between extrinsic and intrinsic regulatory signals that regulate myogenic process. In the present work, we showed that obestatin, a 23-amino-acid peptide encoded by the ghrelin gene, and the GPR39 receptor, are expressed in rat skeletal muscle being up-regulated upon experimental injury. To delineate the role in muscle regeneration, L6E9 cells were used for in vitro assays. For in vivo assays, skeletal muscle tissue was obtained from male rats under continuous subcutaneous infusion of obestatin. In differentiating L6E9 cells, preproghrelin expression, and thus obestatin, increased during myogenesis being sustained throughout terminal differentiation. Autocrine action was demonstrated by neutralization of endogenous obestatin secreted by differentiating L6E9 cells using specific anti-obestatin antibody. Knockdown experiments by preproghrelin siRNA supported that obestatin contributes to myogenic program. Furthermore, GPR39 siRNA reduced obestatin action and the myogenic differentiation. Obestatin treatment showed to regulate myoblast migration and proliferation. Remarkably, obestatin stimulation increased myogenic differentiation of L6E9 cells. The relevance of obestatin actions was confirmed in vivo by up-regulation of Pax-7, MyoD, Myf5, Myf6, myogenin and myosin heavy chain (MHC) in obestatin-infused rats compared to saline-infused rats. These data delineate a novel mechanism whereby the obestatin/GPR39 system is coordinately regulated as part of the myogenic program and operate as an autocrine signal regulating skeletal myogenesis.

P27r-41
The rab gtpase ypt1p and the p24 transmembrane protein complex cooperate in vesicular transport within the early secretory pathway
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Vesicular transport through the eukaryotic secretory pathway is essential for cellular function and multicellular development. This evolutionary conserved process depends on cytosolic coat protein complexes that form vesicles, select specific cargo molecules for incorporation into the vesicles and direct the vesicles to their correct intracellular destination. Two types of coats operate in the early secretory pathway: COPII mediates the export from the endoplasmic reticulum (ER), while COPI is involved in the retrograde transport from the Golgi to the ER and between Golgi cisternae. During the last years we have obtained evidence in yeast indicating that a conserved group of integral membrane proteins, referred to as the p24 family, regulate multiple vesicular trafficking events by controlling COPII and COPI membrane recruitment. p24 proteins, which contain high-affinity COPII and COPI binding signals, are assembled into heteromeric complexes that continuously cycle between ER and Golgi. To gain more insights into the functions of the yeast p24 complex in the early secretory pathway, we performed a screen for mutations that induce synthetic enhancement upon disruption of the EMP24 gene. We identified a strong genetic interaction between EMP24 and YPT1, an essential gene encoding a small GTPase of the Rab family required for multiple vesicle budding and tethering events at the ER-Golgi shuttle. The phenotypic characterization of the double mutant emp24A ypt1-3 suggests that the cycling p24 complex cooperates with Ypt1p in anterograde COPII and retrograde COPI vesicular transport within the early secretory pathway.

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BFU2008-04119/BMC

P27-42
MUC1 mucin and steroid hormone receptors in bovine endometrium (BEEC) and oviduct (BOEC) epithelial cells in culture
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Progesterone-dependent regulation of anti-adhesion MUC1 mucin appears to be an important factor in determining endometrial receptivity. MUC1 plays a role in protecting the endometrium from microbial attack, but must be lost in order for embryo implantation to occur. This is facilitated in some species by progesterone down-regulation of endometrial MUC1 to coincide with the implantation phase of the reproductive cycle. The mechanism of this type of regulation remains to be established, but stimulation of human MUC1 promoter by progesterone, mediated by its receptor, has been shown. Our main goal is to study the unknown transcriptional regulation of MUC1 in bovine endometrium and oviduct epithelial cells, specifically investigating how it is influenced by treatments with progesterone and oestrogen. To this end, we have established primary cultures of bovine endometrium (BEEC) and oviduct (BOEC) epithelial cells using bovine uteri and oviducts at days 1–3 of the oestrous cycle, accurately determined by the presence of a corpus hemorrhagicum, and they have been characterized for the expression of oestrogen/progesterone receptors and MUC1 by real-time RT-PCR and Western blotting. BEEC had lower levels of transcription for all the genes analyzed and lower levels of MUC1 protein, when compared with BOEC. Knowledge of how MUC1 expression can be regulated in uterine epithelium may aid assisted reproduction technologies, by decreasing MUC1 and increasing the availability of the uterine cell surface to the embryo, thereby improving pregnancy rates and reproductive efficiency, in domestic animals as well as in humans.

P27-43
Galanin receptor 3 is mediating important functions in polymorphonuclear neutrophils
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Galanin is a bioactive neuropeptide that participates in the recruitment and activation of polymorphonuclear neutrophils (PMNs). To date, 3 galanin receptors (GALR1, GALR2, GALR3) belonging to the G-protein coupled receptor family are known, however, the receptor(s) involved in PMN processes are unclear. Consequently, we aimed to determine GALRs messenger RNA (mRNA) expression in PMNs, and ascertain if these receptors are involved in PMN functions.

Using reverse transcription polymerase chain reaction (RT-PCR) we were able to show that GALR2/3 receptors are found to be expressed in human resting PMNs. Additionally, immuno- blotting using specific GALR2/3 antibodies confirmed that mRNAs detected by RT-PCR were translated into proteins. To further investigate the receptor subtype mediating galanin PMN functions, we were using the specific GALR3 antagonist SNAP-