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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Sea Dogfish | Sea Lamprey | Saddled Bichir | Paddlefish | Ghost Shark | Coelacanth | Bowfin | Pollen`s Cichlid | Tiktaalik | Ropefish | Great White Shark | Axolotl | Cuvier's Bichir | Russian Sturgeon | Australian Lungfish | Goldfish |
| Sea Dogfish | 100% | 87.3/97.9 | 90.4/98 | 92.4/98.4 | 90.9/97.7 | 89.5/97.7 | 90.7/98.3 | 92.2/98.6 |  | 91.6/98.4 | 94.2/98.5 | 89.3/97.9 | 90.8/98.6 | 92.4/98.6 | 91.9/98.6 | 93/98.6 |
| Sea Lamprey | 87.3/97.9 | 100% | 87.9/96.5 | 88.9/97.5 | 87.6/96.3 | 89.1/97.3 | 88.3/97.3 | 88.1/97.1 |  | 87.9/96.9 | 86.3/97. | 86.2/96.5 | 88.3/96.9 | 89.1/97.9 | 86.9/97.7 | 88.9/97.5 |
| Saddled Bichir | 90.4/98 | 87.9/96.5 | 100% | 92.4/98.6 | 90.6/98 | 91.5/98.3 | 91.7/98.6 | 92.6/98.3 |  | 98.5/99.6 | 90.4/98.2 | 90.3/97.7 | 98.6/99.4 | 92.6/99.2 | 91.6/99 | 92.2/98.8 |
| Paddlefish | 92.4/98.4 | 88.9/97.5 | 92.4/98.6 | 100% | 90.5/98.6 | 93.8/99 | 95.1/99.4 | 95.3/99.6 |  | 93.4/99 | 91.2/98.1 | 89.1/97.5 | 90.8/98.2 | 98.5/99.8 | 93.2/99.6 | 95.9/99.4 |
| Ghost Shark | 90.9/97.7 | 87.6/96.3 | 90.6/98 | 90.5/98.6 | 100% | 91/98.2 | 90/98.4 | 91.1/98.4 |  | 90.6/98.2 | 91.2/98.1 | 89.1/97.5 | 90.8/98.2 | 90.9/98.8 | 91.1/98.8 | 90.1/98.3 |
| Coelacanth | 89.5/97.7 | 89.1/97.3 | 91.5/98.3 | 93.8/99 | 91/98.2 | 100% | 92.2/98.8 | 93.4/99 |  | 92/98.2 | 89.5/97.9 | 90.8/98.6 | 92/98.4 | 93.8/99.2 | 93.8/98.8 | 92.8/98.8 |
| Bowfin | 90.7/98.3 | 88.3/97.3 | 91.7/98.6 | 95.1/99.4 | 90/98.4 | 92.2/98.8 | 100% | 93.6/99.2 |  | 93/99.2 | 89.9/98.3 | 91.6/98.4 | 92.4/98.8 | 95.1/99.6 | 92.4/99.2 | 93.4/99 |
| Pollen`s Cichlid | 92.2/98.6 | 88.1/97.1 | 92.6/98.3 | 95.3/99.6 | 91.1/98.4 | 93.4/99 | 93.6/99.2 | 100% |  | 93.9/99 | 92.2/99 | 93.6/98.6 | 93.8/98.8 | 95.9/99.8 | 94.7/99.4 | 94.9/994 |
| Tiktaalik |  |  |  |  |  |  |  |  | 100% |  |  |  |  |  |  |  |
| Ropefish | 91.6/98.4 | 87.9/96.9 | 98.5/99.6 | 93.4/99 | 90.6/98.2 | 92/98.2 | 93/99.2 | 93.9/99 |  | 100% | 91/98.6 | 90.8/98.2 | 98.6/99.8 | 95.9/99.6 | 91.5/99 | 92/98.8 |
| Great White Shark | 94.2/98.5 | 86.3/97.1 | 90.4/98.2 | 91.2/99 | 91.2/98.1 | 89.5/97.9 | 89.9/98.3 | 92.2/99 |  | 91/98.6 | 100% | 89.3/97.9 | 90.6/98.8 | 91.9/98.6 | 92.2/99 | 91.8/99 |
| Axolotl | 89.3/97.9 | 86.2/96.5 | 90.3/97.7 | 92.4/98.9 | 89.1/97.5 | 90.8/98.6 | 91.6/98.4 | 93.6/98.6 |  | 90.8/98.2 | 89.3/97.9 | 100% | 91.4/98.4 | 92.8/99 | 91.2/98.6 | 91.8/99 |
| Cuvier's Bichir | 90.8/98.6 | 88.3/96.9 | 98.6/99.4 | 93.2/99.2 | 90.8/98.2 | 92/98.4 | 92.4/98.8 | 93.8/98.8 |  | 98.6/99.8 | 90.6/98.8 | 91.4/98.4 | 100% | 92.8/99 | 93/99.6 | 93/99.4 |
| Russian Sturgeon | 92.4/98.6 | 89.1/97.9 | 92.6/99.2 | 98.5/99.8 | 90.9/98.8 | 93.8/99.2 | 95.1/99.6 | 95.9/99.8 |  | 93.6/99.6 | 91.9/98.6 | 92.8/99 | 95.9/99.6 | 100% | 94.2/99.8 | 95.9/99.6 |
| Australian Lungfish | 91.9/98.6 | 86.9/97.7 | 91.6/99 | 93.2/99.6 | 91.1/98.8 | 93.8/98.8 | 92.4/99.2 | 94.7/99.4 |  | 91.5/99 | 92.2/99 | 91.2/98.6 | 93/99.6 | 94.2/99.8 | 100% | 93/99.6 |
| Goldfish | 93/98.6 | 88.9/97.5 | 92.2/98.8 | 95.9/99.4 | 90.1/98.3 | 92.8/98.8 | 93.4/99 | 94.9/994 |  | 93.2/99.2 | 92/98.8 | 91.8/99 | 93/99.4 | 95.9/99.6 | 93/99.6 | 100% |

Fig. 6 Amino Acid Percentages