

APPENDIX

1. Physical characteristics of subjects

| Subject's code | Physical fitness | Age (years) | Height (cm) | Weight (kg) |
|----------------|-----------------------|-------------|-------------|-------------|
| 01 | Sedentary | 9.90 | 144.00 | 38.94 |
| 02 | Sedentary | 10.30 | 141.00 | 32.63 |
| 03 | Sedentary | 11.60 | 139.00 | 30.64 |
| 04 | Sedentary | 11.40 | 139.00 | 44.05 |
| 05 | Sedentary | 11.80 | 132.50 | 32.97 |
| 06 | Sedentary | 12.20 | 136.00 | 38.40 |
| 07 | Sedentary | 8.30 | 135.50 | 33.42 |
| 08 | Sedentary | 9.00 | 129.50 | 29.00 |
| 09 | Sedentary | 11.80 | 134.50 | 26.62 |
| 10 | Sedentary | 11.10 | 134.00 | 32.93 |
| 11 | Sedentary | 12.00 | 140.00 | 29.13 |
| 12 | Sedentary | 9.00 | 131.00 | 27.51 |
| 13 | Sedentary | 12.00 | 136.00 | 34.05 |
| 14 | Sedentary | 10.00 | 133.00 | 28.26 |
| 15 | Sedentary | 12.00 | 138.00 | 35.66 |
| 16 | Sedentary | 10.00 | 138.00 | 33.97 |
| 17 | Sedentary | 9.00 | 131.50 | 24.16 |
| 18 | Sedentary | 11.00 | 142.50 | 40.75 |
| 19 | High physical fitness | 11.70 | 145.50 | 34.95 |
| 20 | High physical fitness | 10.10 | 146.00 | 41.95 |
| 21 | High physical fitness | 10.20 | 131.00 | 28.36 |
| 22 | High physical fitness | 11.10 | 138.30 | 34.66 |
| 23 | High physical fitness | 10.30 | 140.00 | 32.19 |

| Subject's code | Physical fitness | Age (years) | Height (cm) | Weight (kg) |
|-----------------------|-------------------------|--------------------|--------------------|--------------------|
| 24 | High physical fitness | 9.10 | 134.00 | 25.39 |
| 25 | High physical fitness | 10.20 | 141.00 | 28.16 |
| 26 | High physical fitness | 10.60 | 140.50 | 31.90 |
| 27 | High physical fitness | 9.11 | 144.00 | 33.15 |
| 28 | High physical fitness | 11.00 | 146.00 | 43.14 |
| 29 | High physical fitness | 9.11 | 141.50 | 31.19 |
| 30 | High physical fitness | 10.00 | 146.00 | 38.44 |
| 31 | High physical fitness | 9.00 | 137.00 | 30.24 |
| 32 | High physical fitness | 10.00 | 133.50 | 28.42 |
| 33 | High physical fitness | 10.00 | 132.50 | 29.74 |
| 34 | High physical fitness | 10.00 | 142.50 | 35.24 |

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| Subject's code | Physical fitness | Oral temperature (°C) | Skin temperature of forearm (°C) | Skin temperature of thigh (°C) |
|-----------------------|-------------------------|------------------------------|---|---------------------------------------|
| 01 | Sedentary | 37.416 | 31.58 | 30.57 |
| 02 | Sedentary | 37.252 | 30.37 | 28.81 |
| 03 | Sedentary | 36.764 | 29.63 | 29.31 |
| 04 | Sedentary | 37.448 | 31.42 | 28.88 |
| 05 | Sedentary | 36.986 | 30.56 | 30.23 |
| 06 | Sedentary | 37.258 | 32.24 | 29.61 |
| 07 | Sedentary | 37.236 | 31.4 | 29.35 |
| 08 | Sedentary | 37.086 | 31.56 | 30.55 |
| 09 | Sedentary | 37.286 | 32.20 | 31.49 |
| 10 | Sedentary | 36.886 | 30.62 | 32.03 |
| 11 | Sedentary | 37.404 | 32.55 | 31.88 |
| 12 | Sedentary | 37.750 | 33.75 | 31.35 |
| 13 | Sedentary | 36.966 | 32.77 | 31.90 |
| 14 | Sedentary | 36.434 | 32.65 | 30.98 |
| 15 | Sedentary | 36.706 | 31.65 | 32.16 |
| 16 | Sedentary | 36.254 | 31.04 | 30.81 |
| 17 | Sedentary | 37.000 | 33.46 | 32.38 |
| 18 | Sedentary | 36.890 | 32.4 | 30.21 |
| 19 | High physical fitness | 36.696 | 30.4 | 29.25 |
| 20 | High physical fitness | 36.852 | 29.95 | 29.53 |
| 21 | High physical fitness | 36.572 | 30.71 | 30.15 |
| 22 | High physical fitness | 37.194 | 31.08 | 29.66 |
| 23 | High physical fitness | 36.970 | 31.92 | 31.57 |
| 24 | High physical fitness | 36.732 | 32.58 | 30.74 |
| 25 | High physical fitness | 37.148 | 31.85 | 30.32 |

| Subject's code | Physical fitness | Oral temperature (°C) | Skin temperature of forearm (°C) | Skin temperature of thigh (°C) |
|-----------------------|-------------------------|------------------------------|---|---------------------------------------|
| 26 | High physical fitness | 36.684 | 32.53 | 32.01 |
| 27 | High physical fitness | 37.122 | 32.75 | 31.61 |
| 28 | High physical fitness | 36.970 | 32.40 | 31.93 |
| 29 | High physical fitness | 36.730 | 32.01 | 30.91 |
| 30 | High physical fitness | 36.120 | 31.41 | 31.65 |
| 31 | High physical fitness | 36.338 | 32.15 | 31.28 |
| 32 | High physical fitness | 36.792 | 32.21 | 31.29 |
| 33 | High physical fitness | 36.342 | 32.64 | 31.69 |
| 34 | High physical fitness | 36.710 | 31.61 | 31.19 |

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| Subject's code | Physical fitness | Skinfold thickness of triceps (mm) | Skinfold thickness of subscapularis (mm) |
|-----------------------|-------------------------|---|---|
| 01 | Sedentary | 20.67 | 22.33 |
| 02 | Sedentary | 15.00 | 14.33 |
| 03 | Sedentary | 12.00 | 12.33 |
| 04 | Sedentary | 23.33 | 26.67 |
| 05 | Sedentary | 15.67 | 11.33 |
| 06 | Sedentary | 19.33 | 18.00 |
| 07 | Sedentary | 17.67 | 14.67 |
| 08 | Sedentary | 13.00 | 9.00 |
| 09 | Sedentary | 14.00 | 10.00 |
| 10 | Sedentary | 16.67 | 16.33 |
| 11 | Sedentary | 10.30 | 13.50 |
| 12 | Sedentary | 10.30 | 14.00 |
| 13 | Sedentary | 11.33 | 11.33 |
| 14 | Sedentary | 14.33 | 11.00 |
| 15 | Sedentary | 15.67 | 13.00 |
| 16 | Sedentary | 16.50 | 11.00 |
| 17 | Sedentary | 12.00 | 12.50 |
| 18 | Sedentary | 12.00 | 14.00 |
| 19 | High physical fitness | 14.00 | 11.30 |
| 20 | High physical fitness | 20.00 | 15.33 |
| 21 | High physical fitness | 11.30 | 12.50 |
| 22 | High physical fitness | 19.67 | 14.33 |
| 23 | High physical fitness | 13.00 | 11.00 |
| 24 | High physical fitness | 12.50 | 10.00 |
| 25 | High physical fitness | 13.00 | 11.50 |
| 26 | High physical fitness | 12.00 | 13.00 |
| 27 | High physical fitness | 15.33 | 9.00 |

| Subject's code | Physical fitness | Skinfold thickness of triceps (mm) | Skinfold thickness of subscapularis (mm) |
|-----------------------|-------------------------|---|---|
| 28 | High physical fitness | 12.33 | 12.67 |
| 29 | High physical fitness | 11.00 | 13.00 |
| 30 | High physical fitness | 10.00 | 14.00 |
| 31 | High physical fitness | 14.00 | 10.00 |
| 32 | High physical fitness | 15.00 | 13.00 |
| 33 | High physical fitness | 12.33 | 12.00 |
| 34 | High physical fitness | 14.33 | 11.67 |

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2. Maximum oxygen uptake (VO_{2max}) of subjects

| Subject's code | Physical fitness | VO_{2max} ($mL \cdot kg^{-1} \cdot min^{-1}$) |
|----------------|-----------------------|---|
| 01 | Sedentary | 51.27 |
| 02 | Sedentary | 34.06 |
| 03 | Sedentary | 33.02 |
| 04 | Sedentary | 42.34 |
| 05 | Sedentary | 32.85 |
| 06 | Sedentary | 34.66 |
| 07 | Sedentary | 43.95 |
| 08 | Sedentary | 40.35 |
| 09 | Sedentary | 41.88 |
| 10 | Sedentary | 41.17 |
| 11 | Sedentary | 39.85 |
| 12 | Sedentary | 37.36 |
| 13 | Sedentary | 37.11 |
| 14 | Sedentary | 31.46 |
| 15 | Sedentary | 32.95 |
| 16 | Sedentary | 42.88 |
| 17 | Sedentary | 35.75 |
| 18 | Sedentary | 53.76 |
| 19 | High physical fitness | 46.28 |
| 20 | High physical fitness | 47.34 |
| 21 | High physical fitness | 51.81 |
| 22 | High physical fitness | 50.17 |
| 23 | High physical fitness | 50.61 |
| 24 | High physical fitness | 54.88 |
| 25 | High physical fitness | 50.35 |

| Subject's code | Physical fitness | VO ₂ max (mL · kg ⁻¹ · min ⁻¹) |
|----------------|-----------------------|--|
| 26 | High physical fitness | 53.24 |
| 27 | High physical fitness | 50.25 |
| 28 | High physical fitness | 50.08 |
| 29 | High physical fitness | 51.67 |
| 30 | High physical fitness | 48.34 |
| 31 | High physical fitness | 52.01 |
| 32 | High physical fitness | 61.78 |
| 33 | High physical fitness | 52.12 |
| 34 | High physical fitness | 49.13 |

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3. Sweat rate due to indirect ACh-mediated sweat gland activation (AXR)

| Subject's code | Physical fitness | Sweat rate for forearm (mg·cm ⁻² ·min ⁻¹) | Sweat rate for thigh (mg · cm ⁻² · min ⁻¹) |
|----------------|-----------------------|---|--|
| 01 | Sedentary | 0.782 | 1.010 |
| 02 | Sedentary | 0.540 | 0.430 |
| 03 | Sedentary | 0.299 | 0.701 |
| 04 | Sedentary | 0.485 | 0.169 |
| 05 | Sedentary | 0.555 | 0.022 |
| 06 | Sedentary | 0.485 | 0.008 |
| 07 | Sedentary | 0.404 | 0.249 |
| 08 | Sedentary | 0.528 | 0.762 |
| 09 | Sedentary | 0.540 | 0.438 |
| 10 | Sedentary | 0.101 | 0.059 |
| 11 | Sedentary | 0.448 | 0.628 |
| 12 | Sedentary | 0.139 | 0.473 |
| 13 | Sedentary | 0.371 | 0.546 |
| 14 | Sedentary | 0.275 | 0.185 |
| 15 | Sedentary | 0.082 | 0.269 |
| 16 | Sedentary | 0.618 | 0.968 |
| 17 | Sedentary | 0.085 | 0.201 |
| 18 | Sedentary | 0.190 | 0.091 |
| 19 | High physical fitness | 1.077 | 0.554 |
| 20 | High physical fitness | 1.344 | 0.816 |
| 21 | High physical fitness | 0.733 | 0.919 |
| 22 | High physical fitness | 0.859 | 0.602 |
| 23 | High physical fitness | 0.388 | 0.280 |
| 24 | High physical fitness | 0.837 | 0.620 |
| 25 | High physical fitness | 0.468 | 0.567 |

| Subject's code | Physical fitness | Sweat rate for forearm (mg · cm⁻² · min⁻¹) | Sweat rate for thigh (mg · cm⁻² · min⁻¹) |
|-----------------------|-------------------------|---|---|
| 26 | High physical fitness | 0.226 | 0.984 |
| 27 | High physical fitness | 1.527 | 0.535 |
| 28 | High physical fitness | 0.677 | 0.662 |
| 29 | High physical fitness | 0.479 | 0.964 |
| 30 | High physical fitness | 0.178 | 0.351 |
| 31 | High physical fitness | 1.082 | 0.850 |
| 32 | High physical fitness | 0.544 | 0.531 |
| 33 | High physical fitness | 0.421 | 0.134 |
| 34 | High physical fitness | 0.435 | 0.374 |

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4. Sweat rate due to direct ACh-mediated sweat gland activation (DIR)

| Subject's code | Physical fitness | Sweat rate for forearm (mg · cm ⁻² · min ⁻¹) | Sweat rate for thigh (mg · cm ⁻² · min ⁻¹) |
|----------------|-----------------------|--|--|
| 01 | Sedentary | 0.303 | 0.388 |
| 02 | Sedentary | 0.386 | 0.274 |
| 03 | Sedentary | 0.175 | 0.247 |
| 04 | Sedentary | 0.249 | 0.194 |
| 05 | Sedentary | 0.385 | 0.139 |
| 06 | Sedentary | 0.544 | 0.369 |
| 07 | Sedentary | 0.261 | 0.064 |
| 08 | Sedentary | 0.372 | 0.393 |
| 09 | Sedentary | 0.358 | 0.312 |
| 10 | Sedentary | 0.308 | 0.296 |
| 11 | Sedentary | 0.420 | 0.416 |
| 12 | Sedentary | 0.304 | 0.296 |
| 13 | Sedentary | 0.381 | 0.399 |
| 14 | Sedentary | 0.327 | 0.252 |
| 15 | Sedentary | 0.348 | 0.418 |
| 16 | Sedentary | 0.340 | 0.385 |
| 17 | Sedentary | 0.413 | 0.221 |
| 18 | Sedentary | 0.306 | 0.214 |
| 19 | High physical fitness | 0.396 | 0.328 |
| 20 | High physical fitness | 0.731 | 0.510 |
| 21 | High physical fitness | 0.610 | 0.569 |
| 22 | High physical fitness | 0.355 | 0.298 |
| 23 | High physical fitness | 0.487 | 0.405 |
| 24 | High physical fitness | 0.408 | 0.317 |
| 25 | High physical fitness | 0.358 | 0.391 |

| Subject's code | Physical fitness | Sweat rate for forearm (mg · cm⁻² · min⁻¹) | Sweat rate for thigh (mg · cm⁻² · min⁻¹) |
|-----------------------|-------------------------|---|---|
| 26 | High physical fitness | 0.642 | 0.600 |
| 27 | High physical fitness | 0.754 | 0.559 |
| 28 | High physical fitness | 0.498 | 0.515 |
| 29 | High physical fitness | 0.583 | 0.572 |
| 30 | High physical fitness | 0.450 | 0.434 |
| 31 | High physical fitness | 0.602 | 0.426 |
| 32 | High physical fitness | 0.723 | 0.355 |
| 33 | High physical fitness | 0.584 | 0.258 |
| 34 | High physical fitness | 0.478 | 0.375 |

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5. Activated sweat gland density (ASG)

| Subject's code | Physical fitness | Activated sweat rate for forearm (gland/cm ²) | Activated sweat rate for thigh (gland/cm ²) |
|----------------|-----------------------|---|---|
| 01 | Sedentary | 131.276 | 130.014 |
| 02 | Sedentary | 165.358 | 126.227 |
| 03 | Sedentary | 106.031 | 75.736 |
| 04 | Sedentary | 112.342 | 75.736 |
| 05 | Sedentary | 111.080 | 65.638 |
| 06 | Sedentary | 171.669 | 68.163 |
| 07 | Sedentary | 159.046 | 122.440 |
| 08 | Sedentary | 199.439 | 162.833 |
| 09 | Sedentary | 181.767 | 157.784 |
| 10 | Sedentary | 191.865 | 133.801 |
| 11 | Sedentary | 160.309 | 128.752 |
| 12 | Sedentary | 148.948 | 119.916 |
| 13 | Sedentary | 155.260 | 130.014 |
| 14 | Sedentary | 170.407 | 114.867 |
| 15 | Sedentary | 160.309 | 140.112 |
| 16 | Sedentary | 156.522 | 133.801 |
| 17 | Sedentary | 203.226 | 140.112 |
| 18 | Sedentary | 119.916 | 94.670 |
| 19 | High physical fitness | 200.701 | 122.440 |
| 20 | High physical fitness | 164.095 | 107.293 |
| 21 | High physical fitness | 190.603 | 167.882 |
| 22 | High physical fitness | 147.686 | 106.031 |
| 23 | High physical fitness | 181.767 | 137.588 |
| 24 | High physical fitness | 212.062 | 161.571 |
| 25 | High physical fitness | 166.620 | 138.850 |

| Subject's code | Physical fitness | Activated sweat rate for forearm (gland/cm²) | Activated sweat rate for thigh (gland/cm²) |
|-----------------------|-------------------------|--|--|
| 26 | High physical fitness | 160.309 | 142.637 |
| 27 | High physical fitness | 242.356 | 150.210 |
| 28 | High physical fitness | 162.833 | 160.309 |
| 29 | High physical fitness | 249.930 | 145.161 |
| 30 | High physical fitness | 156.522 | 102.244 |
| 31 | High physical fitness | 198.177 | 164.095 |
| 32 | High physical fitness | 209.537 | 128.752 |
| 33 | High physical fitness | 190.603 | 130.014 |
| 34 | High physical fitness | 208.275 | 142.637 |

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6. Activated sweat output per gland (SGO)

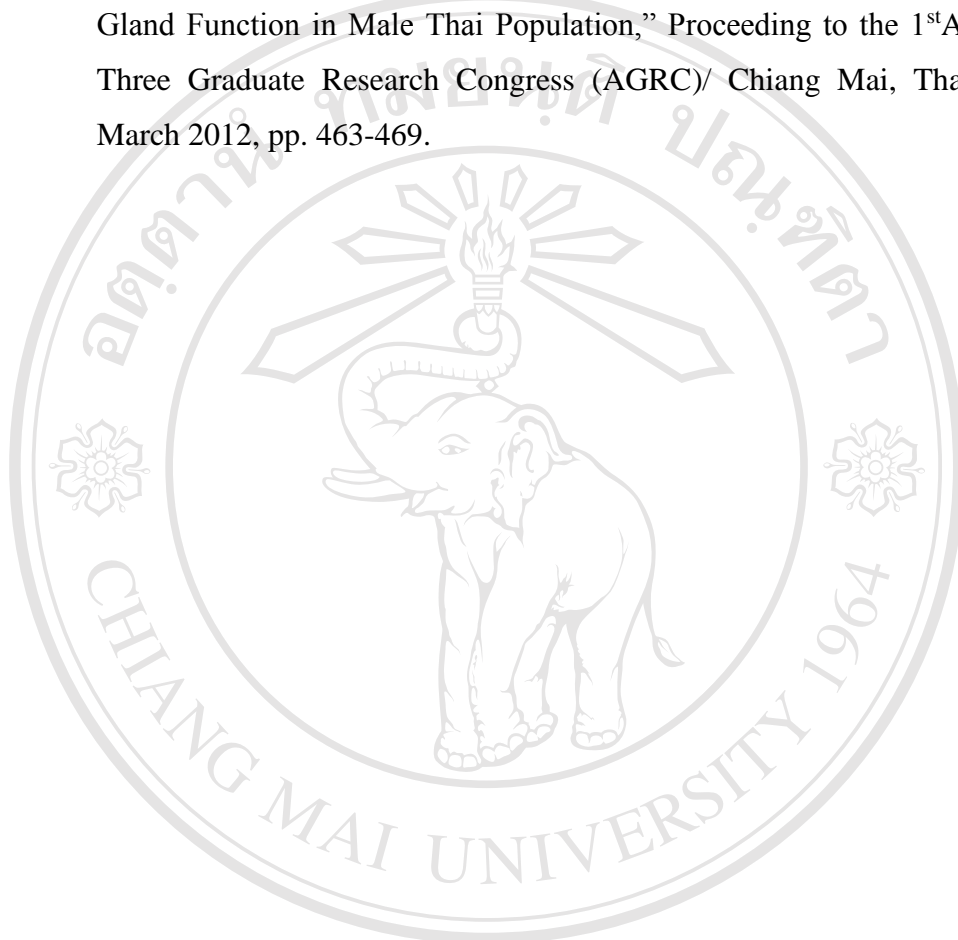
| Subject's code | Physical fitness | Sweat output per gland for forearm ($\mu\text{g}\cdot\text{min}^{-1}\cdot\text{gland}^{-1}$) | Sweat output per gland for thigh ($\mu\text{g}\cdot\text{min}^{-1}\cdot\text{gland}^{-1}$) |
|----------------|-----------------------|--|--|
| 01 | Sedentary | 2.308 | 2.984 |
| 02 | Sedentary | 2.334 | 2.170 |
| 03 | Sedentary | 1.650 | 3.261 |
| 04 | Sedentary | 2.216 | 2.562 |
| 05 | Sedentary | 3.466 | 2.118 |
| 06 | Sedentary | 3.169 | 5.414 |
| 07 | Sedentary | 1.641 | 0.523 |
| 08 | Sedentary | 1.865 | 2.414 |
| 09 | Sedentary | 1.970 | 1.977 |
| 10 | Sedentary | 1.605 | 2.212 |
| 11 | Sedentary | 2.620 | 3.231 |
| 12 | Sedentary | 2.041 | 2.468 |
| 13 | Sedentary | 2.454 | 3.069 |
| 14 | Sedentary | 1.919 | 2.194 |
| 15 | Sedentary | 2.171 | 2.983 |
| 16 | Sedentary | 2.172 | 2.877 |
| 17 | Sedentary | 2.032 | 1.577 |
| 18 | Sedentary | 2.552 | 2.260 |
| 19 | High physical fitness | 1.973 | 2.679 |
| 20 | High physical fitness | 4.455 | 4.753 |
| 21 | High physical fitness | 3.200 | 3.389 |
| 22 | High physical fitness | 2.404 | 2.811 |
| 23 | High physical fitness | 2.679 | 2.944 |
| 24 | High physical fitness | 1.924 | 1.962 |
| 25 | High physical fitness | 2.149 | 2.816 |

| Subject's code | Physical fitness | Sweat output per gland for forearm ($\mu\text{g} \cdot \text{min}^{-1} \cdot \text{gland}^{-1}$) | Sweat output per gland for thigh ($\mu\text{g} \cdot \text{min}^{-1} \cdot \text{gland}^{-1}$) |
|----------------|-----------------------|--|--|
| 26 | High physical fitness | 4.005 | 4.206 |
| 27 | High physical fitness | 3.111 | 3.721 |
| 28 | High physical fitness | 3.058 | 3.213 |
| 29 | High physical fitness | 2.333 | 3.940 |
| 30 | High physical fitness | 2.875 | 4.245 |
| 31 | High physical fitness | 3.038 | 2.596 |
| 32 | High physical fitness | 3.450 | 2.757 |
| 33 | High physical fitness | 3.064 | 1.984 |
| 34 | High physical fitness | 2.295 | 2.629 |

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LIST OF PUBLICATIONS

- (1) Chorsuwan S., Praputpittaya C., Inoue Y., Ueda H., “Maturation of Sweat Gland Function in Male Thai Population,” Proceeding to the 1stAsean Plus Three Graduate Research Congress (AGRC)/ Chiang Mai, Thailand 1-2 March 2012, pp. 463-469.



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CURRICULUM VITAE

Author's Name Ms. Sirijit Chorsuwan

Date/Year of Birth 21st August 1984

Place of Birth Bangkok, Thailand

Education 2007 B.Sc. (Sports science), Mahidol University, Bangkok, Thailand

Publication Chorsuwan S., Praputpittaya C., Inoue Y., Ueda H., "Maturation of Sweat Gland Function in Male Thai Population," Proceeding to the 1stAsean Plus Three Graduate Research Congress(AGRC), 2012, pp. 463-469.

Experience

- 2008 March -2009 April, Trainer at Thai Canadian Community Sports (Gymnastics Bangkok)
- 2009 April – 2010 April Trainer at Chirofit Chiropractic and fitness (Bangkok)

