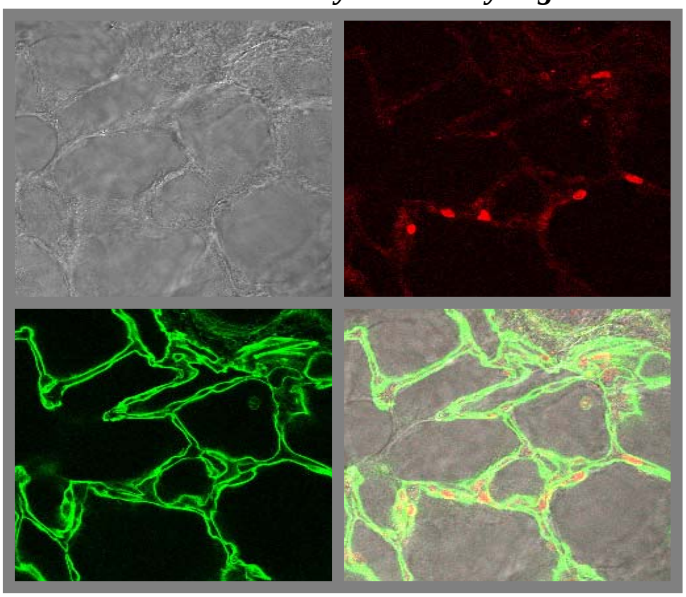
Methods: Fluorecent microscopy; lung slice.

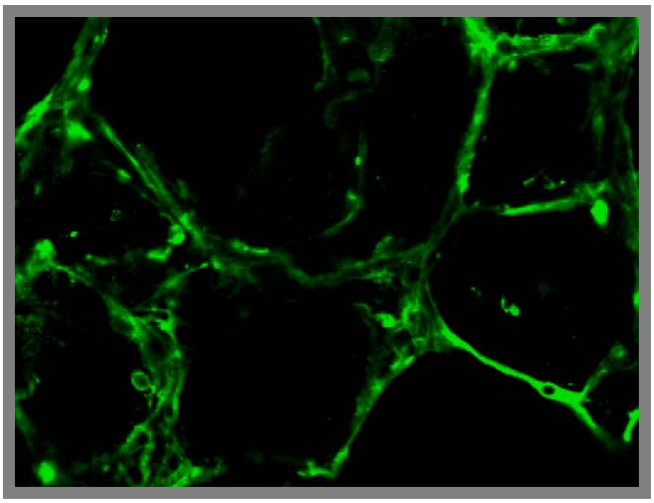
Lung slices were fixed with 4% paraformaldehyde (10 min at room temperature) and then directly labeled with a 1:1000 dilution (in PBS/BSA with 3% goat serum) of fluorescein-labeled lectin from the Cry-Baby Tree, Erythrina crystagalli (ECL), (Vector Labs, CA) and with antibodies. Lung tissue slices were co-labeled with ECL and a final 1:100 fold dilution of RTII-70 antibody (a generous gift from Dr. L. Dobbs) for 1 hour to identify ATI and ATII cells, respectively. Lung slices were then incubated in goat anti-rabbit secondary antibody conjugated to Alexa 568 (1:20,000 dilution; Molecular Probes) for 30 minutes. Dopamine D1 and D2 receptor antibodies, purchased from Chemicon, were used at a 1:1000 fold dilution. Goat anti-rabbit antibody conjugated to Alexa 488 (Molecular Probes) was used as the secondary detection antibody for dopamine receptors at a 1:10,000 dilution for 1 hour. All tissue samples were mounted onto a glass slide with ProLong antifade reagent (Molecular Probes) and imaged using a Zeiss LSM 510 NLO META laser scanning confocal microscope (Zeiss, NY).



Fluorescein-labeled *Erythrina crystagalli* lectin (F-ECL) positive ATI cells. Paraformaldehyde fixed 275µm rat lung tissue slices were co-labeled with F-ECL and surfactant protein A (Alexa Red) with binding specificity for ATI, and ATII cells, respectively. **A)** Differential interference contrast (DIC) image **B)** Round ATII cells labeled with RTII70 and secondary goat anti-rabbit secondary antibody conjugated to Alexa Red (568λ excitation and **C)** ATI cells labeled with Fluorescein-ECL (488λ excitation). **(D)** all images superimposed.

Dopamine receptor expression in lung ATI cells. A) Confocal images of dopamine receptor D2 (top panel) and D1 receptor (bottom panel) antibody binding in PFA fixed 250 μm rat lung slice preparations.

D2 receptor



D1 receptor