

**Supplementary table 4: Results from heatmap study of jejunal tissue.**

| Tissue  | d <sub>j</sub> (um) | p <sub>in</sub> ' (Bar) | VDE <sub>set</sub> (%) | n | Notes                                            |
|---------|---------------------|-------------------------|------------------------|---|--------------------------------------------------|
| Jejunum | 167                 | 10.70 ± 0.84            | 24.5 ± 47.2            | 4 | Small depot - excess fluid in lumen              |
| Jejunum | 167                 | 13.40 ± 1.05            | 22.0 ± 67.1            | 4 | Small depot - excess fluid in lumen              |
| Jejunum | 167                 | 16.20 ± 1.25            | 86.9 ± 24.8            | 4 | Large depot - excess fluid in lumen              |
| Jejunum | 167                 | 18.90 ± 1.45            | 76.2 ± 10.3            | 4 | Large depot - excess fluid in lumen              |
| Jejunum | 167                 | 21.70 ± 1.66            | 80.8 ± 13.7            | 4 | Large depot - excess fluid in lumen              |
| Jejunum | 167                 | 24.40 ± 1.86            | 55.6 ± 56.0            | 4 | Medium depot - excess fluid likely in peritoneum |
| Jejunum | 167                 | 27.20 ± 2.06            | 40.1 ± 51.6            | 4 | Small depot - excess fluid likely in peritoneum  |
| Jejunum | 257                 | 8.80 ± 0.54             | 41.0 ± 75.1            | 4 | Small depot - excess fluid in lumen              |
| Jejunum | 257                 | 11.60 ± 0.71            | 56.1 ± 61.9            | 4 | Medium depot - excess fluid in lumen             |
| Jejunum | 257                 | 14.50 ± 0.88            | 87.5 ± 21.3            | 4 | Large depot - excess fluid in lumen              |
| Jejunum | 257                 | 17.40 ± 1.06            | 84.3 ± 6.2             | 4 | Large depot - excess fluid in lumen              |
| Jejunum | 257                 | 20.20 ± 1.23            | 14.0 ± 36.6            | 4 | Small depot - excess fluid likely in peritoneum  |
| Jejunum | 332                 | 9.40 ± 0.45             | 69.3 ± 73.1            | 4 | Medium depot - excess fluid in lumen             |
| Jejunum | 332                 | 12.70 ± 0.59            | 80.3 ± 15.4            | 4 | Large depot - excess fluid in lumen              |
| Jejunum | 332                 | 15.90 ± 0.73            | Qualitative only       | 4 | No depot - all fluid likely in peritoneum        |
| Jejunum | 446                 | 6.30 ± 0.38             | 28.4 ± 60.2            | 4 | Small depot - excess fluid in lumen              |
| Jejunum | 446                 | 9.30 ± 0.56             | 43.3 ± 23.0            | 4 | Small depot - excess fluid in lumen              |
| Jejunum | 446                 | 12.30 ± 0.73            | Qualitative only       | 4 | No depot - all fluid likely in peritoneum        |
| Jejunum | 551                 | 2.90 ± 0.17             | 1.7 ± 14.1             | 2 | No depot - all fluid in lumen                    |
| Jejunum | 551                 | 5.70 ± 0.31             | 19.3 ± 24.9            | 7 | Small depot - excess fluid in lumen              |
| Jejunum | 551                 | 8.60 ± 0.44             | 39.5 ± 50.2            | 4 | Small depot - excess fluid likely in peritoneum  |
| Jejunum | 551                 | 11.40 ± 0.54            | 12.7 ± 53.3            | 2 | Small depot - excess fluid likely in peritoneum  |