



Curriculum Vitae



Mohammad Reza Tohidkia (DVM, PhD)

PhD, (2013), Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran.

DVM, (1999), Faculty of Veterinary Medicine, Islamic Azad University of Tabriz, Tabriz, Iran.

Associate professor, Biotechnology: Research Center for Pharmaceutical Nanotechnology, Tabriz University of Medical Sciences, Tabriz, Iran.

Tel: +98 (0)411 33367914 (office)

Fax: +98 (0)411 33367929

Mobile: +98 914 4132064

Email: tohidkiam86@gmail.com

Contents

| | |
|---------------------------|---|
| Current position | 2 |
| Personal..... | 2 |
| Education | 2 |
| 2007 – 2013..... | 2 |
| 1992 – 2000..... | 2 |
| 1986– 1990..... | 2 |
| Publications..... | 2 |
| Books/chapters..... | 2 |
| Published papers | 2 |
| Reviewer | 5 |
| Congress/Poster..... | 5 |
| Research Projects | 5 |
| Teaching experience | 5 |
| Skills | 5 |
| Interests | 6 |

Current position

Associate professor Research Center for Pharmaceutical Nanotechnology, Tabriz University of Medical Sciences, Tabriz, Iran.

Personal

Born in 1973, Tabriz, Iran; Male.

Education

- 2007 – 2013** PhD, (Biotechnology), "Isolation and Screening of anti-gastrin/CCKB Receptor scFv Antibody from Phage Antibody library", Department of Biochemistry, Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran.
- 1992 – 2000** DVM, (Veterinarian Medicine), "Production and Characterization of polyclonal Antibody against Streptococci groups A and B", Faculty of Veterinary Medicine, Islamic Azad University of Tabriz, Tabriz, Iran.
- 1986– 1990** Experimental Sciences Diploma, School of Experimental Sciences, Tabriz, Iran

Publications

Books/chapters

1. **Tohidkia M.R.**, Coukos G., Omid Y. Rational Design of Fully Mouse to Fully Human Monoclonal Antibodies for or Immunotherapy.

2. Published papers

| |
|---|
| Pleiotropic cytotoxicity of VacA toxin in host cells and its impact on immunotherapy BioImpacts. Authors : Farnaz Fahimi, <u>Mohammad Reza Tohidkia</u> , Mehdi Fouladi, Reza Aqabeigi, Naser Samadi, Yadollah Omid, |
| Improved Soluble ScFv ELISA Screening Approach for Antibody Discovery Using Phage Display Technology Journal of Biomolecular Screening Continued as SLAS Discovery, 22, 8 Authors : <u>Mohammad R. Tohidkia</u> , Maryam Sepehri1, Shirin Khajeh, Jaleh Barar, and Yadollah Omid |
| Efficiency and cytotoxicity analysis of cationic lipids-mediated gene transfection into AGS gastric cancer cells Artificial Cells, Nanomedicine, and Biotechnology, 46, 5 Authors : Nasrin Gharaati-Far, <u>Mohammad Reza Tohidkia</u> , Alireza Dehnad & Yadollah Omid |
| Phage display-derived antibody fragments against conserved regions of VacA toxin of Helicobacter pylori Applied Microbiology and Biotechnology, 102,16 Authors : Farnaz Fahimi, Shamim Sarhaddi, Mehdi Fouladi, Naser Samadi, Javid Sadeghi, Asal Golchin, <u>Mohammad Reza Tohidkia</u> , Jaleh Barar, Yadollah Omid |
| Phage display selection of fully human antibody fragments to inhibit growth-promoting effects of glycine-extended gastrin 17 on human colorectal cancer cells Artificial Cells, Nanomedicine, and Biotechnology, Authors : Shirin Khajeh, <u>Mohammad Reza Tohidkia</u> , Ayuob Aghanejad, Tayebeh Mehdipour, Farzaneh Fathi & Yadollah Omid |

| |
|---|
| <p>Selection of a fully human single domain antibody specific to Helicobacter pylori urease Applied Microbiology and Biotechnology, Authors : Mehdi Fouladi, Shamim Sarhadi, <u>Mohammadreza Tohidkia</u>, Farnaz Fahimi, Naser Samadi, Javid Sadeghi, Jaleh Barar, Yadollah Omid</p> |
| <p>Phage antibody library screening for the selection of novel high-affinity human single-chain variable fragment against gastrin receptor: an in silico and in vitro study DARU Journal of Pharmaceutical Sciences, 27, 1 Authors : Sepideh Jalilzadeh-Razin, Malihe Mantegi, <u>Mohammad R Tohidkia</u>, Yaghub Pazhang, Mohammad M Pourseif, Jaleh Barar, Yadollah Omid</p> |
| <p><u>Development of electrochemical biosensors for tumor marker determination towards cancer diagnosis: Recent progress</u> Trac-Trends in Analytical Chemistry, 118 Authors : Deniz Sadighbayan, Khosrow Sadighbayan, <u>Mohammad Reza Tohidkia</u>, Ahmad Yari Khosroushahi, Mohammad Hasanzadeh</p> |
| <p><u>Successful Application of Whole Cell Panning for Isolation of Phage Antibody Fragments Specific to Differentiated Gastric Cancer Cell</u> Advanced pharmaceutical Bulletin, 9, 4 Authors : Sepideh Nikfarjam, <u>Mohammad Reza Tohidkia</u>, Tayebeh Mehdipour, Ramin Soleimani, Ali Akbar Rahim Rahimi, Mohammad Nouri</p> |
| <p>Phage antibody display libraries: a powerful antibody discovery platform for immunotherapy Critical Reviews in Biotechnology, 36,2 Authors : Aizhi Zhao*, <u>Mohammad R. Tohidkia*</u>, Donald L. Siegel, George Coukos¹, and Yadollah Omid</p> |
| <p>Bio-assay of the non-amidated progastrin-derived peptide (G17-Gly) using Tailor-made recombinant antibody fragment and phages display method: A biomedical analysis Analytical Methods, 4, 12(21) Authors : Deniz Sadighbayan, <u>Mohammad Reza Tohidkia</u>, Tayebeh Mehdipour, Mohammad Hasanzadeh d, Ahmad Yari Khosroushahi</p> |
| <p>Immunotargeting and therapy of cancer by advanced multivalence antibody scaffolds Journal of Drug Targeting, 28, 10 Authors : Vala Kafil, Amir Ata Saei, <u>Mohammad Reza Tohidkia</u>, Jaleh Barar, Yadollah Omid</p> |
| <p>Optimization of Tris/EDTA/Sucrose (TES) periplasmic extraction for the recovery of functional scFv antibodies AMB Express, 20, 10 (1) Authors : Elham Ghamghami, Marjan Abri Aghdam, <u>Mohammad Reza Tohidkia</u> , Asadollah Ahmadikhah, Morteza Khanmohammadi, Tayebeh Mehdipour, Ahad Mokhtarzadeh and Behzad Baradaran Year of publication: 2020</p> |
| <p>Implementation of a Design of Experiments to Improve Periplasmic Yield of Functional ScFv Antibodies in a Phage Display Platform Advanced Pharmaceutical Bulletin, 12, 3 Authors : Marjan Abri Aghdam , Mohammad Reza Tohidkia , Elham Ghamghami, Asadollah Ahmadikhah, Morteza Khanmahamadi, Behzad Baradaran, Ahad Mokhtarzadeh</p> |
| <p>Mucin-1 conjugated polyamidoamine-based nanoparticles for image-guided delivery of gefitinib to breast cancer International Journal of Biological Macromolecules, 174 Authors : Poorya Najjari Nabi, Nasim Vahidfar, <u>Mohammad Reza Tohidkia</u>, Ali Asghar Hamidi, Yadollah Omid, Ayuob Aghanejada</p> |
| <p><u>Advances in antibody nanoconjugates for diagnosis and therapy: A review of recent studies and trends</u> International Journal of Biological Macromolecules Authors : Jamileh Kadkhoda, Mohammad Akrami-Hasan-Kohal, <u>Mohammad Reza Tohidkia</u>, Samira Khaledi, Soodabeh Davaran, Ayuob Aghanejad</p> |
| <p>Isolation and characterizations of a novel recombinant scFv antibody against exotoxin A of Pseudomonas aeruginosa BMC Infectious Diseases, 21, 1 Authors : Zahra Shadman, Safar Farajni, Mohammad Pazhang, <u>Mohammadreza Tohidkia</u>, Leila Rahbarnia, Saeed Najavand and Sayna Toraby</p> |
| <p>Engineering and quantification of bismuth nanoparticles as targeted contrast agent for computed tomography imaging in cellular and animal models Journal of Drug Delivery Science and Technology, 66 Authors : Ali Tarighatni, Mohammad Reza Fouladi, <u>Mohammad Reza Tohidkia</u>, Gurkaran Johal, Nader D. Nader, Ayuob Aghanejad, Hossein Ghadiri</p> |
| <p>Phage display-derived immunorecognition elements LSPR nanobiosensor for peptide hormone</p> |

| |
|---|
| <p>glycine-extended gastrin 17 detection Microchimica Acta, 189, 1 Authors : Zahra Fattahi, <u>Mohammad Reza Tohidkia</u>, Ahmad Yari Khosroushahi</p> |
| <p>An overview on display systems (phage, bacterial, and yeast display) for production of anticancer antibodies; advantages and disadvantages International Journal of Biological Macromolecules, 208 Authors : Seyede Zahra Bahojb Mahdavi, Fatemeh Oroojalian, Shirin Eyyazi, Maryam Hejazi, Behzad Baradaran, Nasser Pouladi, <u>Mohammad Reza Tohidkia</u>, Ahad Mokhtarzadeh, Serge Muyldermans</p> |
| <p>Photothermal therapy-mediated autophagy in breast cancer treatment: Progress and trends Life Sciences, 298 Authors :Farnaz Fahimi, <u>Mohammad Reza Tohidkia</u>, Mehdi Fouladi, Reza Aqabeigi, Naser Samadi, Yadollah Omidi</p> |
| <p>Anti-Proliferative Effects of <i>Ocimum basilicum</i> Leaf Aqueous Extract on Colon Cancer Cell Lines and the Expression of Apoptotic Genes Jentashapir Journal of Cellular and Molecular Biology, Authors : Mohammad Heydarnezhad Asl, Amin Ahmadi, Kazhal Karari, Mehdi Haghi, Mohammad Reza Tohidkia, Faezeh Pasban</p> |
| <p>Oxygen sensing of hemoglobin states by Goos-H"anchen effect Optics & Laser Technology, 148 Authors : Habibeh Pourhassan, Ebrahim Safari, Mohammad Reza Tohidkia, Ayuob Aghanejad</p> |
| <p>A review on targeting tumor microenvironment: The main paradigm shift in the mAb-based immunotherapy of solid tumors International Journal of Biological Macromolecules, 207 Authors : Ayuob Aghanejad, Samad Farashi Bonab, Maryam Sepehri, Fatemeh Sadat Haghighi, Ali Tarighatnia, Christopher Kreiter, Nader D. Nader, <u>Mohammad Reza Tohidkia</u></p> |
| <p>Ultrasmall iron oxide nanoparticles and gadolinium-based contrast agents in magnetic resonance imaging: a systematic review and meta-analysis Clinical and Translational Imaging Authors: Azadeh Amraee, Samideh Khoei, Seied Rabi Mahdavi, Mohammad Reza Tohidkia, Ali Tarighatnia, Leili Darvish, Saeed Hosseini Teshnizi, Ayuob Aghanejad</p> |
| <p>Recent Trends in Diagnostic Biomarkers of Tumor Microenvironment Molecular Imaging and Biology Authors : Paniz Siminzar, <u>Mohammad Reza Tohidkia</u>, Elisabeth Eppard, Nasim Vahidfar, Ali Tarighatnia, Ayuob Aghanejad</p> |
| <p>Properties of <i>Linum usitatissimum</i> Seed Aqueous Extract Against Colon Jentashapir Journal of Cellular and Molecular Biology, Authors : Fatemeh Musavi, Mehdi Haghi, Amin Ahmadi, Mohammad Heydarnezhad Asl, <u>Mohammad Reza Tohidkia</u>, Rana Madadi Rad and Mohammad Ali Hoseinpour Feizi</p> |
| <p>Selection of potential therapeutic human single-chain Fv antibodies against cholecystokinin-B/gastrin receptor by phage display technology BioDrugs, 27,1 Authors : Mohammad R Tohidkia, Farzad Asadi, Jaleh Barar, Yadollah Omidi</p> |
| <p>Molecular considerations for development of phage antibody library Journal of Drug Targeting, 20, 3 Authors: <u>Mohammad Reza Tohidkia</u>, Jaleh Barar, Farzad Asadi, Yadollah Omidi</p> |
| <p>Serum biochemical parameters of Asian tortoise Iranian Journal of Veterinary Medicine, 4, 3 Authors : Amir Rostami, Hamed Mansour, <u>Mohamad Tohid Kiva</u> Year of publication: 2010</p> |
| <p>Spinal Reirradiation-Mediated Myelopathy: A Systematic Review and Meta-Analysis Clinical Oncology, 35 Authors: A. Amraee, <u>M.R. Tohidkia</u>, L. Darvish, A. Tarighatnia, N. Robotmili, A. Rahimi, N. Rezaei, F. Ansari, S.H. Teshnizi, A. Aghanejad</p> |
| <p>Numerical and analytical analysis of an ultrahigh sensitive surface plasmon resonance sensor based on black phosphorene/graphene heterostructure Applied Optics, 62, 25 Authors: Abolfazl Nourizad, Saeed Golmohammadi, <u>Mohammad Reza Tohidkia*</u>, Ayuob Aghanejad</p> |
| <p>Theranostic chimeric antigen receptor (CAR)-T cells: Insight into recent trends and challenges in solid tumors Life Sciences, 328 Authors: Keyvan Kheyrolahzadeh, <u>Mohammad Reza Tohidkia</u>, Ali Tarighatnia, Parviz Shahabi, Nader D. Nader, Ayuob Aghanejad</p> |

Recent trends in aptamer-based nanobiosensors for detection of vascular endothelial growth factors (VEGFs) biomarker: A review

Environmental Research, 236

Authors: Abolfazl Nourizad, Saeed Golmohammadi, Ayuob Aghanejad, Mohammad Reza Tohidkia

Reviewer

1. Bioimpacts.
2. Advanced Pharmaceutical Bulletin.
3. Iranian Journal of Veterinary Medicine.

Congress/Poster

1. Isolation and screening of scFv antibodies to a CCKB-R-derived peptide using phage display technology. 12th International Congress of Immunology and Allergy of Iran, 2014.

Research Projects

1. Selection of scFv antibody fragments against second extracellular loop of CCK-B/gastrin receptor from a phage antibody library. (Supervisor of M.S. student).
2. Production of scFv monoclonal antibodies against gastrin peptides. (Supervisor of M.S. student).
3. Over-expression of CCK-B receptor protein in gastric adenocarcinoma cell line AGS. (Supervisor of M.S. student)
4. Isolation and characterization of scFv monoclonal antibodies against *H.pylori* Vac A (Advisor of M.S. student).
5. Isolation and characterization of scFv monoclonal antibodies against *H.pylori* Urease B (Advisor of M.S. student).
6. Downstream and purification of fully human scFv. (Advisor of M.S. student).
7. Modeling electrochemical-based detection of gastrin peptide using scFv and phage-scFv in a sandwich fashion.
8. Comparison of various methods for extraction of recombinant scFv and VL antibody fragments from periplasm space of *E. coli* (Supervisor of M.S. student).
9. Isolation and Characterization of Human ScFv Antibody Fragments to Non-metastatic Gastric Cancer(AGS) from a Synthetic Phage Display Antibody Library (Supervisor of M.S. student).
10. Isolation and Characterization of Metastatic Gastric Cancer Cell line (MKN-45)-Specific scFv Fragments by Whole Cell Panning Using Phage Display Technology (Supervisor of M.S. student).

Teaching experience

1. Gene therapy for Ph.D students.

Skills

1. Monoclonal antibody screening using phage display technology.

2. Molecular and cell biology methodologies: Tissue and cell culture techniques, Flow cytometry, SDS-PAGE, Western blot, ELISA, and immunocytochemistry.
3. Molecular genetics techniques including: PCR, QPCR, protein expression and purification and cell-based cloning techniques.
4. Windows-based soft-wares (Word, Excel, PowerPoint).

Interests

1. Gastric cancer target detection.
2. Production of mAbs against GI tumors in particular gastric cancer associated antigens.
3. Production of immunoconjugates.
4. Site-specific targeting of therapeutic agents and nanocarriers and nanodevices.
5. Generation of diagnostic reagents.
6. Isolation and characterization of antibacterial probiotics.
7. Cancer therapy (e.g., chemotherapy , targeted small molecule therapy, and mAbs-based immunotherapies) and cancer cell death.