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Brain death and organ donation

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LIST OF ABBREVIATIONS

DCIP	2,6-dichloroindophenol	EDTA	Ethylenediaminetetraacetic acid
AKI	Acute kidney injury	ECD	Expanded criteria donors
Paw	Airway pressure	FAO	Fatty acid β oxidation
ALT	Alanine transaminase	FOV	Field of view
ADH	Antidiuretic hormone	FiO ₂	Fraction of inspired oxygen
ASL	Arterial spin labelling	FeNa	Fractional sodium excretion
AST	Aspartate transaminase	GPx	Glutathione peroxidase
AST	Aspartate transaminase	GR	Glutathione reductase
BOLD	Blood oxygen level dependent	GAPDH	Glyceraldehyde 3-phosphate dehydrogenase
BW	Body weight	HO-1	Heme oxygenase 1
BSA	Bovine serum albumin	H ₂ O ₂	Hydrogen Peroxide
BD	Brain death	HAES	Hydroxethyl starch
FCCP	Carbonyl cyanide-4-(trifluoromethoxy) phenylhydrazone	IL-6	Interleukin 6
CAT	Catalase	IL-10	Interleukin-10
CPP	Cerebral perfusion pressure	IL-6	Interleukin-6
Cxcl1	Chemokine ligand 1	ICP	Intracranial pressure
Ccl2	Chemokine ligand 2	I-R	Ischemia-reperfusion
CK-MB	Creatine kinase (myocardium)	IPK	Isolated perfused kidney
CrC	Creatinine clearance	LDH	Lactate dehydrogenase
Cinc1	Cytokine induced neutrophil chemoattractant1	LDHA	Lactate dehydrogenase A
DBD	Deceased brain-dead	LD	Living donor
DCD	Deceased circulatory death	MRI	Magnetic resonance imaging
DGF	Delayed graft function	MDA	Malondialdehyde
DGF	Delayed graft function	MnTMPyP:	Manganese(III) tetrakis(1-methyl-4-pyridyl)porphyrin
DPBS	Dulbecco's phosphate-buffered saline	MAP	Mean arterial pressure
TE	Echo time	MCP-1	Monocyte chemotactic protein 1
ETC	Electron transport chain	NAG	N-acetyl- β -D-glucosaminidase
ETCO ₂	End-tidal CO ₂	NADPH	nicotinamide adenine dinucleotide phosphate
		NA	Noradrenaline

GSSG	Oxidized glutathione
SaO ₂	Oxygen saturation
PAS	Periodic-Acid Schiff
PMSF	Phenylmethylsulfonyl fluoride
PBS	Phosphate buffered saline
Pfk-1	Phosphofructokinase-1
PMN	Polymorphonuclear
PEEP	Positive end expiratory pressure
PNF	Primary non-function
P-P	Probability-probabilty
Pc	Pyruvate carboxylase
Pk	Pyruvate kinase
ROS	Reactive oxygen species
GSH	Reduced glutathione
TR	Repetition time
RCR	Respiratory control ratio
Crs	Serum creatinine
SD	Standard deviation
SOD:	Superoxide dismutase
SVR	Systemic vascular resistance
TLDA	TaqMan low density array
TBA	Thiobarbituric acid
TGF- β	Transforming growth factor-beta
TCA	Tricarboxylic acid
TNF- α	Tumor necrosis factor alpha
TNF- α	Tumor necrosis factor α
UCr	Urinary creatinine
Vcam1	Vascular adhesion molecule 1
H ₂ O	Water
W/D	Wet-dry

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BIOGRAPHY

Dane was born on February 14th, 1988, in Durban, South Africa. After having been raised in South Africa, Germany, and Ivory Coast, Dane graduated from high school at the Ety Hillesum Lyceum in 2006 in Deventer, the Netherlands. He obtained a pre-medical degree from University College Utrecht after which he studied medical statistics for a year at the Radboud University in Nijmegen. He then started medical school in 2010 at the Rijksuniversiteit Groningen. During his medical studies, participation in the summer school "Transplantation" led to a research internship at the surgical laboratory under the supervision of professors H.G.D. Leuvenink and H. van Goor. He decided to prolong his research career and alternated this with his medical studies. Two years of full time research eventually led to this thesis.

For his medical studies, Dane was a medical intern at the University Medical Centre Groningen as well as "Deventer Ziekenhuis" in his hometown. During this period, Dane served as the chairman of the commission "de Masterraad" which represents the student body of the medical school of the Rijksuniversiteit Groningen. He completed his medical degree with a final internship at the neurosurgical department at the University Medical Center Utrecht which is where he now works as a doctor.