**Supplemental Table 1:** Clinical profile of patients with fibromyalgia syndrome.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No. | Age | Sex | Disease  Duration  (years) | Abnormal  QST | Distal  IENFD  (fibers/mm) | Proximal  IENFD  (fibers/mm) | Treatment | Relevant  Comorbidity |
| 1 | 42 | F | 10 | - | 9.3 | 13.2 | NSAID | Hypothyroidism |
| 2 | 50 | F | 27 | CDT  WDT | - | - | Pregabalin, Opioids, | None |
| 3 | 52 | F | 7 | CDT, WDT, TSL, PHS, HPT | 3.9 | 5.3 | NSAID,  Lidocaine | Migraine |
| 4 | 43 | F | 18 | PPT | 13.2 | 11.2 | NSAID | Hypothyroidism |
| 5 | 54 | F | 7 | TSL | 5.3 | 12.5 | TCA, SSNRI | None |
| 6 | 39 | F | 13 | WDT, MPS | 2.4 | 7.1 | NSAID, TCA | Depression |
| 7 | 48 | F | 23 | PPT | 15.9 | 6.2 | NSAID, SSNRI | None |
| 8 | 53 | F | 3 | WDT, PHS | 10 | 5.2 | SSNRI, Opioids | Hypothyroidism Crohn’s disease |
| 9 | 44 | F | 2 | PHS | 14.0 | 19.4 | SSNRI | None |
| 10 | 54 | F | 10 | CDT, WDT, TSL | 8.3 | 6.9 | NSAID, SSNRI | Hypothyroidism |
| 11 | 52 | F | 9 | - | 4.7 | 10.4 | NSAID, Opioids | Hypothyroidism |
| 12 | 40 | F | 15 | - | 2.4 | 3.7 | NSAID, Opioids, SSNRI, Gabapentin, TCA | None |
| 13 | 48 | F | 26 | PPT | 8.5 | - | NSAID, Opioids, Pregabalin | None |
| 14 | 60 | M | 16 | CDT, TSL | 4.9 | 7.9 | NSAID, TCA, Pregabalin | None |
| 15 | 58 | F | 40 | - | 8.2 | 8.7 | TCA, SSNRI | None |
| 16 | 50 | F | 18 | PHS | 6.6 | 12.5 | TCA, Gabapentin | Hypothyroidism |
| 17 | 48 | F | 7 | - | 10.6 | 19.0 | SSNRI, Opioids, Pregabalin | None |
| 18 | 42 | F | 4 | - | 6.0 | 3.8 | SSNRI, Opioids | Hypothyroidism |
| 19 | 62 | F | 32 | CDT | 1.8 | 6.8 | NSAID | None |
| 20 | 74 | F | 30 | PPT | 4 | 12.3 | TCA, Opioids | None |
| 21 | 56 | F | 3 | - | 5.4 | 10.7 | TCA | None |
| 22 | 54 | M | 5 | TSL, PHS | 4.7 | 10.5 | TCA | None |
| 23 | 49 | F | 20 | PPT | 4.6 | 12.5 | Opioids, TCA, Pregabalin | Spondylarthritis |
| 24 | 72 | F | 8 | PPT | 14.5 | 20.6 | NSAID, Opioids | None |
| 25 | 41 | F | 15 | PPT | 5.3 | 9.3 | NSAID | None |
| 26 | 60 | F | 32 | PPT, CDT | - | - | Pregabalin, TCA, Opioids | None |
| 27 | 49 | F | 32 | - | 6.9 | 7.8 | NSAID, SSNRI | None |
| 28 | 54 | F | 5 | PHS | 7.4 | 10.8 | TCA, pregabalin | None |
| 29 | 55 | F | 11 | TSL, PHS | 5.4 | 11.6 | None | None |
| 30 | 48 | F | 6 | TSL, PHS, PPT | 12.2 | 7.9 | SSNRI | Hypothyroidism |

Abbreviations: CDT = cold detection threshold; CPT = cold pain threshold; FMS = fibromyalgia syndrome; HPT = heat pain threshold; MDT = mechanical detection threshold; MPS = mechanical pain sensitivity; MPT = mechanical pain threshold; NSAID = non steroidal anti-inflammatory drug; PPT = pressure pain threshold; SSNRI = selective serotonin reuptake inhibitor; TCA = tricyclic antidepressants; TSL = thermal sensory limen; VDT = vibration detection threshold; WDT = warm detection threshold

**Supplemental Table 2:** Individual Agilent Bioanalyzer results.

|  |  |  |  |
| --- | --- | --- | --- |
| Sample | RNA concentration [ng/ul] | rRNA Ratio [28s/18s] | RNA Integrity Number (RIN) |
| FMS |  |  |  |
| 1 | 137 | 1.5 | 7.9 |
| 2 | 113 | 1.5 | 9.2 |
| 3 | 116 | 1.6 | 8.8 |
| 4 | 93 | 1.6 | 8.9 |
| 5 | 93 | 1.3 | 7.2 |
| 6 | 82 | 1.2 | 8.1 |
| 7 | 198 | 1.6 | 7.8 |
| 8 | 155 | 1.4 | 7.4 |
| 9 | 44 | 1.2 | 7 |
| 10 | 269 | 1.6 | 8.1 |
| 11 | 152 | 3.8 | 5.1 |
| 12 | 144 | 1.2 | 8.1 |
|  |  |  |  |
| Controls |  |  |  |
| 1 | 91 | 1.4 | 7.4 |
| 2 | 116 | 1.6 | 8.9 |
| 3 | 154 | 1.6 | 9.1 |
| 4 | 43 | 1.6 | 9.3 |
| 5 | 81 | 1.6 | 8.8 |
| 6 | 154 | 1.6 | 9.1 |
| 7 | 185 | 1.4 | 6.8 |
| 8 | 162 | 1.7 | 7.9 |
| 9 | 203 | 1.8 | 8.2 |
| 10 | 161 | 1.4 | 8.7 |
| 11 | 201 | 1.7 | 8.2 |
| 12 | 161 | 1.6 | 7.9 |

Abbreviations: FMS = Fibromyalgia Syndrome; RIN = RNA integrity number; RNA = ribonucleic acid; rRNA = ribosomal ribonucleic acid.

Supplemental Table 3: **Overview of the 51 differentially expressed miRNAs**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| miRNA | Average disease | Average Control | logFc | p-value | Rank | BH-corrected p-value |
| **hsa-miR-4288** | **-0.383** | **0.329** | **0.713** | **0.0000225** | **1** | **0.0036** |
| **hsa-miR-151a-3p** | **-0.390** | **0.306** | **0.696** | **0.0000270** | **2** | **0.0036** |
| **hsa-miR-151a-5p/hsa-miR-151b** | **-0.522** | **0.406** | **0.928** | **0.0000348** | **3** | **0.0036** |
| **hsa-miR-151a-5p** | **-0.482** | **0.386** | **0.868** | **0.0000575** | **4** | **0.0038** |
| **hsa-miR-199a-5p** | **-0.688** | **0.528** | **1.215** | **0.0000722** | **5** | **0.0038** |
| **hsa-miR-943** | **0.301** | **-0.276** | **-0.577** | **0.0000898** | **6** | **0.0038** |
| **hsa-miR-126-3p** | **-0.696** | **0.545** | **1.241** | **0.0001033** | **7** | **0.0038** |
| **hsa-miR-221-3p** | **-0.296** | **0.253** | **0.549** | **0.0001143** | **8** | **0.0038** |
| **hsa-miR-185-5p** | **-0.290** | **0.256** | **0.546** | **0.0001230** | **9** | **0.0038** |
| **hsa-miR-584-5p** | **-0.359** | **0.253** | **0.612** | **0.0001237** | **10** | **0.0038** |
| **hsa-miR-320b** | **-0.197** | **0.172** | **0.369** | **0.0001423** | **11** | **0.0040** |
| **hsa-miR-4306** | **-0.170** | **0.178** | **0.348** | **0.0001700** | **12** | **0.0043** |
| **hsa-miR-425-5p** | **-0.237** | **0.206** | **0.442** | **0.0003483** | **13** | **0.0063** |
| **hsa-miR-126-5p** | **-0.696** | **0.521** | **1.217** | **0.0003498** | **14** | **0.0063** |
| **hsa-miR-320a** | **-0.175** | **0.130** | **0.305** | **0.0003526** | **15** | **0.0063** |
| **hsa-miR-130a-3p** | **-0.603** | **0.507** | **1.110** | **0.0003687** | **16** | **0.0063** |
| **hsa-miR-4429** | **-0.155** | **0.117** | **0.273** | **0.0003816** | **17** | **0.0063** |
| **hsa-miR-22-3p** | **-0.293** | **0.249** | **0.542** | **0.0003862** | **18** | **0.0063** |
| **hsa-miR-320c** | **-0.190** | **0.139** | **0.330** | **0.0003927** | **19** | **0.0063** |
| **hsa-miR-744-5p** | **-0.140** | **0.132** | **0.272** | **0.0005008** | **20** | **0.0077** |

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