

Abbas Yadegar

Medical Bacteriology, Ph.D.

Foodborne and Waterborne Diseases Research Center

Research Institute for Gastroenterology and Liver Diseases

Shahid Beheshti University of Medical Sciences, Tehran, Iran

First Name: Abbas

Nickname: Babak

Last Name: Yadegar

Gender: Male

Date of born: November 15, 1982

Nationality: Iranian

Current position:

Medical Bacteriologist, Ph.D.

Head of *Helicobacter* and *Campylobacter* Department

Head of Foodborne and Waterborne Diseases Research Center (FWDRC)

Head of Foodborne and Waterborne Microbial Outbreak Investigation Team in Collaboration with Referral Health Lab, Ministry of Health and Medical Education, Tehran, Iran

Research Institute for Gastroenterology and Liver Diseases (RIGLD)

Shahid Beheshti University of Medical Sciences, Tehran, Iran

• Contact

Work address:

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Education:

- BSc: Microbiology
Microbiology Department, Azad University, Lahijan, Iran 2001-2005
- MSc: Medical Bacteriology
Medical Bacteriology Department, Tarbiat Modares University (TMU), Tehran, Iran
2006-2009
- Ph.D: Medical Bacteriology
Medical Bacteriology Department, Tarbiat Modares University (TMU), Tehran, Iran 2009-
2014

Academic Projects:

• Project (MSc):

Prevalence of Aminoglycoside-Modifying Enzymes (AMEs) genes among *Staphylococcus aureus* clinical isolates by PCR (2007-2009)

Supervised by Dr. Morteza Sattari, Dept.of Medical Bacteriology, School of Medicine, Tarbiat Modares University. E-mail: sattarim@modares.ac.ir

Phone: 0098-2182883563

Postal address: Jalal Al ahmad street, Nasr bridge, Tarbiat Modares University

P.O box: 14115-158

• Project (PhD):

Investigating the role of *H. pylori* CagL protein displayed on the surface of *Bacillus subtilis* spores in inducing the expression of IL-8, TNF- α and $\alpha 5\beta 1$ integrin in AGS cell line (2011-2014)

Supervised by Prof. Dr. Mohammad Reza Zali and Dr. Ashraf Mohabati Mobarez

From Gastroenterology and Liver Diseases Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran and Department of Bacteriology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.

Advised by Dr. Masoud Alebouyeh and Dr. Terry Kwok

From Gastroenterology and Liver Diseases Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran and Department of Biochemistry and Molecular Biology, Monash University, Clayton, Victoria 3800, Australia and Department of Microbiology, Monash University, Clayton, Victoria 3800, Australia

Academic Awards:

- **1st-top grade student of MSc graduation (2009)**
- **1st-top grade student of Ph.D entrance exam in Tarbiat Modares University Ph.D examination, Tehran, Iran (2009)**

Inventions:

National Patent: A rapid molecular diagnostic kit for species of *Helicobacter* genus

Inventors: Abbas Yadegar, Masoud Alebouyeh, Mohammad Reza Zali

Research projects:

- 1) **Detection of Non-*pylori Helicobacter* Species in Gastric and Intestinal Samples from Humans**

Abbas Yadegar, Masoud Alebouyeh, Tabassom Mirzaei, Mohammad Reza Zali

- 2) **Molecular Analysis Of The Bacterial Microbiota In The Human Stomach By PCR-DGGE Method**

Abbas Yadegar, Masoud Alebouyeh, Tabassom Mirzaei, Elahe Tajeddin, Mohammad Reza Zali

3) Design and development of a new method for *cagPAI* genotyping of *Helicobacter pylori* isolates in Iran

Abbas Yadegar, Masoud Alebouyeh, Tabassom Mirzaei, Mohammad Reza Zali

4) *Helicobacter pylori oipA* genetic diversity and its associations with clinical outcomes and virulence genotypes among Iranian patients with gastroduodenal diseases

5) Molecular and Functional Surveillance of *Helicobacter pylori* Antibiotic Resistance in Patients with Intestinal Metaplasia

Original articles:

1) Prevalence of the Genes Encoding Aminoglycoside-Modifying Enzymes and Methicillin Resistance Among Clinical Isolates of *Staphylococcus aureus* in Tehran, Iran

Abbas Yadegar, Morteza Sattari, Nour Amir Mozafari, Gholam Reza Goudarzi

Published in: Journal of Microbial Drug Resistance (MDR), Mary Ann Liebert, Inc. (USA), Volume 15, Number 2, 2009

2) Antibacterial effect of essential oils from two medicinal plants against methicillin-resistant *Staphylococcus aureus* (MRSA)

Abolghasem Tohidpour, Morteza Sattari, Reza Omidbeigi, Abbas Yadegar, Javad Nazemi

Published in: Journal of Phytomedicine, 2009

3) Antibacterial Activity of Eucalyptus Extracts on Methicillin Resistance *Staphylococcus aureus*

Fatemeh Mohsen Nezhad, Habib Zeighami, Ali Mota, Morteza Sattari, Abbas Yadegar

Published in: Research Journal of Biological Sciences (RJBS), Medwell Journals, ISSN: 1815-8846, 4 (8), 2009

4) Prevalence of *ant(4')-Ia* gene among clinical isolates of methicillin-resistant *Staphylococcus aureus* using Multiplex-PCR method

Abbas Yadegar, Morteza Sattari, Nour Amir Mozafari, Gholam Reza Goudarzi

Published in: Modares Journal of Medical Sciences (MJMS), Iran, Volume 12, Number 1, 2009.

5) Evaluation and comparison of antibacterial effects of alcoholic extracts of *Zataria multiflora* Boiss leaves, flowers and root on Methicillin-Resistant *Staphylococcus aureus*

Abbas Yadegar, Morteza Sattari, Mohsen Bigdeli, Fereshteh Bakhtiari

Published in: Journal of Medicinal Plants, Iran, Number 33, 2010.

6) Genes silencing, a way beyond the modern medicine

Abbas Yadegar, Morteza Sattari

Published in: Journal of Physician and Laboratory, Iran, Number 35: Dec-Jan, 2008-2009.

7) Molecular production and typing of Flagellin of *Pseudomonas aeruginosa*

Gholam Reza Goudarzi, Abbas Yadegar

Published in: Journal of Yafteh, Iran, Number 2: Summer, 2011.

8) Differentiation of non-*pylori Helicobacter* species based on PCR–restriction fragment length polymorphism of the 23S rRNA gene

Abbas Yadegar, Masoud Alebouyeh, Andy J. Lawson, Tabassom Mirzaei, Ehsan Nazemalhosseini Mojarad, Mohammad Reza Zali

Published in: World Journal of Microbiology and Biotechnology, 01/2014;
DOI: 10.1007/s11274-014-1615-2

9) Clinical relevance of *cagL* gene and virulence genotypes with disease outcomes in a *Helicobacter pylori* infected population from Iran

Published in: World Journal of Microbiology and Biotechnology, 01/2014;
DOI: 10.1007/s11274-014-1673-5

10) Molecular evaluation of the 2'-aminoglycoside nucleotidyltransferase gene in *Escherichia coli* isolates sensitive mannose (type I pili and P) and hemolysin production

Baharak Farhanghi; Neda Soleimani; Mortaza Sattari; Abbas Yadeghar; Majid Sadeghizadeh

Published in: Modares Journal of Medical Sciences: Pathobiology, 2014

11) Analysis of the intactness of *Helicobacter pylori* cag pathogenicity island in Iranian strains by a new PCR-based strategy and its relationship with virulence genotypes and EPIYA motifs

Abbas Yadegar, Masoud Alebouyeh, Mohammad Reza Zali

Published in: Infection, Genetics and Evolution, 2015

12) Association of cagPAI integrity with severeness of *Helicobacter pylori* infection in patients with gastritis

Ahmadzadeh, A., Ghalehnoei, H., Farzi, N., Yadegar, A., Alebouyeh, M., Aghdaei, H.A., Molaei, M., Zali, M.R., Pour Hossein Gholi, M.A.

Published in: Pathologie-biologie, 2015

13) Impacts of *H. pylori* mixed-infection and heteroresistance on clinical outcomes

Masoud Alebouyeh, Abbas Yadegar, Nastaran Farzi, Marzyieh Miri, Homayoon Zojaji, Somayeh Gharibi, Zeinab Fazeli, Naser Ebrahimi Daryani, Hamid Asadzadeh Aghdaei, Mohammad Reza Zali

Published in: Gastroenterology and Hepatology from Bed to Bench 8 (Suppl1), S1, 2015

14) EPIYA motifs of cagA and upper gastrointestinal diseases

S Soleiman-Meigooni, K Baghaei, A Yadegar, S Alizadeh

Gastroenterology and Hepatology from Bed to Bench 8 (3), 236-237, 2015

15) *Helicobacter pylori* CagA induced interleukin-8 secretion in gastric epithelial cells

Z Fazeli, M Alebouyeh, MR Tavirani, M Azimirad, A Yadegar

Published in: Gastroenterology and Hepatology from Bed to Bench 9 (Suppl1), S42, 2016

16) Molecular prevalence of putative virulence-associated genes in *Brucella melitensis* and *Brucella abortus* isolates from human and livestock specimens in Iran

Iman Hashemifar , Abbas Yadegar, Faramarz Masjedian Jazi, Nour Amirmozafari

Published in: Microbial Pathogenesis, 2017

17) Prevalence of proline racemase/hydroxyproline epimerase gene in human *Brucella* isolates in Iran

Iman Hashemifar, Faramarz Masjedian Jazi, Abbas Yadegar, Nour Amirmozafari

Published in: Medical Journal of the Islamic Republic of Iran (MJIRI), 2017

18) Occurrence of *Helicobacter pylori* and its major virulence genotypes in dental plaque samples of patients with chronic periodontitis in Iran

Sahel Valadan Tahbaz, Abbas Yadegar, Nour Amirmozafari, Siamak Yaghoobee, Mohammad Javad Ehsani Ardakani, Homayoun Zojaji
Published in: Gastroenterol Hepatol Bed Bench 2017;10(Suppl. 1):S70-S78).

19) Management of multi-drug resistant *Helicobacter pylori* infection by supplementary, complementary and alternative medicine; a review

Nasim Rezaeimanesh, Nastaran Farzi, Samira Pirmanesh, Saeed Emami, Abbas Yadegar
Published in: Gastroenterol Hepatol Bed Bench 2017; 10 (Suppl. 1):S8-S14).

20) Functional Cytotoxin Associated Gene A in *Helicobacter Pylori* Strains and Its Association with Integrity of Cag-pathogenicity Island and Histopathological Changes of Gastric Tissue

Zeinab Fazeli, Masoud Alebouyeh, Mostafa Rezaei Tavirani, Abbas Yadegar, Nastaran Farzi, Mohammad Reza Zali
Published in: Arch Clin Infect Dis. In Press (In Press):e62955, 2017

Symposium abstracts (oral and poster presentations):

1) Antimicrobial susceptibility patterns of clinical isolates of *Staphylococcus aureus* in Tehran, Iran

Abbas Yadegar, Morteza Sattari, Nour Amir Mozafari
3rd Congress of European Microbiologists (FEMS), Gothenburg, Sweden, June 28-July 2, 2009.

2) Determining methicillin resistance among clinical isolates of *Staphylococcus aureus* by a modified PCR method

Abbas Yadegar, Morteza Sattari, Nour Amir Mozafari
The 10th Iranian Congress of Microbiology. 21-23 April 2009, Ilam University of Medical Sciences, Ilam, Iran.

3) Prevalence of the genes encoding Aminoglycoside-Modifying Enzymes (AMEs) and Methicillin resistance among clinical isolates of *Staphylococcus aureus* by Multiplex PCR

Abbas Yadegar, Morteza Sattari, Nour Amir Mozafari
The Second Iranian Congress of Clinical Microbiology. October (8-10) 2008. Shiraz, Iran.

4) Antimicrobial effects of Essential oils of *Thymus vulgaris* and *Eucalyptus globules*

Abolghasem Tohidpour, Morteza Sattari, Reza Omidbeigi, Shahin Najjar Peeraye, Abbas Yadegar, Fateme Safari
The Second Iranian Congress of Clinical Microbiology. October (8-10) 2008. Shiraz, Iran.

5) Evaluation of antimicrobial effects of alcoholic extract of *Thymus vulgaris*'s root on some human pathogens

Abbas Yadegar, Shadi Ghandian, Mona Karbalayi Ali, Morteza Sattari
The 9th Iranian Congress of Microbiology. 4-6 March 2008, Kerman, Iran.

6) Evaluation of antibacterial effects of gum and essential oil of *Pistacia atlantica* Desf. Subsp. *Kurdica* (Zohary) on human pathogens

Abbas Yadegar, Fereshteh Bakhtiari, Mohsen Bigdeli, Morteza Sattari
The 9th Iranian Congress of Microbiology. 4-6 March 2008, Kerman, Iran

7) Evaluation of antibacterial effects of layers loaded with NanoSilver particles produced from soluble and insoluble phases of Tragacanth

Sahar Sobhani, Abbas Yadegar, Morteza Sattari, Ramin Khajavi
The 9th Iranian Congress of Microbiology. 4-6 March 2008, Kerman, Iran.

8) Study of aminoglycoside resistance among clinical isolates of methicillin-resistant *Staphylococcus aureus* and *Escherichia coli* by PCR method

Abbas Yadegar, Neda Soleimani, Morteza Sattari
The 11th Iranian Congress of Microbiology & 1st East Mediterranean Microbiology Congress. 10-13 May 2010, Guilan, Langroud, Iran.

9) Detection of *aac(6')-Ie/aph(2'')* gene among clinical isolates of *Escherichia coli* and *Staphylococcus aureus* by PCR method

Abbas Yadegar, Neda Soleimani, Morteza Sattari
The Fourth Iranian Congress of Clinical Microbiology. November (9-11) 2010. Isfahan, Iran.

10) A Novel 23S Ribosomal DNA-Based PCR-RFLP Method for Rapid Discrimination of Non-*pylori Helicobacter* Species

Yadegar A, Alebouyeh M, Shokrzadeh L, Mirzaee T, Nazemalhosseini Mojarad E, Zali MR
First International & 12th Iranian Congress of Microbiology. 23-26 May 2011, Kermanshah, Iran.

11) Detection of Enterohepatic non-*pylori* Helicobacter DNA in human fecal specimens by PCR-RFLP

Abbas Yadegar, Masoud Alebouyeh, Tabassom Mirzaiee, Ehsan Nazemalhosseini Mojarad, Mohammad Reza Zali
The 5th Iranian congress of Clinical Microbiology. Nov. 2011, Shiraz, Iran.

12) Characterization of *Helicobacter pylori* virulence factor genotypes and their correlation with gastroduodenal disease in Iranian patients

Abbas Yadegar, Masoud Alebouyeh, Tabassom Mirzaei, Terry Kwok, Ashraf Mohabati Mobarez, Mohammad Reza Zali

The 6th Iranian congress of Clinical Microbiology., Nov. 2012, Mashhad, Iran.

13) Detection of non-*pylori* *Helicobacter* species DNA in human gastroduodenal biopsies by a 23S rRNA gene-based PCR-RFLP method

Abbas Yadegar, Masoud Alebouyeh, Tabassom Mirzaiee, Ehsan Nazemalhosseini Mojarad, Mohammad Reza Zali

The 13th Iranian & the Second International Congress of Microbiology, July 14, 2012 – July 16, 2012, Ardabil, Iran.

14) Virulence genotyping of *Helicobacter pylori* isolates as a predictive tool for disease prognosis of gastrodoudenal disorders

Abbas Yadegar, Masoud Alebouyeh, Ashraf Mohabati Mobarez, Mohammad Reza Zali

The 5th International Congress of Laboratory and Clinic “Blood Disorders”, 15-18 January, 2013, Tehran, Iran.

15) Detection of non-coding sialic-acid binding adhesion gene (*sabA*) in an *Helicobacter pylori* isolate in Tehran, Iran

Tabassom Mirzaei, Masoud Alebouyeh, Abbas Yadegar, Leila shokrzadeh,
Mohammad Reza Zali

The 5th International Congress of Laboratory and Clinic “Blood Disorders”, 15-18
January, 2013, Tehran, Iran.

16) Presence of combined virulence genotypes of *Helicobacter pylori* as a risk factor for development of gastroduodenal disease in Iranian patients

Abbas Yadegar, Masoud Alebouyeh, Ashraf Mohabati Mobarez , Tabassom
Mirzaei, Mohammad Reza Zali

The 14th Iranian & the Third International Congress of Microbiology, August 28-
30, 2013, Tehran, Iran (Oral presentation).

17) Design and development of a new method for *cagPAI* genotyping of *Helicobacter pylori* strains in Iran

Abbas Yadegar, Masoud Alebouyeh, Tabassom Mirzaei, Mohammad Reza Zali

The 2nd Iranian Congress of Medical Bacteriology, October 2-4, 2013, Tehran,
Iran.

Skills:

- Wet lab (regular laboratory practices, aseptic techniques, microbial culture, biochemical diagnostic methods, microscopic manipulation techniques).
- **Molecular Diagnostic Techniques:** Primer design, PCR, qPCR, Multiplex PCR, PCR-RFLP, PCR-DGGE, Real-Time PCR, SOEing PCR, Electrophoresis (nucleic acids and proteins) and SDS-PAGE, Western blot, Dot blot, ELISA.
- DNA Extraction, RNA Extraction, Purification of Nucleic acids and Proteins, bacterial spore purification.
- Transformation, Gene Cloning, Gene Expression in *E. coli*, Site-Directed Mutagenesis (SDM), Bacterial Spore Surface Display.
- **Bioinformatics software’s and tools:**

1) Alignment Tools: BLAST, ExPASy.

2) Packages: CLC Sequence Viewer, BioEdit, Lasergene, Gene Runner, Chromas, MEGA, GelCompare II, BioDocAnalyze.

3) Databases and services (NCBI, Protein Data Bank, Protein information resource, DDBJ).

Language abilities & Certificates:

- Persian (native language)

- English :

TMU TOEFL (2007) Score: 76

MCHE (2008), Certificated by the Iran Ministry of Science, Research and Technology, Score: 59

Interests:

- Host-pathogen interactions, Bacterial oncogenesis and signaling (*H. pylori*)
- Bacterial drug resistance and antimicrobial surveillance (AMR)
- Bacterial surface display system (spore display)
- Bacterial Vaccine Design: Nano-vaccines, Conjugated and recombinant vaccines
- Nanoparticle-based targeted drug delivery and vaccine delivery systems
- Application of bacterial metabolites in prevention and treatment of cancers and other diseases
- Analysis of Human Gut Microbiota
- Genomics, Transcriptomics and Proteomics
- Molecular detection of bacterial antibiotic resistance
- Anaerobic bacteriology (*Clostridium difficile*, *Clostridium perfringens*, *Bacteroides* spp.)
- Probiotic bacteria (LAB, *Bifidobacterium* spp.)
- Microbial outbreak investigation

References available upon request.

Abbas (Babak) Yadegar