Scratch-plate assay was performed on a HUVEC monolayer. Treatments were as above and migration across the “wound” was assessed at 0, 12, 24hrs. All experiments were done in triplicate.

**Results:** LPS is a ligand for TLR4 receptors. HUVECs cultured on Matrigel had increased tubule length when treated with LPS (136% ± 3.2 of control), an effect that was lost in the presence of apyrase (102.9% ± 4.4, P<0.001) (Figure). LPS with heat-inactivated apyrase maintained tubule length (133.6% ± 10.7, P<0.008). Migration was affected similarly, with the stimulatory effect of LPS lost in the presence of apyrase.

**Conclusions:** TLR4 activation by LPS was pro-angiogenic in HUVECs. This effect was in part mediated by extracellular purinergic signalling. Future studies will examine the role of purinergic signalling on angiogenesis in vivo.

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### PS230.

**EVAR: The Effect of Hooks and Oversizing on the Strength of Proximal Fixation of the Stent Graft**
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**Objectives:** Stent-graft migration is an important cause of late proximal endoleak and rupture after EVAR. The aim of this study was to examine the relationship between oversizing (diameter of stent-graft relative to diameter of aortic neck) and the force required to displace a stent-graft with and without hooks.

**Methods:** Truncated Zenith stent-grafts with and without (Group 1 and 2) hooks were deployed in pressurized bovine aorta in vitro. Stent-grafts were oversized by 5, 10, 20, 30, 40 and 50 percent. The displacement force (DF) required to cause 5mm migration of the stent-graft was measured by means of a force-gauge attached to the stent-graft. The relationship between percentage oversize and DF in both groups was analysed.

**Results:** In group-1, Oversizing from 5% to 30% resulted in significant increase in the mean DF from 1.036N to 4.64N (P<0.05). Increase in oversizing >30% was not associated with further significant increase in mean DF. In group-2, an increase in the percentage of oversize from 5% to 20% resulted in a significant increase in mean DF from 2.066N to 6.047N ((P<0.05). Oversizing beyond 20% had no additional effect. At each interval of oversizing mean DF in group 2 was significantly greater that in group 1 (P<0.05).

**Conclusions:** The present of hooks improving the security of proximal fixation is confirmed. Fixation is not improved significantly by oversizing more than 20% (with hooks) or 30% (without hooks). This has implications when planning EVAR.

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### PS232.

**Long-Term Effects of Everolimus-Eluting Self-Expanding Stent Implantation in an Experimental Model of Peripheral Vascular Intervention**
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**Objectives:** The purpose of this study was to assess the vascular response of everolimus eluting self-expanding stents in the peripheral arteries of healthy swine.

**Methods:** The normal bilateral iliac arteries of 24 Yucatan mini-swine were percutaneously treated with 8mmx28 mm intravascular self-expanding nitinol stents; bare metal stents (BMS) were implanted on one side and drug eluting stents (DES) on the contralateral side. The drug eluting stents were coated with everolimus 225 ug/cm² in a polymer matrix and intended to deliver the drug in a sustained fashion over about 6 months. After 3, 6 or 12 months, the animals were sacrificed, the stented iliac arteries perfusion-fixed, and sections stained for histomorphometric analysis (n=8).

**Results:** The chronic presence of everolimus in arterial tissue reduced stent-induced inflammation and neointimal hyperplasia after 3 and 6 months, although some late inflammation and remodeling were observed after drug exhaustion at later times (Fig. 1). Interestingly, the stent-