APPENDICES

APPENDIX A

1. The levels of potential NO consumption by plasma of control and cadmium-exposed subjects

No.	Control subjects (μM) (subjects with urinary cadmium < 0.5 μg/g creatinine)	Cadmium-exposed subjects (μM) (subjects with urinary cadmium > 5 μg/g creatinine)
1	0.09	0.02
2	0.16	0.14
3	0.08	0.05
4	0.10	0.07
5	0.04	0.03
6	0.05	0.06
7	0.10	0.09
8	0.09	0.14
9	0.10	0.03
10	0.09	0.14
11	0.05	0.18
12	0.07	0.04
13	0.09	0.19
14	0.09	0.04
15	0.15	0.10
16	0.05	0.12
17	0.04	0.10
18	0.03	0.03
19	0.09	0.15
20	0.03	0.04
21	0.12	0.11
22	0.11	0.07
23	0.10	0.06
24	0.15	0.11
25	0.04	0.18
Mean	0.08	0.09
S.E.M	0.01	0.01

2. The levels of soluble thrombomodulin (sTM) in plasma of control and cadmium-exposed subjects

No.	Control subjects (ng/mL) (subjects with urinary cadmium < 0.5 µg/g creatinine)	Cadmium-exposed subjects (ng/mL) (subjects with urinary cadmium > 5 µg/g creatinine)
1	4.94	10.32
2	8.22	10.51
3	6.53	15.26
4	6.79	15.63
5	7.62	12.34
6	5.38	23.11
7	4.26	19.56
8	5.44	11.07
9	4.38	10.01
10	6.35	11.83
11	4.78	10.38
12	7.98	11.62
13	7.26	10.87
14	5.70	17.02
15	5.78	11.79
Means	6.09	13.42
S.E.M	0.33	1.00

APPENDIX B

The percentage of cell viability of HCAEC after incubation with different concentration of cadmium

Cadmium conc. (µM)	% cell viability 6 h	% cell viability 24 h	% cell viability 48 h
0	99.39	101.07	100.00
0.1	94.08	91.23	111.30
1	90.66	94.42	117.79
3	86.79	96.10	115.55
10	93.65	97.12	123.69
30	89.24	92.50	119.47
60	69.77	77.24	80.36
100	59.61	55.76	5.64
300	17.81	7.92	2.42

APPENDIX C

The levels of nitric oxide production in cell culture media

	Control (µM)	Acetylcholine 10 µM (µM)	Cadmium 0.01 µM (µM)	Cadmium 0.1 µM (µM)
	0.33	0.71	0.42	0.05
	0.29	0.83	0.60	0.36
	0.30	0.88	0.56	0.45
Mean	0.31	0.81	0.53	0.29
S.E.M	0.01	0.05	0.05	0.12

The levels of nitric oxide production in HCAEC (nmole/mg protein)

	0.11	0.26	-	0.12
	0.10	0.27	-	0.13
	0.04	0.27	-	0.11
Mean	0.08	0.27		0.13
S.E.M	0.02	0.01		0.01

APPENDIX D

The levels of eNOS mRNA expression after cadmium exposure

	Control	Cadmium 0.1 µM	Cadmium 1 µM	Cadmium 10 µM
	1.00	1.00	1.09	1.39
	1.74	2.39	1.88	1.80
	1.45	1.43	1.65	1.68
Mean	1.40	1.61	1.54	1.62
S.E.M	0.22	0.41	0.23	0.12

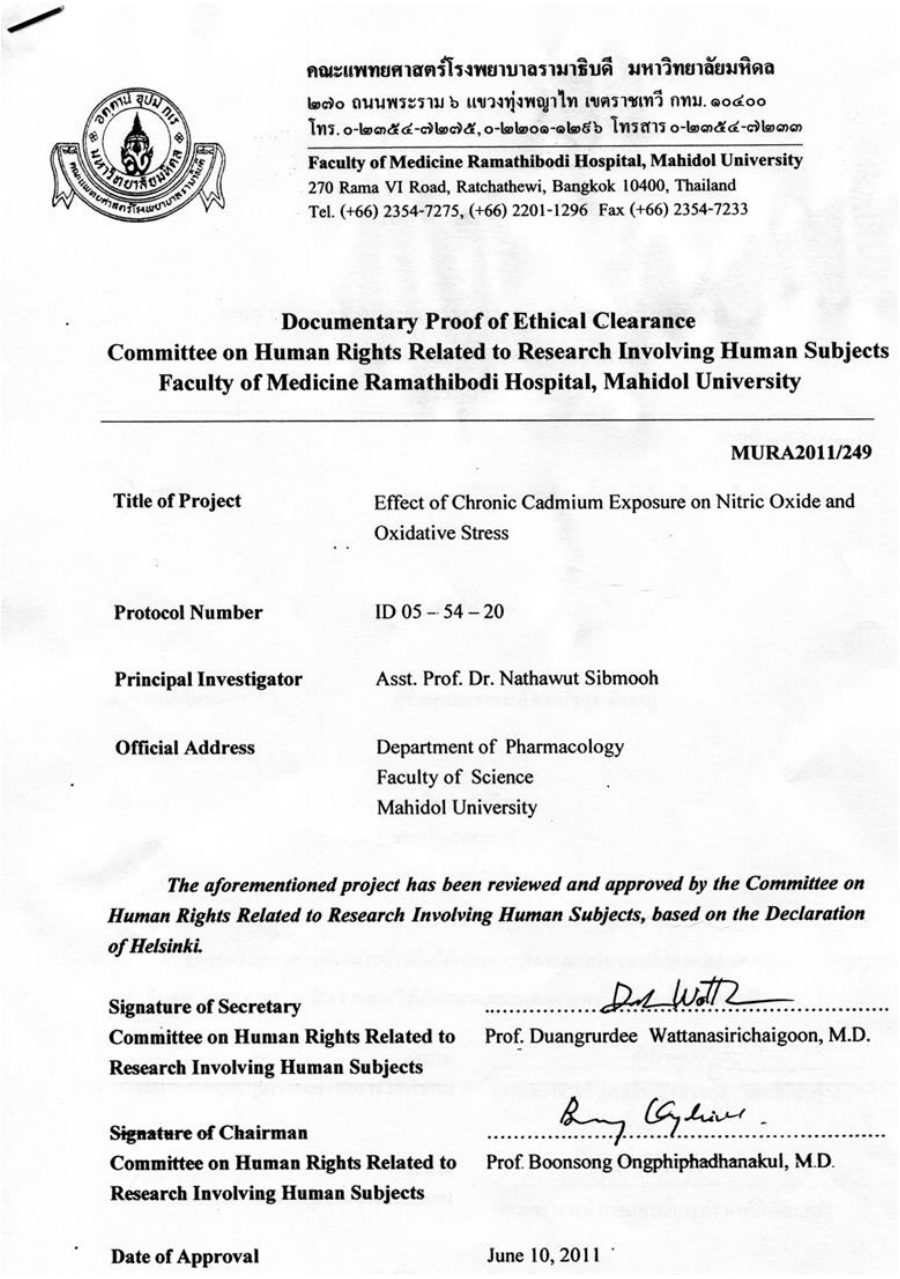
APPENDIX E

The levels of eNOS protein and phosphorylation incubated with cadmium

	Control	Acetylcholine 10 µM	Cadmium 0.01 µM	Cadmium 0.1 µM
	100.00	148.05	123.18	105.98
	100.00	154.55	99.45	75.44
	100.00	232.38	187.03	47.05
Means	100.00	178.33	136.55	76.16
S.EM	0.00	27.09	26.15	17.02

APPENDIX F

1. This study protocol was approved by the Ethics committee of Ramathibodi Hospital, Mahidol University, Bangkok, Thailand (No. ID 05-54-20)



คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี มหาวิทยาลัยมหิดล
๒๗๐ ถนนพระราม ๖ แขวงทุ่งพญาไท เขตราชเทวี กทม. ๑๐๔๐๐
โทร. ๐-๒๓๕๔-๗๒๗๕, ๐-๒๒๐๑-๑๒๙๖ โทรสาร ๐-๒๓๕๔-๗๒๗๓
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Documentary Proof of Ethical Clearance
Committee on Human Rights Related to Research Involving Human Subjects
Faculty of Medicine Ramathibodi Hospital, Mahidol University

MURA2011/249

Title of Project	Effect of Chronic Cadmium Exposure on Nitric Oxide and Oxidative Stress
Protocol Number	ID 05 – 54 – 20
Principal Investigator	Asst. Prof. Dr. Nathawut Sibmooh
Official Address	Department of Pharmacology Faculty of Science Mahidol University

The aforementioned project has been reviewed and approved by the Committee on Human Rights Related to Research Involving Human Subjects, based on the Declaration of Helsinki.

Signature of Secretary Committee on Human Rights Related to Research Involving Human Subjects	..... Prof. Duangrurdee Wattanasirichaigoon, M.D.
Signature of Chairman Committee on Human Rights Related to Research Involving Human Subjects	..... Prof. Boonsong Ongphiphadhanakul, M.D.
Date of Approval	June 10, 2011