73. **Implication of ribosome assembly factors in Xenopus laevis development.**

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Ribosomopathies are cancer predisposition syndromes associated with ribosome assembly dysfunction. While ribosomes are expressed in every cells of an organism, only specific tissues (e.g. blood, skeletons, pancreas) are affected in ribosomopathies. Why specific tissues are more sensitive than others to translational deficiencies caused by ribosome assembly defects is not understood. To gain further insights into the tissue-specific component of ribosomopathies, we characterized the requirement of seven ribosome assembly factors in Xenopus laevis during development. These factors were selected on the basis of their involvement in different steps of ribosome biogenesis (UBTF, fibrillarin/FBL, nucleolin/NCL), of their recent identification as human pre-rRNA processing factors (RRP7A, DUSP11), or because they are well-known ribosomopathy markers (RPS19 for Diamond Blackfan anaemia, and SBDS for Shwachman-Diamond syndrome). We report that the ribosomal assembly factors tested are strongly expressed in the developing neural and neural crest tissues, and that their morpholino-mediated depletion affects embryonic structures derived from these tissues, including the craniofacial skeleton and the eyes. We further show that the expression of genes encoding transcriptional regulators of neural and neural crest development (FoxD3, Pax2, Pax6, and Slug) is differentially affected in morphants. These observations support the idea that in a developing embryo, highly proliferative structures are particularly sensitive to translational defects, and that ribosomopathies are not generic but highly specific diseases.