

# **The importance of prenatal soundscapes for avian development**

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Sound is an unrivalled source of information, in humans, but also in animals, including birds. Sound may be particularly crucial when visual communication is not possible, such as for embryos developing inside an opaque egg or in the womb. Surprisingly however, until recently, we knew very little about how embryos use sound information to direct their development. In this seminar, I will present the fascinating ways in which prenatal soundscapes affect development, in both adaptive and maladaptive ways, in a range of avian taxa. I will show that, in addition to its immediate effects, prenatal sound can inform embryos of upcoming environmental conditions postnatally, and affect a wide range of offspring traits, from morphology and behaviour to physiology and cellular functions, including until adulthood. I will also demonstrate how in the desert-adapted Australian zebra finch, a prenatal acoustic signal of heat from the incubating parent, prepares offspring development for high temperatures. This talk will therefore reveal a novel heat-adaptation strategy in birds, and the importance of prenatal sounds in shaping development.