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## BIOGRAPHICAL SKETCH

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NAME: Sheuli Afroz

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eRA COMMONS USER NAME (credential, e.g., agency login): afroz

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POSITION TITLE: Postdoctoral Fellow

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EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Jahangirnagar University, Bangladesh	Bachelor of Science (B.Sc.)	06/2011	Biochemistry and Molecular Biology
Jahangirnagar University, Bangladesh	Master of Science (M.Sc.)	06/2013	Biochemistry and Molecular Biology
The University of Tokushima, Japan	Doctor of Philosophy (Ph.D.)	03/2018	Pharmaceutical Sciences
Marshall University, Huntington, WV, USA	Postdoc Fellow	09/2019 - Till date	Gastroenterology

### A. Personal Statement

Inflammatory bowel disease (IBD) represents a group of intestinal disorders that cause prolonged inflammation of the digestive tract. During chronic pathophysiological conditions, such as inflammatory bowel disease and obesity, there is an altered expression and/or activity of electrolyte and nutrient transporters. My current research interest is to demonstrate the expression pattern of nutrient transporters such as Na-glucose cotransporter (SGLT1), Na-H exchange 3 (NHE3), Cl-HCO<sub>3</sub> transporter (DRA, PAT1), amino acid transporter (BOAT1) and bile acid transporter (ASBT) in obese as well as chronically inflamed intestine of rodents. I will examine the localization and expression patterns of these transporters by applying the sophisticated immunohistochemistry techniques. I believe all the qualities I have developed through my training, has helped me confirm my passion for gastroenterology and develop the skills to plan experiments and adapt protocols.

### B. Positions and Honors

#### Employment Records

09/2019 - till to date Postdoctoral fellow  
Department of Clinical and Translational Sciences  
School of Medicine, Marshall University, Huntington, WV, USA

#### Professional Society Membership

2015 - 2018 Japanese Biochemical Society

### C. Contributions to Science

During my undergraduate program, my research was focused on the identification and characterization of diarrheal causing bacterial strains. Shigellosis is one of the major diarrheal diseases in Bangladesh and several other developing countries and is caused by any one of the four species or groups of *Shigella*, namely, *S. dysenteriae*, *S. flexneri*, *S. boydii*, and *S. sonnei*. However, several atypical strain or novel subserotypes of shigella have been identified that have virulence genes of *Shigella*. By applying molecular technique, I have identified an atypical *Shigella* species. This finding contributes towards further research of characterization of this novel strain of *Shigella* and its diagnosis of shigellosis patients.

In my doctoral training, my research was focused on the demonstration of the ameliorative effect of phospholipids on gastric ulcer. I reported that Lysophosphatidic acid (LPA) and phosphatidic acid (PA) ameliorated NSAIDs-induced gastric ulcer. In addition, I reported that foods rich in bioactive lipids also have an ameliorative effect on gastric ulcer. This finding has a district role for the inexpensive treatment of gastric ulcers by PA and LPA-rich foods.

**1. Sheuli Afroz**, Teru Ikoma, Ayano Yagi, Kentaro Kogure, Akira Tokumura, Tamotsu Tanaka

Concentrated phosphatidic acid in cereal brans as potential protective agents against indomethacin-induced stomach ulcer. *Journal of Agricultural and Food Chemistry*, 2016, Vol.64, No.37, 6950-6957.

**2. Sheuli Afroz**, Ayano Yagi, Kouki Fujikawa, M Motiur Rahman, Katsuya Morito, Tatsuya Fukuta, Shiro Watanabe, Emi Kiyokage, Kazunori Toida, Taro Shimizu, Tatsuhiko Ishida, Kentaro Kogure, Akira Tokumura, Tamotsu Tanaka

Lysophosphatidic acid in medicinal herbs enhances prostaglandin E<sub>2</sub> and protects against indomethacin-induced gastric cell damage *in vivo* and *in vitro*. *Prostaglandins and Other Lipid Mediators*, 2018, Vol No. 135, 36-44.

**3. Xinyue Li**, Mito Kokawa, **Sheuli Afroz**, Tamotsu Tanaka, Yutaka Kitamura

Evaluation of phosphatidic acid in komatsuna milled by micro wet milling during *in vitro* digestion. *Food Research International* 2019, Vol No.121, 926-932