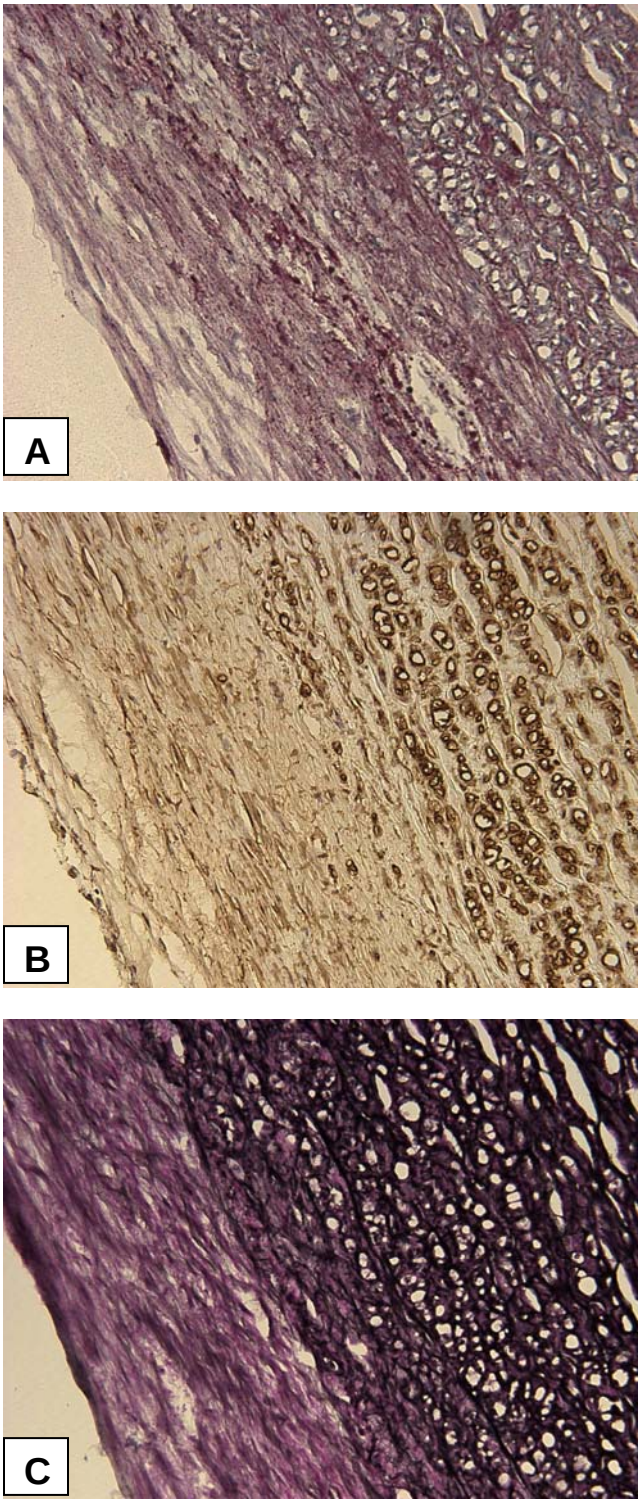
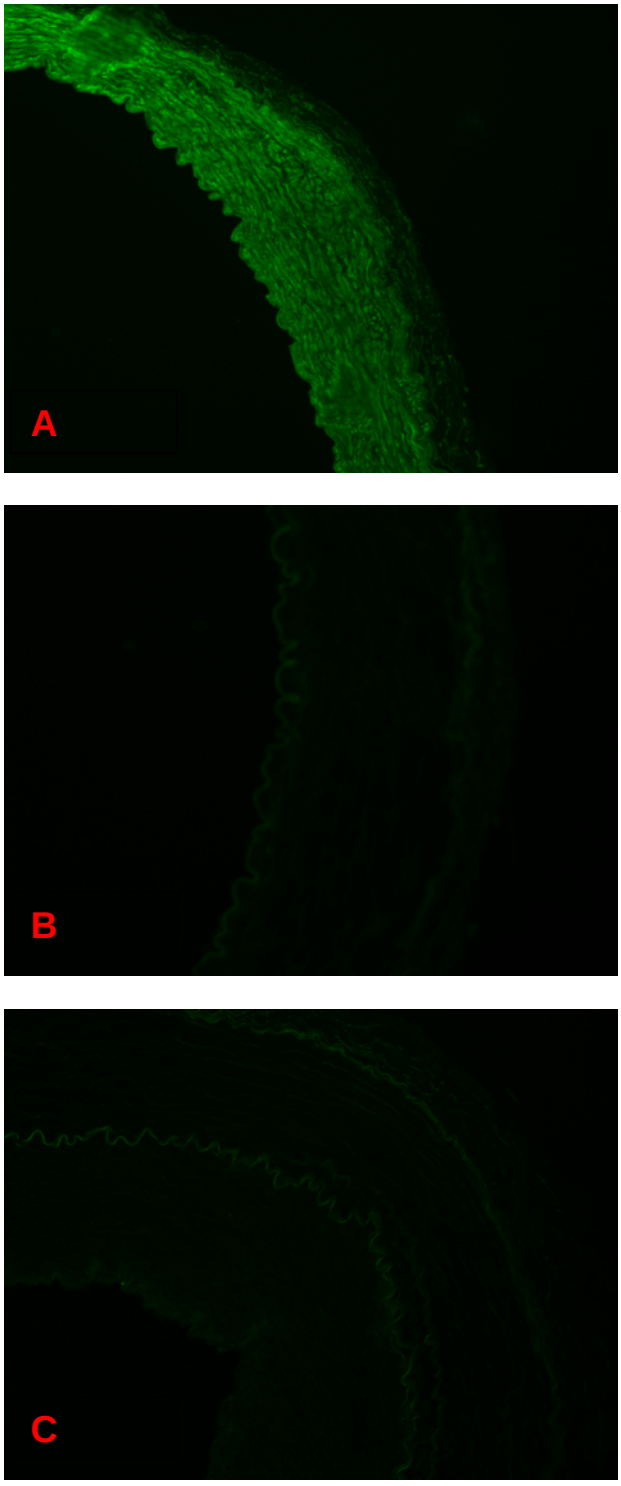
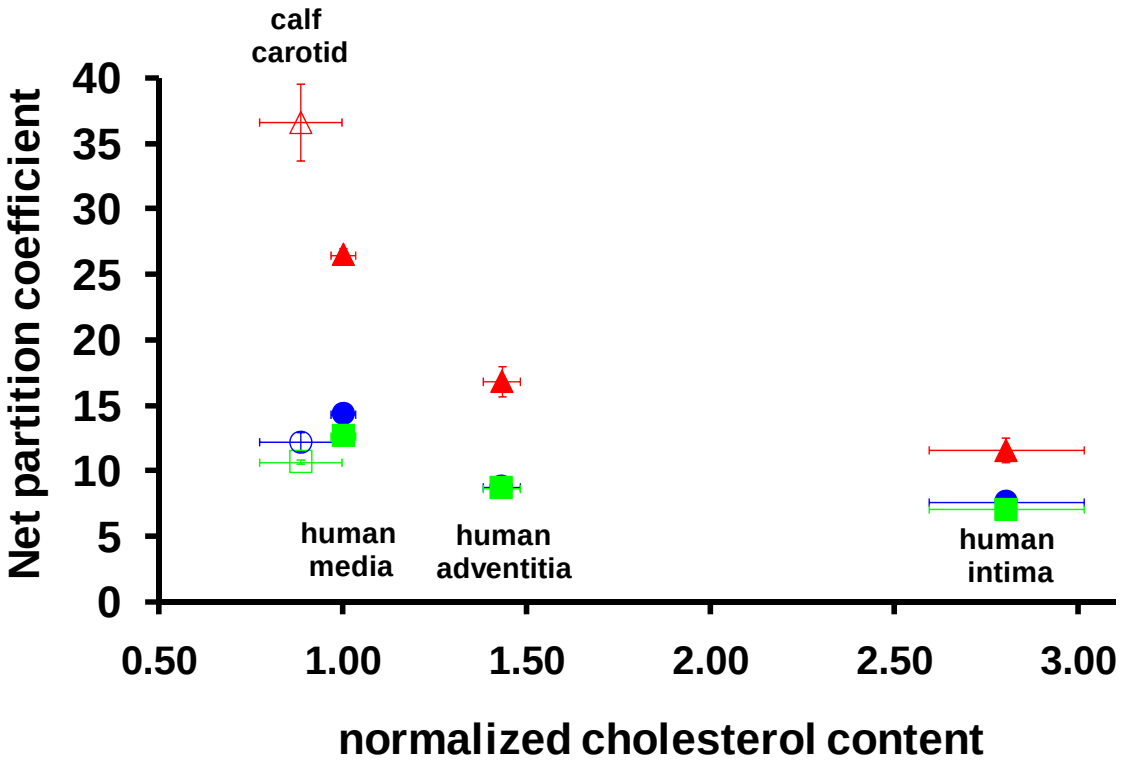


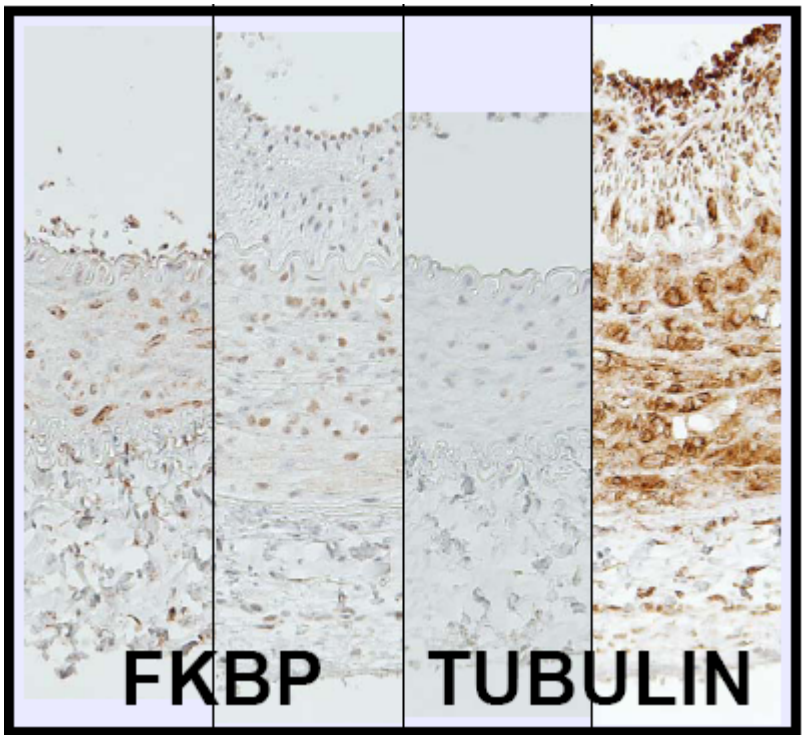
Supplemental figure S1 Autopsy samples of human aorta were stained for lipid (Oil red-O, A), smooth muscle cells (alpha actin, B) and elastin (verHoeff, C). These stains reveal that the layered structures of the abdominal aorta were preserved in these arteries, such that smooth muscle cells and elastin are primarily localized in the media, whereas lipid is distributed rather uniformly throughout the arterial wall



Supplemental figure S2 Fluorescent images of segments of rabbit aorta at the end of a 24h incubation in PBS with (A) or without fluorescent paclitaxel (B, C) illustrate that the signal of the fluorescently labeled drug far exceeds autofluorescence. Autofluorescence was detectable in native uninjured aorta (B) and aorta harvested two weeks after catheter denudation (C) when these vessels were incubated in PBS alone, but the signal on the same imaging settings was significantly lower than the drug signal in aorta immersed in drug solution.



Supplemental figure S3 Compartmental drug partition coefficients from Figure 1 are displayed alongside the net partition coefficients of fresh calf carotids. The latter samples displayed lower cholesterol levels than the human autopsy samples and higher partitioning coefficients that match the trends observed in the human aorta samples. As in Figure 1, red denotes paclitaxel, green sirolimus, blue everolimus and cholesterol levels are normalized with respect to the human media value.



Supplemental figure S4 Distribution of specific intracellular drug binding proteins in native arteries and atheromatous lesions. Six male New Zealand White Rabbits weighing 3.0-3.5kg, approximately 3 months old, were fed for 4 weeks on a regular (n=3) or 2% cholesterol (n=3) diet and their iliac arteries harvested at 4 weeks. Hypercholesterimic animals were balloon-injured at 2-weeks with 3F Fogarty catheters. Arteries were paraffin embedded, sectioned, and stained for the specific binding sites of paclitaxel (β-tubulin) or sirolimus (FKBP-12). Alignment of stained sections of native (left) and diseased iliac arteries (right) revealed a differential effect of disease on paclitaxel and sirolimus binding proteins, with β-tubulin rising markedly in the media of injured arteries, while FKBP levels remain essentially unaltered.