antifreeze 18, 12, 273
classification 121
evolution 273
occurrence in nature 121
regulation 273
channels 413
of blood plasma 254
 proteoglycans 481

R

rape 283
 rate *of cooling* 338, 473
of warming 338, 473
 rats 200, 421
 rabbits *testes* 88
testicular tissue 56, 88
 reduction of spin probe 32, 177
 reparative regeneration 362, 481
 respiratory chain, *inhibition of* 177
 rhythmic cold effects 143

S

SPEV cells 25, 137
Saccharomyces cerevisiae 41
 sexual abstinence 88
 skeletal muscles 290
 skin *explants* 93
 spectrin 49
 spectroscopy *electron* 3
fluorescent 3
 spermatogenesis 88
 spin probe reduction 32, 177
 spleen extract 369
 stromal cells from bone marrow 200
 storage period 388
 stress
cold 449
hyperosmotic 449
 structure reorganization 32

T

temperature of melting 163
 test "open field" 421
 testes 88
 testicular tissue 56
cryopreserved, allotransplantation of 88
 testosterone 63
 therapeutic potential of fetoplacental complex preparations 349
 thermal denaturation 3
 thyroiditis, *autoimmune* 349
 tissue
hypoxia 290
testicular 56
 torpor 438
 tubilin, β - 431
 TRP channels 461
 transplantation
of cryopreserved syngeneic bone marrow 71
of cryopreserved testicular tissue, allo- 88
 trehalose 163
 tyrosine 362

U

ultrastructure 301

V

viability 338, 473
 vitrification 154
 volumetry 25, 137

W

warming rate 338, 473
 winter hardiness 283

Y

yeast like fungi 41
 yielding capacity 283