

PLASMA MEDICINE

VOLUME 3 CONTENTS

Page Range of Issues

Issues 1-2: 1-152; Issue 3: 153-242 Issue 4: 243-332

NUMBERS 1-2

- PREFACE: 1st Young Professionals Workshop on Plasma Medicine 2012** vii
Kai Masur & Stephan Reuter
- Differential Viability of Eight Human Blood Mononuclear Cell Subpopulations After Plasma Treatment** 1
Sander Bekeschus, Julia Kolata, Anne Müller, Axel Kramer, Klaus-Dieter Weltmann, Barbara Bröker, & Kai Masur
- Identification of the Molecular Basis of Non-thermal Plasma-Induced Changes in Human Keratinocytes** 15
Anke Schmidt, Thomas von Woedtke, Klaus-Dieter Weltmann, & Kai Masur
- A Systematic Characterization of a Novel Surface Dielectric Barrier Discharge for Biomedical Experiments** 27
Mareike A. Ch. Hänsch, Jörn Winter, René Bussiahn, Klaus-Dieter Weltmann, & Thomas von Woedtke
- Effects of Atmosphere Composition and Liquid Type on Plasma-Generated Reactive Species in Biologically Relevant Solutions** 45
Helena Tresp, Malte U. Hammer, Klaus-Dieter Weltmann, & Stephan Reuter
- Comparison of Biological Effects on Human Keratinocytes Using Different Plasma Treatment Regimes** 57
Susanne Strassenburg, Ute Greim, René Bussiahn, Beate Haertel, Kristian Wende, Thomas von Woedtke, & Ulrike Lindequist

Viability of Human Blood Leukocytes Compared with Their Respective Cell Lines after Plasma Treatment	71
<i>Lena Bundscherer, Sander Bekeschus, Helena Tresp, Sybille Hasse, Stephan Reuter, Klaus-Dieter Weltmann, Ulrike Lindequist, & Kai Masur</i>	
Proteomic Tools to Characterize Non-Thermal Plasma Effects in Eukaryotic Cells	81
<i>K. Wende, A. Barton, S. Bekeschus, L. Bundscherer, A. Schmidt, K.-D. Weltmann, & K. Masur</i>	
Influence of Plasma Treatment on the Structure and Function of Lipids	97
<i>M.U. Hammer, E. Forbrig, S. Kupsch, K.-D. Weltmann, & S. Reuter</i>	
Effects of the Effluent of a Microscale Atmospheric Pressure Plasma-jet Operated with He/O₂ Gas on Bovine Serum Albumin	115
<i>Jan-Wilm Lackmann, Eugen Edengeiser, Simon Schneider, Jan Benedikt, Martina Havenith, Julia E. Bandow</i>	
Nonthermal Plasma Increases Expression of Wound Healing Related Genes in a Keratinocyte Cell Line	125
<i>Annemarie Barton, Kristian Wende, Lena Bundscherer, Sybille Hasse, Anke Schmidt, Sander Bekeschus, Klaus-Dieter Weltmann, Ulrike Lindequist, & Kai Masur</i>	
Experimental Evidences on Synergy of Gas Discharge Agents in Bactericidal Activity of Nonthermal Plasma	137
<i>Elena Sysolyatina, Andrey Mukhachev, Maria Yurova, Mikhail Grushin, Vladimir Karal'nik, Alexander Petryakov, Nikolai Trushkin, Maria Danilova, Boris Naroditsky, Alexander Gintsburg, Yuri Akishev, & Svetlana Ermolaeva</i>	

NUMBER 3

Nonequilibrium Atmospheric Pressure Dielectric Barrier Discharge In Ophthalmology	153
<i>Elizabeth Curran, Robert Duffy, David Peretz, Sin Park, Breanna Seiber, Ryan Smalley, Ajay Raghavan, Mehul Gurjar, Danil Dobrynin, Kimberly Wasko, Alexander Fridman, Gregory Fridman, & David Pao</i>	
Review of Major Directions in Non-Equilibrium Atmospheric Plasma Treatments in Medical, Biological, and Bioengineering Applications	173
<i>Justine Han</i>	

NUMBER 4

- Promising Trial for Treatment of Chronic Myelogenous Leukemia Using Plasma Technology** 243
M.M. Ahmed, G.M. El-Aragi, Abdel Monsef A. Elhadary, & Z.S. Said
- Cold Physical Plasma Treatment Alters Redox Balance in Human Immune Cells** 267
Sander Bekeschus, Thomas von Woedtke, Axel Kramer, Klaus-Dieter Weltmann, & Kai Masur
- Characterization of Plasma Parameters and Tissue Injury Produced by Plasma Electrosurgical Systems** 279
J. Canady, A. Shashurin, K. Wiley, N. J. Fisch, & M. Keidar
- Nonthermal Plasma-Assisted Trauma Management: Hemostasis of Noncompressible Profuse Hemorrhage** 291
Atharva Amritkar, Becky Cunningham, Bradley Hawkins, Brennan Batalla, David Moore, Eric Thompson, Matt Rossett, Rittick Gupta, Justine Han, & Justin M. Johnson
- Nonequilibrium Atmospheric Pressure Forward-Vortex Plasma System for Generation of Reactive Species in Flowing Water for Medical Applications** 315
Tony Liang, Justine Han, Selli Abdali, Justin Ruegg, & Alexander Rabinovich
- INDEX to Volume 3** 333

PLASMA MEDICINE

AUTHOR INDEX FOR VOLUME 3

Page Range of Issues

Issues 1-2: 1-152; Issue 3: 153-242 Issue 4: 243-332

- | | | |
|-----------------------------------|--------------------------------------|---|
| Ahmed, M.M., 243 | Greim, U., 57 | Peretz, D., 153 |
| Akishev, Y., 137 | Grushin, M., 137 | Petryakov, A., 137 |
| Amritkar, A., 291 | Gupta, R., 291 | Raghavan, A., 153 |
| Bandow, J.E., 115 | Gurjar, M., 153 | Reuter, S., 45,71,97 |
| Barton, A., 81, 125 | Haertel, B., 57 | Rossett, M., 291 |
| Batalla, B., 291 | Hammer, M.U., 45,97 | Said, Z.S., 243 |
| Bekeschus, S.,
1,71,81,125,267 | Han, J., 173,291 | Schmidt, A., 15,81,125 |
| Benedikt, J., 115 | Hänsch, M.A.Ch., 27 | Schneider, S., 115 |
| Bröker, B., 1 | Hasse, S., 71,125 | Seiber, B., 153 |
| Bundscherer, L., 71,81,125 | Havenith, M., 115 | Shashurin, A., 279 |
| Bussiahn, R., 27,57 | Hawkins, B., 291 | Smalley, R., 153 |
| Canady, J., 279 | Johnson, J.M., 291 | Strassenburg, S., 57 |
| Cunningham, B., 291 | Karal'nik, V., 137 | Sysolyatina, E., 137 |
| Curran, E., 153 | Keidar, M., 279 | Thompson, E., 291 |
| Danilova, M., 137 | Kolata, J., 1 | Tresp, H., 45,71 |
| Dobrynin, D., 153 | Kramer, A., 1,267 | Trushkin, N., 137 |
| Duffy, R., 153 | Kupsch, S., 97 | von Woedtke, T.,
15,27,57,267 |
| Edengeiser, E., 115 | Lackmann, J.-W., 115 | Wasko, K., 153 |
| El-Aragi, G.M., 243 | Lindequist, U., 57,71,125 | Weltmann, K.-D.,
1,15,27,45,71,81,97,
125,267 |
| Elhadary, A.M.A., 243 | Masur, K.,
1,15,71,81,125,267,291 | Wende, K., 57,81,125 |
| Ermolaeva, S., 137 | Mukhachev, A., 137 | Wiley, K., 279 |
| Fisch, N.J., 279 | Müller, A., 1 | Winter, J., 27 |
| Forbrig, E., 97 | Naroditsky, B., 137 | Yurova, M., 137 |
| Fridman, A., 153 | Pao, D., 153 | |
| Fridman, G., 153 | Park, S., 153 | |
| Gintsburg, A., 137 | | |

PLASMA MEDICINE

SUBJECT INDEX FOR VOLUME 3

Page Range of Issues

Issues 1-2: 1-152; Issue 3: 153-242 Issue 4: 243-332

- acidification, 27
apoptosis, 71, 267
arginase, 243
atmospheric pressure plasma, 27, 115
bilayer, 97
biological active reactive species, 27
biological efficiency, 27
blood, 291
BSA, 115
CD4+ T helper cells, 71
cell cycle, 57
chronic myelogenous leukemia, 243
coagulation, 291
cold atmospheric pressure plasma, 1, 267
cytokinesis block micronucleus assay, 243
DBD plasma, 57
DNA damage, 57
electron paramagnetic resonance spectroscopy, 45
electron spin resonance spectroscopy, 45
eye sterilization, 153
gene expression profiling, 15
gene expression, 125
HaCaT cells, 125
HaCaT keratinocytes, 15
hemorrhage, 291
hemostasis, 291
human blood cells, 1
hydrogen peroxide, 27, 45
jurkat cells, 71
keratinocytes, 57, 81, 125
LC/MS, 81
lesions, 97
lipid oxidation, 97
lipids, 97
membrane, 97
monocytes, 71
nitrate, 27
nitrite, 27
nonequilibrium atmospheric plasma, 173
non-thermal atmospheric pressure plasma, 81
nonthermal plasma, 15, 71, 97, 125, 137, 291
ophthalmology, 153
oxidative stress, 1, 267
pH effect, 71
pH, 45
plasma jet, 81, 243
plasma medicine, 1, 15, 71, 81, 97, 125, 173, 267, 291
plasma poration, 97
plasma sterilization, 153
plasma treatment regime, 57
plasma treatment, 97
plasma-induced liquid chemistry, 27
protein modification, 115
proteomics, 81
Pseudomonas aeruginosa, 137
radicals, 45
raman spectroscopy, 115
reactive nitrogen species, 15, 45
reactive oxygen and nitrogen species, 1
reactive oxygen species, 15, 45, 81
reactive species, 45
redox balance, 267
ROS, 57
sDBD, 27
self-mediated in- and efflux, 97
Staphylococcus aureus, 137
sterilization, 137
surface dielectric barrier discharge, 27

TGF- β 1, 243
THP-1 cells, 71
trauma, 291

wound healing, 71,125
X-jet, 115