Supplementary Table S1 Outstanding work of MSs Distribution

Muscle	Close to IMCT/Fascia	Close to nerve(NEPs)	Close to vessels	Superficial	Deep	Proximal	Middle	Distal	High density area	Species	Method	References
tibialis anterior, extensor digitorum longus, gastrocnemius, soleus muscle		★(extensor digitorum longus, soleus muscle				★	★			mice	H&E	(Lian et al. 2022)[31]
multifidus muscle	★						★			sheep	Van Gieson's	(James et al. 2022)[40]
masseter muscle					★				deep layer of the posterior superficial region	mice	immunohistochemistry	(Iwao SATO. 2007)[50]
Intraorbital Skeletal Muscles		★		★						Camelus dromedarius	Van Gieson's	(Abuel-Atta, DeSantis, and Wong 1997)[30]
wing muscles						★	★			duck	Delafield's H&E	(Adal and Chew Cheng 1980)[51]

intrinsic postvertebral muscles	★							human	Van Gieson's stain with Weigert's haematoxylin	(Amonoo-Kuofi 1982)[52]
Muscle around shoulder						★	Muscle-tendon junction	mice	$AgNO_3$	(Backenköhler, Halata, and Strasmann 1996)[53]
sternomastoid muscle		★					ventral portion	rat	ATPase	(Giuriati et al. 2018)[39]
platysma		★		★	★		cranial two-thirds area	human	H&E	(May et al. 2018)[44]
platysma				★			regions connected to the cheek pouch	rhesus monkey	H&E	(May et al. 2022)[45]
Anterior (ALD) and posterior (PLD) latissimus dorsi muscles	★(branch)		★(PDL)	★	★		Slow muscle fiber: well-distributed; Fast fiber: NEPs	avian	H&E	(Ovalle, Dow, and Nahirney 1999)[54]
gastrocnemius				★	★		longitudinal axis of the medial gastrocnemius	rat	Masson-Goldner trichome method	(Piotr et al. 2023)[55]

vastus intermedius, peroneus longus				★ (peroneus longus)	★ (peroneus longus)	★(vastus intermedius)		sheep	periodic acid Shiff reaction and Mayer's hematoxylin	(Watanabe and Suzuki 1999)[56]
rectus femoris, tibialis anticus muscles	★				★			cat	H&E	(Barker and Chin 1960)[57]
medial pterygoid muscle			★		★		Middle area	human	Weigert-Van Gieson	(Bhojwani et al. 2017)[58]
Extraocular Muscles		★		★	★	★	Entire muscle length	pig	Azan and ferric oxide	(Blumer et al. 2001)[59]
Jaw Muscles							Non specific	mallard	H&E	(Bout and Dubbeldam 1991)[49]
longus colli		★ anterolateral						human	Masson’s trichrome	(Boyd-Clark, Briggs, and Galea 2002)[60]
multifidus							closely to vertebral lamina	human	Masson’s trichrome	(Boyd-Clark et al. 2002)[60]
masseter			★	★				rabbit	Light-microscope	(Bredman, Weijs, and Brugman 1991)[61]

Extensor Digitorum Brevis			★		★	midway between the dorsal and ventral surfaces	cat	van Gieson	(Bridgman, Eldred, and Eldred 1962)[62]
jaw-closer muscles				★			cat	Van Gieson	(Burhanudin, McDonald, and Rowlerson 1996)[63]
Capsularis Muscle				★			cat	ATPase	(Eldred, Yung, and Roy 1997)[64]
masseter				★			human	ATPase	(Eriksson and Thornell 1987)[65]
flexor carpi radialis muscle				★		In slow fiber(deep area)	cat	ATPase	(Gonyea and Ericson 1977)[66]
ambiens muscle			★			In slow fiber	turtle	NA	(Hermanson, Lennard, and Takamoto 1986)[67]
extensor digitorum longus	★	★					mice	Myosin ATPase	(Johnson and Ovalle 1986)[34]
masseter						uneven	mice	Miller's, van Gieson's or Bodian's	(Karlsen 1965)[68]

masseter	★			★		★			Japanese shrew-mole	H&E	(Kubota and Masegi 1972b)[41]
Medial pterygoid	★			★	★	★		Anterolateral of muscle	Japanese shrew-mole	H&E	(Kubota and Masegi 1972b)[41]
Temporal muscle				★		★			Japanese shrew-mole	H&E	(Kubota and Masegi 1972b)[41]
Snout Musculature				★		★	★		Japanese shrew-mole	H&E, azan	(Kubota and Masegi 1972a)[69]
medial pterygoid muscle				★		★			cotton-headed tamarin	H&E	(Kubota and Masegi 1975)[70]
zygomaticomandibular muscle						★			cotton-headed tamarin	H&E	(Kubota and Masegi 1975)[70]
lateral pterygoid muscle						★			cotton-headed tamarin	H&E	(Kubota and Masegi 1975)[70]
Temporal muscle						★		Anterior area	squirrel monkey	H&E	(Kubota, Masegi, and Osanai 1973)[71]

medial pterygoid muscle				★		★			squirrel monkey	H&E	(Kubota et al. 1973)[71]
masseter						★			squirrel monkey	H&E	(Kubota et al. 1973)[71]
Temporal muscle						★		Anterior area	Tree Shrew	H&E, Azan, silver impregnation, Weigert's myelin sheath	(Kubota, Masegi, and Quanbunchan 1974)[72]
masseter				★		★			Tree Shrew	H&E, Azan, silver impregnation, Weigert's myelin sheath	(Kubota et al. 1974)[72]
suboccipital muscles	★	★							human	Teased silver	(Kulkarni, Chandy, and Babu 2001)[35]
masticatory muscles				★		★	★		rat	Weigert's iron Haematoxylin, van Gieson	(Lennartsson 1980)[73]
Extraocular Muscles			★		★		★	periphery within a semicircular area	human	toluidine blue	(Lukas et al. 1994)[74]

Masseter, Temporal			★	★		★		cat	Holmes silver	(Lund et al. 1978)[42]
Subscapularis, supraspinatus,infraspinatus							evenly	Monodelphis domestica	silver	(Maass, Baumann, and Halata 2001)[75]
M.teres minor				★		★	2/3 close to origin at the scapula	Monodelphis domestica	silver	(Maass et al. 2001)[75]
M. teres major				★			close to origin at the scapula	Monodelphis domestica	silver	(Maass et al. 2001)[75]
M. deltoideus		★		★(head)			lateral parts of the ventral, dorsal aspect	Monodelphis domestica	silver	(Maass et al. 2001)[75]
masseter, medial pterygoid,temporalis	★						Located in Slow fiber	rat	H&E	(Maier 1979)[76]
soleus		★	★				evenly	Guinea Pig	trichrome stained	(Maier, Simpson, and Edgerton 1976)[77]
medial gastrocnemius, vastus lateralis		★	★		★		Located in Slow fiber	Guinea Pig	trichrome stained	(Maier et al. 1976)[77]

muscles										
Extensor Digitorum, Hallucis Brevis Muscles						★	Middle of muscle belly	crab-eating monkey	toluidine blue	(Matsumura and Saito 1997)[78]
masseter			★	★		★	muscle belly	Guinea Pig	H&E	(Odagiri, Kubota, and Shibanai 1993)[79]
maxillomandibularis muscle							medial part of the muscle	Guinea Pig	H&E	(Odagiri et al. 1993)[79]
masseter				★				human	mATPase	(Osterlund et al. 2011)[12]
tenuissimus muscle	★	★						hamster	H&E	(Patten and Ovalle 1992)[36]
pronator teres [PT]	★				★(INDR)	★(INDR)	INDR	human	Sihler's, H&E	(Zhou et al. 2023)[5]

flexor carpi ra-dialis [FCR]	★		★(INDR)			human	Sihler's, H&E	(Zhou et al. 2023)[5]
palmaris longus [PL]	★	★(INDR)				human	Sihler's, H&E	(Zhou et al. 2023)[5]
flexor carpi ulnaris [FCU]	★	★(INDR)				human	Sihler's, H&E	(Zhou et al. 2023)[5]
flexor digitorum superficialis [FDS]	★	★(INDR)	★(INDR)			human	Sihler's, H&E	(Zhou et al. 2023)[5]
flexor pollicis longus [FPL]	★			★(INDR)		human	Sihler's, H&E	(Zhou et al. 2023)[5]
flexor digi-torum profundus [FDP]	★	★(INDR)				human	Sihler's, H&E	(Zhou et al. 2023)[5]
pronator quadratus [PQ]	★		★(INDR)			human	Sihler's, H&E	(Zhou et al. 2023)[5]
sternomastoid muscle					Slow muscle fiber	rat	Azan and Goldner	(Zenker, Sandoz, and Neuhuber 1988)[80]

Levator Palpebrae Superioris Muscle				★				human	-	(Takahashi et al. 2021)[81]
Tongue	★							rat	ATPase	(Smith 1989)[82]
peronei tertius and longus	★			★				cat	Silver	(Scott and Young 1987)[83]
peroneus brevis	★			★	★	★		cat	Silver	(Scott and Young 1987)[83]
masseter			★			★		cat	ATPase	(Sciote 1993)[43]
thyroarytenoid muscle		★		★			superior medial quadrant	human	H&E	(Sanders et al. 1998)[84]
Tongue				★			posterior area near the base of the tongue	human	H&E	(Saigusa et al. 2004)[85]
First Dorsal Interosseus		★		★		★		human	deCastro's silver	(Sahinen and Kennedy 1972)[86]

flexor carpi radialis muscle	★	★	★	★		cat	Holmes	(Richmond and Stuart 1985)[87]
Obliquus capitis inferior	★				Slow muscle fiber	rhesus monkeys	ATPase,H&E	(Richmond, Singh, and Corneil 1999)[88]
Diaphragm	★				vertebral part of the muscle	cat	H&E	(Duron, Jung-Caillol, and Marlot 1978)[89]
Masticatory muscles					Slow muscle fiber	albino Wistar rats	ATPase	(Rokx, van Willigen, and Jansen 1984)[90]

★: Conclusion of the references; H&E: hematoxylin and eosin; IVD: intervertebral disc; NEPs: nerve-entry points; INDR: intramuscular nerve-dense region; IMCT: intramuscular connective tissue.

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