Analysis performed: 190618_121828

• 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 fully sequenced genomes, 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, whose relationship could not be programmatically determined, Σ = total homologs found.

							• The numbers in the table denote the number of: orthologs found (black), P = paralogs found, ? = homologs found, ? = total homologs found.												
					# compl. # unique s genomes blasthits		PDGF-A	PDGF-B	PDGF-C	PDGF-D	PIGF-1	VEGF-A121	VEGF-A165	VEGF-A206	<i>VEGF-B167</i>	VEGF-B186	VEGF-C	VEGF-D	VEGF-F
			55	6	3 0	ctenophora (comb jellies)											1 00 07 00	0 04 04 55	0 D0 20 E2
					2 11	porifera (sponges)											1 P0, ?7, Σ8	0 P1, ?1, Σ2	0 P0, ?3, Σ3
			3	36k	2 0	placozoa													
)		36	668 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, ∑21	0 P6, ?9, Σ15	0 P18, ?61, Σ79	0 P6, ?0, Σ6	11 P1, ?43, ∑55	0 P7, ?19, Σ26	0 P3, ?2, Σ5
			15	925	0 1	xenacoelomorpha													
	(<u> </u>	17	'91 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
				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
		<u> </u>	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
Ц				60 64k		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
				' 8k			0 12/10/22	0 11/10/21			0 11/10/21	1 10/10/21	1 10/10/21	1 10/10/21	0 12/10/22	0 11/10/21	0 12/10/22	0 12/10/22	0 11/10/21
						cyclostomata (hagfish/lamprey)	c D21 20 527	2	2 P10 20 F20	2 D11 20 T12	0 D3E 30 Z3E	11 D14 20 525	11 D14 20 T2E	11 D12 20 524	o D20 20 720	0 P20 21 F20	C D32 30 530	2 D26 20 720	0 D3E 30 Z3E
				.5 115k		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
			18	3907 2M	186 2134	actinopterygii (ray-finned fishes)											175 P1034, ?141, Σ1350		
			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		0 P4, 70, Σ4	0 P4, ?0, Σ4	0 P4, ?0, Σ4	0 P4, ?0, Σ4	0 P4, ?2, Σ6
			56	559 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
			94	45 3M	132 1551	aves (birds)	127 P340, ?5, Σ472	118 P461, ?5, ∑584	98 P452, ?2, Σ552	154 P316, ?0, Σ470	109 P463, ?4, Σ576	140 P390, ?9, ∑539	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
			24	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, ∑52	17 P29, ?0, Σ46	0 P57, ?0, Σ57	0 P63, ?0, Σ63	9 P54, ?0, Σ63	8 P55, ?0, Σ63	0 P53, ?0, Σ53
		Lo	32	27 96k	6 66	lepidosauria excl. toxicofera (non-poisonous lizards)	3 P52, ?0, Σ55	6 P45, ?0, Σ51	3 P38, ?1, Σ42	5 P18, ?0, Σ23	6 P46, ?1, Σ53	26 P31, ?1, ∑58	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
			37	'76 467k	15 161	toxicofera (poisonous reptiles)	12 P122, ?0, Σ134	9 P113, ?0, Σ122	9 P89, ?0, Σ98	11 P26, ?0, Σ37	14 P91, ?28, Σ133	53 P63, ?29, Σ145	53 P43, ?29, ∑125	53 P45, ?28, ∑126	7 P109, ?26, Σ142	7 P120, ?26, Σ153	11 P108, ?26, ∑145	2 P119, ?23, Σ144	24 P107, ?5, Σ136
			35		10 188	testudines (turtles)	9 P65, ?1, Σ75	8 P66, ?1, Σ75	7 P60, ?7, Σ74	17 P20, ?0, Σ37	10 P61, ?1, Σ72	30 P48, ?1, Σ79	30 P52, ?4, Σ86	30 P36, ?1, Σ67	8 P65, ?1, Σ74	8 P88, ?2, Σ98	6 P91, ?2, Σ99	5 P92, ?1, Σ98	0 P70, ?1, Σ71
		<u></u>	5 5					1 P5, ?0, Σ6											
			5			monotremata (egg-laying mammals)	1 P6, ?0, Σ7		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
						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
			└○ 47	'55 8M	181 2995	eutheria (placentals)	247 P762, ?6, ∑1015	223 P892, ?13, ∑1128	218 P659, ?1, ∑878	235 P417, ?0, ∑652	261 P1262, ?9, ∑1532	434 P900, ?6, Σ1340	440 P862, ?6, ∑1308	440 P857, ?6, ∑1303	249 P1420, ?11, Σ1680	249 P1504, ?10, Σ1763	171 P1406, ?9, ∑1586	164 P1601, ?9, ∑1774	0 P1596, ?10, Σ1606
			19	7 46k	2 9	tardigrada (water bears)	0 P1, ?3, Σ4	0 P3, ?1, Σ4	0 P2, ?0, Σ2	0 P1, ?0, Σ1	0 P2, ?0, Σ2	0 P0, ?4, Σ4	0 P0, ?6, Σ6	0 P0, ?3, Σ3	0 P4, ?0, Σ4	0 P3, ?1, Σ4	0 P2, ?2, Σ4	0 P4, ?0, Σ4	0 P2, ?1, Σ3
			94	2k	1 0	onychophora (velvet worms)													
			19)5 2k	0 0	pycnogonida (sea spiders)													
			99	646k	27 103	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, Σ34	0 P25, ?13, Σ38	0 P24, ?11, Σ35	1 P16, ?16, Σ33	1 P14, ?2, Σ17	1 P26, ?30, Σ57
			5	39k	1 41	xiphosura (horseshoe crabs)	0 P6, ?3, Σ9	0 P6, ?1, Σ7	0 P7, ?3, Σ10	0 P3, ?2, Σ5	0 P7, ?20, Σ27	7 P0, ?11, ∑18	7 P0, ?11, Σ18	7 P0, ?11, ∑18	0 P7, ?11, Σ18	0 P7, ?11, Σ18	0 P7, ?4, Σ11	0 P2, ?0, Σ2	0 P7, ?11, Σ18
			96	66 7k	1 1	myriapoda (millipeds)										0 P0, ?1, Σ1			
					25 53		0 P10, ?8, Σ18	0 P11, ?4, Σ15	1 P4, ?3, Σ8	0 P1, ?8, Σ9	0 P5, ?7, Σ12	5 P4, ?11, Σ20	5 P4, ?12, ∑21	4 P4, ?8, Σ16	1 P9, ?19, Σ29	1 P6, ?19, Σ26	1 P8, ?13, Σ22	1 P6, ?8, Σ15	1 P7, ?9, Σ17
						hexapoda (insects)									5 P110, ?177, Σ292				3 P95, ?236, Σ334
							20 1777 . 1177 2211	J 103, 113, 2203	1 112, .31, 277	2 123, .10, 211	J 132, 111, 2130	4 9 199, 191, 2290	J9 101, 190, <u>2</u> 910	39 1 13, 123, 2213	J 1110, .177, Z232	J 131, 130, <u>2</u> 233	10 110, 190, 2132	2 130, .33, 233	5 1937 . 2307 2331
						nematomorpha (horsehair worms)	• PO 33E 53E	o DO 244 544							o D4 222 522	• P0 224 F24	o DO 34 54	o DO 33 E3	a D0 224 524
						nematoda (roundworms)	0 P0, ?35, Σ35								0 P1, ?22, ∑23	0 P0, ?21, Σ21	0 P0, ?4, Σ4	0 P0, ?2, Σ2	0 P0, ?24, Σ24
			7	21k		priapulida (penis worms)	1 P0, ?0, Σ1	0 P1, ?7, Σ8					0 P1, ?0, Σ1		0 P1, ?0, Σ1	0 P1, ?0, Σ1	0 P1, ?0, Σ1		0 P1, ?0, Σ1
		0				loricifera													
			62	436	0 0	/ kinorhyncha (mud dragons)													
			56	5 2k	0 0	/ chaetognatha (arrow worms)													
		O	32	.0 3k	0 1	bryozoa (moss animals)										0 PO, ?1, Σ1			
			26	155	0 2	entoprocta										0		0 P0, ?1, Σ1	
			2	278	0 0	cycliophora (symbion)													
			33	315 129k	5 8	annelida (segmented worms)	0 P0, ?3, Σ3	0 P2, ?2, Σ4	0 P1, ?1, Σ2	0 P1, ?1, Σ2	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
					26 38			0 P8, ?0, Σ8							0 P9, ?6, Σ15	0 P4, ?6, Σ10	0 P1, ?15, Σ16	0 P7, ?4, Σ11	0 P8, ?4, Σ12
		0				nemertea (ribbon worms)													
							0 P1, ?0, Σ1	0 P1, ?0, Σ1	0 PO 21 T1	0 D1 20 T1		0 P1 20 T1	0 P1 20 T1	0 P1 20 T1	0 D1 21 T2	0 P1, ?0, Σ1	0 D1 22 Z3	1 DO 20 51	0 P1 20 T1
						brachiopoda (lamp shells)	0 11,:0, 21	0 11, :0, Z1	0 10, :1, 21	U FI, :U, ZI		0 11, 10, 21	0	0 P1, ?0, Σ1	0 11,:1, 22	0 11, :0, Z1	0 P1, ?2, Σ3	1 P0, ?0, Σ1	0 P1, ?0, Σ1
					1 0	phoroniformea (horseshoe worms)													
		O				gastrotricha (hairybacks)													
		O	44	27 561k	26 1	platyhelminthes (flatworms)										0 P0, ?1, Σ1			
			21	. 79	0 0	gnathostomulida (jaw worms)													
	-	0	1	2	0 0	micrognathozoa													
			23	37 64k	6 6	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
		O				orthonectida													
		<u> </u>			0 0														
			24	130		ulcyclinia													