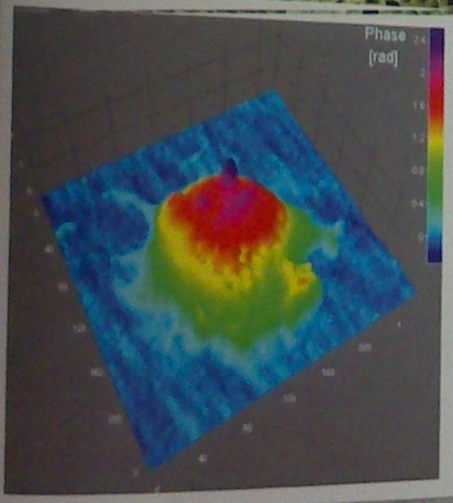
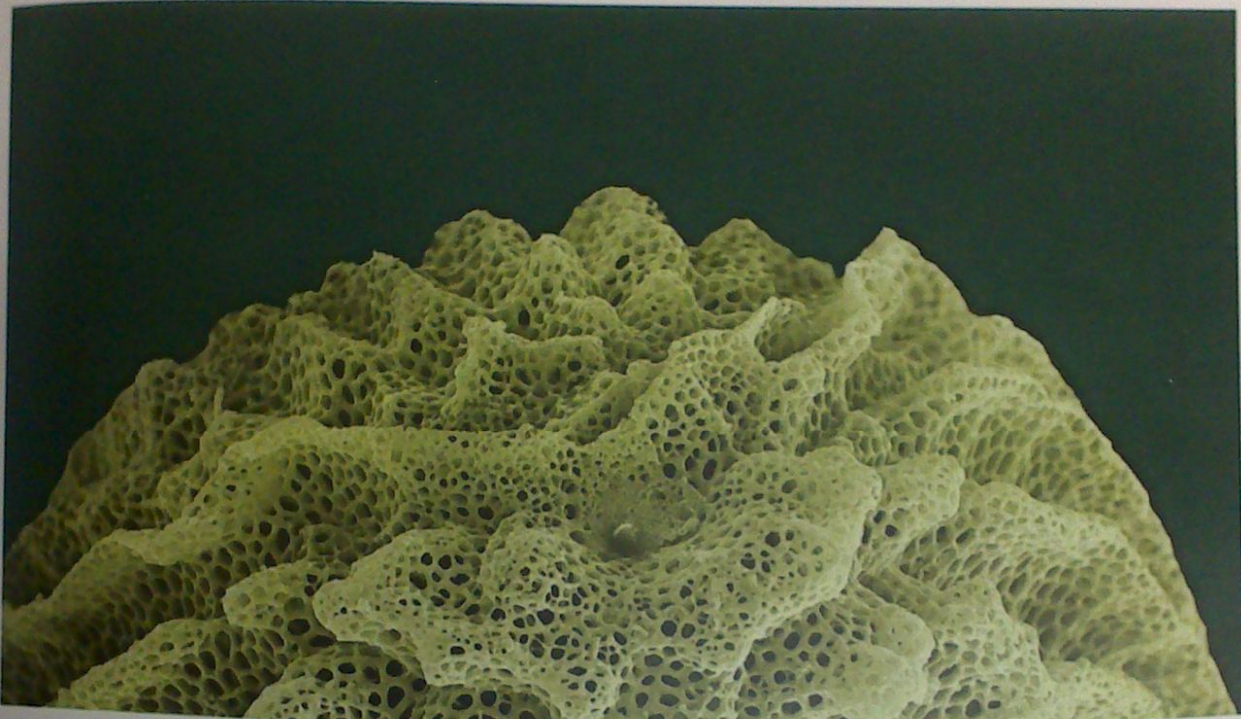


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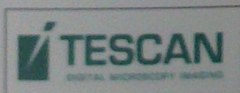
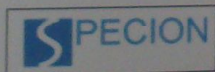


Československá mikroskopická společnost

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¹ 3D reprezentace obrazové fáze v pseudobarvách zobrazující krysi rakovinné buňky LW13K2 koherencí řízeným holografickým mikroskopem (autor: Aneta Křížová)

² Detail vajíčka mouchy stínomilky (autor: Marek Semmelbauer)

³ The electron diffraction of decagonal AlPdCo quasicrystal (autor: Ivona Černíková)

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Influence of intrauterine growth retardation on microcirculatory bed of oral cavity tissues

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Intrauterine growth retardation (IUGR) is a significant problem in contemporary society: its rate varies from 3 to 24% among mature and from 18 to 46% among premature newborns in different countries. Frequency of oral cavity pathology is increased in children with IUGR in anamnesis.

We investigated periodontium of newborn rats with experimental model of IUGR for detection of pathogenetic mechanism of intrauterine growth retardation development. Previously, histological investigation was performed with morphometry. Light microscopy showed that microcirculatory response was characterized by a pronounced decrease in vascular density; uneven congestion of microcirculatory bed, presence both contractility and dilatation of the capillary bed; reduced vascular volume with presence of empty vessels. Endotheliocytes of microcirculatory bed are flattened; signs of their desquamation were registered. The increasing intravascular blood clotting in the postcapillary and venular portions of the microcirculatory system have been observed along with a partial reduction of the capillary link. Perivascular space is characterized by initial sclerotic process.

The present findings provide further evidence of a strong functional reactivity of microcirculatory bed in IUGR that and underscore the importance of such changes in the future pathogenesis of postnatal oral pathology. These pilot studies have shown a great potential of confocal microscopy for qualitative morphological characterization of parodontal tissues.

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