Expression of Cathepsin D and BCL-2 in Colorectal Carcinoma, and Their Correlation with Proliferation Indices

Khalifa SE, Khairy RA, Bassam A.
Cairo university, Egypt

Background and Objectives: Colorectal cancer in Egypt occupies first rank among digestive system malignancies and fifth rank among total cancers, thus requires search for possible prognostic and therapeutic targets. Direct targeting of the antiapoptotic Bcl-2 family members with the novel GX15-070, a BH3-mimetic, is recently in clinical trials in some breast cancers, which inhibits as well downstream cathepsin D expression. We aimed in this study to evaluate the immunohistochemical expression of cathepsin D and Bcl-2 in colorectal carcinoma and their relation with Ki-67 expression and various clinicopathological variables.

Methods: Forty colorectal carcinoma cases were studied for immunohistochemical demonstration of cathepsin D, Bcl-2, Ki-67 and their correlation with clinicopathological variables.

Results: Tumor cells were positively stained for cathepsin D in 90% of cases. Stromal cells were positive in 92.5%. A significant correlation was detected between cathepsin D expression in stromal cells and depth of tumor invasion (p 0.004) and between expression in tumor cells and clinical presentation (p 0.04). Bcl-2 immunostaining was observed in 45% of cases, mostly mild expression. No significant correlation was detected between Bcl-2 and cathepsin D expressions in both tumor and stromal cells. Extent of Bcl-2 expression (but not cathepsin D) to mean Ki-67 score nearly reached statistical significance (p 0.053).

Conclusion: Cathepsin D immunoreactivity was detected in high percentage of cancer cells and stromal cells of colorectal carcinomas and correlated with aggressive parameters, that points to its role in dissemination of cancer cells. Bcl-2 expression was detected at a relatively lower percentage; however it correlated with high proliferation indices suggesting its role in progression of colorectal cancer. Further studies are required to rule out a link between cathepsin D and Bcl-2 in colorectal cancer for the potential of therapeutic targeting by GX15-070.

Key words: Colorectal cancer, Cathepsin D, Bcl-2, Ki-67
Fecal microbiota transplantation is a rescue treatment modality for refractory ulcerative colitis.

Ahmet Uygun, Kadir Ozturk, Hakan Demirci, Gürkan Çelebi Turker Turker, Mustafa Gulsen

University of Health Sciences, Ankara/Turkey.

Background: Fecal microbial transplantation (FMT) provides to replace beneficial bacteria with more favorable microbiomes in recipient with dysbiosis. The aim of the present study was to prospectively investigate the efficacy of FMT by assessing the clinical and endoscopic response in patients with ulcerative colitis (UC) who had failed anti-inflammatory, immunosuppressive and TNF-α inhibitors (Infliximab, Adalimumab, Vedolizumab) and therapy.

Methods: In this prospective and uncontrolled study, 98 patients with UC were included. All medications except mesalazine were stopped 1 weeks before FMT. Colonoscopy was performed both before and after FMT. To assess the efficacy of FMT, Mayo scores were calculated at week 0 and week 24. A total of 400- 500 ml extracted fresh fecal suspension was administered into the 20 to 30cm proximal of terminal ileum of recipients.

Results: After 4 years of FMT experience with 98 patients who have completed their 6 months on UC and different 194 FMT, 38 of the (per protocol analysis 38.7%) (intention-to-treat analysis 42.2%) 98 patients showed clinical response (100% clinical + laboratory + fully responded endoscopically), and 31 of the 98 (31.6%) patients achieved clinical and endoscopic remission (laboratory 70%, clinically and endoscopically 50-75% improvement) at the week 24. 21 patients (21.4%) were accepted as a nonresponder at the end of the week 24 and 8 patients (8.1%) leaved the research. There was no significant difference among donors concerning both the rate of clinical remission and clinical response. No adverse events were observed in the majority of patients during FMT and 24 weeks follow-up. 25 patients (31.65%) experienced mild adverse events such as, high ratio of white blood cell and sedimentation, nausea, abdominal pain and high fever after FMT.

Conclusion: FMT could be considered as a promising rescue treatment modality before surgery in patients with refractory UC. Besides, although the long-term results are unknown, FMT also appears to be definitely safer and more tolerable than the immunosuppressive and TNF-α inhibitors (Infliximab, Adalimumab) therapy in patients with UC.
Pre malignant conditions of colonic carcinoma

**Deepak Ghuliani**
*Maulana Azad Medical College, New Delhi, India*

Colorectal cancer (CRC), commonest gastrointestinal malignancy develops from the progression of acquired or hereditary premalignant lesions. 75% of colorectal cancers are “sporadic while a potential genetic influence is identified in the remaining 25% of patients. The tumour results from complex interactions between several risk factors (environmental, dietary, familial and hereditary) which become relevant during the different stages of colorectal carcinogenesis. The chromosomal instability (CIN) / Loss of heterozygosity (LOH) pathway and the microsatellite instability (MIN) / Replication error (RER) pathway are two well-described genetic pathways leading to the development of colorectal adenocarcinoma. Most, if not all colonic cancers develop from a precursor polyp. The most common neoplastic polyp with malignant potential is the adenoma. It follows the adenoma-carcinoma sequence where inactivation of APC gene sets the stage for accumulation of genetic damage leading to a malignancy. Carcinomas are found in 0% to 4% adenomas. Histologically divided as tubular, villous and tubulovillous- the size and histology of adenomas are independent risk factors. Serrated polyps - another type of neoplastic polyp are mixed hyperplastic and adenomatous polyps. The sessile and traditional serrated types are the definite precursors for colonic cancers.

Adenomas , may occur sporadically or as part of one of the hereditary syndromes like Familial adenomatous polyposis(FAP), Attenuated FAP, Gardener's and Turcot's syndrome. FAP is the commonest adenomatous polyposis syndrome with hundreds to thousands polyps all over the colon, more in the left and associated with 1% of colonic cancers. Besides, several hamartomatous polyposis syndromes like Peutz-Jeghers syndrome and Juvenile polyposis syndrome have markedly increased risk of colonic cancer with development of extra-colonic manifestations, both malignant and non malignant.

Hereditary non polyposis colonic cancer(HNPCC) is the most common familial colorectal syndrome associated with 2-3% of colorectal cancers. The associated colonic ca occurs at an early age (44 years) 70% are right sided with a 40% risk of synchronous and metachronous cancers. Other premalignant conditions include inflammatory bowel diseases – Ulcerative colitis and Crohn's disease where the risk is directly proportional to extent and duration of disease.

Thus early identification of these conditions not only provides the opportunity to either prevent the progression to cancer or diagnois at an early curable stage but also allows for appropriate surveillance and management, which varies considerably between syndromes. Clinical testing for germline mutations should occur in the setting of appropriate genetic counseling and offer predictive testing for family members.

**Biography**

Deepak Ghuliani, presently working as Professor of Surgery at Maulana Azad Medical College, New Delhi has a special interest in Gastrointestinal and Endocrine surgery. Working as a General Surgeon, He has a vast experience in all types of gastrointestinal and hepatobiliary cases especially the GI Oncology. Besides clinical practice he has a passion for teaching and all types of academic activities. He has several publications in National and International journals. Recently he has become the Fellow of American College of Surgeons. Working as Professor of Surgery not only is he conducting research and teaching undergraduate and postgraduate medical students but also actively involved in conferences, CME’s, skills workshops, updates in the role of speaker, chairperson , judge, trainer and also a quiz master.
Repair of Bile Duct Injury Experience at TU Teaching Hospital

Dhruba Narayan Sah  
Tribhuvan University Teaching Hospital, Nepal

**Introduction:** Iatrogenic bile duct injuries (BDI) following cholecystectomy is a substantial problem in the era of laparoscopic advancement in surgical gastroenterology. Early and accurate diagnosis and management involving multidisciplinary team are of paramount importance. Though endoscopic procedures are most frequently used in management of BDI, surgical repair is the necessity especially in cases of complete transection.

Aim of the review is to analyze our experience of management of BDI.

**Methods:** This is a retrospective analysis of all operated cases of BDI between May 2014- December 2017. Patients’ clinical details, investigations, operative details, perioperative outcomes and follow-up were recorded. Data were analyzed using Statistical Package of Social Sciences 23.

**Results:** Total of 23 cases of BDI were operated at TUTeaching Hospital, Nepal over 44 months out of which 87% were female with age range 17-59 years. Majority cases occurred following laparoscopic cholecystectomy (34.8% while conversion from laparoscopic to open in 26.1 %) and 30.4 % following open cholecystectomy. Injury identified mostly in early postoperative period (69.6 %). E3 (60.9%) injury was most common followed by E2 (21.7%). Median time of repair was 90 days (7 weeks- 25 years). Roux-en-Y Hepaticojejunostomy (HJ) done in 20 cases, 2 cases had revised HJ while 1 case had right hepatectomy and HJ. Median duration of follow-up of 30 months (range, 13-54) revealed excellent outcomes.

**Conclusion:** Roux-en-Y HJ is the most frequent surgical treatment along with control of sepsis and delayed repair after delineating the proper anatomy for better outcomes in hands of experienced hepatobiliary surgeons.
The short chain fatty acids (SCFA) and lipopolysaccharides (LPS) status in Sprague-Dawley rats during NAFLD development

Dominika Maciejewska 1

1Department of Biochemistry and Human Nutrition, Pomeranian Medical University in Szczecin, Poland

Short chain fatty acids (SCFA) are produced by the gut microbiota during the fermentation of non-digestible polysaccharides. The aim of our study was to examine how a fat-rich and cholesterol-rich diet (HFHCh) that, which leads to NAFLD development, affects the SCFA profile and lipopolysaccharide (LPS) concentration. The experiment was carried out on 60 male, 8-weeks-old Sprague-Dawley rats. The study group (n=30 rats) received HFHCh. The control group (n=30) received standard food for laboratory rats. The rats from study and control groups were sacrificed after 4, 8, 12, 16 and 20 weeks after start of dietary exposure. The exposure to high-fat and high-cholesterol diet was associated with significant changes in SCFA levels. Relative to the control, each of HFHCh subgroup revealed a statistically significant decrease in butyrate (12.5% ± 5.7% vs. 32.8% ± 9.1%) and an increase in propionate level (45.4% ± 6.2% vs. 19.14% ± 7.1%). The ratio of acetate: propionate: butyrate was also changed (from 1.1 : 0.6 : 1 for control groups to 3 : 3.6 : 1 for HFHCh groups). The main SCFA in the HFHCh group was propionate instead of acetate. The dietary exposure resulted in significant differences in LPS concentration. After 12 weeks of HFD exposure, LPS concentration was significantly higher compared to control groups (p<0.05). Our study showed that HFHCh diet, which develops NAFLD, affected butyrate and propionate production associated with an increase in LPS secretion.

Biography
Dominika Maciejewska, work in the Pomeranian Medical University, Poland. Her field of interest is the molecular mechanism of NAFLD development. Her current research are focus mainly on seeking lipid marker in NAFLD progression.
The effects of chewing gum, early oral hydration and early mobilization on time of first bowel sounds, first passage of flatus and first defecation following abdominal gynaecologic surgery.

Füsun Terzioglu  
Istinye University, Turkey

Aims and objectives: The aim of this study was to determine the effects of chewing gum, early oral hydration and early mobilization on time of first bowel sounds, first passage of flatus and first defecation following abdominal gynaecologic surgery. Background: A major complication of abdominal surgical procedures is paralytic ileus which results in patient discomfort, prolonged length of hospital stay, and increased cost of treatment. Design: Prospective randomized case-control study. Methods: Women who underwent abdominal gynaecological surgery for benign disorders under general anesthesia were randomized into 8 groups according to different combinations of interventions consisting of chewing gum, early oral hydration and early mobilization. The effects of these interventions on the time of first bowel sounds, first passage of flatus and first defecation following abdominal gynaecologic surgery were investigated. The data were analyzed using chi-square tests, t test for independent samples, Tukey HSD test, pair wise comparison test, one-way analysis of variance. Results: It was found that the time when bowel sounds were heard was shorter, the time first passage of flatus was shorter and first defecation occurred earlier in the 1st group of women who chew gum, was hydrated orally and were mobilized early after surgery than the other groups. It was also determined that these periods were longest in the women who did not receive any intervention and received the routine hospital care when compared with other groups. Duration of hospital stay was shorter in the women who chew gum, was hydrated orally and was mobilized early than the other groups. Conclusions: Early oral feeding, early mobilization and chewing gum are effective methods in terms of preventing paralytic ileus following abdominal gynaecologic surgery, improving patient comfort and shortening the duration of hospitalization. Relevance to clinical practice: Nurses may cause early recovery, prevent paralytic ileus and shorten the duration of hospitalization after gynecologic abdominal surgery by recommending gum chewing, early mobilization and early hydration.

Biography
Füsun Terzioglu, RN, Msc, PhD is the Dean Faculty of Health Science and Director of Nursing of MLP Care in Istinye University. She has been working as a Director of Nursing Services at Hacettepe University Hospitals between 2012-2016 and Founding Dean of Faculty of Nursing. She graduated in first place from Hacettepe University in 1989. She studied about counseling on assisted reproductive techniques at Liverpool Women’s Hospital Reproductive Medicine Unit in United Kingdom on the British Council Research Scholarship. She earned a certificate in management and leadership in nursing. She is an active member of Thematic Network leadership work group. She worked as a Co-Head of Nursing Department, Erasmus Department Coordinator, Head of Strategic Planning Group and board member of Hacettepe University Women’s Research and Implementation Center (HUWRICH) between 2009 and 2011. Her interest subjects are sexuality and reproductive health and management and leadership. She is member of national and international nurse’s organizations such as INDEN and Sigma Theta Tau. She has published more than 70 papers, 15 grant projects, eight books as an editor and author, and more than 100 presentations in the national and international congress. She is also invited speaker more than 60 congress and symposium.
The Efficacy of Ursodeoxycholic acid in the treatment of non-alcoholic Steatohepatitis: A 10-year systematic review

Higinio T Mappala  
Jose Reyes Mem. Medical Center, Philippines

Non-alcoholic fatty liver disease (NAFLD) is one of the most common forms of chronic liver disease which may progress to non-alcoholic steatohepatitis (NASH). Currently there are no therapeutic strategies for such disease. Only lifestyle modification through diet and exercise were proven to afford some benefit in patients with NAFLD. No pharmacologic agents have so far been approved for the treatment of NAFLD or NASH. Therefore, most clinical efforts have been directed at treating the components of metabolic syndrome, namely obesity, diabetes, hypertension and dyslipidemias. Other interventions are directed at specific pathways potentially involved in the pathogenesis of NAFLD, such as insulin resistance, oxidative stress, pro-inflammatory cytokines, apoptosis, bacterial overgrowth, and angiotensin pathway. However, since the FLINT study, the largest NASH study to date, no drug has ever come close to Obeticholic acid except Ursodeoxycholic acid (UDCA). This lecture aims to show the potential of Ursodeoxycholic Acid (UDCA) as a promising therapeutic option for NAFLD. This is a 10-year Systematic Review of randomized controlled trials on the effects of Ursodeoxycholic Acid on Non-Alcoholic Fatty Liver Disease. (NAFLD). Ursodeoxycholic Acid may yet prove to be a targeted treatment for Non-Alcoholic Fatty Liver Disease.

Biography

Higinio T. Mappala is a Full-time Medical Specialist IV and Administrator at the Jose Reyes Memorial Medical Center, Manila, Philippines, A Board-certified Internist, Gastroenterologist, Endoscopist, Clinical Nutritionist and Clinical Toxicologist; has served as a University Professor and Dean of 2 Medical Schools; a highly-regarded Researcher, with more than 70 scientific papers, and more than 30 international publications. A former Board Director of the Philippine Societies of Gastroenterology and Digestive Endoscopy; Editorial Board member, American Journal of Biomedical Science and Research; Online Research rater of McMaster, Canada and Online Dynamed Research peer-reviewer; a Young Investigator's Awardee at the World Congress and Asia-Pacific Congress of Gastroenterology; A nominee as one of the Top 100 Leading Physicians 2018, Cambridge Biographical Institute. He is a focused lecturer on NAFLD in local and international conventions, with 18 invites as Keynote Speaker in 2018.
Comparison of fatty acids profile in group of female patients with metabolic syndrome and kidney diseases – similar trend of changes, different pathophysiology

**Małgorzata Szczuko**

1Department of Clinical Nutrition Medical University of Gdańsk, Poland

Abstract:

Introduction: We compared the amount of FA in plasma of patients with metabolic syndrome and chronic kidney disease (CKD) because, in our opinion, their concentration in plasma may be caused by differing release mechanisms, despite the fact that the direction of changes seems to be identical.

Materials and methods: The study involved 58 women including: 24 patients with chronic kidney disease treated with haemodialysis, 19 patients with metabolic syndrome (MetS) and 15 healthy women in control group. A total of 36 fatty acids and derivatives were identified and quantified by gas chromatography.

Results: Intensified elongation processes from acid C10:0 to C16:0 were noted in both groups, as well as increased synthesis of arachidonic acid (C20:4n6). Significant correlations of oleic acid (C18:1n9), gamma linoleic acid (C18:3n6) and docosatetraenoate acid (C22:4n6) with parameters of CKD patients were observed. In MetS group, auxiliary metabolic pathways of oleic acid were activated, which simultaneously inhibited the synthesis of EPA and DHA from ALA. On the other hand, in the group of female patients with CKD the synthesis of EPA and DHA was intensified.

Conclusions: Activation of the synthesis of oleic acid (C18:1n9 ct) and trans vaccinic acid (C18:1) is a protective mechanism in kidneys diseases due to increased concentration of SFA in plasma. The cause of increased amount of all FA in plasma in CKD group, especially in case of palmitic (C16:0) and stearic (C18:0) acids, may be, besides the diet, the decomposition of adipose tissue and progressing devastation of the organism, whereas in MetS group dietary intake seems to be the main reason for SFA increase. Moreover, in MetS there are auxiliary metabolic pathways activated for oleic acid, which cause simultaneous inhibition of EPA and DHA synthesis from ALA, whereas in CKD group we observe increased synthesis of EPA and DHA. Additionally, the increase in nervonic acid (C24:1) is several times higher in MetS group than in CKD group, as compared to the control group.

Key words: fatty acids, metabolic syndrome, chronic kidney disease
Quantitative assessment of nutrition and nutritional status of patients with celiac disease, ulcerative colitis (UC) and Crohn’s disease (CD) aged 13-18

Małgorzata Szczuko,
Pomeranian Medical University In Szczecin, Poland

Abstract

Introduction: Patients with chronic intestinal diseases suffer from nutrients deficiency. The aim of the study is to show the differences in the diet of nutrition and nutrients supply, as well as to demonstrate the need of supplementation in the group of adolescents.

Materials and methods: Test group comprised of 60 patients. Groups formed by people suffering from UC-24 person, CD -12 person and coeliac disease -24 person, respectively. The groups were equal with respect to gender. The age of patients was, accordingly 16,33±2,24, 16,25±1,65, 15,26±1,45 years. Dietary intake was assessed on the basis of a 24-hour dietary recall introduced to dietary software Dieta 5d recommended by NFNI. The measurements of body mass, height and blood morphology were used to assess the differences in nutritional state. The data were subjected to statistical analysis with Statistica 12 (Tulsa, Oklahoma, USA).

Results: Energy consumption in all analysed groups is insufficient. The group of patients suffering from coeliac disease consumed the fewest calories. The largest statistically significant differences were shown between coeliac disease and ulcerative colitis. They related to the lower total intake of protein and all mono acids except lysine. In the same group, we determined a significantly lower consumption of vitamins E, C, pyridoxine, thiamine and folic acid, as well as almost all mineral compounds. Additionally, a lower intake of essential fatty acids, starch and dietary fibre was noted in patients with coeliac disease, as compared to UC and CD. The consumption of calcium in all tested groups was insufficient. Statistical analysis of blood morphology results revealed statistically significant difference in the number of monocytes in patients with Crohn’s disease and ulcerative colitis. Between those suffering from Crohn’s disease and coeliac disease the statistically significant difference referred to RDW-CV, whereas between the patients with ulcerative colitis and coeliac disease the difference related to erythrocytes, haematocrit and MCV.

Conclusions: Based on the assessment of the diet and morphology it should be stated that all tested groups are prone to malnutrition. The caloric load of the diet of people suffering from coeliac disease can be increased through the addition of starch from gluten-free sources. The supplementation with calcium and vitamin D should be introduced in all the groups at the same level. Additionally, due to insufficient supply with the diet, the supplementation of potassium, magnesium and folacin should be considered especially in coeliac disease and Crohn’s disease groups. In case of coeliac disease, the supplementation should also include vitamin E, zinc, iron and iodine. The intake of dietary fibre in coeliac disease may be insufficient. The reduction in the number of erythrocytes and haematocrit can suggest the occurrence of UC. Lower values for blood platelets, especially RDW-CV (%), can increase the probability of coeliac disease. The increase in monocytes may be characteristic for CD.

Keywords: Ulcerative Colitis; Crohn’s disease; celiac disease; nutritional status, diet, teenagers.
FXR and Liver Diseases

She Chen

Fudan University, Shanghai 200032, China

Farnesoid X receptor (FXR; NR1H4), a member of the nuclear receptor superfamily, is mainly expressed in liver, intestine, kidney and, to a lower extent, adipose tissue. FXR regulates a wide variety of genes critically involved in the control of bile acid, lipid, and glucose homeostasis. Accumulated evidence from our and others’ group suggests that the FXR dependent pathway protects liver from fatty accumulation, fibrosis and tumorigenesis, and this protective effect was abolished in FXR null mice. Here we will discuss all our findings in the study of FXR and liver diseases, including its molecular mechanisms and potential drug applications.

Biography

She Chen, M.D., Ph.D., now is a professor in the Department of Biochemistry and Molecular Biology at Fudan University, Shanghai, P. R. China. She received her Bachelor degree in medicine at Shanghai Medical University in 1998, Ph.D. in Biochemistry and Molecular Biology at Fudan University. She has published more than 40 research articles in reputed journals in the field of liver diseases and has been serving as a council member of the Shanghai Society for Cell Biology.
Progress in precise detection of portal hypertension in cirrhosis

Changqing Yang

Tongji Hospital of Tongji University, Shanghai, China

Portal hypertension is one of the main causes of severe complications and death in patients with cirrhosis, which is the result of chronic inflammation and fibrosis of the liver. The majority of cirrhosis complications are caused by portal hypertension, such as ascites, upper gastrointestinal bleeding, hepatic encephalopathy, spontaneous peritonitis, hepatorenal syndrome, hepatopulmonary syndrome, hypersplenism. Portal hypertension seriously affects the prognosis of patients with cirrhosis. Therapies directed at controlling these complications are targeted to decreasing portal hypertension, reducing the risk of variceal bleeds, maintaining electrolyte balance, and preventing infections, of which decreasing portal hypertension is the key.

There are mainly invasive and non-invasive methods for measuring portal hypertension. Invasive methods, such as ultrasound guided portal vein puncture, hepatic vein catheter manometry and intraoperative pressure measurement, are not often performed in patients because of some defects. In recent years, several noninvasive techniques have been proposed to measure portal hypertension, such as multitudinous spiral CT portography, MR portography, contrast-enhanced US and doppler-US, heart-to-liver ratio after 99mTc-MIBI enema, liver transient elastography plus platelets. With technological innovation, magnetic resonance-based morphology plus APRI and 3D digital finite element detection based on CT are new developments for measuring portal hypertension. 3D digital finite element detection based on CT have many advantages such as safe, non-invasive, direct and quantification, and it can detect pressure values of each part of the portal and its branches.

Biography
Changqing Yang, MD and PhD, Prof. of Medicine, Chairman of the department of Internal Medicine, Chief of the Division of Gastroenterology and Hepatology, Tongji Hospital of Tongji University. He did his postdoctoral research at Beth Israel Deaconess Medical Center, Harvard Medical School. He has published more than 200 research articles, book chapters and edited five books in liver fibrosis and cirrhosis. He is the member of the American Gastroenterology Association (AGA) and American Association for the Study of Liver Diseases (AASLD).
Enteroid, a powerful platform for nutritional study

Yulong Yin
The Chinese Academy of Sciences, People’s Republic China

Enteroid, also called intestinal organoid or mini-gut, is cultured from the primary intestinal crypts or single leucine-rich repeat-containing g-protein coupled receptor 5-positive intestinal stem cells. Enteroids have several advantages compared to conventional in vitro models (e.g. cell lines, primary cells and ex vivo xenograft): (1) enteroids contain most, if not all, the cell types of intestinal epithelium including enterocytes, enteroendocrine cells, goblet cells, Paneth cells, and intestinal stem cells (ISCs); (2) enteroids contain the villus and crypt domains mimicking the in vivo intestinal epithelium; (3) enteroids are stable in long-term culture (at least 1.5 years) without genetic or physiological changes. Enteroids have been broadly used in various biological studies including oncology, virology, bacteriology, biomaterials, etc.

Nutrition is crucial for human health and well-being. Intestinal epithelial cells comprise different cell types such as enterocytes, enteroendocrine cells, goblet cells, Paneth cells, and stem cells and form the frontline of the intestine. These intestinal epithelial cells closely work together to coordinate nutrient absorption and metabolism. Nutritional studies are greatly hampered due to the paucity of proper models. Although previous studies on nutriology employed conventional cell lines and animal models to gain a better understanding in this field, these models lack the association with human physiological responses and hence impede their applications in this field. Thus, the enteroid model might open a new window for various nutritional studies including the effects of diet/nutrients on intestinal development and function, ion and nutrient transport, secretory and absorption functions, and intestinal barrier, etc.

Biography

Yulong Yin is the Program Director in Institute of Subtropical Agriculture, the Chinese Academy of Sciences. He is also an academician of the Chinese Academy of Engineering. He has achieved many significant results in nutrition, bioactives development, intestinal health and physiology etc. He has been awarded as “Thomson Reuters Highly Cited Researcher” for several times. He has published more than 300 research articles in the field. He also serves as an editor-in-chief of Animal Nutrition, the editorial board member of Journal of Animal Science (2019) and the section editor of Science China Life Sciences.
The present situation and future prospect of Fecal Microbiota Transplantation treatment in children in China

Zhihua Huang  
Huazhong University of Science and Technology, China

Since its origin over 1700 years ago with the use of yellow soup to treat severe diarrhea in ancient China, Fecal Microbiota Transplantation (FMT) has evolved into a widely accepted. In recent years, FMT succeeded in treating gastrointestinal disease such as infection with C. difficile caused by enteric flora disturbance. Nevertheless, FMT in children just got started on a world scale. Regular administration was established about FMT in children in China. It has got satisfactory results in treating enteritis caused by Clostridium. Difficile, Inflammatory Bowel Disease (IBD), functional constipation, functional dyspepsia, allergic colitis, autism.

Biography
Zhihua Huang has been graduated from Tongji Medical University in 1974, is currently the Faculty of Medicine, Tongji Medical College, Huazhong University of Science and Technology, Tongji Hospital, professor of pediatrics, director of physicians, doctoral tutor. Currently the Pediatric Brand of Chinese Medical Association learn to digest, deputy head of China micro-ecology of the Standing Committee of Preventive Medicine, Pediatrics, deputy head of micro-ecology, long-term pediatric infections, and hepatobiliary disease in forest research

zhhuang@tjh.tjmu.edu.cn