

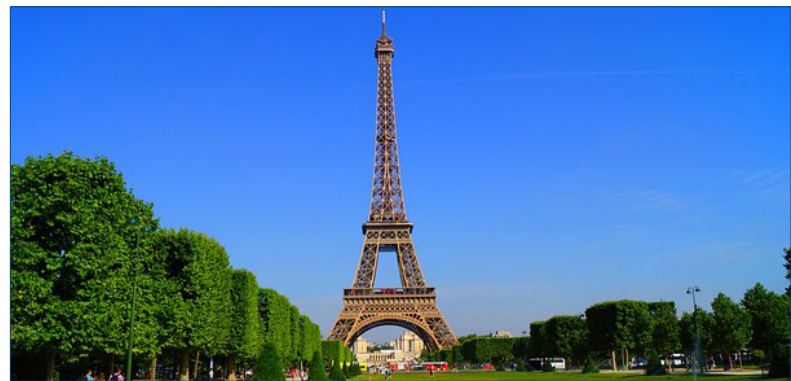
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# Scientific Tracks & Sessions

## November 15, 2018

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### ***Gastroenterologists 2018***



International Conference on  
**Gastroenterology and Digestive Disorders**

November 15-16, 2018 | Paris, France

## Role of bile in adequacy of the data of experiments on the small intestine of rats *in vitro* and *in vivo*

**Olha V Storchylo**

Odessa National Medical University, Russia

Studies of the functions of the Small Intestine in the experiment occur on model systems in conditions *in vitro*, *in situ*, and *in vivo*. The creation of model conditions presupposes the presence of limitations on certain parameters: for example, in conditions of Digestion and absorption *in vitro*, mediums that are not adequate to the real composition of intestinal juice are usually used. Therefore, in addition to Saliva, Pancreatic and Gastric Juice, they do not contain bile. Bile is necessary for the emulsification of food lipids, the detoxification of pathogenic Microflora coming with a food, for the activation of Pancreatic Lipase, for the transportation of lipids through the Intestinal wall into the Blood and Lymph. Accordingly, the influence of Bile on the fluidity of membranes of enterocytes and, as a result, on the modification of their digestive and transport capabilities should be expected. Therefore, in own experiments *in vitro*

and *in vivo*, we investigated the effect of bile on the activity of hydrolysis systems of dimeric substrates of Protein and Carbohydrate origin and transport of the resulting monomers in the Small Intestine of rats. A significant multidirectional effect of bile on the activity of both hydrolytic and transport systems of enterocytes is shown.

### Speaker Biography

Olha V Storchylo graduated Odessa State University (Ukraine) at biochemistry in 1983. She completed her post-graduate in human and animal physiology and biochemistry at the Institute of Physiology Pavlov named of Academy of Sciences of USSR in 1988 and joined the Human and Animal Physiology Department of Odessa State University as an Assistant Professor. From 2008 until now, she is an Associate Professor of Medical Chemistry Department of Odessa National Medical University. Fields of interests are nutrition, digestion and absorption in the small intestine and effects of milk thistle fruits on it, total body irradiation, nutrigenomics, radio pharmacology.

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## **Monocyte Chemotactic Protein -1 (mcp-1) is a promising marker for diagnosis of resistant spontaneous bacterial peritonitis and a prognostic marker for spontaneous fungal peritonitis**

**Laila A Eissa**

Mansoura University, Egypt

**M**CP-1 is a powerful Chemotactic Protein present in Inflammatory states and its levels have been increased in several chronic diseases as Cirrhosis. In cirrhosis increased MCP-1 levels in urine have been described as associated with increasing mortality. The rate of mortality from Spontaneous Peritonitis (SP) in cirrhotic patients is still high despite the development of new antibiotic treatments and intensive hospital care. The coexistence of spontaneous fungal Peritonitis (SFP) is almost entirely ignored health problem. Therefore, this study was designed to evaluate the role of MCP-1 in early diagnosis of Resistant Spontaneous Bacterial Peritonitis and Spontaneous Fungal Peritonitis.

### **Speaker Biography**

Laila A Eissa Egyptian science educator. Doctor of Philosophy in Biochemistry, Moscow Institute Fine Chemical Technology, 1994. MsD, Moscow Institute Fine Chemical Technology, 1989. graduate, Mansoura University, 1986. Achievements include research in the role of nitric oxide in the treatment of bilharziasis; research in the role of Spirulina platensis in liver disease & aging. Member of Mansoura University Social Club, Egyptian Pharmaceutical Society.

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## Epigenetic modulation of intestinal NHE3 expression by DNA methylation

Seema Saksena

University of Illinois, USA

**N**HE3 plays an important role in Intestinal Na<sup>+</sup> absorption and its down-regulation has been implicated in infectious and Inflammatory Bowel Diseases (IBD)-associated Diarrhea. Recent evidence also indicates a novel role of epigenetic mechanisms, such as DNA methylation in the pathophysiology of IBD. Whether changes in DNA methylation are involved in modulating Intestinal NHE3 gene expression is not known. Caco-2 and HUTU-80 cells were used as models of Human Intestinal Epithelial Cells (IECs). Normal C57/BL6, wild type or GADD45b KO mice were used as in vivo models. NHE3 gene DNA methylation levels were assessed by methyl-CpG binding domain-based capture assays. In vitro methylation of NHE3 promoter construct (p-1509/+127) cloned into a CpG free luciferase vector decreased the promoter activity in Caco2 cells. DNA methyltransferase (DNMT) inhibitor, 5-azacytidine (10 mM, 24h) caused a significant decrease in DNA methylation of the NHE3 gene and concomitantly increased NHE3 mRNA and protein expression in Caco2 cells. Similarly, 5-aza treatment increased NHE3 mRNA levels in HUTU-80 cells. 5-aza treatment for 3 weeks

(10 mg/kg body wt., i.p., 3x/wk) also resulted in an increase in NHE3 expression in the mouse ileum and colon. siRNA knock down of GADD45b (protein involved in DNA demethylation) in Caco2 cells decreased NHE3 mRNA expression. Furthermore, there was a significant decrease in NHE3 mRNA and protein expression in the ileum & colon of GADD45b KO mice. Our studies for the first time demonstrate that NHE3 gene expression is regulated by an epigenetic mechanism involving DNA methylation. These findings suggest that changes in DNA methylation may be involved in the inhibition of NHE3 Gene Expression in Intestinal Inflammation contributing to the pathophysiology of IBD-associated Diarrhea.

### Speaker Biography

Seema Saksena, PhD is a Research Associate professor under the section of Digestive Diseases and Nutrition at University of Illinois at Chicago, USA. She did her PhD at Dr. R. M. L. University in India, her postdoc at Central Drug Res Institute, India. She has published more than 30 articles and abstracts.

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## Service evaluation of dietitian led community Gastroenterology services

**Chloe Adams Mnutr**

British Dietetic Association, London

This service evaluation summarises outcome data from 97 patients seen within the service between June 2014 and October 2015. Data collection was completed post-intervention using outcome measures from patient records at the point of discharge. Data collection focuses on symptom improvement, pharmacological changes, and qualitative data, with a focus on quality of life and patient experience. Results demonstrate the intervention improved Stool Frequency (n87/97) and Consistency (n88/97) in 96%, and 90% saw a global symptom improvement of >50%. 100% (n26/26) taking medication at the start of intervention had stopped, or reduced medication on discharge. Analysis identified a cost saving of 72.8%. Qualitative data identified themes demonstrating a highly positive impact on quality of life. Pilot results led to continuation of Dietetic Led

community Gastroenterology Services. The department works towards securing further funding to increase capacity of this service.

### Speaker Biography

Chloe Adams Mnutr graduated with a Master of Nutrition (Honours) from The University of Nottingham in 2010. She is registered with the Health and Care Professions Council and is a member of the British Dietetic Association (BDA). In 2012 she went on to gain accredited training in The Low FODMAP Diet, and proposed a dietitian led community gastroenterology service in 2013, one of the first in the UK. She has now worked for BCHC 8 years, and also volunteers for the BDA as Coeliac clinical lead for the gastroenterology specialist group. She has won 2 BCHC values in practice awards for Quality and Caring categories in 2015, and 2017 respectively. In 2018 she won NHS England's Chief Allied Health Professional Officer Award in Leadership for being an "Allied Health Professional in Action" initiating a dietitian led Community Gastroenterology Service in Birmingham

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