Supplementary Information for the manuscript titled

‘Medullary bone-like tissue in the mandibular symphyses of a pterosaur suggests non-reproductive significance’

by

Edina Prondvai* and Koen HW Stein

Glossary for the histological descriptions

1. **dynamic osteogenesis or DO**: bone formation by an osteogenic lamina consisting of mutually aligned osteoblasts on a pre-existing firm surface (bone or cartilage);
2. **endosteal bone**: bone tissue derived from the osteogenic endosteum which covers the surface of the medullary cavity, trabeculae and vascular canals;
3. **endosteal lamellae**: lamellar organization of endosteal bone;
4. **Haversian system**: remodelled bone organized into mostly longitudinally oriented secondary osteons, i.e. vascular canals surrounded by concentric layers of lamellar bone;
5. **lacunae**: small spaces in the bone matrix containing the individual bone cells, i.e. osteocytes;
6. **laminar and plexiform architecture**: vascular arrangement in the bone tissue dominated by circumferentially and circumferentially-radially oriented canals, respectively;
7. **primary bone tissue**: bone that has been formed where no prior bone tissue exists;
8. **secondary bone tissue**: bone that has been deposited on previously resorbed bone surface indicated by the presence of a resorption line;
9. **static osteogenesis or SO**: bone formation without the development of an osteogenic lamina, i.e. without a pre-existing firm surface;
10. **woven-fibred bone**: bone tissue resulting from static osteogenesis diagnosed by random orientation of irregularly shaped osteocytes and lacunae;
11. **parallel-fibred bone**: bone tissue resulting from dynamic osteogenesis diagnosed by ordered alignment of spindle shaped osteocytes and lacunae.
Figure captions for Supplementary Figures

**Supplementary Figure 1. Overview of a transverse section of symphysis specimen 2010.74.10 which does not exhibit medullary bone-like tissue.** (a) Thin section under cross polarized light aided by a lambda wave plate and (b) its line drawing showing the distribution of medullary cavity recesses and the areas of secondary remodelling but no medullary bone-like tissue (see also legend within the figure). **Abbreviations:** Ds, dorsal surface of the symphysis; LAG, line of arrested growth; Ls, lateral surface of the symphysis; Nf, nutritive foramen; Vk, ventral keel.

**Supplementary Figure 2. Longitudinal section of the skeletally least mature symphysis specimen 2007.111.1(15) exhibiting medullary bone-like tissue.** (a) Thin section under plane polarized light and (b) under crossed plane polarizers aided by lambda wave plate. (c) Line drawing of the same section highlighting the distribution and extent of primary bone (Pb, white area), secondary bone (Sb, grey area), medullary cavity recess (Mcr) and medullary bone-like tissue (Mb). **Further abbreviations:** Rl, resorption line.
Supplementary Figure 1