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### **List of Abbreviations**

Abbreviation	Meaning
° C	Degree Celsius
A-aO <sub>2</sub>	Alveolar-arterial O <sub>2</sub> gradient
ABG	Arterial Blood Gas Analysis
AECC	The American European Consensus Conference
AHA	American Heart Association
AIS	Alveolar-interstitial syndrome
ALI	Acute Lung Injury
ALT	Alanine Aminotransferase
Ang-1	Angiopoietin 1
Ang-2	Angiopoietin 2
AP	Anteroposterior
APACHE II	Acute Physiology And Chronic Health Evaluation II
score	score
APC	Inhaled activated protein C
ARDS	Acute Respiratory Distress Syndrome
AST	Aspartate Aminotransferase
AUC	Area under curve
BAL	Bronchoalveolar Lavage
BNP	Brain natriuretic peptide
$Br_2$	Bromine
BUN	Blood Urea Nitrogen
C3	Complement 3
C5	Complement 5
c-AMP	Cyclic adenosine monophosphate
CBC	Complete Blood Count
c-GMP	Cyclic guanosine monophosphate
CH <sub>3</sub> Br	Methyl bromide (bromomethane)
CHF	Congestive heart failure
$Cl_2$	Chlorine
CNS	Central Nervous System
СО	Carbon monoxide
CO <sub>2</sub>	Carbon dioxide

COCl <sub>2</sub> Phosgene (carbonyl chloride)  CRP C-Reactive Protein  CT scanning Computed Tomography scanning  CVC Central venous catheter	
CT scanning Computed Tomography scanning CVC Central venous catheter	
CVC Central venous catheter	
CVP Central venous pressure	
CVS Cardiovascular System	
CXR Chest X ray	
<b>DNA</b> Deoxyribonucleic acid	
ECCO <sub>2</sub> R Extracorporeal CO <sub>2</sub> removal	
<b>ECMO</b> Extracorporeal membrane oxygenation	
EDTA Ethylenediaminetetraacetic acid	
<b>EPA</b> Eicosapentaenoic acid	
<b>EVD</b> Extravascular lung density	
FACTT Fluid And Catheter Treatment Trial	
FDG Fluorodeoxyglucose	
FEV1 Forced Expiratory Volume in 1 second	
FVC Forced Vital Capacity	
g Earth's gravitational force	
GLA Gamma-linolenic acid	
GM-CSF Granulocyte-Macrophage Colony-Stimulating	
Factor	
<b>GSH</b> Glutathione	
H <sub>2</sub> O <sub>2</sub> Hydrogen Peroxide	
H <sub>2</sub> S Hydrogen sulfide	
H <sub>2</sub> SO <sub>4</sub> Sulfuric acid	
HCl Hydrogen chloride	
HCO <sub>3</sub> Bicarbonate	
HF Hydrogen fluoride	
HFOV High-frequency oscillatory ventilation	
HFV High-frequency ventilation	
HIV Human Immunodeficiency Virus	
HRCT High-resolution Computed Tomography	
HRP Horseradish peroxidase	
I:E Inspiratory to Expiratory ratio	
ICAM-1 Intercellular adhesion molecule-1	
ICU Intensive Care Unit	
IDLH Immediately Dangerous to Life and Health	
IL-1β Interleukin-1β	

IL-6	Interleukin-6
IL-8	Interleukin-8
INO	Inhaled nitric oxide
IRV	Inverse ratio ventilation
IU/I	International Unit/liter
K	Potassium
K-S test	Kolmogorov-Smirnov test
LDH	Lactate dehydrogenase
LiDCO	Lithium dilution estimate of cardiac output
LIS	Lung Injury Score
LTs	Leukotrienes
M	Mean
MAP	Mean airway pressure
MDH	Malate dehydrogenase
mEq/L	Milliequivalent/liter
mg/dL	Milligram/deciliter
mg/kg/h	Milligram/kilogram/hour
mg/m <sup>3</sup>	Milligram/cubic meter
ml/cmH <sub>2</sub> O	Milliliter/cmH <sub>2</sub> O
mmHg	Millimeter mercury
MOP	Multiple organ failure
n	Number of patients
Na	Sodium
NAC	N-Acetylcysteine
NADH/NAD	Reduced Nicotinamide adenine dinucleotide/ Oxidized Nicotinamide adenine dinucleotide ratio
NADPH	Reduced Nicotinamide adenine dinucleotide Phosphate
NF-kB	Nuclear Factor-kappa-light-chain-enhancer of activated B cells
ng/ml	Nanogram/milliliter
NH <sub>3</sub>	Ammonia
NH <sub>3</sub> OH	Ammonium hydroxide
NHLBI	The National Heart, Lung and Blood Institute
NIV	Non-invasive ventilation
nm	Nanometer
$O_2$	Oxygen
$O_2$	Superoxide ion

#### Se List of Abbreviations

ОН	Hydroxyl radical
OI	Oxygenation Index
P	Probability
PAC	Pulmonary artery catheter
PAI-1	Plasminogen activator inhibitor-1
PaO <sub>2</sub>	Partial pressure of O2
PaO <sub>2</sub> /FiO <sub>2</sub>	Arterial oxygen pressure (tension) to inspired
	oxygen concentration ratio
PAOP	Pulmonary artery occlusion pressure
PBW	Predicted body weight
P <sub>c</sub>	Microvascular Capillary Pressure
PC	Phosphocholine
PCCA	Poison Control Center-Ain Shams University
PChE	Pseudocholinestrase enzyme
PCO <sub>2</sub>	Partial pressure of CO <sub>2</sub>
PDE	Phosphodiestrase
PEEP	Positive End-Expiratory Pressure
PET	Positron Emission Tomography
PGE <sub>1</sub>	Prostaglandin E <sub>1</sub>
PGI <sub>2</sub>	Prostaglandin I <sub>2</sub>
PiCCO	Pulse index Contour Continuous Cardiac Output
PLA	Left Atrial Pressure
ppm	Part per million
PSS	Poisoning Severity Score
PTCER	Pulmonary transcapillary escape rate
PTX3	Pentraxin-3
Q	Cardiac Output
r	Correlation coefficient
RCT	Randomized controlled trial
ROC curve	Receiver operating characteristic curve
Rv	Outflow Resistance
SD	Standard Deviation
SIRS	Systemic Inflammatory Response Syndrome
SO <sub>2</sub>	Sulfur dioxide
SOD	Superoxide dismutase
SO <sub>2</sub> F <sub>2</sub>	Sulfuryl fluoride
SOFA score	Sequential Organ Failure Assessment score
SP-D	Surfactant protein D

SpO <sub>2</sub> /FiO <sub>2</sub>	Pulse oximetric oxygen saturation/Fraction of inspired oxygen ratio
SPSS	Statistical package for Social Science
t	Student's t-test statistical analysis
TFPI	Tissue factor pathway inhibitor
TMB	Tetramethylbenzidine
TNF-α	Tumor Necrosis Factor-α
UK	United Kingdom
US	United States
USA	United States of America
V <sub>A</sub> /Q	Ventilation–Perfusion ratio
VAP	Ventilator-acquired pneumonia
VILI	Ventilator-Induced Lung Injury
Vt	Tidal Volume
VWF	Von Willebrand Factor
$\mathbf{X}^2$	Chi square test statistical analysis
μg/kg/min	Microgram/kilogram/minute

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# Introduction





## Aim of the Work

