

## Supplementary Material

# MicroRNA-29a-3p, Up-Regulated in Human Gastric Cells and Tissues with *H.Pylori* Infection, Promotes the Migration of GES-1 Cells via A20-Mediated EMT Pathway

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**Supplementary Table S1. Clinical specimens information for qRT-PCR**

| <b>Number</b> | <b>Age</b> | <b>Gender</b> | <b>Histopathology</b>                          | <b><i>Helicobacter pylori</i></b> |
|---------------|------------|---------------|--|-----------------------------------|
| 1             | 40         | F             | Chronic erosive gastritis                      | +                                 |
| 2             | 37         | M             | Duodenal ulcer (active)                        | +                                 |
| 3             | 46         | M             | Erosive antral gastritis (mild)                | +                                 |
| 4             | 46         | M             | Erosive antral gastritis (mild)                | +                                 |
| 5             | 38         | M             | Erosive antral gastritis (mild)                | +                                 |
| 6             | 56         | F             | Bile reflux gastritis                          | +                                 |
| 7             | 51         | F             | Duodenal ulcer                                 | +                                 |
| 8             | 47         | M             | Erosive gastritis (moderate)                   | +                                 |
| 9             | 54         | M             | Erosive antral gastritis (moderate)            | +                                 |
| 10            | 57         | F             | Erosive antral gastritis (mild)                | +                                 |
| 11            | 24         | F             | Chronic superficial gastritis                  | +                                 |
| 12            | 63         | M             | Gastric ulcer                                  | +                                 |
| 13            | 43         | M             | Erosive antral gastritis (moderate)            | +                                 |
| 14            | 35         | F             | Chronic superficial gastritis; duodenitis      | +                                 |
| 15            | 23         | M             | Erosive antral gastritis (moderate)            | +                                 |
| 16            | 66         | M             | Chronic active gastritis                       | +                                 |
| 17            | 20         | M             | Chronic superficial gastritis with bile reflux | -                                 |
| 18            | 40         | M             | Chronic active gastritis (moderate)            | +                                 |
| 19            | 69         | F             | Normal gastric mucosa tissues                  | -                                 |
| 20            | 71         | M             | Chronic active gastritis (moderate)            | -                                 |
| 21            | 36         | M             | Chronic superficial gastritis                  | -                                 |
| 22            | 44         | F             | Chronic gastritis (mild)                       | -                                 |
| 23            | 61         | M             | Chronic active gastritis (mild)                | -                                 |
| 24            | 42         | M             | Chronic superficial gastritis                  | +                                 |
| 25            | 52         | M             | Chronic superficial gastritis (mild)           | -                                 |
| 26            | 48         | M             | Chronic gastritis                              | -                                 |
| 27            | 45         | M             | Chronic gastritis (mild)                       | -                                 |
| 28            | 63         | M             | Chronic gastritis                              | -                                 |
| 29            | 65         | M             | Chronic active gastritis (moderate)            | +                                 |
| 30            | 37         | M             | Chronic superficial gastritis                  | -                                 |
| 31            | 45         | M             | Chronic superficial gastritis (mild)           | -                                 |
| 32            | 60         | F             | Chronic superficial gastritis                  | -                                 |
| 33            | 39         | F             | Chronic active gastritis                       | +                                 |
| 34            | 26         | F             | Normal gastric mucosa tissues                  | -                                 |
| 35            | 58         | F             | Normal gastric mucosa tissues                  | -                                 |
| 36            | 51         | F             | Chronic superficial gastritis                  | -                                 |
| 37            | 51         | M             | Chronic active antral gastritis (moderate)     | -                                 |
| 38            | 54         | F             | Chronic antral gastritis (mild)                | -                                 |
| 39            | 26         | F             | Chronic superficial gastritis                  | +                                 |
| 40            | 53         | F             | Chronic superficial gastritis                  | +                                 |

|    |    |   |  |   |
|----|----|---|--|---|
| 41 | 47 | M | Chronic superficial gastritis                                  | + |
| 42 | 47 | M | Normal gastric mucosa tissues                                  | - |
| 43 | 72 | M | Normal gastric mucosa tissues                                  | - |
| 44 | 55 | F | Chronic antral gastritis (moderate) with intestinal metaplasia | - |
| 45 | 68 | F | Chronic superficial gastritis (mild)                           | + |
| 46 | 38 | M | Chronic active gastritis (mild) with hemorrhage                | - |
| 47 | 48 | F | Bile reflux gastritis  | + |
| 48 | 61 | F | Bile reflux gastritis  | - |
| 49 | 60 | F | Chronic superficial gastritis                                  | - |
| 50 | 59 | F | Erosive antral gastritis (mild)                                | - |
| 51 | 23 | F | Chronic superficial gastritis                                  | - |
| 52 | 48 | F | Erosive antral gastritis (mild)                                | - |
| 53 | 71 | M | Bile reflux gastritis  | - |
| 54 | 47 | M | Normal gastric mucosa tissues                                  | - |
| 55 | 65 | F | Chronic superficial gastritis                                  | - |
| 56 | 43 | F | Erosive antral gastritis (mild)                                | + |
| 57 | 38 | F | Normal gastric mucosa tissues                                  | - |
| 58 | 41 | F | Normal gastric mucosa tissues                                  | - |
| 59 | 19 | M | Normal gastric mucosa tissues                                  | - |
| 60 | 50 | F | Normal gastric mucosa tissues                                  | - |
| 61 | 60 | F | Bile reflux gastritis  | - |
| 62 | 29 | F | Erosive antral gastritis (mild)                                | + |
| 63 | 52 | F | Chronic superficial gastritis                                  | - |
| 64 | 61 | F | Esophagitis  | - |
| 65 | 32 | M | Chronic superficial gastritis                                  | - |
| 66 | 45 | F | Chronic superficial gastritis                                  | + |
| 67 | 67 | F | Normal gastric mucosa tissues                                  | - |
| 68 | 42 | F | Chronic superficial gastritis                                  | - |
| 69 | 62 | F | Erosive antral gastritis                                       | + |
| 70 | 36 | M | Normal gastric mucosa tissues                                  | - |
| 71 | 35 | M | Erosive antral gastritis (mild)                                | - |
| 72 | 50 | M | Gastric ulcer  | - |
| 73 | 28 | F | Chronic superficial gastritis                                  | - |
| 74 | 59 | M | Chronic superficial gastritis                                  | - |
| 75 | 35 | F | Normal gastric mucosa tissues                                  | - |
| 76 | 56 | F | Normal gastric mucosa tissues                                  | - |
| 77 | 33 | M | Normal gastric mucosa tissues                                  | - |
| 78 | 69 | M | Chronic atrophic erosive gastritis                             | - |
| 79 | 26 | M | Erosive antral gastritis (mild)                                | + |
| 80 | 61 | M | Gastric ulcer (multi-focal)                                    | + |
| 81 | 23 | M | Duodenal ulcer   | + |
| 82 | 59 | M | Chronic atrophic gastritis                                     | + |
| 83 | 20 | M | Duodenal ulcer (active)  | + |

|    |    |   |                               |   |
|----|----|---|-------------------------------|---|
| 84 | 58 | F | Normal gastric mucosa tissues | - |
| 85 | 64 | F | Gastric ulcer                 | - |
| 86 | 50 | F | Erosive gastritis             | + |
| 87 | 29 | F | Chronic superficial gastritis | + |
| 88 | 60 | M | Hemorrhagic erosive gastritis | - |
| 89 | 38 | M | Gastric ulcer; duodenal ulcer | + |
| 90 | 21 | F | Duodenal ulcer                | + |
| 91 | 35 | F | Duodenal ulcer (active)       | + |
| 92 | 39 | M | Erosive antral gastritis      | + |
| 93 | 50 | M | Chronic erosive gastritis     | + |
| 94 | 38 | M | Duodenal ulcer (active)       | + |
| 95 | 48 | M | Chronic erosive gastritis     | + |
| 96 | 51 | M | Chronic erosive gastritis     | + |
| 97 | 52 | F | Gastric ulcer; duodenal ulcer | + |
| 98 | 55 | F | Erosive antral gastritis      | + |

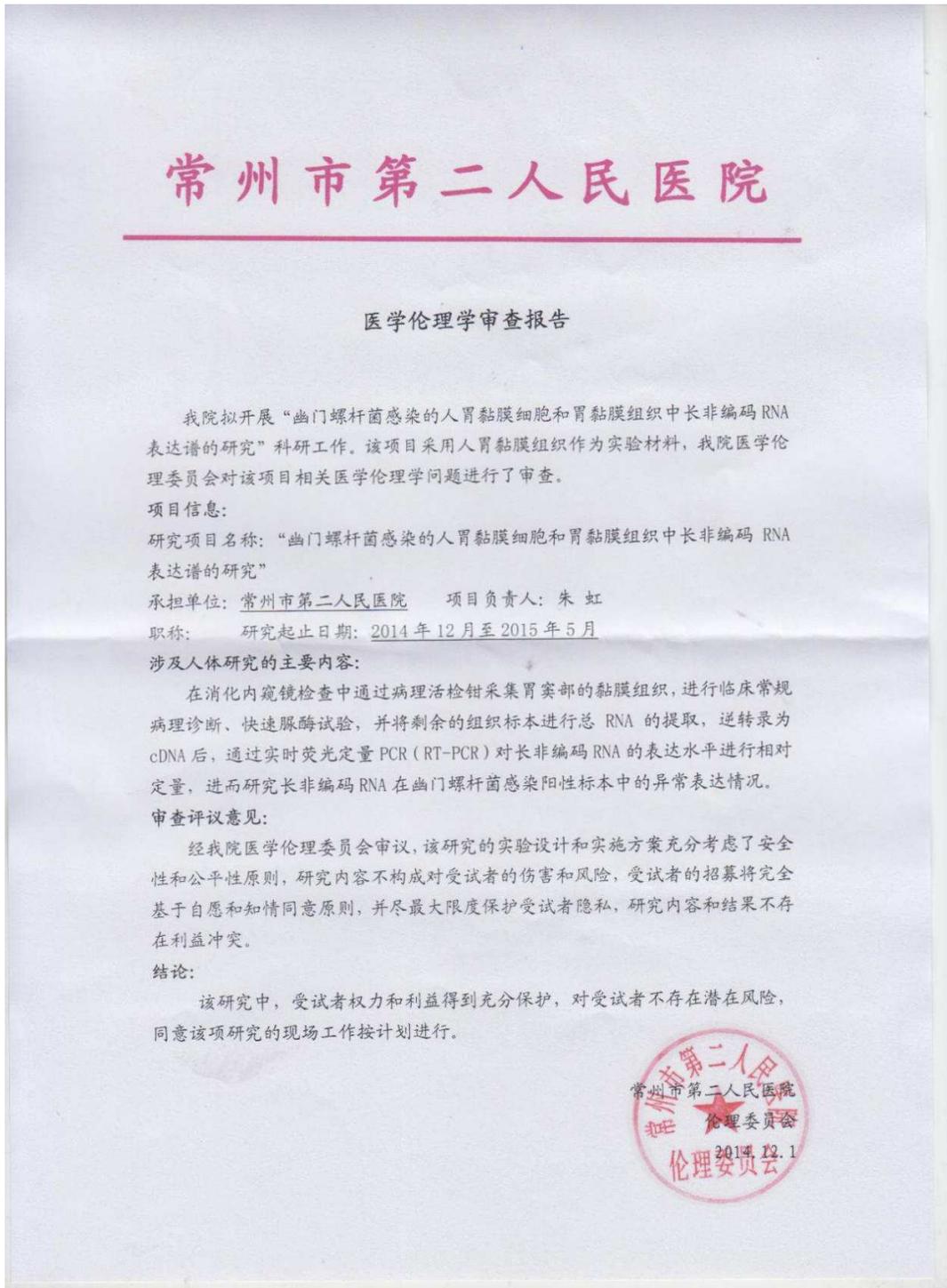
**Supplementary Table S2. Clinical specimens information for IHC**

| Number | Age | Gender | Histopathology                                 | <i>Helicobacter pylori</i> |
|--------|-----|--------|--|----------------------------|
| 1      | 40  | F      | Chronic erosive gastritis                      | +                          |
| 2      | 37  | M      | Duodenal ulcer (active)                        | +                          |
| 3      | 46  | M      | Erosive antral gastritis (mild)                | +                          |
| 4      | 46  | M      | Erosive antral gastritis (mild)                | +                          |
| 5      | 38  | M      | Erosive antral gastritis (mild)                | +                          |
| 6      | 35  | F      | Chronic superficial gastritis; duodenitis      | +                          |
| 7      | 23  | M      | Erosive antral gastritis (moderate)            | +                          |
| 8      | 66  | M      | Chronic active gastritis                       | +                          |
| 9      | 20  | M      | Chronic superficial gastritis with bile reflux | -                          |
| 10     | 40  | M      | Chronic active gastritis (moderate)            | +                          |
| 11     | 69  | F      | Normal gastric mucosa tissues                  | -                          |
| 12     | 71  | M      | Chronic active gastritis (moderate)            | -                          |
| 13     | 36  | M      | Chronic superficial gastritis                  | -                          |
| 14     | 44  | F      | Chronic gastritis (mild)                       | -                          |
| 15     | 61  | M      | Chronic active gastritis (mild)                | -                          |
| 16     | 42  | M      | Chronic superficial gastritis                  | +                          |
| 17     | 52  | M      | Chronic superficial gastritis (mild)           | -                          |
| 18     | 48  | M      | Chronic gastritis                              | -                          |
| 19     | 45  | M      | Chronic gastritis (mild)                       | -                          |
| 20     | 63  | M      | Chronic gastritis                              | -                          |
| 21     | 65  | M      | Chronic active gastritis (moderate)            | +                          |
| 22     | 37  | M      | Chronic superficial gastritis                  | -                          |
| 23     | 45  | M      | Chronic superficial gastritis (mild)           | -                          |

|    |    |   |                                 |   |
|----|----|---|---------------------------------|---|
| 24 | 60 | F | Chronic superficial gastritis   | - |
| 25 | 39 | F | Chronic active gastritis        | + |
| 26 | 47 | M | Normal gastric mucosa tissues   | - |
| 27 | 65 | F | Chronic superficial gastritis   | - |
| 28 | 50 | F | Normal gastric mucosa tissues   | - |
| 29 | 60 | F | Bile reflux gastritis           | - |
| 30 | 29 | F | Erosive antral gastritis (mild) | + |
| 31 | 32 | M | Chronic superficial gastritis   | - |
| 32 | 45 | F | Chronic superficial gastritis   | + |
| 33 | 67 | F | Normal gastric mucosa tissues   | - |
| 34 | 42 | F | Chronic superficial gastritis   | - |
| 35 | 62 | F | Erosive antral gastritis        | + |
| 36 | 36 | M | Normal gastric mucosa tissues   | - |
| 37 | 23 | M | Duodenal ulcer                  | + |
| 38 | 59 | M | Chronic atrophic gastritis      | + |
| 39 | 20 | M | Duodenal ulcer (active)         | + |
| 40 | 58 | F | Normal gastric mucosa tissues   | - |
| 41 | 64 | F | Gastric ulcer                   | - |
| 42 | 50 | F | Erosive gastritis               | + |
| 43 | 29 | F | Chronic superficial gastritis   | + |
| 44 | 39 | M | Erosive antral gastritis        | + |
| 45 | 50 | M | Chronic erosive gastritis       | + |
| 46 | 38 | M | Duodenal ulcer (active)         | + |
| 47 | 48 | M | Chronic erosive gastritis       | + |

## Supplementary Figure S1. Medical ethics review report

Note: Medical ethics review report was Chinese language in China. We translated the the Medical ethics review report of Chinese language into English.



## **The Second People's Hospital of Changzhou**

### **Medical ethics review report**

The Second People's Hospital of Changzhou will carry out the "Microarray analysis of Long non-codingRNA expression profiles in human gastriccells and tissues with *Helicobacter pylori* Infection" research work. The project used the gastric mucosal tissue as experimental materials. The project was reviewed by the medical ethics committee of The Second People's Hospital of Changzhou.

Project information:

The name of research project: Microarray analysis of Long non-codingRNAexpression profiles in human gastriccells and tissues with Helicobacter pylori infection.

Responsible unit: The Second People's Hospital of Changzhou

The project leader: Zhu Hong

Study date: 2014/12—2015/05

The main content of research:

The gastric mucosa specimens were harvested by digestive endoscopy, to carry out clinical pathological diagnosis and Rapid Urease Test at the Digestive Endoscopy center of The Second People's Hospital of Changzhou. Remaining specimens were used for RNA extraction and then transcribed into cDNA. Subsequently, quantitative real-time PCR was performed with the cDNA to analysis the relative expression of non-long coding RNA in gastric mucosa specimens.

Review opinions:

The experimental design and implementation scheme of the study give full consideration to the safety and fairness principle. The research content does not cause harm and risk to the subjects. The subjects' recruitment will be entirely based on voluntary and the fairness principle. We try our best to protect the privacy of subjects. There is no conflict of interest in research contents and

results.

Conclusion:

In this study, there is no potential risk to subjects. The rights and interests of subjects are fully protected. we agreed to this study.

Ethics committee of The Second

People's Hospital of Changzhou