

*Creating an Interconvertible Digital-physical Catalogue of Rare Histological Bone Samples for Use in Classroom Teaching and Student Learning in Forensics and Biological Anthropology*

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The BAFAL Lab and Field Coordinator is an SRAP-funded position in UWG's Biological and Forensic Anthropology Laboratory (BAFAL), a facility focusing on Forensic Science and Physical Anthropology. BAFAL hosts an analytical microscopy station, where modern human reference samples garnered in collaboration with the Autonomous University of Yucatan (UADY), Merida, Mexico, are curated. This collection includes human and non-human samples, diverse stages of bone development and growth, cases of heat exposure, as well as pathological and trauma-related lesions. While visual analysis of bone surfaces is a useful tool for analysis, more detailed information can be gained through microscopy. This does, for example, facilitate more reliable diagnoses of changes resulting from health insults. The current project presents parts of an interconvertible digital-physical teaching catalogue currently under development at BAFAL, showcasing unique samples such as rickets (vitamin D deficiency induced bone disease), osteomyelitis (bone infection), and mandibular torus (benign bone growth in the mouth). Once finished, this teaching catalogue will supplement learning in classes and provide students with the opportunity of hands-on experience and to learn about questions such as: "How old was this individual?", "Was this bone exposed to fire?", "Is this human?", or "Does disease differ between the past and the present?".