BSF Enterprise PLC

# T-Rex Leather™ ANCESTRAL PROTEIN MODELLING

## Reconstruction of ancient collagen using protein inference models

Conceptual 3-step schematic based on reported *Tyrannosaurus rex* collagen fragments

### 01 Ancient Peptide Fragments

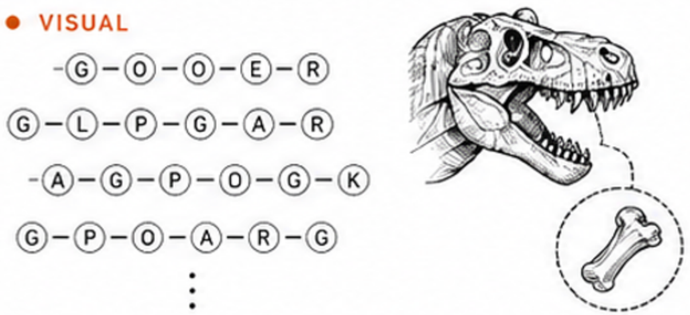
- **STARTING POINT**

  Researchers begin with reported collagen peptide fragments associated with a 68-million-year-old *Tyrannosaurus rex* fossil.

- **EVIDENCE**

  These are reported peptide fragments rather than a complete recovered collagen sequence.

- **VISUAL**




### 02 Ancestral Protein Modelling

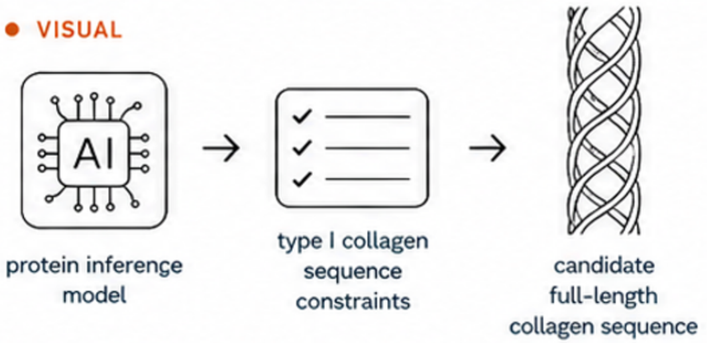
- **METHOD**

  A protein inference model combines the reported fragments with type I collagen sequence constraints.

- **OUTPUT**

  The model generates candidate full-length collagen sequences.

- **VISUAL**




### 03 Candidate Selection

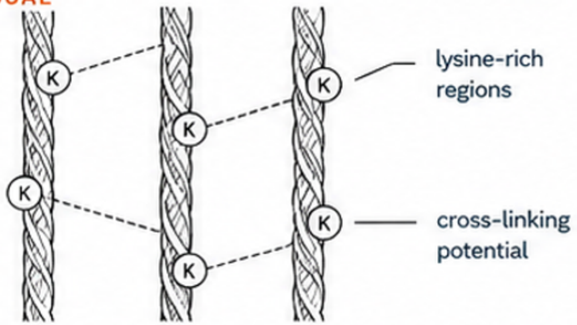
- **FINDING**

  A selected candidate sequence showed elevated lysine content.

- **INTERPRETATION**

  This suggests greater potential for collagen cross-linking and improved mechanical performance.

- **VISUAL**




T-REX LEATHER™

**PLASTIC-FREE. CELL-WOVEN TISSUE.**

BSF's 100% cell-woven tissue is positioned as an alternative to synthetic bio-leathers that rely on polyurethane (PU) or PVC-based binders and glues.

• APM RECONSTRUCTS CANDIDATE COLLAGEN SEQUENCES WITH GREATER CROSS-LINKING POTENTIAL. •