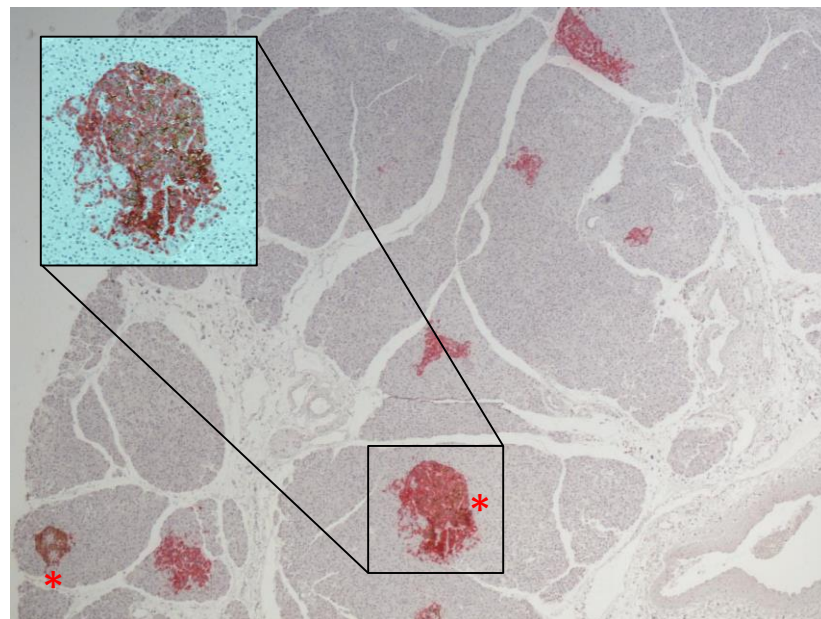
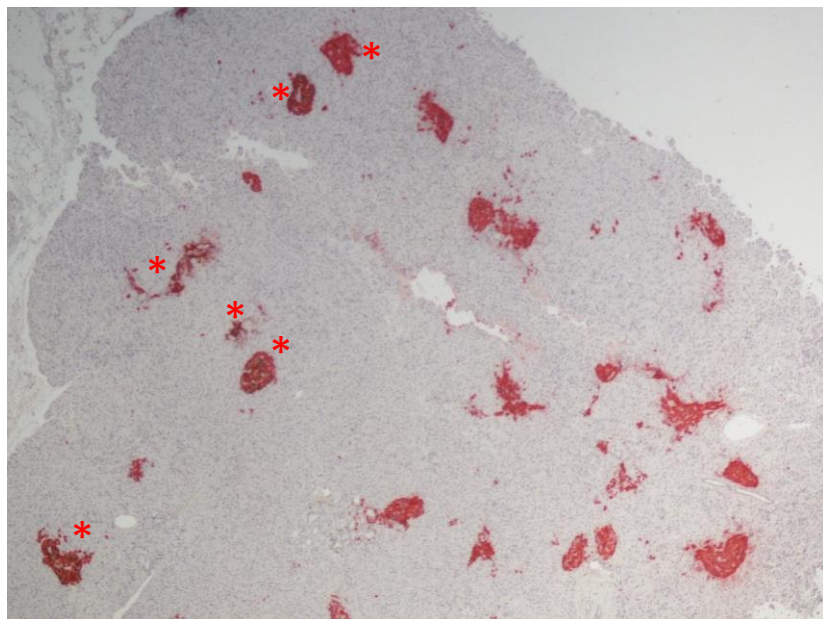
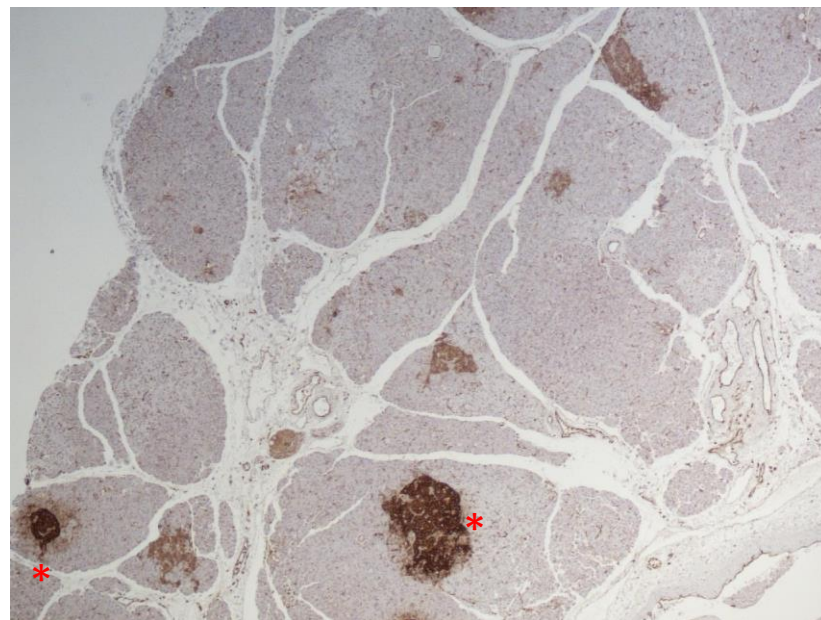
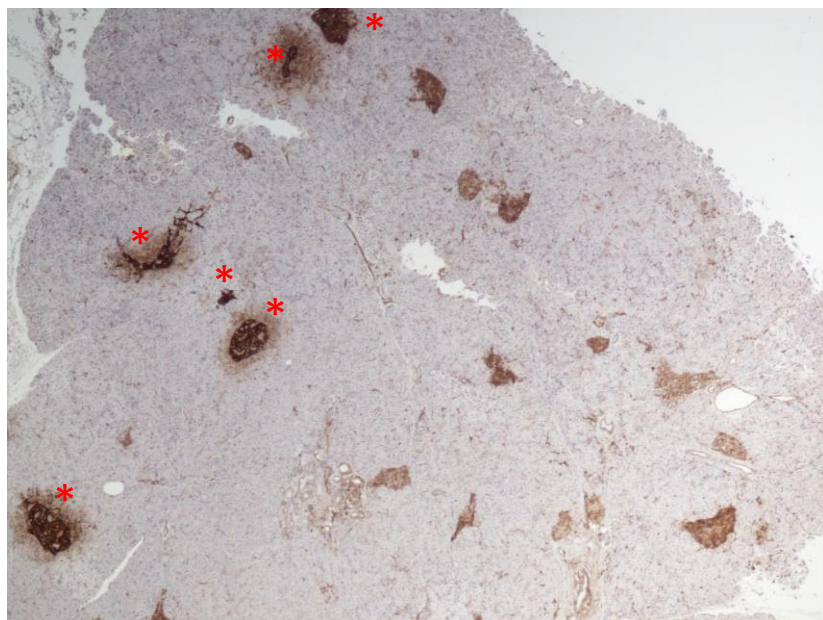


Figure 1a:

Insulin (brown)/ Glucagon (red)



HLA-A, B, C



DiViD 4

DiViD 5

Figure 1b.

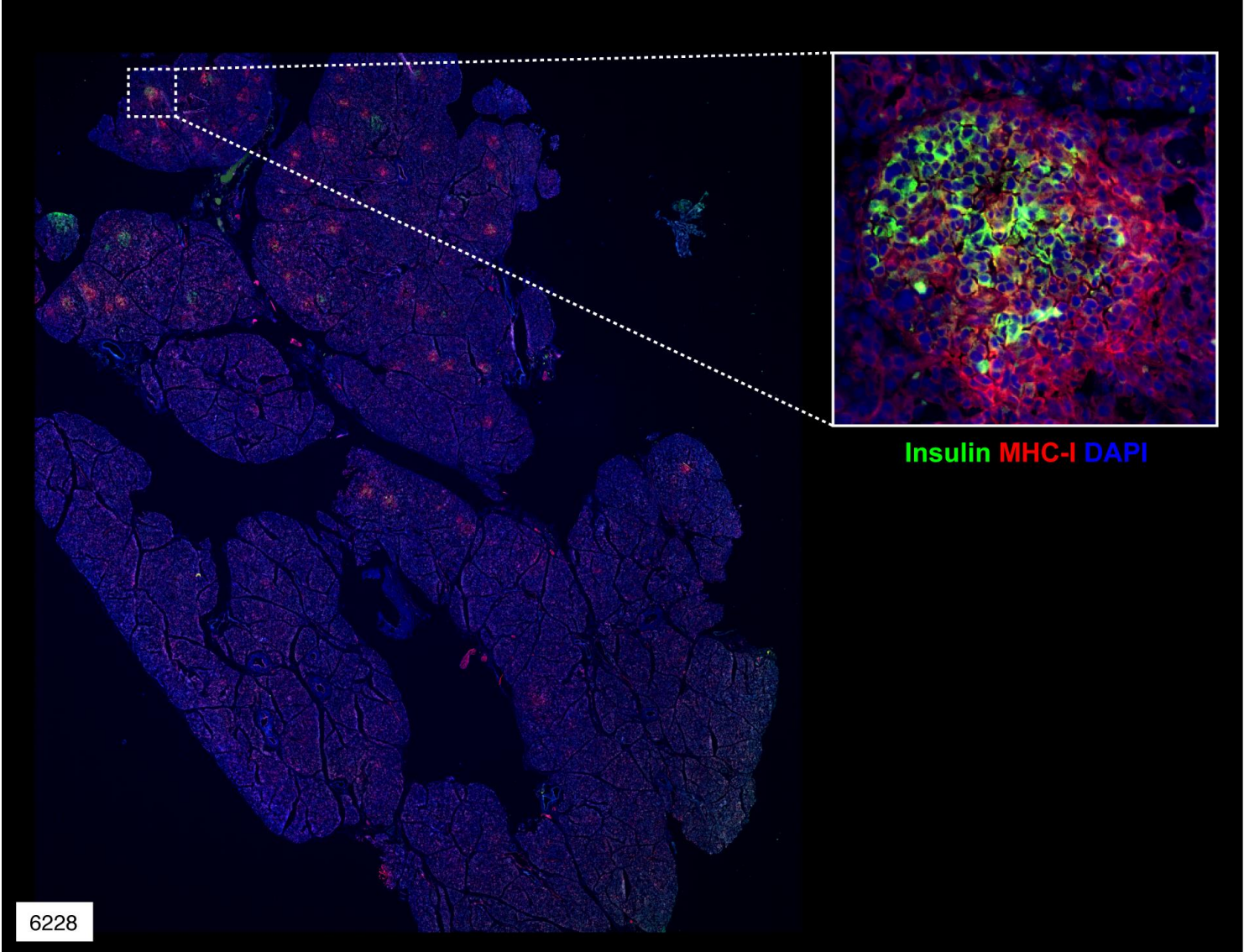


Figure 2a;

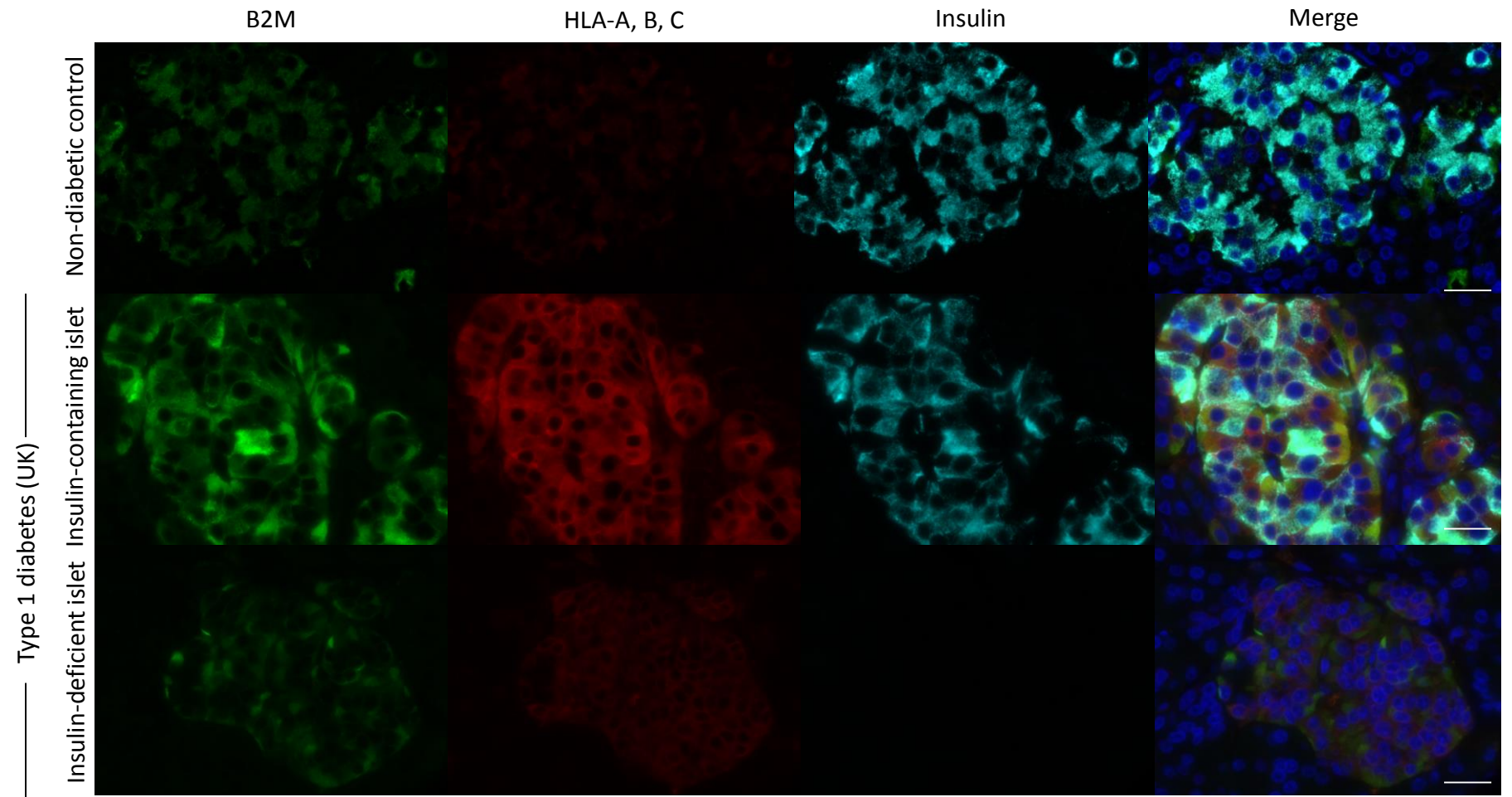


Figure 2b  
HLA-A, B, C

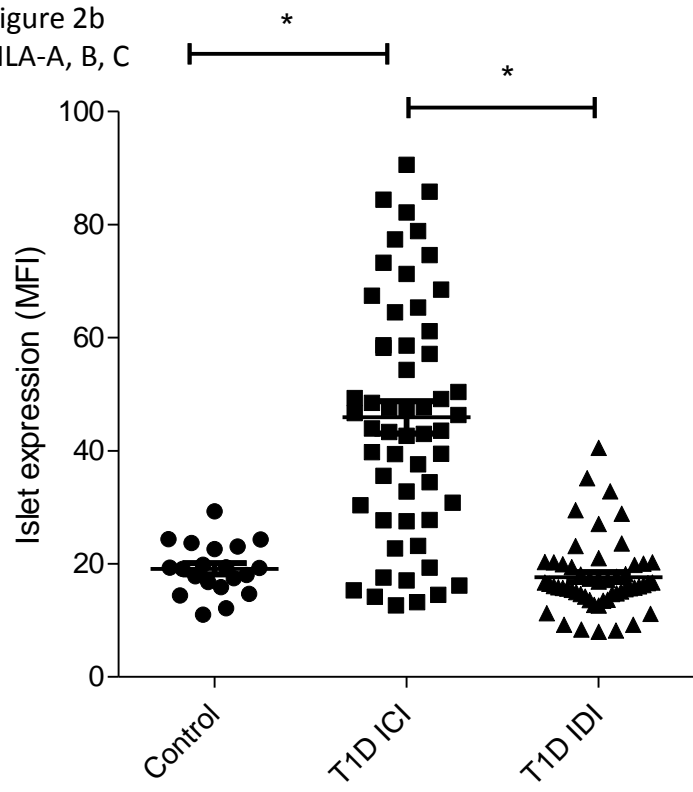


Figure 2c  
B2M

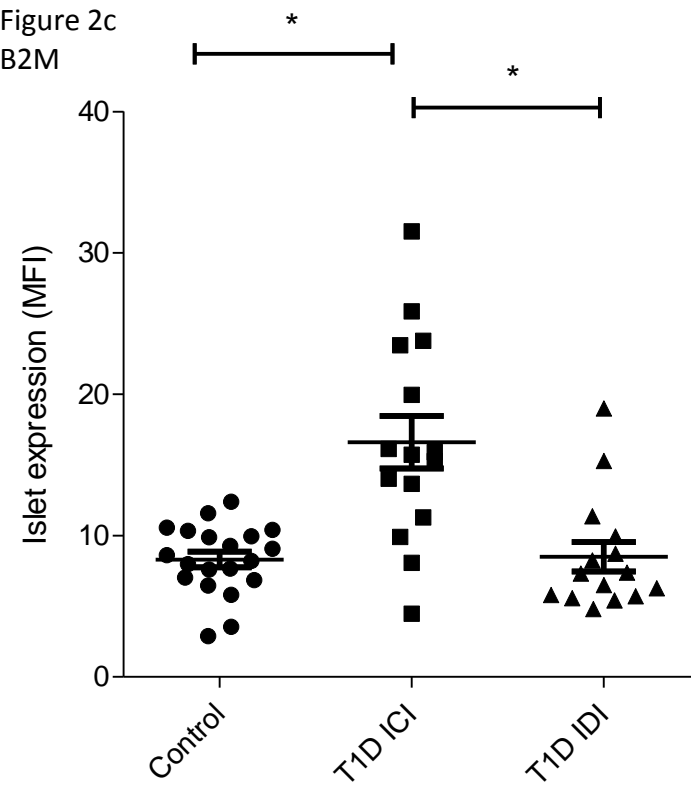
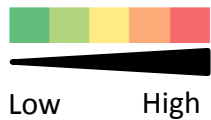


Figure 3a:

| Case IDs               |             | HLA-A1 | HLA-A2  | HLA-A3  | HLA-A4  | HLA-A5  | HLA-A6  | HLA-A7  | HLA-A8 | HLA-B1 | HLA-B2 | HLA-B3 | HLA-B4  | HLA-B5  | HLA-B6 | HLA-C1 | HLA-C2 | HLA-C3 | HLA-C4 | HLA-C5 | HLA-C6 | HLA-C7 | B2M     |
|------------------------|-------------|--------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Age-matched nPOD cases | 6024-01PT   | 58.4   | 178.5   | 178.5   | 97.6    | 70.7    | 426.8   | 99.2    | 167.6  | 32.2   | 223.2  | 146.0  | 163.7   | 146.6   | 113.8  | 176.0  | 217.6  | 135.8  | 121.1  | 45.2   | 165.6  | 133.4  | 284.5   |
|                        | 6048-04PT   | 93.6   | 135.6   | 135.6   | 89.3    | 69.2    | 413.7   | 95.5    | 220.6  | 34.5   | 141.0  | 169.0  | 177.5   | 152.7   | 114.9  | 228.0  | 243.8  | 138.1  | 230.9  | 66.0   | 185.4  | 146.8  | 367.6   |
|                        | 6140-04PT   | 214.3  | 319.1   | 319.1   | 222.6   | 93.3    | 1123.7  | 100.2   | 202.8  | 38.5   | 180.1  | 275.5  | 313.9   | 331.1   | 243.4  | 227.7  | 284.6  | 239.5  | 357.7  | 131.5  | 292.6  | 212.4  | 553.6   |
|                        | 6162-01PT   | 63.6   | 183.8   | 183.8   | 181.5   | 90.2    | 843.6   | 131.8   | 150.1  | 16.3   | 183.6  | 186.5  | 188.6   | 207.8   | 155.1  | 256.4  | 305.7  | 170.1  | 357.6  | 59.6   | 200.7  | 150.7  | 391.7   |
|                        | 6229-02PT   | 76.8   | 267.4   | 267.4   | 243.7   | 95.9    | 1122.6  | 99.4    | 129.3  | 34.8   | 162.0  | 279.5  | 306.2   | 278.0   | 229.4  | 266.0  | 317.5  | 197.0  | 246.7  | 100.4  | 236.3  | 172.3  | 418.8   |
|                        | 6251-02PT   | 55.4   | 240.3   | 240.3   | 217.2   | 86.5    | 959.2   | 112.7   | 104.1  | 21.5   | 258.7  | 242.0  | 331.4   | 235.5   | 187.0  | 223.9  | 261.2  | 184.6  | 259.1  | 85.5   | 222.1  | 168.5  | 397.5   |
|                        | 6179-04B PB | 56.2   | 222.9   | 222.9   | 183.4   | 74.0    | 869.8   | 75.2    | 106.9  | 29.5   | 121.8  | 179.3  | 226.7   | 176.0   | 142.2  | 198.1  | 229.8  | 174.3  | 232.1  | 92.0   | 210.7  | 161.1  | 362.1   |
| DiViD Cases            | DiViD-6     | 46.8   | 289.6   | 289.6   | 213.7   | 111.7   | 1153.9  | 126.6   | 260.1  | 31.7   | 191.4  | 291.7  | 305.0   | 287.5   | 240.4  | 317.2  | 371.5  | 221.0  | 269.7  | 88.1   | 265.5  | 195.7  | 700.8   |
|                        | DiViD-5     | 177.5  | 392.1   | 392.1   | 374.1   | 146.7   | 1869.2  | 152.1   | 201.4  | 106.8  | 243.7  | 445.4  | 592.3   | 523.8   | 374.6  | 304.9  | 355.9  | 347.2  | 583.8  | 179.1  | 446.3  | 308.2  | 832.9   |
|                        | DiViD-4     | 100.0  | 447.8   | 447.8   | 408.9   | 149.3   | 2202.6  | 147.7   | 91.6   | 45.7   | 158.0  | 288.0  | 664.4   | 359.8   | 261.8  | 271.0  | 323.9  | 304.8  | 476.4  | 154.9  | 366.5  | 243.6  | 780.1   |
|                        | DiViD-3     | 126.7  | 739.7   | 739.7   | 595.3   | 258.0   | 2772.2  | 165.3   | 486.6  | 61.4   | 325.1  | 815.1  | 925.5   | 806.2   | 634.2  | 865.0  | 1047.8 | 680.9  | 434.9  | 354.5  | 809.8  | 557.4  | 1077.4  |
|                        | DiViD-2     | 91.9   | 460.5   | 460.5   | 368.6   | 132.9   | 1837.2  | 126.5   | 393.6  | 89.4   | 339.2  | 472.9  | 473.7   | 580.5   | 408.5  | 328.2  | 387.3  | 398.8  | 365.8  | 192.9  | 472.4  | 340.2  | 839.7   |
| T-test                 |             | NS     | p<0.005 | p<0.005 | p<0.005 | p<0.005 | p<0.001 | p<0.001 | p=0.06 | p<0.05 | p=0.08 | p<0.05 | p<0.005 | p<0.005 | p<0.01 | p=0.07 | p=0.07 | p<0.01 | p<0.05 | p<0.05 | p<0.01 | p<0.05 | p<0.001 |
| Fold change            |             | 1.25   | 2.07    | 2.07    | 2.18    | 1.82    | 2.34    | 1.43    | 1.68   | 2.39   | 1.42   | 2.09   | 2.34    | 2.24    | 2.15   | 1.72   | 1.72   | 2.05   | 1.63   | 2.33   | 2.06   | 1.91   | 2.07    |

Figure 3b:

| Case IDs     |             | Duration (years) | IHC Score | ICI Score | HLA-A1 | HLA-A2 | HLA-A3 | HLA-A4 | HLA-A5 | HLA-A6 | HLA-A7 | HLA-A8 | HLA-B1 | HLA-B2 | HLA-B3 | HLA-B4 | HLA-B5 | HLA-B6 | HLA-C1 | HLA-C2 | HLA-C3 | HLA-C4 | HLA-C5 | HLA-C6 | HLA-C7 | B2M   |
|--------------|-------------|------------------|-----------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| Non-diabetic | 6013-04PT   |                  |           | +++       | 55.7   | 195.3  | 195.3  | 130.3  | 70.7   | 638.7  | 67.0   | 235.4  | 21.2   | 170.0  | 163.0  | 289.9  | 147.8  | 132.2  | 208.4  | 204.9  | 160.9  | 272.3  | 95.7   | 189.3  | 143.1  | 463.4 |
|              | 6024-01PT   |                  |           | +++       | 58.4   | 178.5  | 178.5  | 97.6   | 70.7   | 426.8  | 99.2   | 167.6  | 32.2   | 223.2  | 146.0  | 163.7  | 146.6  | 113.8  | 176.0  | 217.6  | 135.8  | 121.1  | 45.2   | 165.6  | 133.4  | 284.5 |
|              | 6075-06PB   |                  |           | +++       | 76.5   | 231.3  | 231.3  | 195.6  | 104.5  | 954.5  | 91.9   | 175.4  | 20.6   | 142.3  | 278.1  | 275.6  | 288.0  | 227.8  | 311.4  | 371.7  | 243.4  | 230.3  | 94.4   | 285.0  | 211.3  | 476.3 |
|              | 6012-02PT   |                  |           | +++       | 50.0   | 195.2  | 195.2  | 208.8  | 94.3   | 950.3  | 98.5   | 140.2  | 47.0   | 205.5  | 217.3  | 246.2  | 246.5  | 189.5  | 192.8  | 219.7  | 156.5  | 212.9  | 79.6   | 187.1  | 147.7  | 376.6 |
|              | 6099-02PB   |                  |           | +++       | 69.7   | 193.8  | 193.8  | 181.1  | 77.7   | 819.4  | 74.4   | 161.7  | 35.9   | 165.9  | 200.8  | 188.5  | 232.8  | 170.3  | 185.0  | 199.6  | 175.1  | 269.8  | 87.7   | 209.6  | 159.4  | 415.3 |
|              | 6102-04PT   |                  |           | +++       | 87.8   | 244.4  | 244.4  | 188.6  | 105.9  | 850.8  | 96.6   | 275.8  | 24.5   | 181.5  | 240.9  | 290.0  | 235.7  | 193.0  | 296.2  | 371.1  | 231.2  | 313.5  | 73.6   | 263.3  | 195.4  | 428.6 |
|              | 6140-04PT   |                  |           | +++       | 214.3  | 319.1  | 319.1  | 222.6  | 93.3   | 1123.7 | 100.2  | 202.8  | 38.5   | 180.1  | 275.5  | 313.9  | 331.1  | 243.4  | 227.7  | 284.6  | 239.5  | 357.7  | 131.5  | 292.6  | 212.4  | 553.6 |
|              | 6019-04PT   |                  |           | +++       | 132.9  | 281.8  | 281.8  | 159.7  | 76.7   | 817.8  | 81.3   | 162.1  | 37.6   | 194.1  | 150.1  | 220.1  | 216.5  | 124.5  | 211.7  | 257.9  | 144.4  | 270.4  | 93.4   | 166.9  | 132.3  | 347.7 |
| nPOD T1D     | 6228-04PT   | 0                |           | ++/+++    | 106.1  | 263.5  | 263.5  | 275.6  | 116.8  | 1144.7 | 127.7  | 166.5  | 45.9   | 166.9  | 352.5  | 223.2  | 368.6  | 306.9  | 274.3  | 331.0  | 260.1  | 320.9  | 133.2  | 308.8  | 213.4  | 563.4 |
|              | 6209-01PT   | 0.25             |           | +         | 41.6   | 209.9  | 209.9  | 178.0  | 85.4   | 865.9  | 65.3   | 129.4  | 77.7   | 240.2  | 325.1  | 309.0  | 368.3  | 241.6  | 271.9  | 329.8  | 214.0  | 290.7  | 68.1   | 240.8  | 185.0  | 412.6 |
|              | 6113-01PH   | 1                |           | +         | 93.6   | 209.9  | 209.9  | 200.5  | 87.6   | 934.9  | 80.8   | 171.0  | 26.0   | 298.9  | 168.5  | 259.9  | 198.1  | 148.3  | 273.8  | 430.4  | 177.7  | 335.8  | 62.2   | 258.2  | 173.9  | 462.3 |
|              | 6211-04PT   | 4                |           | +++       | 93.5   | 334.3  | 334.3  | 269.4  | 124.0  | 1321.2 | 112.2  | 220.6  | 41.4   | 201.8  | 329.3  | 282.4  | 376.6  | 270.5  | 268.8  | 291.6  | 272.4  | 465.1  | 129.5  | 324.4  | 237.4  | 472.7 |
|              | 6243-02PT   | 5                |           | +++       | 87.2   | 311.7  | 311.7  | 247.0  | 98.3   | 1413.3 | 99.2   | 216.7  | 31.9   | 253.5  | 278.8  | 341.6  | 295.9  | 229.7  | 309.6  | 383.3  | 194.4  | 305.9  | 56.9   | 237.2  | 180.5  | 581.4 |
|              | 6070-06PT   | 7                |           | +         | 88.1   | 231.8  | 231.8  | 271.5  | 95.9   | 1145.6 | 112.7  | 203.0  | 48.3   | 150.4  | 193.2  | 321.3  | 246.3  | 159.2  | 234.3  | 274.3  | 202.2  | 302.5  | 114.9  | 246.4  | 189.7  | 347.3 |
|              | 6069-06PT   | 7                |           | +++       | 97.8   | 233.6  | 233.6  | 268.6  | 97.9   | 1320.8 | 121.6  | 223.0  | 31.9   | 192.0  | 217.8  | 192.9  | 232.8  | 183.0  | 246.7  | 291.7  | 169.2  | 297.5  | 76.8   | 203.3  | 161.4  | 523.2 |
|              | 6046-03PT   | 8                |           | +++       | 97.5   | 242.5  | 242.5  | 214.4  | 89.3   | 1008.6 | 98.8   | 174.9  | 23.3   | 195.9  | 238.7  | 278.6  | 260.3  | 198.7  | 285.3  | 321.6  | 185.9  | 298.2  | 100.9  | 222.8  | 164.7  | 458.1 |
|              | 6038-06PH   | 20               |           | ++        | 119.6  | 279.0  | 279.0  | 214.6  | 95.2   | 1060.6 | 125.6  | 210.6  | 34.2   | 199.4  | 225.5  | 219.0  | 241.3  | 185.8  | 213.9  | 243.3  | 216.1  | 400.6  | 119.1  | 263.3  | 204.6  | 463.6 |
|              | Fold change |                  |           |           |        | 0.98   | 1.12   | 1.12   | 1.37   | 1.14   | 1.38   | 1.18   | 1.00   | 1.25   | 1.15   | 1.24   | 1.09   | 1.25   | 1.23   | 1.17   | 1.21   | 1.13   | 1.31   | 1.09   | 1.16   | 1.14  |

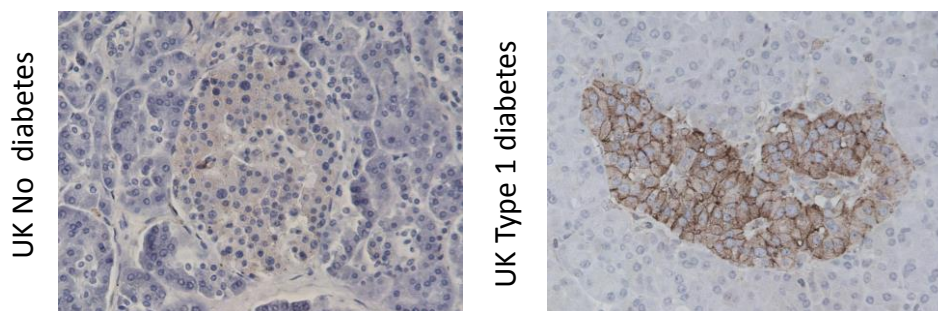


a.

| Case IDs    | HLA-F1 | HLA-F2 | HLA-F3 | HLA-F4 | HLA-F5 | HLA-F6 | HLA-F7 |
|-------------|--------|--------|--------|--------|--------|--------|--------|
| 6024-01PT   | 48.0   | 57.5   | 48.1   | 48.1   | 74.5   | 48.1   | 8.7    |
| 6048-04PT   | 42.2   | 48.1   | 57.5   | 57.5   | 90.5   | 57.5   | 9.9    |
| Age-matched | 65.0   | 70.8   | 63.3   | 63.3   | 83.4   | 63.3   | 6.5    |
| nPOD cases  | 50.1   | 48.3   | 52.5   | 52.5   | 80.1   | 52.5   | 8.2    |
| 6229-02PT   | 60.1   | 63.6   | 62.8   | 62.8   | 76.1   | 62.8   | 8.4    |
| 6251-02PT   | 56.4   | 59.8   | 56.2   | 56.2   | 79.6   | 56.2   | 10.5   |
| 6179-04B PB | 69.1   | 64.2   | 67.3   | 67.3   | 82.7   | 67.3   | 11.0   |
| DiViD-6     | 58.7   | 58.9   | 62.2   | 62.2   | 97.6   | 62.2   | 8.4    |
| DiViD-5     | 57.1   | 79.3   | 71.7   | 71.7   | 102.6  | 71.7   | 44.4   |
| DiViD-4     | 86.6   | 67.5   | 87.8   | 87.8   | 119.1  | 87.8   | 8.7    |
| DiViD-3     | 178.3  | 164.6  | 169.1  | 169.1  | 219.7  | 169.1  | 17.2   |
| DiViD-2     | 113.1  | 99.2   | 99.1   | 99.1   | 136.9  | 99.1   | 7.1    |
| T-test      | p<0.05 | p<0.05 | p<0.05 | p<0.05 | p<0.05 | p<0.05 | NS     |
| Fold change | 1.67   | 1.53   | 1.63   | 1.63   | 1.62   | 1.63   | 1.88   |

Figure 4

b. HLA-F protein expression (IHC)



HLA-F

Insulin (light blue) Glucagon (red)

Merge

c.

nPOD No diabetes

DiViD Type 1 diabetes

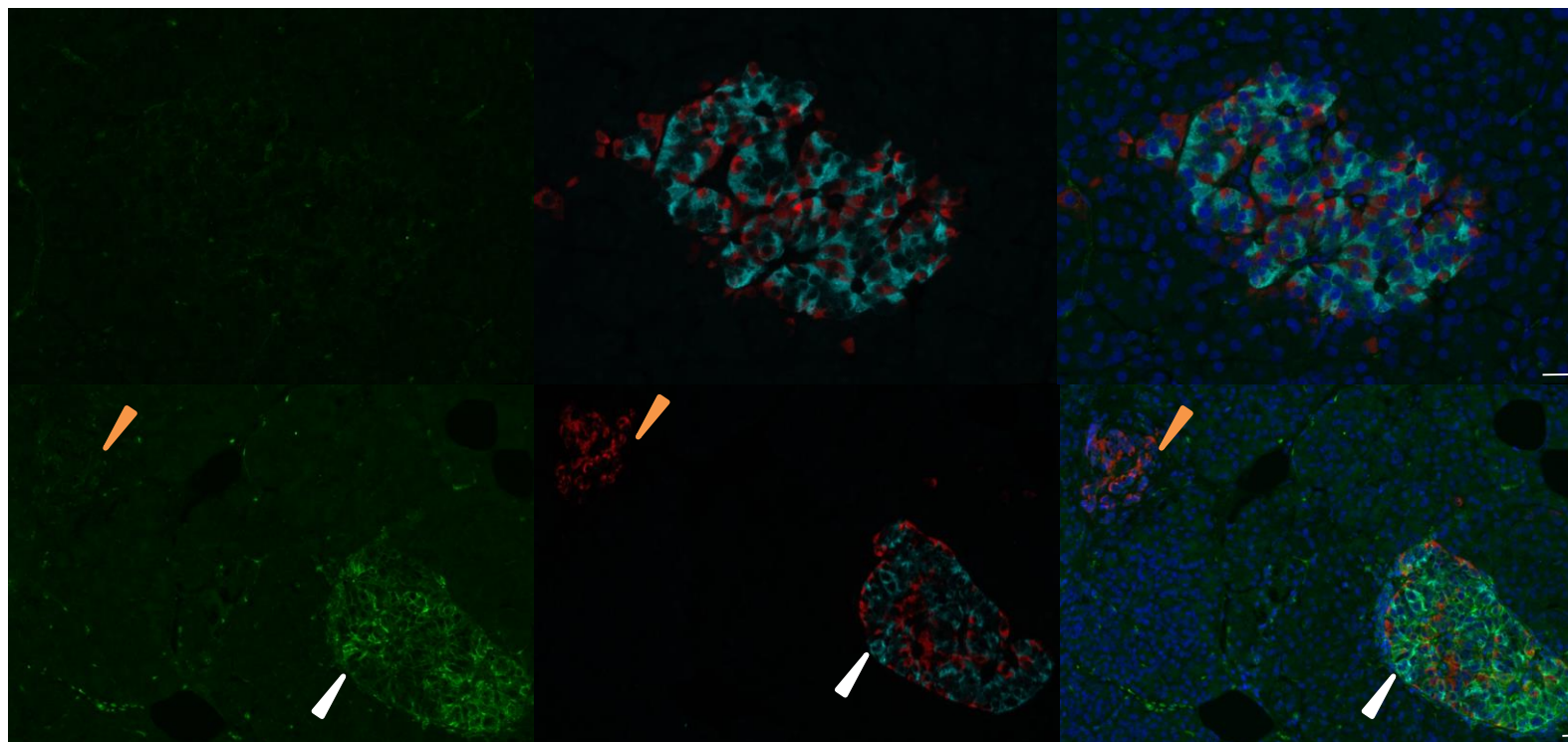


Figure 5

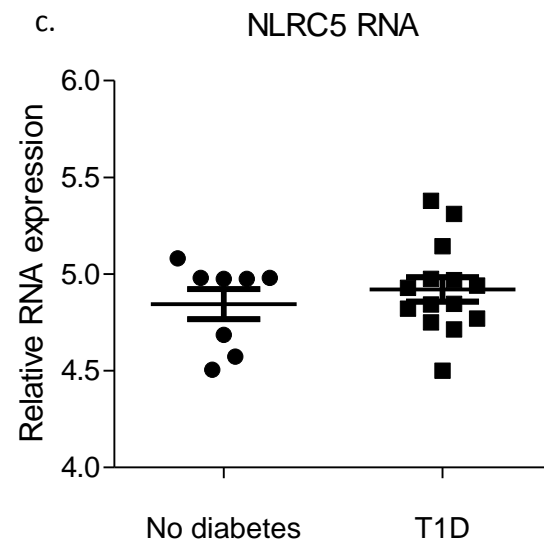
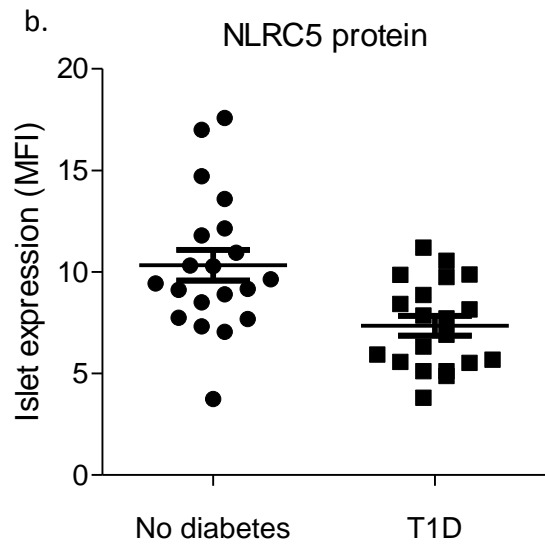
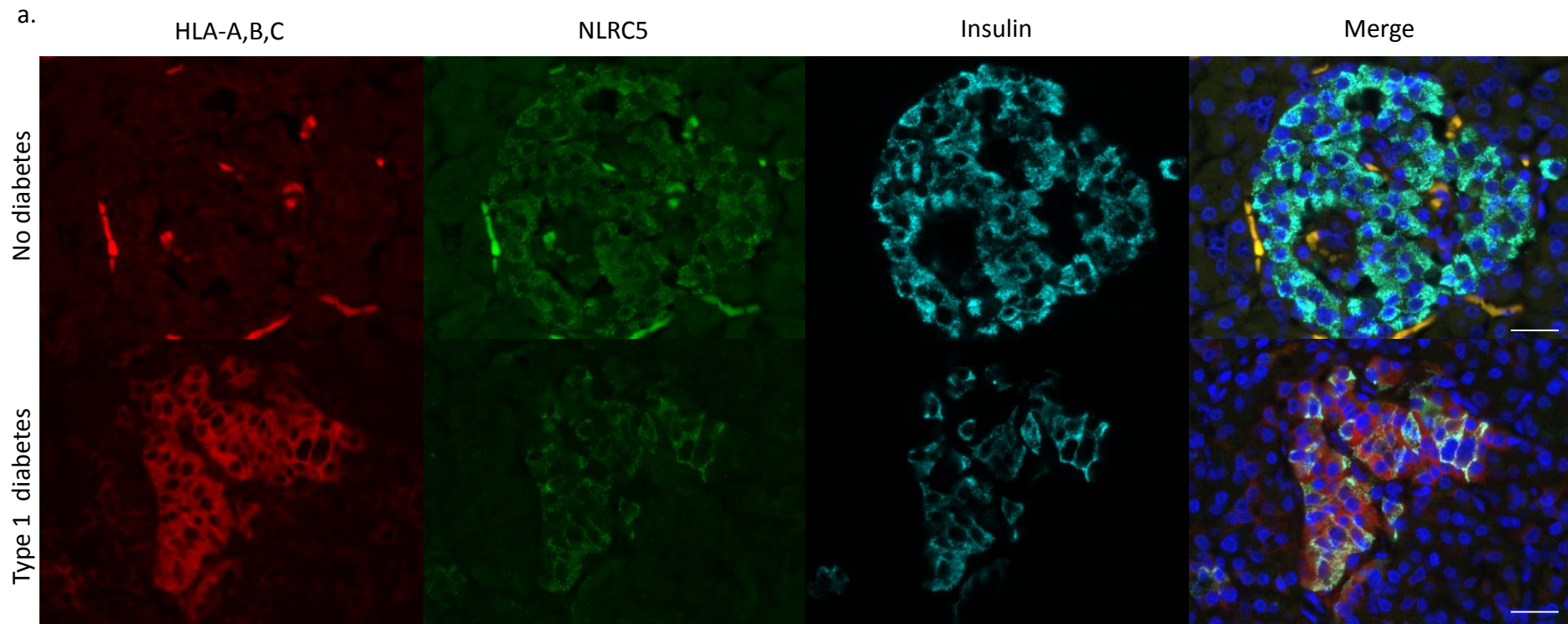


Figure 6:

a.

STAT1

HLA-A,B,C

Insulin

Merge

No diabetes

Insulin - islet

Insulin + islet

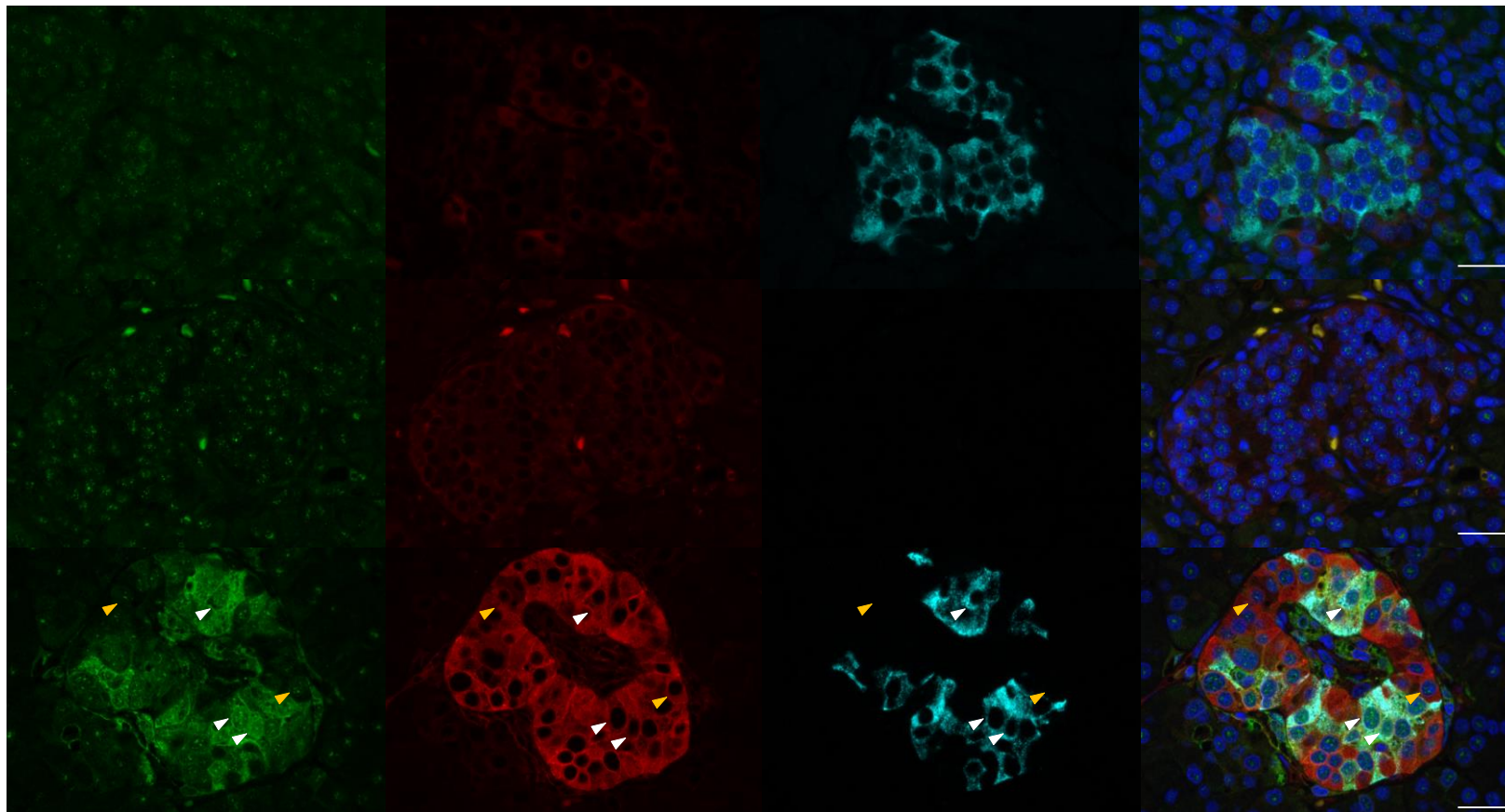
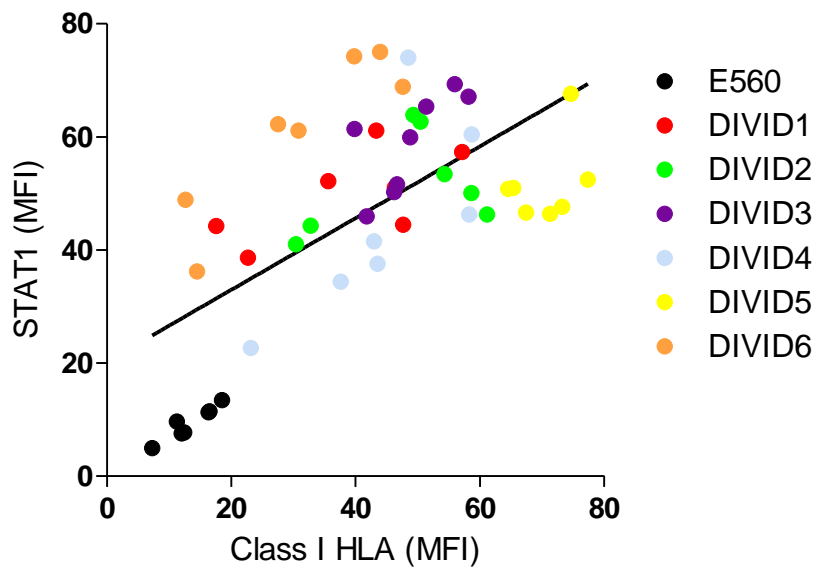


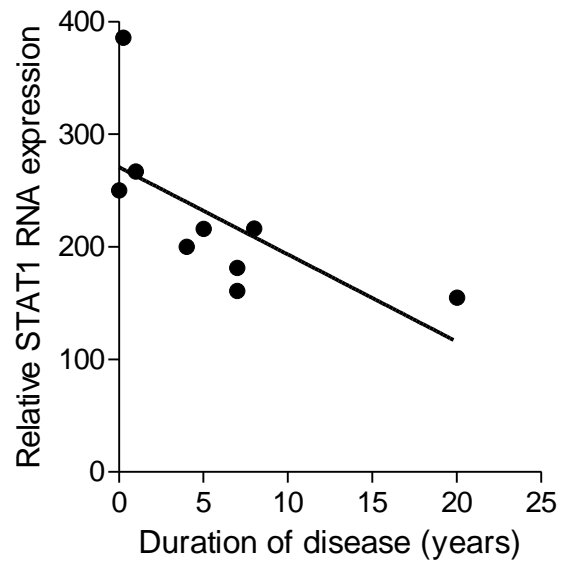


Figure 6:

b.



c.



d.

