CHAPTER VI. REFERENCES

Abdel-Karim, A. E., & Michael, M. I., 1993. Tail regeneration after autotomy in Bunopus tuberculatus. *Qatar Univ Sci J*. 13(2): 293–300.

Adams, S. L., Cohen, A. J., & Lassová, L., 2007. Integration of signaling pathways regulating chondrocyte differentiation during endochondral bone formation. *J Cell Physiol.* 213(3): 635–41.

Ahmed, N., Iu, J., Brown, C. E., Taylor, D. W., & Kandel, R. A., 2014. Serum- and growth-factor-free three dimensional culture system supports cartilage tissue formation by promoting collagen synthesis via Sox9-Col2a1 interaction. *Tissue Eng Part A*. 20(15-16): 2224-33.

Alibardi, L., 2009. *Morphological and Cellular Aspects of Tail and Limb Regeneration in Lizards*. Bologna: Springer.

Alibardi, L., 2010. Morphological and cellular aspects of tail and limb regeneration in lizards: A model system with implications for tissue regeneration in mammals. *Adv Anat Embryol Cell*. 207: iii, v–x, 1-109.

Alibardi, L., 2012. Observations on FGF immunoreactivity in the regenerating tail blastema, and in the limb and tail scars of lizard suggest that FGFs are required for regeneration. *Belg J Zool*. 142(1): 23–38.

Alibardi, L., 2014a. Histochemical, biochemical and cell biological aspects of tail regeneration in lizard, an amniote model for studies on tissue regeneration. *Prog Histochem Cytoc*. 48(4): 143-244.

Alibardi, L., 2014b. Observations on lumbar spinal cord recovery after lesion in lizards indicates regeneration of a cellular and fibrous bridge reconnecting the injured cord. *Dev Biol.* 2: 210–29.

Alibardi, L., 2015a. Original and regenerating lizard tail cartilage contain putative resident stem/progenitor cells. *Micron.* 78(9): 10–8.

Alibardi, L., 2015b. Regeneration of articular cartilage in lizard knee from resident stem/progenitor cells. *Int J Mol Sci.* 16(9): 20731–47.

Alibardi, L., & Lovicu, F. J., 2010. Immunolocalization of FGF1 and FGF2 in the regenerating tail of the lizard Lampropholis guichenoti: Implications for FGFs as trophic factors in lizard tail regeneration. *Acta Histochemic.* 112(5): 459–73.

Alibardi, L., & Meyer-Rochow, V. B., 1989. Comparative fine structure of the axial skeleton inside the regenerated tail of some lizard species and the tuatara (Sphenodon punctatus). *Gegenbaurs Morphol Jahrb.* 135(5): 705–16.

Alibardi, L., & Miolo, V., 1990. Fine observation on nerves colonizing the regenerating tail of the lizard Podarcis sicula. *Histol Histopathol.* 5(4): 387–96.

Alibardi, L., & Toni, M., 2006. Cytochemical, biochemical and molecular aspects of the process of keratinization in the epidermis of reptilian scales. *Prog Histochem Cytoc.* 40(2): 73–134.

Allendorph, G. P., Isaacs, M. J., Kawakami, Y., Izpisua Belmonte, J. C., & Choe, S., 2007. BMP-3 and BMP-6 structures illuminate the nature of binding specificity with receptors. *Biochemistry*. 46(43): 12238–47.

Anderson, H. C., Sipe, J. B., Hessle, L., Dhanyamraju, R., Atti, E., Camacho, N. P., *et al*., 2004. Impaired calcification around matrix vesicles of growth plate and bone in alkaline phosphatase-deficient mice. *Am J Pathol.* 164(3): 841–7.

Aspberg, A., 2012. The different roles of aggrecan interaction domains. *J Histochem Cytochem.* 60(12): 987–96.

Bahamonde, M. E., & Lyons, K. M., 2001. BMP3: to be or not to be a BMP. *J Bone Joint Surg.* 83(1): 56–62.

Bai, X., Wang, Y., Man, L., Zhang, Q., Sun, C., Hu, W., *et al*., 2015. CD59 mediates cartilage patterning during spontaneous tail regeneration. *Nature.* 5(8): 1–14.

Bae, K. S., Kim, S. Y., Park, S. Y., Jeong, A. J., Lee, H. H., Lee, J., *et al*., 2014. Identification of lactoferrin as a human dedifferentiation factor through the studies of reptile tissue regeneration mechanisms. *J Microbiol Biotechnol*. 24(6): 869-78.

Bandyopadhyay, A., Yadav, P. S., & Prashar, P., 2013. BMP signaling in development and diseases: A pharmacological perspective. *Biochem Pharmac.* 85(7): 857-64.

Barone, L. M., Owen, T. A., Tassinari, M. S., Bortell, R., Stein, G. S., & Lian, J. B., 1991. Developmental expression and hormonal regulation of the rat matrix GLA protein (MGP) gene in chondrogenesis and osteogenesis. *J Cell Biochem.* 46(4): 351–65.

Bateman, P. W., & Fleming, P. A., 2009. To cut a long tail short: A review of lizard caudal autotomy studies carried out over the last 20 years. *J Zool.* 277(1): 1–14.

Beazley, K. E., Lima, F., Borras, T., & Nurminskaya, M., 2013. Attenuation of chondrogenic transformation in vascular smooth muscle by dietary quercetin in the MGP-deficient mouse model. *PLoS ONE.* 8(9): 1-17.

Beederman, M., Lamplot, J. D., Nan, G., Wang, J., Liu, X., Yin, L., *et al*., 2013. BMP signaling in mesenchymal stem cell differentiation and bone formation. *J Biomed Sci Eng.* 6(8A): 32-52.

Bellairs, A. A., & Bryant, S. V., 2001. *Biology of Reptilia*. Brisbane: John Willey and Sons.

Bely, A. E., & Nyberg, K. G., 2010. Evolution of animal regeneration: re-emergence of a field. *Trends Ecol Evol.* 25(3): 161-70.

Boozalis, T. S., LaSalle, L. T., & Davis, J. R., 2012. Morphological and biochemical analyses of original and regenerated lizard tails reveal variation in protein and lipid composition. *Comp Biochem Phys A.* 161(1): 77-82.

Bruns, J., Meyer-Pannwitt, U., & Silbermann, M., 1992. The rib perichondrium. An anatomical study in sheep of a tissue used as transplant in the treatment of hyaline-cartilage defects. *Acta Anat.* 144(3): 258–66.

Carlson, B. M., 2007. *Principles of Regenerative Biology, 1st Edition*. Burlington: Academic Press.

Cancedda, R., Descalzi Cancedda, F., & Castagnola, P., 1995. Chondrocyte differentiation. *Int Rev Cytol.* 159: 265–358.

Cernea, M., Tang, W., Guan, H., & Yang, K., 2016. Wisp1 mediates Bmp3-stimulated mesenchymal stem cell proliferation. *J Mol Endocrinol*. 56(1): 39–46.

Clark, D. R., 1971. The strategy of tail-autotomy in the ground skink, Lygosoma laterale. *J Exp Zool.* 176(3): 295–302.

Coletti, D., Teodori, L., Lin, Z., Beranudin, J. F., & Adamo, S., 2013. Restoration versus reconstruction: cellular mechanisms of skin, nerve and muscle regeneration compared. *Regen Med Res*. 1(1): 4.

Congdon, J. D., Vitt, L. J., & King, W. W., 1974. Geckos: adaptive significance and energetics of tail autotomy. *Science.* 184(4144): 1379–80.

Corl, J., 1999. Gekko gecko. [cited 2016 Oct 3]. Available from: http://animaldiversity.org/accounts/Gekko_gecko/.

Cottrell, J., & Michaels, S., 2017. BMP-2 increases articular chondrocyte maturation and hypertrophy through a COX-2 dependent mechanism associated with inflammation. *J Immunol.* 198(1): 1-7.

Cox, P. G., 1969. Some aspects of tail regeneration in the lizard, Anolis carolinensis. *J Exp Zool.* 171(2): 127–49.

Cristino, L., Pica, A., Della Corte, F., & Bentivoglio, M., 2000. Plastic changes and nitric oxide synthase induction in neurons that innervate the regenerated tail of the lizard Gekko gecko: I. Response of spinal motoneurons to tail amputation and regeneration. *J Comp Neurol*. 417(1): 60–72.

Cruet-Hennequart, S., Drougard, C., Shaw, G., Legendre, F., Demoor, M., Barry, F., *et al*., 2015. Radiation-induced alterations of osteogenic and chondrogenic differentiation of human mesenchymal stem cells. *PLoS ONE.* 10(4): 1–24.

Cunningham, N. S., Jenkins, N. A., Gilbert, D. J., Copeland, N. G., Reddi, A. H., & Lee, S. J., 1995. Growth/differentiation factor-10: a new member of the transforming growth factor-beta superfamily related to bone morphogenetic protein-3. *Growth Factors*. 12(2): 99–109.

Dan, H., Simsa-Maziel, S., Reich, A., Sela-Donenfeld, D., & Monsonego-Ornan, E., 2012. The role of matrix Gla protein in ossification and recovery of the avian growth plate. *Front Endocrinol.* 3(7): 1–10.

Daniels, C. B., 1983. Running: An escape strategy enhanced by autotomy. *Herpetologica.* 39(2): 162–165.

Daniels, C. B., Lewis, B. C., Tsopelas, C., Munns, S. L., Orgeig, S., Baldwin, M. E., *et al*., 2003. Regenerating lizard tails: a new model for investigating lymphangiogenesis. *FASEB J.* 17(3): 479–81.

Das, I.. 2015. *A field guide to the reptiles of South-East Asia*. London: New Holland Publishers.

DeLise, A. M., Fischer, L., & Tuan, R. S., 2000. Cellular interactions and signaling in cartilage development. *Osteoarthr Cartilage.* 8(5): 309–34.

Delorme, S. L., Lungu, I. M., & Vickaryous, M. K., 2012. Scar-free wound healing and regeneration following tail loss in the leopard gecko, Eublepharis macularius. *Anat Rec.* 295(10): 1575–95.

Dial, B. E., & Fitzpatrick, L. C., 1983. Lizard tail autotomy: function and energetics of postautotomy tail movement in Scincella lateralis. *Science.* 219(4583): 391–3.

Dionne, M. S., Brunet, L. J., Eimon, P. M., & Harland, R. M., 2002. Noggin is required for correct guidance of dorsal root ganglion axons. *Dev Biol*. 251(2): 283–293.

Dirckx, N., Van Hul, M., & Maes, C., 2013. Osteoblast recruitment to sites of bone formation in skeletal development, homeostasis, and regeneration. *Birth Defects Res*. 99(3): 170–91.

Dwivedi, P. P., Anderson, P. J., & Powell, B. C., 2012. Development of an efficient, non-viral transfection method for studying gene function and bone growth in human primary cranial suture mesenchymal cells reveals that the cells respond to BMP2 and BMP3. *BMC Biotechnol.* 12(1): 45.

Dyer, L. A., Pi, X., & Patterson, C., 2014. The role of BMPs in endothelial cell function and dysfunction. *Trends Endocrinol Metab*. 25(9): 472–80.

Echeverri, K., Clarke, J. D., & Tanaka, E. M., 2001. In vivo imaging indicates muscle fiber dedifferentiation is a major contributor to the regenerating tail blastema. *Dev Biol.* 236(1): 151–64.

Erlebacher, A., Filvaroff, E. H., Gitelman, S. E., & Derynck, R., 1995. Toward a molecular understanding of skeletal development. *Cell.* 80(3): 371–8.

Fernando, W. A., Leininger, E., Simkin, J., Li, N., Malcom, C. A., Sathyamoorthi, S., *et al*., 2011. Wound healing and blastema formation in regenerating digit tips of adult mice. *Dev Biol.* 350(2): 301–10.

Fisher, R. E., Geiger, L. A., Stroik, L. K., Hutchins, E. D., George, R. M., Denardo, D. F., *et al*., 2012. A histological comparison of the original and regenerated tail in the green anole, Anolis carolinensis. *Anat Rec.* 295(10): 1609–19.

Fox, S. F., & McCoy, J. K., 2000. The effects of tail loss on survival, growth, reproduction, and sex ratio of offspring in the lizard Uta stansburiana in the field. *Oecologia.* 122(3): 327–34.

Gamer, L. W., Nove, J., Levin, M., & Rosen, V., 2005. BMP-3 is a novel inhibitor of both activin and BMP-4 signaling in Xenopus embryos. *Dev Biol*. 285(1): 156–68.

Gamer, L. W., Cox, K., Carlo, J. M., & Rosen, V., 2009. Overexpression of BMP3 in the developing skeleton alters endochondral bone formation resulting in spontaneous rib fractures. *Dev Dyn.* 238(9): 2374–81.

Gamer, L. W., Ho, V., Cox, K., & Rosen, V., 2010. Expression and function of BMP3 during chick limb development. *Dev Dyn.* 237(6): 1691–98.

Geuna, S., Borrione, P., Poncino, A., & Giacobini-Robecchi, M. G., 1998. Morphological and morphometrical changes in dorsal root ganglion neurons innervating the regenerated lizard tail. *Int J Dev Neurosci*. 16(2): 85–95.

Gilbert, E. A. B., Delorme, S. L., & Vickaryous, M. K., 2015. The regeneration blastema of lizards: an amniote model for the study of appendage replacement. *Regeneration.* 2(2): 45–53.

Gilbert, E. A. B., Payne, S. L., & Vickaryous, M. K., 2013. The anatomy and histology of caudal autotomy and regeneration in lizards. *Physiol Biochem Zool.* 86(6), 631–44.

Grimsrud, C. D., Romano, P. R., D'Souza, M., Puzas, J. E., Schwarz, E. M., Reynolds, P. R., *et al*., 2001. BMP signaling stimulates chondrocyte maturation and the expression of Indian hedgehog. *J Orthop Res*. 19(1): 18–25.

Grogan, S. P., Olee, T., Hiraoka, K., & Lotz, M. K., 2008. Notch signaling proteins Hes-1 and Hey-1 bind N-box domains in the Col2a1 enhancer site to repress chondrogenesis. *Arthritis Rheum.* 58(9): 2754–63.

Hall, B. K., & Miyake, T., 1995. Divide, accumulate, differentiate: cell condensation in skeletal development revisited. *Int J Dev Biol.* 39(6): 881–93.

Hering, T. M., Wirthlin, L., Ravindran, S., & McAlinden, A., 2014. Changes in type II procollagen isoform expression during chondrogenesis by disruption of an alternative 5' splice site within Col2a1 exon 2. *Matrix Biol. 36*: 51–63.

Higham, T. E., Lipsett, K. R., Syme, D. A., & Russell, A. P., 2013. Controlled chaos: Three-dimensional kinematics, fiber histochemistry, and muscle contractile dynamics of autotomized lizard tails. *Physiol Biochem Zool.* 86(6): 611–30.

Higham, T. E., & Russell, A. P., 2010. Flip, flop and fly: modulated motor control and highly variable movement patterns of autotomized gecko tails. *Biol Lett.* 6(1): 70–3.

Higham, T. E., Russell, A. P., & Zani, P., 2013. Integrative biology of tail autotomy in lizards. *Physiol Biochem Zool.* 86(6): 603–10.

Hill, C., Jain, A., Takemoto, H., Silver, M. D., Nagesh, S. V. S., Ionita, C. N., *et al*., 2012. A histological comparison of the original and regenerated tail in the green anole, Anolis carolinensis. *Anat Rec.* 295(10): 1609–19.

Holder, L. A., 1960. The comparative morphology of the axial skeleton in the Australian Gekkonidae. *J Linn Soc.* 44: 300–35.

Huang, W., Yang, S., Shao, J., & Li, Y. P., 2007. Signaling and transcriptional regulation in osteoblast commitment and differentiation. *Front Biosci.* 12: 3068–92.

Hutchins, E. D., Eckalbar, W. L., Wolter, J. M., Mangone, M., & Kusumi, K., 2016. Differential expression of conserved and novel microRNAs during tail

regeneration in the lizard Anolis carolinensis. *BMC Genomics.* 17(1): 339.

Hutchins, E. D., Markov, G. J., Eckalbar, W. L., George, R. M., King, J. M., Tokuyama, M. A., *et al*., 2014. Transcriptomic analysis of tail regeneration in the lizard Anolis carolinensis reveals activation of conserved vertebrate developmental and repair mechanisms. *PLoS ONE.* 9(8): 1-12.

Integrated Taxonomic Information System, nd. ITIS Standard Report Page: Gekko gecko. [cited 2016 Nov 5]. Available from: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=174050#null.

Karp, S. J., Schipani, E., St-Jacques, B., Hunzelman, J., Kronenberg, H., & McMahon, P., 2000. Indian hedgehog coordinates endochondral bone growth and morphogenesis via parathyroid hormone related-protein-dependent and -independent pathways. *Development.* 127(3): 543–48.

Kent, G. C., 1987. *Comparative Anatomy of the Vertebrates* (9th ed.). New York: McGraw Hill Book.

Kongbuntad, W., Tantrawatpan, C., Pilap, W., Jongsomchai, K., Chanaboon, T., Laotongsan, P., *et al*., 2016. Genetic diversity of the red-spotted tokay gecko (Gekko gecko Linnaeus, 1758) (Squamata: Gekkonidae) in Southeast Asia determined with multilocus enzyme electrophoresis. *J Asia Pac Biodivers.* 9(1): 63–8.

Kosher, R. A., Kulyk, W. M., & Gay, S. W., 1986. Collagen gene expression during limb cartilage differentiation. *J Cell Biol.* 102(4): 1151–6.

Kronenberg, H. M., 2006. PTHrP and skeletal development. *Ann N Y Acad Sci.* 1068(1): 1–13.

Kurup, A., & Ramachandran, A. V., 2011. Exogenous NGF favors initiation of lizard tail regeneration while EGF and TGF- β truncate regenerative growth and commit to precocious muscle and cartilage differentiation. *J Dev Biol Tissue Eng.* 3(1): 1–10.

Kusumi, K., & Fisher, R. E., 2012. Special Issue: Studying mechanisms of regeneration in amphibian and reptilian vertebrate models. *Anat Rec.* 295(10): 1529–31.

Lamplot, J. D., Qin, J., Nan, G., Wang, J., Liu, X., Yin, L., *et al*., 2013. BMP9 signaling in stem cell differentiation and osteogenesis. *Am J Stem Cells*. 2(1): 1–21.

Lauinga, K. L., Cortesb, M., Domowicza, M. S., Henrya, J. G., Baria, A. T., & Schwartz, N. B., 2014. Aggrecan is required for growth plate cytoarchitecture and differentiation. *Dev Biol.* 396(2): 224–36.

Lee, H.-Y., Kopesky, P. W., Plaas, A., Sandy, J., Kisiday, J., Frisbie, D., *et al*., 2010. Adult bone marrow stromal cell-based tissue-engineered aggrecan exhibits ultrastructure and nanomechanical properties superior to native cartilage. *Osteoarthr Cartilage.* 18(11): 1477–86.

Lefebvre, V., & de Crombrugghe, B., 1998. Toward understanding SOX9 function in

chondrocyte differentiation. *Matrix Biol.* 16(9): 529–40.

Lefebvre, V., Li, P., & De Crombrugghe, B., 1998. A new long form of Sox5 (L-Sox5), Sox6 and Sox9 are coexpressed in chondrogenesis and cooperatively activate the type II collagen gene. *EMBO J.* 17(19): 5718–33.

Li, Q., Yang, H., & Zhong, T., 2015. Regeneration across metazoan phylogeny: lessons from model organisms. *J Genet Genomics*. 42(2): 57-70.

Lim, J., Tu, X., Choi, K., Akiyama, H., Mishina, Y., & Long, F., 2015. BMP-Smad4 signaling is required for precartilaginous mesenchymal condensation independent of Sox9 in the mouse. *Dev Biol.* 400(1): 132–8.

Lin, Z.-H., Qu, Y.-F., & Ji, X., 2006. Energetic and locomotor costs of tail loss in the Chinese skink, Eumeces chinensis. *Comp Biochem Physiol A.* 143(4): 508–13.

Long, F., & Ornitz, D. M., 2013. Development of the endochondral skeleton. *Cold Spring Harb Perspect Biol.* 5(1): 1–20.

Lozito, T. P., & Tuan, R. S., 2015. Lizard tail regeneration: regulation of two distinct cartilage regions by Indian hedgehog. *Dev Biol.* 399(2): 249–62.

Lozito, T. P., & Tuan, R. S., 2016. Lizard tail skeletal regeneration combines aspects of fracture healing and blastema-based regeneration. *Development (Cambridge, Eng).* 143(16): 2946-57.

Luo, G., D'Souza, R., Hogue, D., & Karsenty, G., 2009. The matrix Gla protein gene is a marker of the chondrogenesis cell lineage during mouse development. *J Bone Miner Res.* 10(2): 325–34.

Martin, J., & Salvador, A., 1993. Tail loss reduces mating success in the Iberian rock-lizard, Lacerta monticola. *Behav Ecol Sociobiol.* 32(3): 185–89.

McAlinden, A., Johnstonea, B., Kollara, J., Kazmia, N., & Hering, T. M., 2008. Expression of two novel alternatively spliced Col2a1 isoforms during chondrocyte differentiation. *Matrix Biol.* 27(3): 254–66.

McLean, K. E., & Vickaryous, M. K., 2011. A novel amniote model of epimorphic regeneration: the leopard gecko, Eublepharis macularius. *BMC Dev Biol.* 11(1): 50.

Mescher, A. L., Neff, A. W., & King, M. W., 2016. Inflammation and immunity in organ regeneration. *Dev Comp Immunol.* 66: 98–110.

Meyer, V., Preest, M. R., & Lochetto, S. M., 2002. Physiology of original and regenerated lizard tails. *Herpetologica.* 58(1): 75–86.

Mori-Akiyama, Y., Akiyama, H., Rowitch, D. H., & de Crombrugghe, B., 2003. Sox9 is required for determination of the chondrogenic cell lineage in the cranial neural crest. *Proc Natl Acad Sci USA.* 100(16): 9360–5.

Mwale, F., Stachura, D., Roughley, P., & Antoniou, J., 2006. Limitations of using aggrecan and type X collagen as markers of chondrogenesis in mesenchymal stem cell differentiation. *J Orthop Res*. 24(8): 1791–8.

Narayanan, A., 2015. The initiation and progression of tail regeneration in northern house gecko hemidactylus flaviviridis at role of fibroblast growth factor 2. *Biochip & Tissue Chip.* 5(1): 1–7.

Naya, D. E., Veloso, C., Muñoz, J. L. P., & Bozinovic, F., 2007. Some vaguely explored (but not trivial) costs of tail autotomy in lizards. *Comp Biochem Physiol A.* 146(2), 189–93.

Newman, B., Gigout, L. I., Sudre, L., Grant, M. E., & Wallis, G. A., 2001. Coordinated expression of matrix Gla protein is required during endochondral ossification for chondrocyte survival. *J Cell Biol.* 154(3): 659–66.

Nirmal, R. S., & Nair, P. D., 2013. Significance of soluble growth factors in the chondrogenic response of human umbilical cord matrix stem cells in a porous three dimensional scaffold. *Eur Cells and Mater.* 26: 234–51.

Niu, N., Shao, R., Yan, G., & Zou, W., 2016. Bromodomain and extra-terminal proteins (BET) inhibitors suppress chondrocyte differentiation and restrain bone growth. *J Biol Chem.* 8: 1-22.

Oviedo, N. J., & Beane, W. S., 2009. Regeneration: The origin of cancer or a possible cure?. *Semin Cell Dev Biol*. 20(5): 617-27.

Pirotte, N., Leynen, N., Artois, T., & Smeets, K., 2016. Do you have the nerves to regenerate? The importance of neural signalling in the regeneration process. *Dev Biol.* 409(1): 4–15.

Polazzi, E., & Alibardi, L., 2011. Cell culture from lizard skin: A tool for the study of epidermal differentiation. *Tissue Cell.* 43(6): 350–58.

Pratt, C. W. M., 1946. The plane of fracture of the caudal vertebrae of certain lacertilians. *J Anat.* 80(4): 184–8.

Pritchard, J. J., & Ruzicka, A. J., 1950. Comparison of fracture repair in the frog, lizard and rat. *J Anat.* 84(3): 236–61.

Ritzman, T. B., Stroik, L. K., Julik, E., Hutchins, E. D., Lasku, E., Denardo, D. F., *et al*., 2012. The gross anatomy of the original and regenerated tail in the green anole (Anolis carolinensis). *Anat Rec.* 295(10): 1596–608.

Rumping, J. M., & Jayne, B. C., 1996. Muscle activity in autotomized tails of a lizard (Gekko gecko): a naturally occurring spinal preparation. *J Comp Physiol A Neuroethol Sens Neural Behav Physiol.* 179(4): 525–38.

Russell, A. P., Lynn, S. E., Powell, G. L., & Cottle, A., 2015. The regenerated tail of juvenile leopard geckos (Gekkota: Eublepharidae: Eublepharis macularius) preferentially stores more fat than the original. *Zoology.* 118(3): 183–91.

Sanggaard, K. W., Danielsen, C. C., Wogensen, L., Vinding, M. S., Rydtoft, L. M., Mortensen, M. B., *et al*., 2012. Unique structural features facilitate lizard tail autotomy. *PLoS ONE.* 7(12): 1-8.

Sartori, R., & Sandri, M., 2015. BMPs and the muscle–bone connection. *Bone*. 80: 37–42.

Sharma, B., & Albig, A. R., 2013. Matrix Gla protein reinforces angiogenic resolution. *Microvasc Res*. 85: 24-33.

Sheppard, L., & Bellairs, A. A., 1972. The mechanism of autotomy in Lacerta. *Brit J Herpetol.* 4: 276–86.

Shieh, S., & Cheng, T., 2015. Regeneration and repair of human digits and limbs: fact and fiction. *Regeneration.* 2(4): 149–68.

Simou, C., Pafilis, P., Skella, A., Kourkouli, A., & Valakos, E. D., 2008. Physiology of original and regenerated tails in aegean wall lizard (podarcis erhardii). *Copeia.* 3: 504–9.

Simpson, S. B., & Cox, P. G., 1967. Vertebrate regeneration system: culture in vitro. *Science.* 157(3794): 1330–2.

Soesilo, N. P., 1982. Regenerasi ekor kadal (Mabouya multifasciata Kuhl) setelah mengalami autotomy. Tesis Pasca Sarjana Pogram Studi Biologi, Universitas Gadjah Mada Yogyakarta.

Sun, M. M.-G., & Beier, F., 2014. Chondrocyte hypertrophy in skeletal development, growth, and disease. *Birth Defects Res C Embryo Today.* 102(1): 74–82.

Tiku, M. L., & Sabaawy, H. E., 2015. Cartilage regeneration for treatment of osteoarthritis: a paradigm for nonsurgical intervention. *Ther Adv Musculoskelet Dis.* 7(3): 76–87.

Towler, D. A., 2009. Bone morphogenetic proteins. *Blood*. 114(10): 2012–3.

Tuan, R. S., Chen, A. F., & Klatt, B. A., 2013. Cartilage regeneration. *J Am Acad Orthop Surg.* 21(5): 303–11.

van der Eerden, B. C. J., Karperien, M., & Wit, J. M., 2003. Systemic and local regulation of the growth plate. *Endocr Rev.* 24(6): 782–801.

Wang, Y., Wang, R., Jiang, S., Zhou, W., Liu, Y., Wang, Y., *et al*., 2011. Gecko CD59 is implicated in proximodistal identity during tail regeneration. *PLoS ONE.* 6(3): 1-10.

Wiley, D. M., & Jin, S. W., 2011. Bone Morphogenetic Protein functions as a context-dependent angiogenic cue in vertebrates. *Semin Cell Dev Biol*. 22(9): 1012–8.

Xu, J., Wang, W., Ludeman, M., Cheng, K., Hayami, T., Lotz, J. C., & Kapila, S., 2008. Chondrogenic differentiation of human mesenchymal stem cells in three-dimensional alginate gels. *Tissue Eng Part A.* 14(5): 667–80.

Yagami, K., Suh, J. Y., Enomoto-Iwamoto, M., Koyama, E., Abrams, W. R., Shapiro, I. M., *et al*., 1999. Matrix GLA protein is a developmental regulator of chondrocyte mineralization and, when constitutively expressed, blocks endochondral and intramembranous ossification in the limb. *J Cell Biol.* 147(5): 1097–108.

Yamashita, K., Mikawa, S., & Sato, K., 2016. BMP3 expression in the adult rat CNS. *Brain Res*. 1643: 35–50.

Yao, Y., Watson, A. D., Ji, S., & Boström, K. I., 2009. Heat shock protein 70 enhances

vascular bone morphogenetic protein-4 signaling by binding matrix gla protein. *Circ Res.* 105(6): 575–84.

Yeung Tsang, K., Wa Tsang, S., Chan, D., & Cheah, K. S. E., 2014. The chondrocytic journey in endochondral bone growth and skeletal dysplasia. *Birth Defects Res Part C Embryo Today.* 102(1): 52–73.

Yoon, B. S., & Lyons, K. M., 2004. Multiple functions of BMPs in chondrogenesis. *J Cell Biochem*. 103: 93–103.

Zelzer, E., Glotzer, D. J., Hartmann, C., Thomas, D., Fukai, N., Soker, S., & Olsen, B. R., 2001. Tissue specific regulation of VEGF expression during bone development requires Cbfa1/Runx2. *Mech Dev.* 106(1–2): 97–106.

Zhang, W., Ouyang, H., Dass, C. R., & Xu, J., 2016. Current research on pharmacologic and regenerative therapies for osteoarthritis. *Bone Res.* 4(10): 1-14.

Zhang, Y., & Ross, A. C., 2013. Retinoic acid and the transcription factor MafB act together and differentially to regulate aggrecan and matrix metalloproteinase gene expression in neonatal chondrocytes. *J Cell Biochem.* 114(2): 471–79.

Zhang, Z., Yang, W., Cao, Y., Shi, Y., Lei, C., Du, B., *et al*., 2015. The functions of BMP3 in rabbit articular cartilage repair. *Int J Mol Sci.* 16(11): 25934–46.

Zhang, P., Liu, Y., Wang, Y., Zhang, M., Lv, L., Zhang, X., & Zhou, Y., 2017. SIRT6 promotes osteogenic differentiation of mesenchymal stem cells through BMP signaling. *Sci Rep*. 7(1): 10229.

Zhou, X., Tao, Y., Liang, C., Zhang, Y., Li, H., & Chen, Q., 2015. BMP3 alone and together with TGF-β promote the differentiation of human mesenchymal stem cells into a nucleus pulposus-like phenotype. *Int J Mol Sci.* 16(9): 20344–59.

Zug, G. R., Vitt, L. J., & Caldwell, J. P., 2001. *Herpetology* (2nd ed.). New York: Academic Press.