

## **Ein neuer Weg der Kariesprävention** **Beeinflussung des Biofilm-Metabolismus**

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### **Literatur**

- Acevedo AM, Machado C, Rivera LE, Wolff M, Kleinberg I.: The inhibitory effect of an arginine bicarbonate/calcium carbonate CaviStat-containing dentifrice on the development of dental caries in Venezuelan school children. *J Clin Dent* 2005; 16(3): 63-70.
- Acevedo AM, Montero M, Rojas-Sanchez F, Machado C, Rivera LE, Wolff M, Kleinberg I.: Clinical evaluation of the ability of CaviStat in a mint confection to inhibit the development of dental caries in children. *J Clin Dent* 2008; 19(1): 1-8.
- Burne RA, Marquis RE.: Alkali production by oral bacteria and protection against dental caries. *FEMS Microbiol Lett.* 2000; 193(1): 1-6.
- Casiano-Colón A, Marquis RE.: Role of the arginine deiminase system in protecting oral bacteria and an enzymatic basis for acid tolerance. *Appl Environ Microbiol.* 1988; 54(6): 1318-24.
- Gordan VV, Garvan CW, Ottenga ME, Schulte R, Harris PA, McEdward D, Magnusson I.: Could alkali production be considered an approach for caries control? *Caries Res* 2010; 44(6): 547-54.
- Huang X, Exterkate RA, ten Cate JM.: Factors associated with alkali production from arginine in dental biofilms. *J Dent Res* 2012; 91(12): 1130-4.
- Hu DY, Yin W, Li X, Feng Y, Zhang YP, Cummins D, Mateo LR, Elwood RP: A clinical investigation of the efficacy of a dentifrice containing 1.5% arginine and 1450 ppm fluoride, as sodium monofluorophosphate in a calcium base, on primary root caries. *J Clin Dent* 2013; 24 Spec no A: A23-31.
- Kleinberg I.: Effect of urea concentration on human plaque pH levels in situ. *Arch Oral Biol* 1967; 12(12): 1475-84.
- Kleinberg I.: Effect of varying sediment and glucose concentrations on the pH and acid production in human salivary sediment mixtures. *Arch Oral Biol* 1967; 12(12): 1457-73.

- Kraivaphan P, Amornchat C, Triratana T, Mateo LR, Ellwood R, Cummins D, DeVizio W, Zhang YP.: Two-year caries clinical study of the efficacy of novel dentifrices containing 1.5% arginine, an insoluble calcium compound and 1,450 ppm fluoride. *Caries Res.* 2013; 47(6): 582-90.
- Liu Y, Dong Y, Chen YY, Burne RA: Environmental and growth phase regulation of the *Streptococcus gordonii* arginine deiminase genes. *Appl Environ Microbiol* 2008 ; 74(16): 5023-30.
- Liu Y, Nascimento MM, Schulte R, Kalra R, Burne RA.: Characterization of the arginolytic microflora of human dental biofilms. *J Dent Res* 2012; 91(A): 1262.
- Liu YL, Nascimento M, Burne RA.: Progress toward understanding the contribution of alkali generation in dental biofilms to inhibition of dental caries. *Int J Oral Sci* 2012; 4(3): 135-40.
- Marquis RE, Bender GR, Murray DR, Wong A.: Arginine deiminase system and bacterial adaptation to acid environments. *Appl Environ Microbiol* 1987; 53(1): 198-200.
- Morou-Bermudez E, Elias-Boneta A, Billings RJ, Burne RA, Garcia-Rivas V, Brignoni-Nazario V, Suárez-Pérez E.: Urease activity as a risk factor for caries development in children during a three-year study period: a survival analysis approach. *Arch Oral Biol.* 2011; 56 (12): 1560-8.
- Nascimento MM, Browngardt C, Xiaohui X, Klepac-Ceraj V, Paster BJ, Burne RA.: The effect of arginine on oral biofilm communities. *Mol Oral Microbiol* 2014; 29(1): 45-54.
- Nascimento MM, Gordan VV, Garvan CW, Browngardt CM, Burne RA.: Correlations of oral bacterial arginine and urea catabolism with caries experience. *Oral Microbiol Immunol* 2009; 24(2): 89-95.
- Nascimento MM, Liu Y, Kalra R, Perry S, Adewumi A, Xu X, Primosch RE, Burne RA.: Oral arginine metabolism may decrease the risk for dental caries in children. *J Dent Res.* 2013; 92(7): 604-8.
- Souza ML, Cury JA, Tenuta LM, Zhang YP, Mateo LR, Cummins D, Ellwood RP.: Comparing the efficacy of a dentifrice containing 1.5% arginine and 1450 ppm fluoride to a dentifrice containing 1450 ppm fluoride alone in the management of primary root caries. *J Dent.* 2013 Aug;41 Suppl 2:S35-41.
- Srisilapanan P, Korwanich N, Yin W, Chuensuwonkul C, Mateo LR, Zhang YP, Cummins D, Ellwood RP.: Comparison of the efficacy of a dentifrice containing 1.5% arginine and 1450 ppm fluoride to a dentifrice containing 1450 ppm fluoride alone in the management of early coronal caries as assessed using Quantitative Light-induced Fluorescence. *J Dent* 2013; 41 Suppl 2: S29-34.

- ten Cate JM, Cummins D.: Fluoride toothpaste containing 1.5% arginine and insoluble calcium as a new standard of care in caries prevention. *J Clin Dent.* 2013; 24(3): 79-87.
- Van Wuyckhuyse BC, Perinpanayagam HE, Bevacqua D, Raubertas RF, Billings RJ, Bowen WH, Tabak LA: Association of free arginine and lysine concentrations in human parotid saliva with caries experience. *J Dent Res.* 1995; 74(2): 686-90.
- Yin W, Hu DY, Fan X, Feng Y, Zhang YP, Cummins D, Mateo LR, Pretty IA, Ellwood RP.: A clinical investigation using quantitative light-induced fluorescence (QLF) of the anticaries efficacy of a dentifrice containing 1.5% arginine and 1450 ppm fluoride as sodium monofluorophosphate. *J Clin Dent.* 2013; 24 Spec no A: A15-22.
- Yin W, Hu DY, Li X, Fan X, Zhang YP, Pretty IA, Mateo LR, Cummins D, Ellwood RP.: The anti-caries efficacy of a dentifrice containing 1.5% arginine and 1450 ppm fluoride as sodium monofluorophosphate assessed using Quantitative Light-induced Fluorescence (QLF). *J Dent.* 2013; 41 Suppl 2: S22-8.