“Epithelial Bending for Organ Formation: Forces, Molecular Signals, and Novel Ensemble Cell Behaviours“

Friday, October 20, 2017, 10h00
EPFL – room AI 1 153

Prof. Jeremy Green
Professor of Developmental Biology,
Dental Institute,
King’s College London (UK)

host: Prof. Andy Oates

Abstract
Epithelial bending is a fundamental process of developmental morphogenesis from the earliest stages of gastrulation to the final stages of organogenesis. Classically, epithelia bend by apical constriction in which apical actin contraction forces cells to become wedge-shaped. In principle, this is not the only way a sheet of cells can bend itself. We have investigated invagination of epithelia to form mouse tooth buds, hair follicles, mammary ducts and salivary glands. A novel family of epithelial bending mechanisms will be presented, including some of the signals and forces that drive them, and a broader set of principles relevant to tissue morphogenesis as a whole.

See current Bioengineering seminar calendar at http://bioengineering.epfl.ch/seminars