

## Progressive structure-based alignment of homologous proteins: Adopting sequence comparison strategies.

Agnel Praveen Joseph, Narayanaswamy Srinivasan, Alexandre De Brevern

► **To cite this version:**

Agnel Praveen Joseph, Narayanaswamy Srinivasan, Alexandre De Brevern. Progressive structure-based alignment of homologous proteins: Adopting sequence comparison strategies.. *Biochimie, Elsevier*, 2012, 94 (9), pp.2025-34. <10.1016/j.biochi.2012.05.028>. <inserm-00750325>

**HAL Id: inserm-00750325**

**<http://www.hal.inserm.fr/inserm-00750325>**

Submitted on 9 Nov 2012

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Fold/Family	PDBs	RIGID BODY				FLEXIBLE	
		mulPBA	SALIGN	MAMMOTH	MASS	POSA	MATT
Cupins (134)	1VJ2a, 1V70a, 1QXRa, 1O5Ua, 1DZRa	<b>66</b> , 52.33, 75.70	49, 32.83, 67.40	<b>64</b> , 54.33, 74.80	9, 6.00, 43.01	54, 43.83, 76.90	63, 50.33, 69.10
Globins (141)	1VHBa, 1MBaA, 1LHsA, 1ITHa, 1HLMa, 1HBGa, 1GDJa, 1ECAa, 1DLWa, 1BABA, 1SCTa, 1H97a, 1FLPa, 1EW6a, 1ASHa	101, 38.83, 111.70	<b>105</b> , 23.17, 111.43	101, 26.17, 109.93	NA	<b>105</b> , 32.50, 110.81	86, 21.0, 108.1
Superhelix (205)	2TDTa, 1XATa, 1QQ0a, 1LXAa, 1FWYa	<b>68</b> , 62.00, 81.50	57, 55.17, 90.40	36, 29.00, 79.00	<b>69</b> , 66.17, 93.20	46, 40.83, 94.40	<b>68</b> , 66.17, 73.20
PTB (136)	1IRSa, 2NMBa, 1X11a, 1SHCa, 1EVHa, 1DDMa	<b>64</b> , 40.00, 84.73	17, 7.83, 70.40	63, 36.5, 82.73	58, 37.67, 80.27	<b>68</b> , 42.83, 85.07	<b>67</b> , 41.80, 80.50
Kinase (306)	1BMKa, 1CDKa, 1CJAa, 1HCKa, 1PHKa, 2SRCa	<b>99</b> , 65.00, 169.40	42, 20.17, 153.20	93, 61.00, 161.93	70, 47.17, 151.67	<b>128</b> , 86.00, 186.27	64, 27.50, 130.3
Serine Protease (191)	3SGBE, 1WYKa, 1TONa, 1QA7a	<b>86</b> , 69.50, 108.00	<b>85</b> , 74.00, 110.50	80, 55.5, 101.83	60, 42.33, 92.50	83, 67.83, 106.83	84, 67.17, 105.17
Rossmann (164)	1GD1o, 1GPBa, 4MDHa, 5LDHa, 6LDHa, 8ADHa	<b>57</b> , 35.00, 86.13	48, 34.17, 83.53	<b>53</b> , 31.5, 79.27	29, 19.50, 69.53	52, 34.67, 85.73	42, 20.80, 71.3
tRNA Synthetase (486)	1ADJa, 1AT1a, 1HC7a, 1QF6a	128, 93.16, 212.33	NA	NA	<b>175</b> , 148.50, 231.50	<b>240</b> , 198.67, 288.67	64, 39.00, 156.83
TIM barrel (393)	1CCWb, 1CZ1a, 1F8Ma, 1GVOa, 1ITUa, 1K4Ga, 1K87a, 1MUWa, 1NTHa, 1UROa	<b>38</b> , 5.33, 95.07	31, 2.00, 69.49	18, 1.17, 65.1	28, 3.67, 72.40	30, 9.50, 99.47	7.0, 1.00, 49.16
Gamma Crystallin (85)	1H4Ax, 1G6Ea, 1F53a, 1C01a, 1BHUa	<b>31</b> , 17.00, 46.10	17, 9.66, 41.90	20, 11.83, 43.20	2, 0.67, 21.90	26, 14.67, 45.90	31, 14.17, 43.00
Metallo- hydrolase (246)	1QH5a, 1M2Xa, 1K07a, 1E5Da	138, 118.17, 164.83	<b>140</b> , 119.83, 165.00	126, 110.83, 157.66	131, 110.67, 159.50	<b>140</b> , 123.33, 166.33	138, 113.83, 161.67
Ferritin (271)	1O9Ra, 1NOGa, 1MXRa, 1MTYd, 1MTYb, 1LKOa, 1JKVa, 1JGCa, 1AFRa	<b>95</b> , 29.67, 105.25	6, 0.33, -	79, 22.67, 102.92	10, 6.16, 39.39	<b>107</b> , 50.5, 117.83	<b>95</b> , 48.8, 109.9