Analysis performed: 190620_072758

• Analyzed sequences (hits resulting from 676 blast searches, 52 animal groups x 13 query sequences):49992 (out of which unique: 8666, programmatically recognized as VEGF/PDGF family members: 90.5%).

Red dotted lines in the tree indicate paraphyletic relationships.

• The tree background color indicates the presence of the proteins with the corresponding color according to our hypotheses.

The red-to-white background of the table indicates a heuristic reliability of the results, where a brighter color indicates a higher reliability. This is calculated using the number of species in the phylum and the number of protein sequences available for that phylum.
The numbers in the table denote the number of: orthologs found (black), P = paralogs found, ? = homologs found, ? = total homologs found.

								• The numbers in the table denote the number of: orthologs found (black), P = paralogs found, ? = homologs found.												
					l # se- # com quences genon	-		PDGF-A	PDGF-B	PDGF-C	PDGF-D	PIGF-1	VEGF-A121	VEGF-A165	VEGF-A206	VEGF-B167	VEGF-B186	VEGF-C	VEGF-D	VEGF-F
				55	6 3	0	ctenophora (comb jellies)													
				1354	34k 2	11	porifera (sponges)											1 P0, ?7, Σ8	0 P1, ?1, Σ2	0 P0, ?3, Σ3
	•			3	36k 2	0	placozoa													
				3668	115k 18	94	enidaria (medusae/polyps)	0 P6, ?4, Σ10	1 P3, ?1, Σ5	0 P1, ?0, Σ1		0 P2, ?1, Σ3	0 P6, ?7, Σ13	1 P7, ?13, Σ21	0 P6, ?9, Σ15	0 P18, ?61, Σ79	0 P6, ?0, Σ6	11 P1, ?43, Σ55	0 P7, ?19, Σ26	0 P3, ?2, Σ5
				151	925 0	1	xenacoelomorpha													
				1791	136k 11	42	echinodermata	0 P5, ?1, Σ6	0 P5, ?0, Σ5	0 P11, ?1, Σ12	0 P12, ?1, Σ13	0 P9, ?3, Σ12	3 P2, ?7, Σ12	3 P3, ?11, Σ17	3 P2, ?7, Σ12	0 P10, ?9, Σ19	0 P10, ?8, Σ18	2 P8, ?12, Σ22	1 P9, ?7, Σ17	0 P7, ?3, Σ10
				39	23k 2	9	hemichordata (acorn wormws)	0 P2, ?0, Σ2	0 P2, ?0, Σ2	0 P2, ?1, Σ3	0 P2, ?0, Σ2	0 P1, ?0, Σ1	0 P1, ?2, Σ3	0 P1, ?1, Σ2	0 P1, ?1, Σ2	0 P2, ?1, Σ3	0 P2, ?2, Σ4	2 P1, ?1, Σ4	0 P3, ?1, Σ4	0 P2, ?0, Σ2
		-0		······ 11	95k 4	20	cephalochordata (lancelets)	0 P6, ?1, Σ7	0 P6, ?1, Σ7	0 P5, ?1, Σ6	0 P5, ?1, Σ6	0 P5, ?0, Σ5	1 P5, ?1, Σ7	1 P5, ?1, Σ7	1 P5, ?1, Σ7	0 P6, ?2, Σ8	0 P6, ?1, Σ7	6 P1, ?5, Σ12	0 P6, ?1, Σ7	0 P6, ?1, Σ7
_	-			360	64k 6	2	tunicata	0 P1, ?0, Σ1	0 P1, ?0, Σ1			0 P1, ?0, Σ1	1 P0, ?0, Σ1	1 P0, ?0, Σ1	1 P0, ?0, Σ1	0 P1, ?0, Σ1	0 P1, ?0, Σ1	0 P1, ?0, Σ1	0 P1, ?0, Σ1	0 P1, ?0, Σ1
				77	8k 3	0	cyclostomata (hagfish/lamprey)													
				825	115k 6	52	chondrichthyes (cartilaginous fishes)	6 P21, ?0, Σ27	2 P25, ?0, Σ27	2 P18, ?0, Σ20	2 P11, ?0, Σ13	0 P25, ?0, Σ25	11 P14, ?0, Σ25	11 P14, ?0, Σ25	11 P13, ?0, Σ24	0 P29, ?0, Σ29	0 P29, ?1, Σ30	6 P23, ?0, Σ29	2 P26, ?0, Σ28	0 P25, ?0, Σ25
			-0	18907	2M 186	2134	actinopterygii (ray-finned fishes)	217 P665, ?170, Σ1052	27 P863, ?170, Σ1060	117 P282, ?15, Σ414	148 P269, ?9, Σ426	102 P882, ?159, ∑1143	426 P811, ?209, Σ1446	430 P462, ?137, Σ1029	433 P463, ?130, Σ1026	59 P1041, ?154, Σ1254	58 P1161, ?173, Σ1392	175 P1034, ?141, Σ1350	102 P1012, ?136, Σ1250	30 P1054, ?169, Σ1253
				2	35k 1	31	coelacanthimorpha (lobe-finned fishes)	1 P15, ?0, Σ16	2 P12, ?0, Σ14	1 P12, ?0, Σ13	2 P4, ?0, Σ6	2 P12, ?0, Σ14	3 P12, ?0, Σ15	3 P11, ?0, Σ14	3 P11, ?0, Σ14	3 P14, ?0, Σ17	3 P14, ?1, Σ18	2 P15, ?0, Σ17	1 P16, ?0, Σ17	0 P14, ?0, Σ14
				6	1k 0	10	dipnoi (lungfishes)	1 P3, ?0, Σ4	1 P3, ?0, Σ4	0 P4, ?0, Σ4	0 P4, ?0, Σ4	0 P4, ?0, Σ4	2 P2, ?0, Σ4	2 P2, ?0, Σ4		0 P4, ?0, Σ4	0 P4, 70, Σ4	0 P4, ?0, Σ4	0 P4, ?0, Σ4	0 P4, ?2, Σ6
				5659	478k 6	144	amphibia	16 P59, ?1, Σ76	12 P62, ?1, Σ75	6 P54, ?0, Σ60	5 P17, ?0, Σ22	0 P66, ?1, Σ67	27 P38, ?1, Σ66	27 P30, ?1, Σ58	27 P33, ?1, Σ61	3 P69, ?1, Σ73	3 P73, ?1, Σ77	5 P71, ?1, Σ77	6 P72, ?1, Σ79	0 P68, ?1, Σ69
				9445	3M 132	1551	aves (birds)	127 P340, ?5, Σ472	118 P461, ?5, Σ584	98 P452, ?2, Σ552	154 P316, ?0, Σ470	109 P463, ?4, Σ576	140 P390, ?9, Σ539	141 P329, ?5, Σ475	141 P329, ?5, Σ475	0 P672, ?8, Σ680	0 P764, ?8, Σ772	130 P704, ?4, Σ838	96 P707, ?4, Σ807	1 P729, ?8, Σ738
				2 4	179k 4	102	crocodylia (crocodiles)	5 P26, ?0, Σ31	1 P14, ?0, Σ15	4 P35, ?0, Σ39	6 P21, ?0, Σ27	7 P46, ?0, Σ53	17 P40, ?0, Σ57	17 P35, ?0, Σ52	17 P29, ?0, Σ46	0 P57, ?0, Σ57	0 P63, ?0, Σ63	9 P54, ?0, Σ63	8 P55, ?0, Σ63	0 P53, ?0, Σ53
				○ 3227	96k 6	66	lepidosauria excl. toxicofera (non-poisonous lizar	ds) 3 P52, ?0, Σ55	6 P45, ?0, Σ51	3 P38, ?1, Σ42	5 P18, ?0, Σ23	6 P46, ?1, Σ53	26 P31, ?1, Σ58	26 P26, ?1, Σ53	26 P22, ?1, Σ49	2 P54, ?0, Σ56	2 P59, ?0, Σ61	7 P56, ?1, Σ64	5 P57, ?0, Σ62	4 P48, ?0, Σ52
				○ 3776	467k 15		toxicofera (poisonous reptiles)	12 P122, ?0, Σ134	9 P113, ?0, Σ122	9 P89, ?0, Σ98	11 P26, ?0, Σ37	14 P91, ?28, ∑133	53 P63, ?29, ∑145	53 P43, ?29, Σ125	53 P45, ?28, ∑126	7 P109, ?26, Σ142	7 P120, ?26, Σ153	11 P108, ?26, Σ145	2 P119, ?23, Σ144	24 P107, ?5, Σ136
				358	184k 10		testudines (turtles)	9 P65, ?1, Σ75	8 P66, ?1, Σ75	7 P60, ?7, Σ74	17 P20, ?0, ∑37	10 P61, ?1, Σ72	30 P48, ?1, ∑79	30 P52, ?4, ∑86	30 P36, ?1, Σ67	8 P65, ?1, Σ74	8 P88, ?2, Σ98	6 P91, ?2, Σ99	5 P92, ?1, Σ98	0 P70, ?1, Σ71
					26k 1		monotremata (egg-laying mammals)	1 P6, ?0, Σ7	1 P5, ?0, Σ6	3 P10, ?0, Σ13	3 P10, ?0, Σ13	1 P5, ?0, Σ6	1 P6, ?0, Σ7	1 P6, ?0, Σ7	1 P6, ?0, Σ7	0 P8, ?0, Σ8	0 P8, ?0, Σ8	2 P6, ?0, Σ8	1 P7, ?0, Σ8	0 P6, ?0, Σ6
					142k 5		metatheria (marsupials)	7 P36, ?0, Σ43	5 P36, ?0, Σ41	4 P33, ?0, Σ37	10 P16, ?0, Σ26	4 P25, ?0, Σ29	4 P28, ?0, Σ32	4 P22, ?0, Σ26	4 P22, ?0, Σ26	4 P32, ?0, Σ36	4 P36, ?0, Σ40	4 P35, ?0, Σ39	5 P34, ?0, Σ39	0 P39, ?0, Σ39
			L_ 0				eutheria (placentals)	247 P762, ?6, Σ1015	223 P892, ?13, Σ1128	218 P659, ?1, Σ878	235 P417, ?0, Σ652		434 P900, ?6, Σ1340	440 P862, ?6, Σ1308	440 P857, ?6, Σ1303	249 P1420, ?11, Σ1680	249 P1504, ?10, Σ1763	171 P1406, ?9, Σ1586	164 P1601, ?9, Σ1774	0 P1596, ?10, Σ1606
					46k 2		tardigrada (water bears)				0 P1, ?0, Σ1								0 P4, ?0, Σ4	0 P2, ?1, Σ3
					2k 1		onychophora (velvet worms)		- , , –	, , _	, , _	- , , -	5 , , , –	- , , , –	- , , , –	J , , , _	- , , , –	- , , , –	<u> </u>	
							pycnogonida (sea spiders)													
							arachnida (spiders)	2 P20, ?3, Σ25	0 P20, ?3, Σ23	0 P21, ?5, Σ26	0 P9, ?2, Σ11	2 P24, ?39, Σ65	14 P5, ?22, Σ41	14 P5, ?20, Σ39	13 P5, ?16, ∑34	0 P25, ?13, Σ38	0 P24, ?11, Σ35	1 P16, ?16, Σ33	1 P14, ?2, Σ17	1 P26, ?30, Σ57
							xiphosura (horseshoe crabs)	0 P6, ?3, Σ9	0 P6, ?1, Σ7							0 P7, ?11, Σ18			0 P2, ?0, Σ2	0 P7, ?11, Σ18
							myriapoda (millipeds)		0 10/11/21	0 177 107 220	0 13/12/23	0 177 1207 221	,	,	,	0 177127220	0 P0, ?1, Σ1	J 177117222	0 1 2 1 2 2	0 177 1227 220
							crustacea	0 P10, ?8, Σ18	0 P11, ?4, Σ15	1 P4, ?3, Σ8	n P1, ?8, Σ9	0 P5, ?7, Σ12	5 P4. ?11. Σ20	5 P4. ?12. Σ21	4 P4, ?8, Σ16	1 P9, ?19, Σ29		1 P8, ?13, Σ22	1 P6, ?8, Σ15	1 P7, ?9, Σ17
							hexapoda (insects)									5 P110, ?177, Σ292				3 P95, ?236, Σ334
							nematomorpha (horsehair worms)	20 111/121/221	3 100/1110/2100	<u> </u>	2 120/120/212	3 102, 1212, 2200	13	33 1 02, 1200, 2020	33 1 137 1 1 1 37 2 1 1 3	3 1223, 1211, 2232	3 101,1100, 2100	10 120, 120, 2202	2 100, 100, 200	3 . 3 3 7 . 2 3
							nematoda (roundworms)	0 P0, ?35, Σ35	0 P0, ?11, Σ11							0 P1, ?22, Σ23	0 P0, ?21, Σ21	0 P0, ?4, Σ4	ο Ρ0. ?2. Σ2	0 P0, ?24, Σ24
							priapulida (penis worms)		0 P1, ?7, Σ8					0 P1, ?0, Σ1				0 P1, ?0, Σ1	0 107.2722	0 P1, ?0, Σ1
		•			1 0	,	loricifera	1 10/.0/21	0 117.7720					0 11/10/21		0 11, .0, 21	0 11/.0/21	0 11/.0/21		0 11/ 10/ 21
					436 0		kinorhyncha (mud dragons)													
					2k 0		chaetognatha (arrow worms)													
					3k 0		bryozoa (moss animals)										0 P0, ?1, Σ1			
							entoprocta										0 P0, ?1, Σ1		ο ΡΟ, ?1, Σ1	
		-			278 0		cycliophora (symbion)										0 107.2722		0 10, 1, 21	
		_				· ·	annelida (segmented worms)	0 P0, ?3, Σ3	0 P2, ?2, Σ4	0 P1, ?1, Σ2	0 P1, ?1, ∑2	0 P1, ?2, Σ3	0 P0, ?3, Σ3	0 P0, ?3, Σ3	0 P0, ?3, Σ3	0 P1, ?2, Σ3	0 P1, ?1, Σ2	0 P0, ?3, Σ3	0 P1, ?1, Σ2	0 P1, ?2, Σ3
						38 4		0 P4, ?6, Σ10	0 P8, ?0, Σ8		0 P1, ?4, Σ5			2 P2, ?9, Σ13		0 P9, ?6, Σ15	0 P4, ?6, Σ10		0 P7, ?4, Σ11	0 P8, ?4, Σ12
						· ·		0	0	0	0 F1, :4, Z3	U FZ, :1, Z3	2	Z FZ, : 9, Z13	Z FZ, : 3, Z3	0	U F4, :0, Z10	0 F1, :13, Z10	U F7, :4, ZII	0 70, :4, 212
					5k 1	•	nemertea (ribbon worms)	o D1 20 51	0 D1 20 T1	0 DO 21 T1	0 D1 20 T1		0 D1 20 T1	0 D1 20 T1	0 D1 20 T1	0 D1 21 T2	0 D1 20 T1	0 D1 22 T2	1 DO 20 T1	0 D1 20 T1
					42k 1		brachiopoda (lamp shells)	0 P1, ?0, Σ1	0 P1, ?0, Σ1	0 P0, ?1, Σ1	0 P1, (U, Z1		0 P1, ?0, Σ1	0 P1, ?0, Σ1	0 P1, ?0, Σ1	0 P1, ?1, Σ2	0 P1, ?0, Σ1	0 P1, ?2, Σ3	1 P0, ?0, Σ1	0 P1, ?0, Σ1
					165 1		phoroniformea (horseshoe worms)													
					389 0		gastrotricha (hairybacks)										0 00 21 51			
					561k 26		platyhelminthes (flatworms)										0 P0, ?1, Σ1			
							gnathostomulida (jaw worms)													
					2 0		micrognathozoa	. 50 00 5												
							rotifera (wheel animals)	1 P0, ?0, Σ1	0 P1, ?0, Σ1	0 P1, ?1, Σ2		0 P1, ?0, Σ1		0 P1, ?0, Σ1		0 P1, ?0, Σ1	0 P1, ?1, Σ2	0 P1, ?0, Σ1	0 P1, ?0, Σ1	0 P1, ?2, Σ3
							orthonectida													
				24	150 0	U	dicyemida													