Supporting Information for:

Towards discovery of new leishmanicidal scaffolds able to inhibit *Leishmania* GSK-3

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Figure S1. Sequence alignment of the GSK-3 structures of *Leishmania major* (Q4QE15) and *Homo sapiens* (P49841).
Figure S2. Sequence alignment of Leishmania spp. GSK-3 sequences available in the Uniprot database. The identity index among the sequences is also included. *L. panamensis* (A0A088RMG0), *L. major* (Q4QE15), *L. donovani* (A6N857), *L. infantum* (A4HXQ3) and *L. mexicana* (Q0PKV3).
Table S1. *In vitro* enzymatic and antiparasitic activities of first selection of hGSK-3β inhibitors (1-24).\(^a\)

| Compound | Chemical structure | hGSK-3β IC\(_{50}\) (µM) | LdGSK-3β IC\(_{50}\) (µM) | *L. infantum* promastigotes EC\(_{50}\) (µM) | *L. pifanoi* amast. ax EC\(_{50}\) (µM) | PMM\(^c\) EC\(_{50}\) (µM) | SI\(^d\) |
|----------|-------------------|------------------------|------------------------|---------------------------------|---------------------------------|------------------------|------|
| 1        | ![Chemical structure](image1) | 2\(^1\)              | 1.1±0.2                | 10.9±0.4                        | 2.0±1.9                         | 32.9±3.5               | 16.5 |
| 2        | ![Chemical structure](image2) | 0.005\(^2\)          | 0.32±0.05              | 17.6±2.3                        | 7.1±1.8                         | >50                     | >7.0 |
| 3        | ![Chemical structure](image3) | 0.9±0.1\(^3\)        | 0.24±0.00              | >25                             | >50                             | -                      | -    |
| 4        | ![Chemical structure](image4) | 2.0±0.4\(^3\)        | 0.17±0.00              | >25                             | >50                             | -                      | -    |
| 5        | ![Chemical structure](image5) | 0.5\(^4\)            | 1.8±0.3                | 4.6±0.2                         | 2.2±0.6                         | 6.3±1.2                | 2.9  |
|   | Structure |       |       |       |       |       |
|---|-----------|-------|-------|-------|-------|-------|
| 6 | ![Structure 6](image) | $10^4$ | 12.5±2.4 | 0.9±0.1 | 1.7±0.1 | 6.8±0.4 | 4.0 |
| 7 | ![Structure 7](image) | 2.5$^4$ | 7.5±1.4 | 6.6±0.5 | 0.5±0.1 | 7.3±1.0 | 14.6 |
| 8 | ![Structure 8](image) | 5$^4$ | 10.3±2.0 | 4.4±0.1 | 2.4±0.4 | 3.6±0.5 | 1.5 |
| 9 | ![Structure 9](image) | 1.0$^5$ | 74.3%@10 µM | >50 | >50 | - | - |
| 10 | ![Structure 10](image) | 1$^4$ | 3.0±0.4 | 8.6±0.3 | 1.2±0.2 | 7.9±0.6 | 6.6 |
| 11 | ![Structure 11](image) | 3.01±0.14$^6$ | <20%@10 µM | >50 | 3.6±1.3 | 9.9±0.9 | 2.8 |
| 12 | ![Structure 12](image) | 8.7±0.4$^7$ | <20%@10 µM | >50 | 20.8±0.0 | - | - |
| 13 | ![Chemical Structure](Image) | 0.89±0.19<sup>g</sup> | <20%@10 µM | >50 | >25 | - | - |
| 14 | ![Chemical Structure](Image) | 0.005±0.001<sup>g</sup> | 1.6±0.2 µM | >50 | 6.5±2.0 | >25 | >3.8 |
| 15 | ![Chemical Structure](Image) | 0.047±0.007<sup>g</sup> | 17.7±2.7 | >50 | >50 | - | - |
| 16 | ![Chemical Structure](Image) | 4.47±0.35<sup>g</sup> | <20%@10 µM | >50 | 2.5±2.7 | >50 | >20.0 |
|   | Structure       | IC₅₀ (µM) | S___ (µM) | Kᵣ (µM) | S₅₀ (µM) | S₁₀ (µM) |
|---|-----------------|-----------|-----------|----------|----------|----------|
| 17| ![Structure 17](image17.png) | 0.58±0.07 | 35.5% @ 10 µM | 3.4±0.5 | 4.5±0.2 | >25      |
| 18| ![Structure 18](image18.png) | 0.8%     | <20% @ 10 µM | >50      | >50      | -        |
| 19| ![Structure 19](image19.png) | 9.72±0.57 | <20% @ 10 µM | >25      | 14.4±2.6 | 32.0±3.1 |
| 20| ![Structure 20](image20.png) | 6.22±0.20 | <20% @ 10 µM | >50      | >50      | -        |
| 21| ![Structure 21](image21.png) | 7.23±0.26 | <20% @ 10 µM | >50      | >50      | -        |
|   | Chemical Structure | IC<sub>50</sub> (µM) | EC<sub>50</sub> (LdGSK-3) | SI | Reference |
|---|-------------------|----------------------|------------------------|----|-----------|
| 22 | ![Compound 22](image) | 7.04±0.27 <20%@10 µM >50 >50 - - |
| 23 | ![Compound 23](image) | 9.75±0.26 <20%@10 µM >50 >50 - - |
| 24 | ![Compound 24](image) | 7.33±0.15 <20%@10 µM >50 >50 - - |

<sup>a</sup>IC<sub>50</sub>: 50% inhibitory concentration; EC<sub>50</sub>: 50% effective concentration.

<sup>b</sup>Indirubin-3'-monoxime-5-sulphonic acid was used as reference of the assay: IC<sub>50</sub> (LdGSK-3)= 2.4±0.2 µM.

<sup>c</sup>PMM: peritoneal murine macrophages.

<sup>d</sup>SI: Specificity Index (EC<sub>50</sub> PMM/EC<sub>50</sub> amas. ax). 

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Table S2. Chemical structure of the Leishbox compounds (25-210) and the initial screening on LdGSK3.

| Compd. | Leishbox ID  | Chemical structure | % inhibition @ 10µM |
|--------|--------------|-------------------|-------------------|
| 25     | TCMDC-143347 | ![Chemical structure](image1) | -13.55±3.90       |
| 26     | TCMDC-134026 | ![Chemical structure](image2) | 4.75±1.20         |
| 27     | TCMDC-143077 | ![Chemical structure](image3) | 6.35±5.75         |
| 28     | TCMDC-143512 | ![Chemical structure](image4) | 1.15±1.75         |
| 29     | TCMDC-143217 | ![Chemical structure](image5) | 3.80±1.90         |
| 30     | TCMDC-143442 | ![Chemical structure](image6) | 5.20±1.90         |
|   |   |   |
|---|---|---|
| 31 | TCMDC-143180 | 8.20±1.70 |
| 32 | TCMDC-143621 | 8.80±4.10 |
| 33 | TCMDC-143600 | -0.35±3.85 |
| 34 | TCMDC-143211 | -2.00±2.70 |
| 35 | TCMDC-143078 | 2.90±4.05 |
| 36 | TCMDC-143136 | 7.10±1.90 |
| 37 | TCMDC-143459 | 5.90±4.55 |
|   |   |   |
|---|---|---|
| 38 | TCMDC-143212 | ![Chemical Structure](image1) | 7.10±1.40 |
| 39 | TCMDC-143076 | ![Chemical Structure](image2) | 9.00±3.05 |
| 40 | TCMDC-143554 | ![Chemical Structure](image3) | 13.50±3.10 |
| 41 | TCMDC-143443 | ![Chemical Structure](image4) | 7.05±1.35 |
| 42 | TCMDC-143216 | ![Chemical Structure](image5) | 5.30±2.55 |
| 43 | TCMDC-143486 | ![Chemical Structure](image6) | 15.30±1.60 |
| 44 | TCMDC-143427 | ![Chemical Structure](image7) | -2.45±1.00 |
| 45 | TCMDC-143213 | ![Chemical Structure](image8) | -2.50±5.50 |
|   | TCMDC-143260 | ![Molecule](image1) | 4.95±4.45 |
|---|--------------|---------------------|------------|
| 46| TCMDC-143122 | ![Molecule](image2) | 1.55±0.55  |
| 47| TCMDC-143215 | ![Molecule](image3) | 3.25±2.75  |
| 48| TCMDC-143487 | ![Molecule](image4) | 5.60±2.35  |
| 49| TCMDC-125826 | ![Molecule](image5) | 4.70±2.30  |
| 50| TCMDC-143196 | ![Molecule](image6) | 5.95±1.25  |
| 51| TCMDC-143630 | ![Molecule](image7) | 5.05±2.35  |
| 52| TCMDC-143350 | ![Molecule](image8) | -1.60±1.50 |
| 53| TCMDC-143113 | ![Molecule](image9) | 0.10±1.10  |
| 54|              |                     |            |
|   | TCMDC-143397 | ![Chemical Structure](image) | 0.55±3.00 |
|---|---|---|---|
| 56 | TCMDC-143295 | ![Chemical Structure](image) | 0.50±2.95 |
| 57 | TCMDC-143607 | ![Chemical Structure](image) | 6.10±3.15 |
| 58 | TCMDC-143091 | ![Chemical Structure](image) | 3.75±2.40 |
| 59 | TCMDC-143169 | ![Chemical Structure](image) | 16.15±4.10 |
| 60 | TCMDC-143245 | ![Chemical Structure](image) | 0.20±2.80 |
| 61 | TCMDC-143404 | ![Chemical Structure](image) | -2.20±1.15 |
| 62 | TCMDC-143296 | ![Chemical Structure](image) | 12.10±2.40 |
| 63 | TCMDC-143388 | ![Chemical Structure](image) | -3.20±0.80 |
| 64 | TCMDC-143133 | ![Chemical Structure](image) | 1.40±0.95 |
|   | Compound | Structure | Value   |
|---|----------|-----------|---------|
| 65 | TCMDC-143501 | ![Structure Image] | -0.35±2.35 |
| 66 | TCMDC-143633 | ![Structure Image] | 0.90±0.90 |
| 67 | TCMDC-143349 | ![Structure Image] | 5.65±3.60 |
| 68 | TCMDC-143094 | ![Structure Image] | 6.80±1.95 |
| 69 | TCMDC-143171 | ![Structure Image] | 64.27±2.13 |
| 70 | TCMDC-143277 | ![Structure Image] | 3.80±1.25 |
| 71 | TCMDC-143396 | ![Structure Image] | 74.63±1.76 |
| 72 | TCMDC-143238 | ![Structure Image] | 7.40±4.30 |
| 73 | TCMDC-143246 | ![Structure Image] | -3.05±0.35 |
|   | TCMDC-143451 | ![Chemical Structure](image1) | 10.00±0.75 |
|---|---------------|--------------------------------|-------------|
| 75 | TCMDC-143297  | ![Chemical Structure](image2) | 10.05±1.10  |
| 76 | TCMDC-143491  | ![Chemical Structure](image3) | 5.70±0.50   |
| 77 | TCMDC-143629  | ![Chemical Structure](image4) | 4.60±0.95   |
| 78 | TCMDC-143144  | ![Chemical Structure](image5) | 4.90±1.45   |
| 79 | TCMDC-143168  | ![Chemical Structure](image6) | 6.40±1.30   |
| 80 | TCMDC-143261  | ![Chemical Structure](image7) | 7.95±1.65   |
| 81 | TCMDC-143418  | ![Chemical Structure](image8) | 6.35±3.00   |
| 82 | TCMDC-143099  | ![Chemical Structure](image9) | 1.90±2.60   |
| 83 | TCMDC-143351  | ![Chemical Structure](image10) | -5.05±0.45  |
|   |     |          |           |
|---|-----|----------|-----------|
| 84| TCMDC-143285 | ![Chemical Structure](image1) | 3.55±2.20 |
| 85| TCMDC-143503 | ![Chemical Structure](image2) | 3.45±4.90 |
| 86| TCMDC-143072 | ![Chemical Structure](image3) | 6.55±2.70 |
| 87| TCMDC-143145 | ![Chemical Structure](image4) | -0.05±0.95 |
| 88| TCMDC-143115 | ![Chemical Structure](image5) | 2.00±1.95 |
| 89| TCMDC-143175 | ![Chemical Structure](image6) | 4.80±2.05 |
| 90| TCMDC-143305 | ![Chemical Structure](image7) | 6.40±2.45 |
|   | TCMDC-143524 | ![Chemical Structure](image) | 12.65±6.10 |
|---|--------------|-------------------------------|-------------|
| 91 | TCMDC-143509 | ![Chemical Structure](image) | -0.55±1.25  |
| 92 | TCMDC-143375 | ![Chemical Structure](image) | -2.35±1.95  |
| 93 | TCMDC-143406 | ![Chemical Structure](image) | 10.45±0.55  |
| 94 | TCMDC-143483 | ![Chemical Structure](image) | 90.25±1.12  |
| 95 | TCMDC-143431 | ![Chemical Structure](image) | 1.65±2.40   |
| 96 | TCMDC-143577 | ![Chemical Structure](image) | 6.15±1.05   |
|   | TCMDC-143124 | ![Molecular Structure](image1) | 8.50±1.10 |
|---|-------------|---------------------------------|------------|
| 98| TCMDC-143214 | ![Molecular Structure](image2) | 0.60±0.60  |
| 99| TCMDC-143249 | ![Molecular Structure](image3) | 37.05±1.50 |
| 100| TCMDC-143628 | ![Molecular Structure](image4) | 16.40±2.40 |
| 101| TCMDC-143627 | ![Molecular Structure](image5) | 4.05±3.10  |
| 102| TCMDC-143086 | ![Molecular Structure](image6) | 25.85±1.25 |
| 103| TCMDC-143407 | ![Molecular Structure](image7) | -0.75±1.55 |
| 104| TCMDC-143398 | ![Molecular Structure](image8) | -0.45±1.10 |
| 105| TCMDC-143419 | ![Molecular Structure](image9) | -4.60±0.90 |
|   |   |   |   |
|---|---|---|---|
| 107 | TCMDC-142900 | ![Molecule Image](image1) | -4.05±3.20 |
| 108 | TCMDC-143141 | ![Molecule Image](image2) | 5.15±1.90 |
| 109 | TCMDC-125160 | ![Molecule Image](image3) | -4.55±1.90 |
| 110 | TCMDC-143274 | ![Molecule Image](image4) | -0.10±5.35 |
| 111 | TCMDC-143448 | ![Molecule Image](image5) | 7.35±4.65 |
| 112 | TCMDC-143603 | ![Molecule Image](image6) | 7.50±0.65 |
|   |   |   |
|---|---|---|
| 113 | TCMDC-143447 | ![](image1) | 1.40±0.50 |
| 114 | TCMDC-143478 | ![](image2) | 2.85±0.45 |
| 115 | TCMDC-143473 | ![](image3) | 3.20±0.80 |
| 116 | TCMDC-143584 | ![](image4) | 7.05±1.35 |
| 117 | TCMDC-143571 | ![](image5) | 6.20±1.15 |
| 118 | TCMDC-143239 | ![](image6) | 22.80±3.55 |
| 119 | TCMDC-143281 | ![](image7) | 100.29±1.24 |
| 120 | TCMDC-143429 | ![](image8) | 18.15±1.70 |
| 121 | TCMDC-143647 | ![](image9) | 14.80±1.70 |
| 122 | TCMDC-143480 | ![Chemical Structure](image1.png) | 3.95±2.45 |
| 123 | TCMDC-143482 | ![Chemical Structure](image2.png) | 12.15±3.90 |
| 124 | TCMDC-143391 | ![Chemical Structure](image3.png) | 70.59±3.12 |
| 125 | TCMDC-143594 | ![Chemical Structure](image4.png) | 10.60±1.00 |
| 126 | TCMDC-143576 | ![Chemical Structure](image5.png) | 17.10±1.10 |
| 127 | TCMDC-143208 | ![Chemical Structure](image6.png) | 9.65±3.70 |
| 128 | TCMDC-143280 | ![Chemical Structure](image7.png) | 99.46±0.78 |
| 129 | TCMDC-143488 | ![Chemical Structure](image8.png) | 8.90±6.75 |
| 130 | TCMDC-143075 | ![Chemical Structure](image9.png) | 12.85±2.80 |
| 131 | TCMDC-143163 | ![Chemical Structure](image10.png) | 19.75±3.70 |
|   | TCMDC-143521 | ![Chemical Structure](symbol.png) | 8.15±0.95 |
|---|-------------|-----------------------------------|---------|
| 132 | TCMDC-143563 | ![Chemical Structure](symbol.png) | 15.75±4.25 |
| 133 | TCMDC-143092 | ![Chemical Structure](symbol.png) | 5.25±1.70 |
| 134 | TCMDC-143106 | ![Chemical Structure](symbol.png) | 6.85±1.55 |
| 135 | TCMDC-143129 | ![Chemical Structure](symbol.png) | 13.95±3.25 |
| 136 | TCMDC-124508 | ![Chemical Structure](symbol.png) | 9.35±1.30 |
| 137 | TCMDC-143278 | ![Chemical Structure](symbol.png) | 13.00±3.55 |
| 138 | TCMDC-143269 | ![Chemical Structure](symbol.png) | 15.95±1.70 |
| 139 | TCMDC-143367 | ![Chemical Structure](symbol.png) | 18.20±7.00 |
| No. | Code          | Chemical Structure | Value     |
|-----|---------------|--------------------|-----------|
| 141 | TCMDC-143164  | ![Chemical Structure](image1.png) | 8.55 ± 0.55 |
| 142 | TCMDC-143534  | ![Chemical Structure](image2.png) | 7.95 ± 2.05 |
| 143 | TCMDC-143567  | ![Chemical Structure](image3.png) | 2.25 ± 0.35 |
| 144 | TCMDC-143095  | ![Chemical Structure](image4.png) | 9.10 ± 1.75 |
| 145 | TCMDC-143110  | ![Chemical Structure](image5.png) | 9.25 ± 0.40 |
| 146 | TCMDC-143147  | ![Chemical Structure](image6.png) | 11.85 ± 0.55 |
| 147 | TCMDC-143558  | ![Chemical Structure](image7.png) | 13.40 ± 2.35 |
| 148 | TCMDC-143223  | ![Chemical Structure](image8.png) | 9.60 ± 3.10 |
| 149 | TCMDC-143266  | ![Chemical Structure](image9.png) | 8.90 ± 2.10 |
|   |   |   |
|---|---|---|
| 150 | TCMDC-143353 | 13.55 ± 4.65 |
| 151 | TCMDC-143197 | 61.89 ± 2.34 |
| 152 | TCMDC-143536 | -2.95 ± 1.70 |
| 153 | TCMDC-143586 | -5.50 ± 2.15 |
| 154 | TCMDC-143096 | 2.50 ± 1.45 |
| 155 | TCMDC-143119 | 7.50 ± 1.00 |
| 156 | TCMDC-143139 | 11.90 ± 1.75 |
| 157 | TCMDC-143557 | 4.50 ± 4.45 |
|   |   |   |
|---|---|---|
| 158 | TCMDC-143170 | 7.85±3.95 |
| 159 | TCMDC-143306 | 8.80±2.70 |
| 160 | TCMDC-143345 | 12.60±3.50 |
| 161 | TCMDC-143315 | 3.00±3.05 |
| 162 | TCMDC-143532 | 9.20±3.30 |
| 163 | TCMDC-143591 | 3.10±0.70 |
| 164 | TCMDC-143573 | 1.15±1.40 |
| 165 | TCMDC-142704 | 4.70±0.85 |
|   |   |   |
|---|---|---|
| 166 | TCMDC-143174 | 18.60±2.15 |
| 167 | TCMDC-143237 | 38.45±1.35 |
| 168 | TCMDC-143252 | 14.15±2.15 |
| 169 | TCMDC-143236 | 32.90±2.70 |
| 170 | TCMDC-143344 | 13.20±1.65 |
| 171 | TCMDC-143639 | 4.25±2.30 |
| 172 | TCMDC-143523 | 5.20±2.65 |
| 173 | TCMDC-143538 | 8.60±2.90 |
|   |   |   |   |
|---|---|---|---|
| 174 | TCMDC-143574 | ![Chemical Structure](image1.png) | 6.00±1.50 |
| 175 | TCMDC-143101 | ![Chemical Structure](image2.png) | 16.65±1.70 |
| 176 | TCMDC-143165 | ![Chemical Structure](image3.png) | 8.55±1.75 |
| 177 | TCMDC-143218 | ![Chemical Structure](image4.png) | 17.70±1.20 |
| 178 | TCMDC-143255 | ![Chemical Structure](image5.png) | 28.65±1.95 |
| 179 | TCMDC-143327 | ![Chemical Structure](image6.png) | 29.35±2.80 |
| 180 | TCMDC-143358 | ![Chemical Structure](image7.png) | 17.50±3.45 |
| 181 | TCMDC-143517 | ![Chemical Structure](image8.png) | 5.90±2.90 |
|   |   |   |   |
|---|---|---|---|
| 182 | TCMDC-143518 | ![Chemical Structure](image) | 9.60±1.20 |
| 183 | TCMDC-143514 | ![Chemical Structure](image) | 14.80±2.25 |
| 184 | TCMDC-143098 | ![Chemical Structure](image) | 53.23±3.29 |
| 185 | TCMDC-125387 | ![Chemical Structure](image) | 1.70±0.75 |
| 186 | TCMDC-143166 | ![Chemical Structure](image) | 3.65±2.60 |
| 187 | TCMDC-143181 | ![Chemical Structure](image) | 67.81±1.17 |
| 188 | TCMDC-143287 | ![Chemical Structure](image) | 20.90±4.45 |
| 189 | TCMDC-143348 | ![Chemical Structure](image) | 12.20±0.75 |
|    | TCMDC-143508              |             | 8.15±3.40 |
|----|--------------------------|-------------|-----------|
| 190| TCMDC-143531             |             | 12.20±2.70|
| 191| TCMDC-143568             |             | -2.40±2.70|
| 192| TCMDC-143093             |             | 2.65±4.15 |
| 193| TCMDC-143566             |             | 0.90±4.25 |
| 194| TCMDC-143140             |             | 16.55±4.05|
| 195| TCMDC-143188             |             | -2.80±6.35|
| 196| TCMDC-143201             |             | 10.05±1.90|
| 197| TCMDC-143256             |             | 7.15±1.10 |
|   |     |     |     |
|---|-----|-----|-----|
| 199 | TCMDC-143355 | ![Chemical Structure](image) | 8.70 ± 1.75 |
| 200 | TCMDC-143383 | ![Chemical Structure](image) | 20.95 ± 1.30 |
| 201 | TCMDC-143522 | ![Chemical Structure](image) | 18.65 ± 3.35 |
| 202 | TCMDC-143570 | ![Chemical Structure](image) | 6.50 ± 2.15 |
| 203 | TCMDC-143090 | ![Chemical Structure](image) | 4.90 ± 2.30 |
| 204 | TCMDC-143117 | ![Chemical Structure](image) | 8.00 ± 4.85 |
| 205 | TCMDC-143184 | ![Chemical Structure](image) | 14.00 ± 2.25 |
| 206 | TCMDC-143202 | ![Chemical Structure](image) | 10.00 ± 0.90 |
| 207 | TCMDC-143271 | ![Chemical Structure](image) | 8.90 ± 5.85 |
|   |   |   |
|---|---|---|
| 208 | TCMDC-143259 | 10.20±3.25 |
| 209 | TCMDC-143340 | 16.10±4.80 |
| 210 | TCMDC-143618 | 17.65±3.55 |
Table S3. LdGSK-3 inhibition for N-phenylpyrimidine-2-amines from the Leishbox.

| Compound | Leishbox ID  | Chemical Structure | % inhibition @10µM |
|----------|--------------|--------------------|-------------------|
| 95       | TCMDC-143483 | ![Chemical Structure](image1) | 90.25±1.12        |
| 74       | TCMDC-143451 | ![Chemical Structure](image2) | 10.00±0.75        |
| 124      | TCMDC-143391 | ![Chemical Structure](image3) | 70.59±3.12        |
| 140      | TCMDC-143367 | ![Chemical Structure](image4) | 18.20±7.00        |
| 67       | TCMDC-143349 | ![Chemical Structure](image5) | 5.65±3.60         |
| 189      | TCMDC-143348 | ![Chemical Structure](image6) | 12.20±0.75        |
| 119      | TCMDC-143281 | ![Chemical Structure](image7) | 100.29±1.24       |
| 128      | TCMDC-143280 | ![Chemical Structure](image8) | 99.46±0.78        |
|   | TCMDC-143249 | ![Molecule](image1.png) | 37.05±1.50 |
|---|-------------|--------------------------|------------|
|   | TCMDC-143246 | ![Molecule](image2.png)  | -3.05±0.35 |
|   | TCMDC-143216 | ![Molecule](image3.png)  | 5.30±2.55  |
|   | TCMDC-143215 | ![Molecule](image4.png)  | 3.25±2.75  |
|   | TCMDC-143214 | ![Molecule](image5.png)  | 0.60±0.60  |
|   | TCMDC-143213 | ![Molecule](image6.png)  | -2.50±5.50 |
|   | TCMDC-143212 | ![Molecule](image7.png)  | 7.10±1.40  |
|   |   |   |   |
|---|---|---|---|
| 34 | TCMDC-143211 | ![Chemical Structure](image1.png) | -2.00±2.70 |
| 103 | TCMDC-143086 | ![Chemical Structure](image2.png) | 25.85±1.25 |
**Table S4.** LdGSK-3 inhibition for benzoimidazoles from the Leishbox

| Compound | Leishbox ID   | Chemical Structure | % inhibition @ 10µM |
|----------|---------------|--------------------|---------------------|
| 40       | TCMDC-143554  | ![Chemical Structure](image1) | 13.50±3.10          |
| 91       | TCMDC-143524  | ![Chemical Structure](image2) | 12.65±6.10          |
| 182      | TCMDC-143518  | ![Chemical Structure](image3) | 9.60±1.20           |
| 28       | TCMDC-143512  | ![Chemical Structure](image4) | 1.15±1.75           |
| 85       | TCMDC-143503  | ![Chemical Structure](image5) | 3.45±4.90           |
| 114      | TCMDC-143478  | ![Chemical Structure](image6) | 2.85±0.45           |
| 120      | TCMDC-143429  | ![Chemical Structure](image7) | 18.15±1.70          |
|    |    | ![Chemical Structure](image1) | 74.63±1.76 |
|----|----|-----------------------------|------------|
| 71 | TCMDC-143396 | ![Chemical Structure](image2) | -1.60±1.50 |
| 53 | TCMDC-143350 | ![Chemical Structure](image3) | 13.0±3.55  |
| 138| TCMDC-143278 | ![Chemical Structure](image4) | 3.80±1.25  |
| 70 | TCMDC-143277 | ![Chemical Structure](image5) | 7.95±1.65  |
| 80 | TCMDC-143261 | ![Chemical Structure](image6) | 67.81±1.17 |
| 187| TCMDC-143181 | ![Chemical Structure](image7) | 6.40±1.30  |
| 79 | TCMDC-143168 | ![Chemical Structure](image8) | 7.50±1.00  |
| 155| TCMDC-143119 | ![Chemical Structure](image9) |           |
| Compound | Leishbox ID   | Chemical Structure | %inhibition @10µM |
|----------|--------------|--------------------|-------------------|
| 125      | TCMDC-143594 | ![Chemical Structure](image1) | 10.60±1.00        |
| 167      | TCMDC-143237 | ![Chemical Structure](image2) | 38.45±1.35        |
| 206      | TCMDC-143202 | ![Chemical Structure](image3) | 10±0.90           |
| 197      | TCMDC-143201 | ![Chemical Structure](image4) | 10.05±1.90        |
| 184      | TCMDC-143098 | ![Chemical Structure](image5) | 53.23±3.29        |
| 151      | TCMDC-143197 | ![Chemical Structure](image6) | 61.89±2.34        |

Table S5. LdGSK-3 inhibition for oxadiazole from the Leishbox
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