

Authors	Method	Type of Bone	Types of lamellae	Layer Thickness (µm)	Interpretation of lamellae orientation
Frost, 1962	Polarized Microscopy	Human, multiple bones	Secondary osteon lamellae	7.5	
			Cicumferential lamellae	7.27	
Reid, 1986	Polarized Microscopy	Human rib	Osteonal/interstitial lamellae	2.78-3.05	
			Cicumferential lamellae	1.93-2.11	
Ardizzoni, 2001	Polarized Microscopy; SEM	Human tibiae	Dense lamellae (maintain similar thickness)	0.5-1.5	
			Loose lamellae (decrease in thickness towards Haversian canal)	2.1-6.8	
Pazzaglia et al., 2012	SEM;Morphometrics	Human tibiae	Lamellae (spiral and crescent-shaped patterns)	9.06 ± 2.13	
			Interlamellar lines		
Marotti et al., 2013	SEM/TEM	Human tibiae	Dense lamella	1.8-2.2	No obvious orientation; Interwoven, heterogeneous lamellae
			Loose lamella	3.3-4.2	
Weiner et al., 1997	SEM/TEM	Rat tibia	Lamellar unit (thick, thin and transition zone)	3.2	Rotated plywood: 5 arrays with 30° angles and 120° backflip
Weiner et al., 1999	SEM/TEM	Rat, Human, Baboon and Bovine long bones	5 sublayers	“backflip” sublayer smaller in rat than human and baboon	
Ascenzi et al., 2003	Polarized Microscopy; X-Ray Diffraction		Dark lamellae (polarized light)		Homogeneous, mostly oriented parallel to long axis of osteon
			Bright lamellae		Oblique angle ± 45° to long axis
Wagermaier et al., 2006	X-Ray Diffraction	Human femora	5-6 sublayers	5-7	Spiral twisting; 5 sublayers with 5° to 25° angles and around 6th jump to -30°
Faingold et al., 2013	Dual ion beam microscopy; SSV	Horse metacarpals	Disordered and unidirectional sub-	5	Rotated-plywood-like; 5–15°, 40°, 80° and 110–120°
Reznikov et al., 2013	Dual ion beam microscopy; SSV	Rat tibiae	Fanning sub-lamella	3.5	Plywood-like fanning sub-lamellae
			Uni-directional sub-lamella	0.7-1.1	
			disordered sub-lamella	0.3	
Varga et al., 2013	Synchrotron X-ray phase nano-tomography	Human femora	Oscillating plywood	4-8	Oscillating/Twisted plywood; 0°-20° angle offsets
			Twisted plywood	6-9	
Reznikov et al., 2014	Dual ion beam microscopy; SSV	Human femora	Ordered motif (repeats (fanning and uni-directional)	2-3	Twisted plywood fanning sub-lamellae
			Disordered motif	0.25-1	