Snake venom is perhaps best known for its ability to incapacitate or disrupt the physiological systems of animals. Notable examples include the extreme lethality seen in the venoms of cobras, boomslangs and tipains. From a human perspective this property of venom is both a source of a major health concern, with estimates of over a million envenomation cases annually, and a source of novel biochemical compounds used in the development of new drugs (ref). However, snake venom is not only extremely varied in terms of its biochemistry but also in its ability to incapacitate prey. For example, many species, such as the Gold-ringed cat snake (*Boiga dendrophila*), are incapable of subduing laboratory test model prey ([7](#_ENREF_7)) while other species, such as Russel’s viper (*Daboia russelii*), possess enough potent venom to incapacitate hundreds of thousands of potential prey items ([8](#_ENREF_8)). Despite the importance in understanding the diversity of snake venom, little is known on what drives the evolution of this remarkable range and the capability to incapacitate prey in numbers higher than energetic requirements. We will….

, little is known of what drives both the range and the ability of many species of venom in snake species.

However, both the extreme lethality of such species and the variability in this ability across venomous snakes

While the high lethality of many snake species is particularly important as both a source of human mortality in cases of snake bite and for drug discovery, the variation in such lethality is still surprisingly poorly understood. For example, many species, such as the Gold-ringed cat snake (*Boiga dendrophila*), are incapable of subduing laboratory test model prey ([7](#_ENREF_7)) while other species, such as Russel’s viper (*Daboia russelii*), possess enough potent venom to incapacitate hundreds of thousands of potential prey items ([8](#_ENREF_8)). Furthermore, this variation in the ability to kill prey is potentially skewed towards extreme lethality, with many species seemingly capable of killing vast amounts of prey. While

Snake venom is interesting

Hugh Diversity

Limited synthesis of this and there is clearly a need for a comparative approach

This also leads itself to a greater understanding of predator-prey co-evolution.

In particular venom lends itself to this type of study as it is quantifiable. Here we test a range of hypothesis relating to both of these aspects of venom

The debate on the drivers of venom volume really picked up in relation to the Overkill hypothesis -----..