Bridging repair of the abdominal wall in a rat experimental model. Comparison between uncoated and polyethylene oxide-coated equine pericardium meshes.

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Supplementary material:

Supplementary Table S1

Supplementary Figures S1-S7

Supplementary Table S1 – Raman lines of the samples analysed.

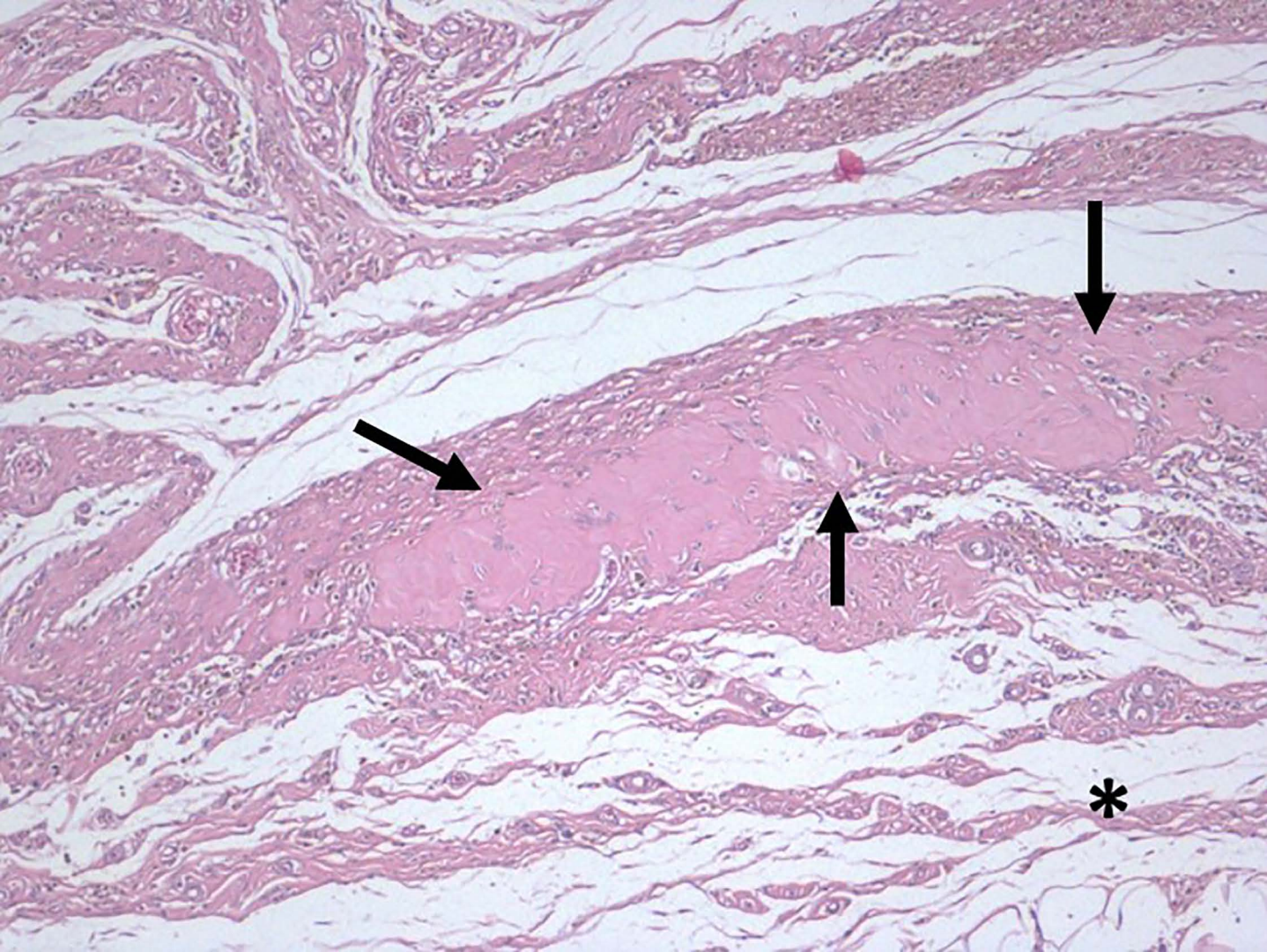
Group A				Group B				Groub B (crusted side)			Assignment	References
A0	A1	A2	A3	B0	B1	B2	B3	B1 w	B2 w	B3 w		
					426	*430*		*427*	*432*	*429*	$\nu_2(PO_4)^{-3}$	[36, 37]
530	532	531	531	531	532	533	535	532	537	533	ν(S-S)	[34]
570		571	567	570			570				Trp?	[40]
			579			583		582	580	580	–	
							594	*592*		*592*	$\nu_4(PO_4)^{-3}$	[36]
											$\nu_2(PO_4)^{-3}$	[37]
602		599	600	600							–	
620		621	621	620	620		621				Phe	[38]
		644	644				645				τ(CC) Tyr, Phe	[40]
	666				665			665			ν(C-S) cystine	[40]
694		696	696		698		698				–	
720		724	724	721			724			721	$\delta(CH_2)$	[33]
756	758	758	758	758			761				Trp?	[35, 40]
814	814	814	818	815	817	816	817				ν(CC)	[40]
											ν(CC), $\delta(CO_2)$ proteinbackbone	[39]
831			830								Pro, Hyp, Tyr	[40]
								848	847	846	–	
855	854	854	854	854	855	854	857			857	ν(CC) Pro, δ(CCH) Tyr	[33-36, 38-40]
874	873	873	873	873	875	872	875			876	ν(CC) Hyp	[33-36]
											ν(CC), δ(CCH) Hyp	[39]
920	920	920	920	920	920	920	921				ν(CC) Pro ring	[34, 36, 38-40]
938	938	938	938	939	938		939				ν(CC) α helix	[33, 34, 36, 38-40]
				960	*960*	*960*	*959*	*960*	*960*	*960*	$\nu_1(PO_4)^{-3}$	[36, 37]
968			968								Amide III	[38]
1002	1004	1004	1004	1003	1004	1002	1004	1004	1004	1003	ν_s(CC) ring breathing Phe	[33, 36-40]
1031	1033vw	1033	1033	1031	1033	1030	1033		1031	1030	δ(CH) Phe	[34, 35]

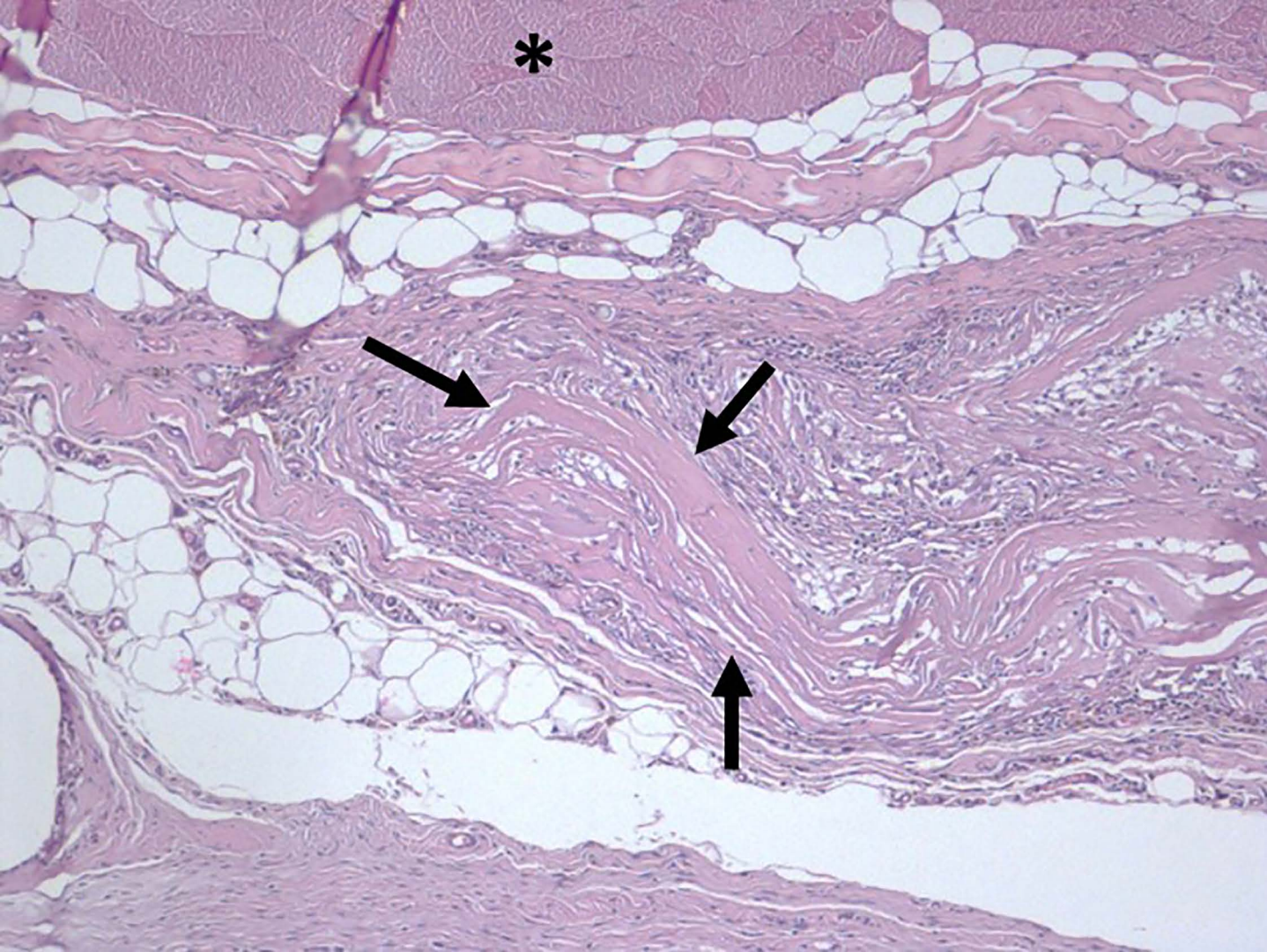
											o.p. δ(OH)	
1043		1045	1045	1045	1043	1043	1047			1043	carboxyl	[38]
											Pro	[40]
1054	1050										–	
1062		1062	1062	1061	1060	1061	1062				δ(COC)	[33]
					1070	*1071*		*1071*	*1072*	*1071*	$\nu_1(CO_3)^{-2}$, $\nu_3(PO_4)^{-3}$	[36, 37]
					1076						$\nu_3(PO_4)^{-3}$	[36, 40]
1082	1080		1085		1080		1080				δ(CN)/(CC)	[33]
1100		1097		1100	1100	1098	1100			1102	ν_{as}(COC)	[33]
1126	1125	1125	1125	1126	1126	1125	1126		1127	1126	ν(COC), ν(CN)	[33, 35]
				1142	1145	1142				1143	–	
1164	1163	1163	1163	1163	1165	1161	1163			1164	Tyr	[40]
1175	1175	1175	1175	1175	1175	1175	1175		1176		ν(CC) Tyr	[33, 38]
1206	1206	1206	1206	1205	1205	1205	1205		1205		$\omega(CH_2)$ Tyr, Hyp	[36, 38, 40]
											Amide III ν(CN)	[33, 36-
1236				1237		1238			1236	1236	δ(NH)	39]
											Amide III ν(CN)	[33, 36-
1246	1248	1244	1248	1244	1244	1247	1244				δ(NH)	39]
											Amide III ν(CN)	[36, 38,
1269	1270	1269	1266	1269	1271	1270	1271		1270		δ(NH)	39]
1278	1278	1278		1277		1280				1281	Amide III	[33, 36, 40]
											$\tau(CH_2)$, ω(CH3,	
	1300		1299								CH2) / lipids	[40]
		1317	1317	1317		1316	1317				$\tau(CH_3, CH_2)$	[38, 40]
1341	1341	1340	1340	1344	1344	1345	1344				$\omega(CH_3, CH_2)$	[33, 38]
1366	1366	1366									Trp?	[40]
1376	1378	1378		1378	1378		1378				δ(CH3) lipids	[40]
1385			1388		1386	1386	1386				(CH_3)?	[40]
1395	1395	1395	1395	1398	1398		1398				$\delta(CH_2)$	[33, 40]
1423	1425	1425	1425	1423	1422	1422	1425		1422		$\nu(COO^-)$	[33, 38]
1450	1448	1448	1448	1451	1449	1450	1452	1448	1450	1448	δ(CH3, CH2)	[35, 37, 38]
1460				1464	1463	1464	1463				δ(CH3, CH2)	[38]

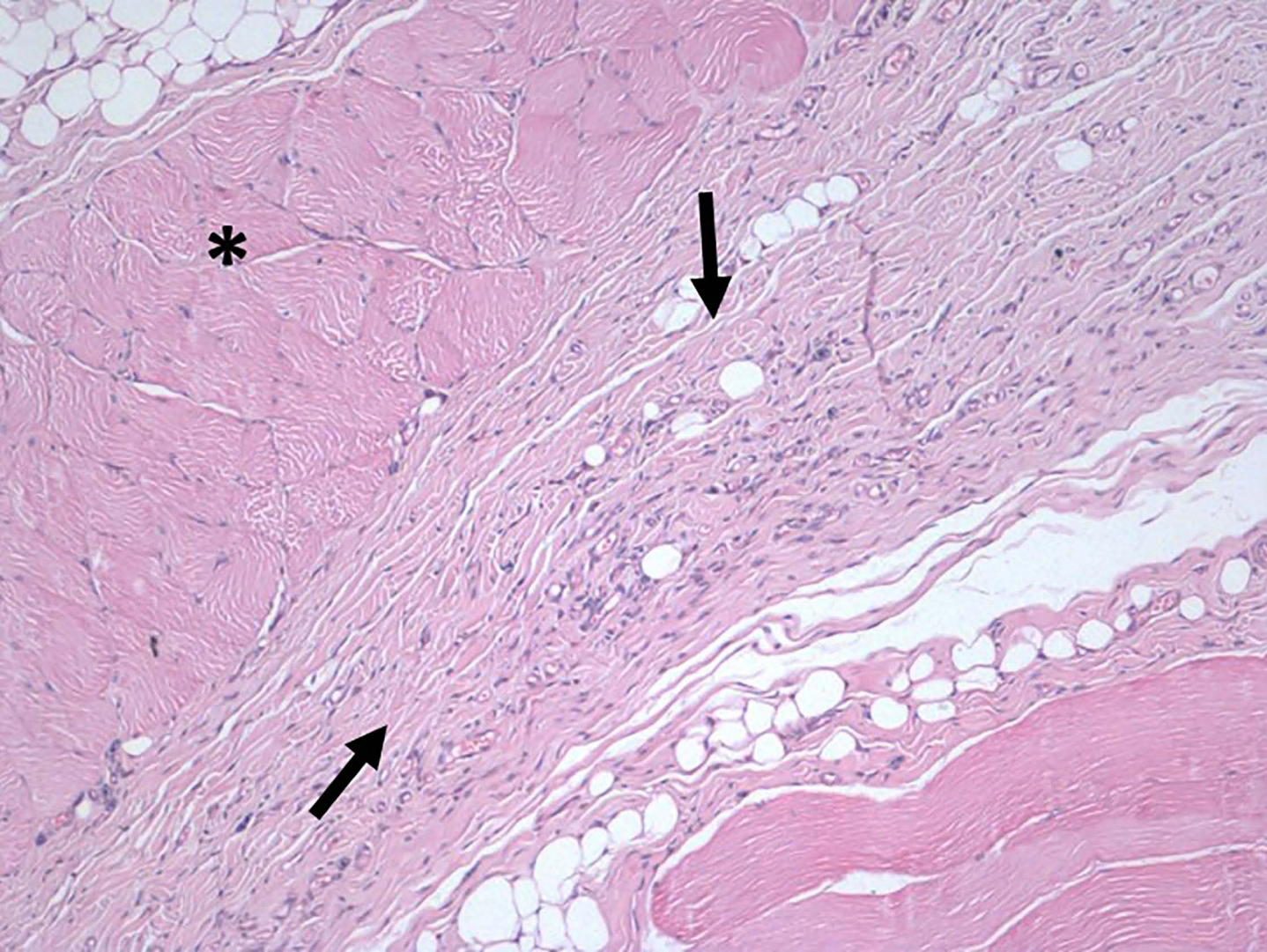
									1479	1477	–	
1556	1556	1556	1556	1558	1556						ν(CC) Trp?	[35, 40]
											ν(CCH) aromatic	
1585	1578	1584	1584								Pro, Hyp	[36, 38]
1606	1608	1606	1606	1606	1607		1607				δ(CC)Phe, Tyr	[36, 38]
												[36, 38,
1639		1636		1640	1640	1640	1640		1635		ν(C=C) Amide I	40]
												[33, 36-
1668	1658	1658	1658	1668	1663	1666	1667		1663		ν(C=O) Amide I	39]
			1684				1680				Amide I	[40]
										1695		
			1746								ν(C=O) lipids	[40]
		2734	2729				2735				–	
	2853	2853	2853								$\nu(CH_3, CH_2)$	[40]
												[33, 37,
2881	2884	2882	2882	2880	2882	2880	2883	2885	2880	2880	$\nu(CH_3, CH_2)$	40]
												[33, 37,
2939	2936	2938	2933	2940	2940	2940	2941	2940	2938	2940	$\nu(CH_3, CH_2)$	40]
												[33, 37,
2980	2979	2979		2979	2978	2982	2983		2978		$\nu(CH_3, CH_2)$	40]
	3008		3006								ν_{as} (=CH) lipids	[40]
3066	3062	3062	3062	3063	3062	3063	3063	3064			ν(C=CH)	[33]
3210		3209	3209				3208				–	
3318	3318	3318	3318	3318	3318	3318	3318		3315		ν_s(NH)	[33]

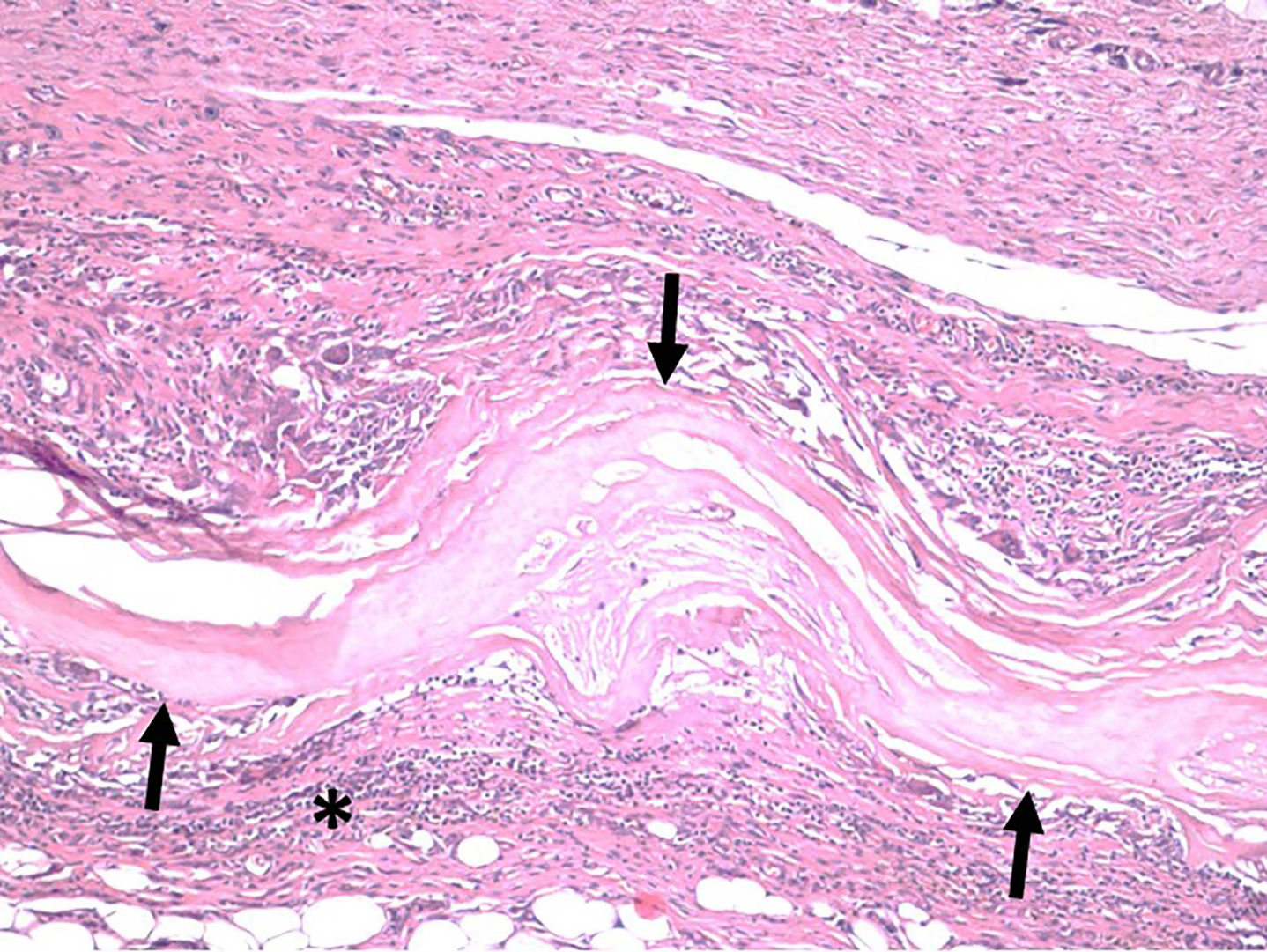
All data are reported as cm^{-1}. Group A: non-coated prosthesis; Group B: coated prosthesis. A1 and B1: evaluation after 30 days; A2 and B2: evaluation after 60 days; A3 and B3: evaluation after 90 days.

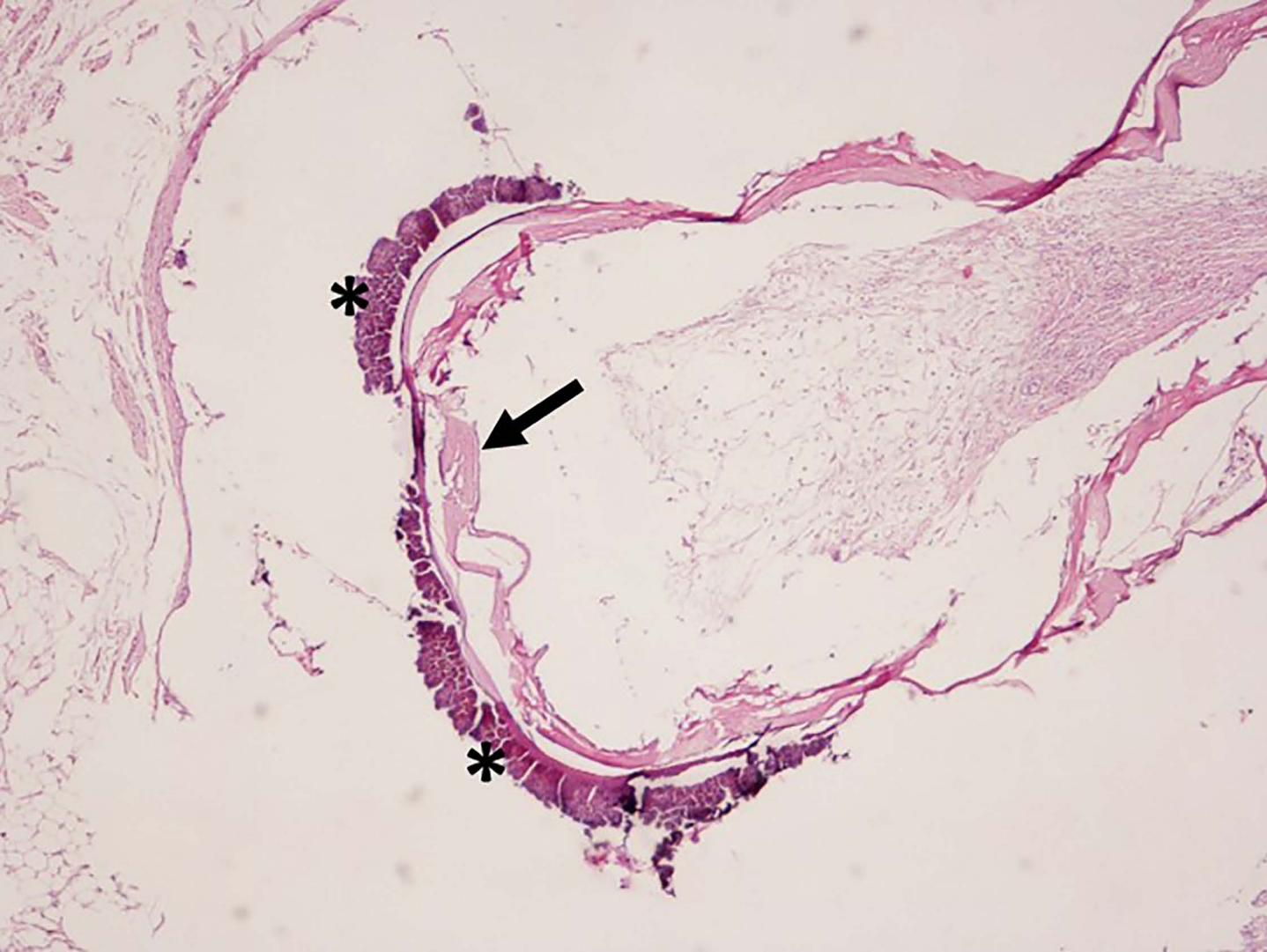
Phosphate and carbonate positions are reported in italics. ν: stretching, νs: symmetric stretching, νas: antisymmetric stretching, δ: bending, τ: twisting, ω: wagging, o.p.: out of plane, Trp: tryptophan, Phe: phenylalanine, Tyr: tyrosine, Pro: proline, Hyp: hydroxyproline.

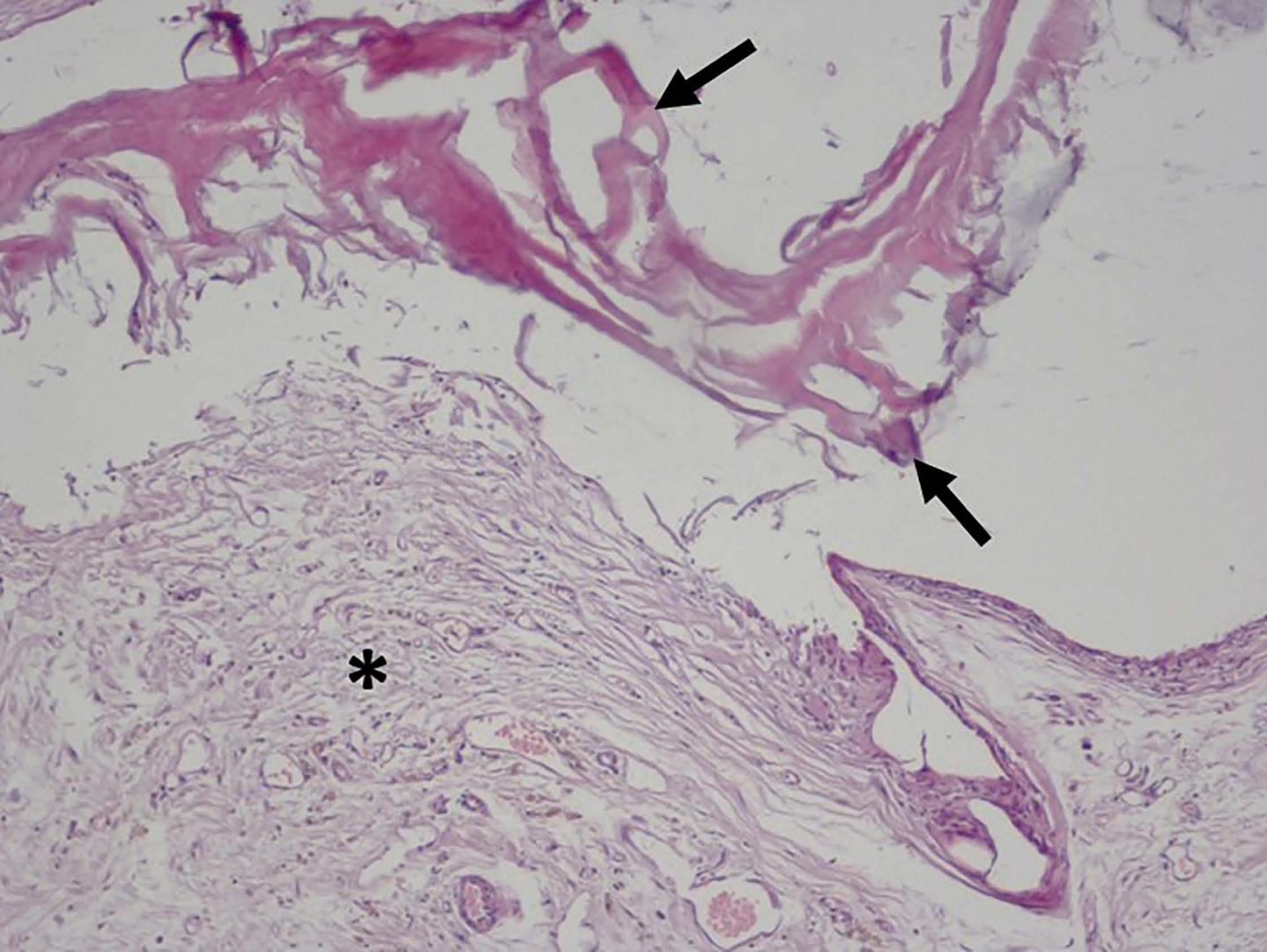


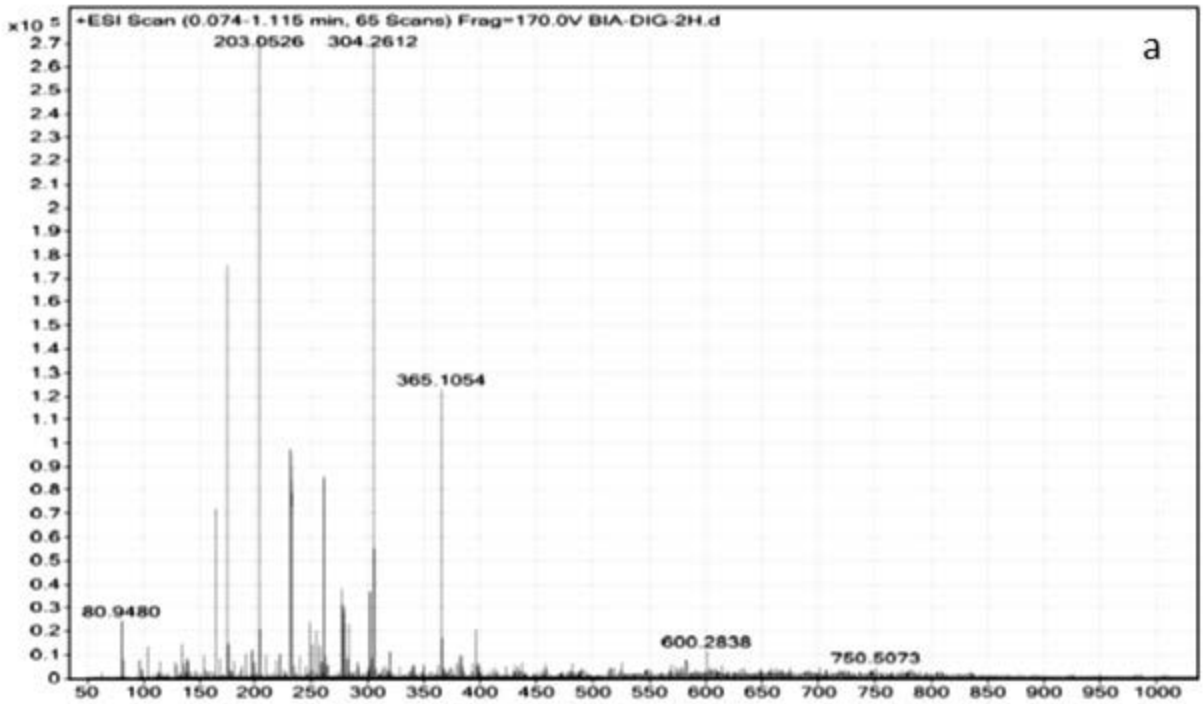








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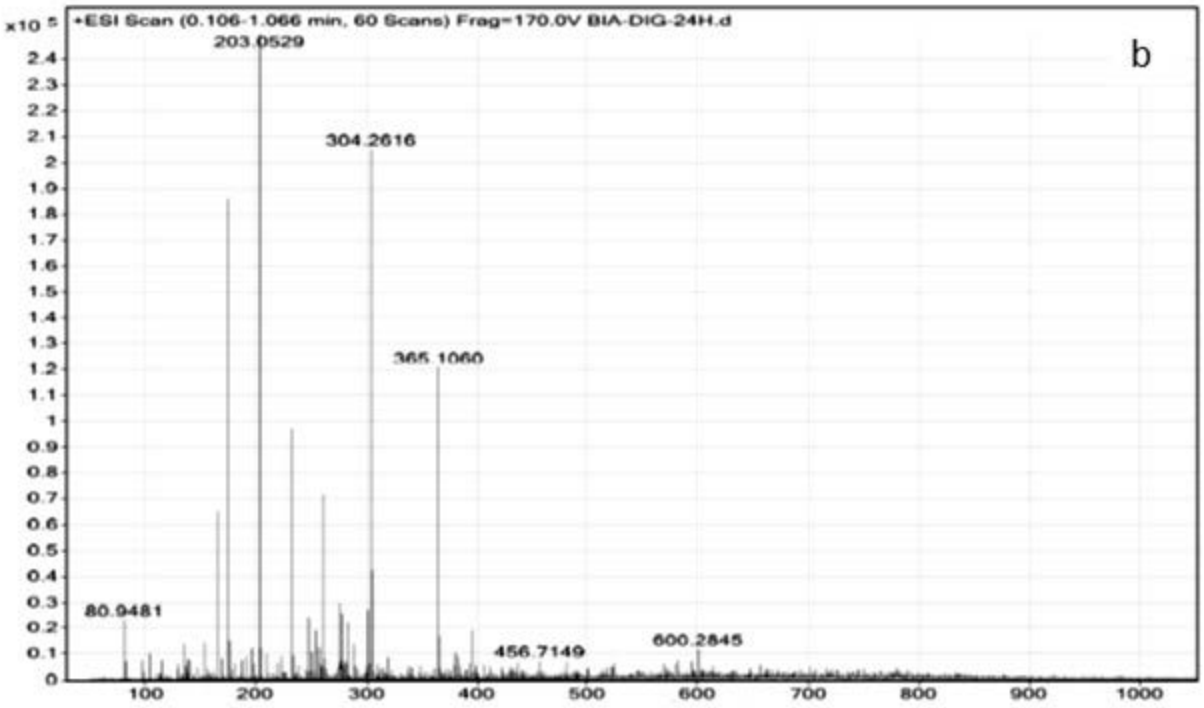
a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