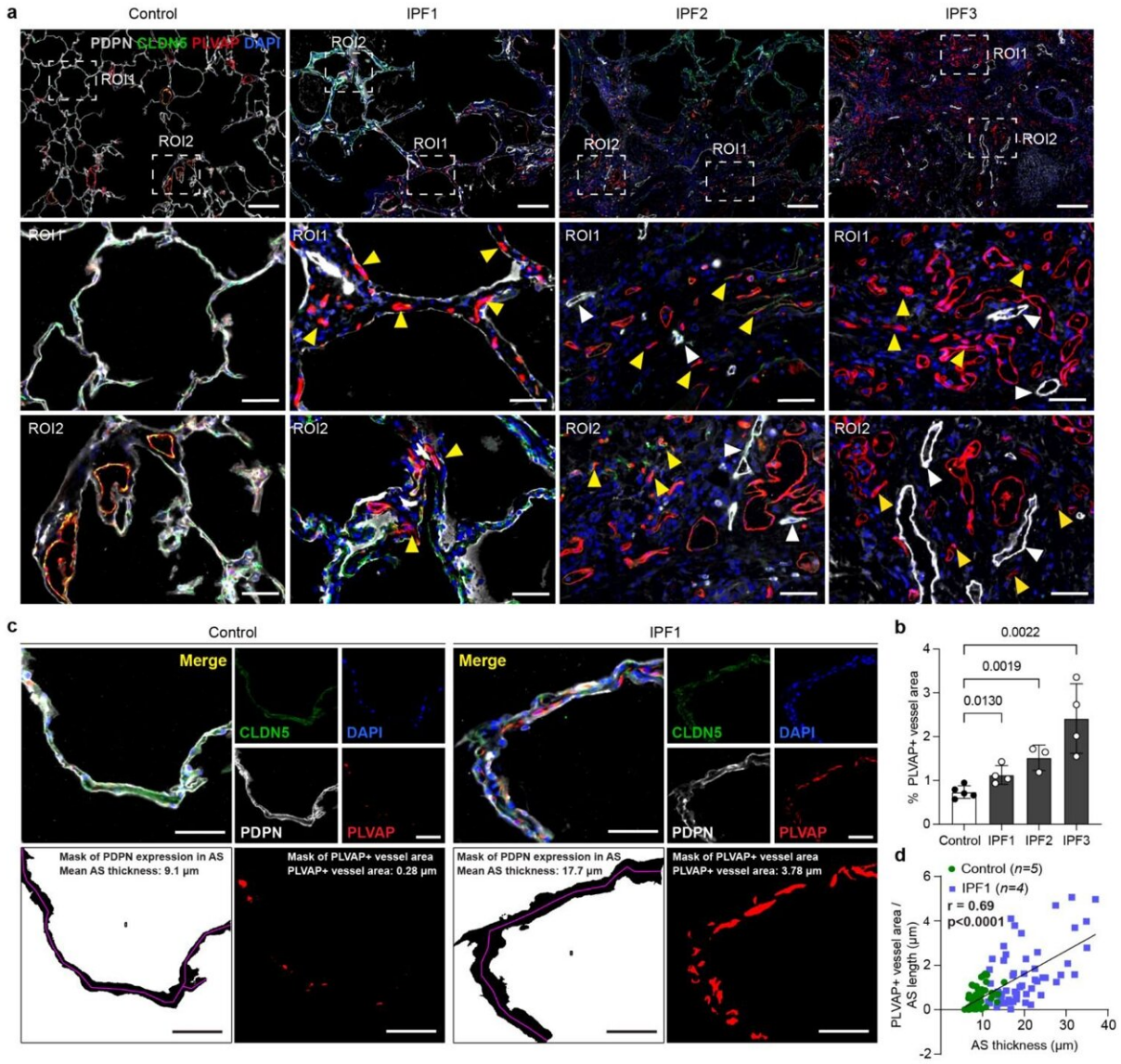
Accelerating drug development for lung diseases: New insights from single-cell genomics

December 6 2023, by Luisa Hoffmann



VWA1+/PLVAP+ ectopic ECs appear in alveolar septae of early-stage lung fibrosis. (a) Representative Immunofluorescence images of CLDN5 (green), PLVAP (red) and PDPN (white) expression in histopathological and microCT-staged IPF tissues. Yellow arrowheads indicate ectopic PLVAP+ vessels. White arrowheads mark PDPN+ lymphatics. Scale bars = 200 μm (overview images) and 50 μm (enlarged views). (b) Bar graphs show the quantification of PLVAP signal (percentage of PLVAP+ area to the total area of lung ROIs) in vivo (n = 5 control and n = 4 IPF patients). Statistics: Unpaired t-test. (c) Example images of quantification methodology of the alveolar PLVAP+ vessel area (normalized to the alveolar septal (AS) length) against the AS thickness. Representative alveolar septae of control and IPF1 tissues are shown. Scale bars = 50 μm. (d) The scatter plot shows the quantitative analysis of 60 AS derived from both control and IPF1 tissues, demonstrating a significant correlation of the normalized PLVAP+ vessel area with AS thickness (Pearson's r =0.69, P