Supplementary Tables:

Supplementary Table 1: Clinical and Epidemiological characteristics of patients in controls and OAB group

| Characteristics | Controls $(n = 25)$ | OAB group (<i>n</i> = 30) | P value |
|--------------------|-----------------------|----------------------------|---------|
| Age (years) | 66.6 11.8 (44–84) | 62.0 15.5(23–89) | 0.213 |
| Creatinine (mg/ml) | 0.75 0.51 (0.02–1.63) | 0.64 0.47 (0.15–1.85) | 0.414 |
| OABSS score | 1.7 1.6 (0-5) | 8.9 ± 3.5 (3–14) | < 0.01 |

OAB: overactive bladder, OABSS: overactive bladder symptom score.

Supplementary Table 2: Urinary NGF/Cr and BDNF/Cr levels in controls and OAB patients

| | NGF/Cr (pg/mg) | BDNF/Cr (pg/mg) |
|---------------------------|-----------------------|--------------------------------|
| Controls (<i>n</i> = 25) | 61.44 103.00 | 859.58 4 835.35 |
| OAB $(n = 30)$ | 116.30 ± 86.83 | 1627.25 <mark>+</mark> 1119.95 |
| P value | 0.04 | < 0.01 |

NGF: nerve growth factor, BDNF: brain derived neurotrophic factor, OAB overactive bladder.

Supplementary Table 3: Comparisons of urinary NGF/Cr and BDNF/Cr levels among patients with different severity of OAB symptoms

| Items Contr | rols (n = 25) | Mild OAB (n = 7) | Moderate OAB (n = 13) | Severe OAB (n = 10) |
|--------------------|-------------------------|--------------------------|---|--|
| NGF/Cr (pg/mg) | 61.44 ± 10 3.00 | 55.58 <u>+</u> 51. 94 | 107.11 = 99.79 | 170.74 54.16 |
| P value | | 0.89 (vs. controls) | 0.20 (vs. controls) 0.22 (vs. mild OAB) | <0.01 (vs. controls) <0.01 (vs. mild OAB) 0.08 (vs. moderate OAB) |
| BDNF/Cr (pg/mg) | 859.58 4 8 35.35 | 873.17 6 6 0.08 | 1591.84 ± 1158.2 | 2201.14 1073.51 |

| P value | 0.97 | 0.03 (vs. controls) | <0.01 (vs. controls) |
|---------|---------------|---------------------|----------------------|
| | (vs.controls) | 0.15 (vs. mild | 0.01 (vs. mild OAB) |
| | · | OAB) | 0.21 (vs. moderate |
| | | | OAB) |

NGF nerve growth factor, BDNF brain derived neurotrophic factor, OAB overactive bladder.

Supplementary Table 4: Comparisons of urinary NGF/Cr and BDNF/Cr levels of different types of OAB

| Controls | (n=25) | Dry OAB (n = 9) | Wet OAB (n = 21) |
|-----------------|----------------------------------|---------------------|---|
| NGF/Cr (pg/mg) | 61.44 103.00 | 60.56 51.81 | 140.19 88.66 |
| P value | | 0.98 (vs. controls) | <0.01 (vs. controls) 0.02 (vs. dry OAB) |
| BDNF/Cr (pg/mg) | 859.58 <mark>+</mark> 835.3 5 | 810.71 448.40 | 1977.20 1144.41 |
| P value | | 0.87 (vs. controls) | <0.01 (vs. controls) <0.01 (vs. dry OAB) |

NGF: nerve growth factor, BDNF: brain derived neurotrophic factor, OAB: overactive bladder.

Supplementary Table 5: Correlation between urinary NGF/Cr, BDNF/Cr and different OAB symptoms

| | NGF/Cr BDNF/Cr | | | | |
|---------------------|----------------|---------|-------|---------|--|
| | r | P value | r | P value | |
| Daytime urination | -0.04 | 0.82 | -0.08 | 0.68 | |
| Nocturnal urination | 0.28 | 0.13 | -0.02 | 0.91 | |
| Urinary urgency | 0.55 | < 0.01 | 0.43 | 0.02 | |
| UUI 0.59 | | < 0.01 | 0.52 | <0.01 | |

NGF: nerve growth factor, BDNF: brain derived neurotrophic factor, OAB: overactive bladder, UUI: urge urinary incontinence.

Supplementary Table 6: The sensitivity and specificity of urinary NGF/Cr and BDNF/Cr levels according to the cutoff values

| Cutoff values (pg/mg) | Sensitivity (%) | Specificity (%) | |
|-----------------------|-----------------|-----------------|--|
|-----------------------|-----------------|-----------------|--|

| NGF/Cr 26.32 | 93.3 | 64.0 |
|----------------|------|------|
| BDNF/Cr 681.93 | 86.7 | 72.0 |

NGF: nerve growth factor, BDNF: brain derived neurotrophic factor.

Supplementary Figure 1. The correlation between urinary NGF/Cr (A), BDNF/Cr (B) and OABSS score.

