Abstract
Dchs1 and Fat4 are protocadherins that typically act as a ligand-receptor pair to regulate many aspects of mammalian development. In humans, compound mutations of FAT4 and DCHS1, result in Van Maldergem’s syndrome characterized by a range of abnormalities including neuronal deficits and craniofacial defects. The precise roles and mechanisms of Dchs1-Fat4 signalling during mammalian development are still very uncharacterized. However, there is emerging evidence that Dchs1-Fat4 regulate planar cell polarity and activity of the Hippo transcriptional co-effectors, Yap and Taz. The talk will present data showing roles of Dchs-Fat4 during sternum morphogenesis via PCP and Dchs1-Fat4 regulation of osteoblast differentiation via the differential regulation of Yap and Taz. I will discuss differences and similarities between the Drosophila and the vertebrate Fat-PCP-Hippo pathways.

Biosketch
I have been a group leader in the Department of Craniofacial Development and Stem Cell Biology at KCL since 1995. My lab investigates cell signalling and mechanisms of organogenesis, with a focus on craniofacial development. The labs current interests are on the function of Dchs1-Fat4-PCP and Hippo signalling to understand how these pathways control the shape and development of embryonic structures. Prior to KCL I was a post-doc at UCL with Professors Lewis Wolpert, Cheryll Tickle and Paul Brickell investigating the role of Bmp signaling during limb development. Before that a PhD student at the LSHTM.