

A. Personal information

Name: Hamid Bakherad

Date of Birth: 19-Sep-1982

Place of Birth: Mashhad, Iran.

Languages: Persian (Native), English (MHLE: 65)

Address: Department of Pharmaceutical Biotechnology, School of Pharmacy and Pharmaceutical Sciences, Isfahan University of Medical Sciences, Isfahan, I.R. Iran.

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B. Education

- **Master (2008-2011), Shahed University**

Microbial Biotechnology

Thesis Title: Production of recombinant nanobodies derived from camels heavy chain antibodies against clostridium butolium type E neurotoxin.

- **PhD (2012-2017), Tehran university of Medical Sciences**

Pharmaceutical Biotechnology

Thesis Title: Isolation of camel Heavy- chain antibodies (Nanobody) against the extracellular domain of G-CSF receptor by phage display technology and its biological activity assessment in a cell culture model.

C. Honors

- Ranking 1th in the National Competition of Microbial Biotechnology (Konkour) for entering the PhD level. (2012)

- Ranking 3th among University Master graduates. (2011)

D. Skills

- Antibody production (Monoclonal and Polyclonal)
 - Biosimilar Drugs Production
 - Industrial equipment such as mammalian bioreactor and Fermentor
 - Molecular biology (RNA and DNA extraction, Cloning, PCR, RT-PCR, SOE-PCR, PAGE)
 - Immunological Assay [ELISA (Direct, Indirect, sandwich, competitive), Western blot, Dot blot, Panning]
 - Protein purification [Chromatography (Gel filtration, Ion Exchange, Affinity), SDS-PAGE]
 - Cell Culture
 - Phage Display
 - Bioinformatics (Probe and primer design)
 - Microbiology
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F. Research Projects

- Production of phage-based nanobody library against specific cancer markers of colon, breast and prostate. (2009)
 - Production of nanobodies derived from camelid heavy chain antibodies against *Clostridium botulinum* type E toxin, UreC of *Helicobacter pylori* (2009)
 - Increasing functional affinity (avidity) of anti-BoNt/E and UreC nanobodies by dimerization. (2013)
 - Cloning, molecular characterization and expression of a DNA-ligase from a new bacteriophage: Phax1 (2013)
 - Isolation of camel Heavy-chain antibodies (Nanobody) against the extracellular domain of G-CSF receptor by phage display technology (2014)
 - Identification and in vitro Characterization of novel Nanobodies against human granulocyte colony-stimulating factor receptor to provide inhibition of G-CSF function (2013).
 - Production of Nanobodies from camelid-derived heavy chain antibody against recombinant GPR78 with phage display technique (2014).
 - Preparation of recombinant CGRP78 vaccine to immunize BALB/c mice against 4T1 and B16F10 cancer cells (2019).
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G. Conferences

1) Production and immunogenic characterization of recombinant prostate specific membrane antigen (rPSMA) as potential target in prostate cancer therapy. Hamed Zare, Seyed Latif Mousavi Gargari, Masoumeh Rajabi Bazl, Mohammad Mohammadi, **Hamid Bakherad**, Walead Ebrahimi Zade, Leila Safaee. 12th Congress of biochemistry and 4th international congress of biochemistry and molecular biology, Mashhad. Iran. 2011.

2) Production of phagmid library of camelid single-domain VHH antibodies against UreC of *H. pylori*. Leila Safaee, Seyed Latif Mousavi Gargari, Masoumeh Rajabi Bazl, Mohammad Mohammadi, **Hamid Bakherad**, Walead Ebrahimi Zade, Hamed Zare. 12th Congress of biochemistry and 4th international congress of biochemistry and molecular biology, Mashhad. Iran. 2011.

3) Production of Nanobodies from camelid-derived heavy chain antibody against recombinant PSMA in prostate cancer with phage display technique. Hamed Zare, Mir Latif Mousavi Gargari, Masoumeh Rajabi Bazl, **Hamid Bakherad**, Walead Ebrahimi Zadeh, Leila Safaee Ardakani, Shakiba Darvish Alipour. The 7th Biotechnology congress of I. R. Iran. Tehran, Iran. 12-14 of September 2011.

4) Screening and selection of phage displayed VHH against UreC. Leila Safaee Ardekani, Mir Latif Mousavi, Masoumeh Rajabi Bazl, **Hamid Bakherad**, Walead Ebrahimi zadeh, Hamed Zare, Shakiba Darvish Alipour. The 7th Biotechnology congress of I. R. Iran. Tehran, Iran. 12-14 of September 2011.

5) Production of Nanobodies from camelid-derived Heavy chain antibodies against *Clostridium botulinum* type E Toxin. **Hamid Bakherad**, Seyed Latif Mousavi, Masoumeh Rajabi bazl, Leila safae, Hamed Zare, Walead Ebrahimi Zade, Shakiba Darvish Alipour. The 7th Biotechnology congress of I. R. Iran. Tehran, Iran. 12-14 of September 2011.

H. Articles

1) [In Vivo Neutralization of Botulinum Neurotoxins Serotype E with Heavy-chain Camelid](#)

[Antibodies \(VHH\)](#). **Hamid Bakherad**, Seyed Latif Mousavi Gargari, Iraj Rasooli, Masoumeh RajabiBazl, Mohammad Mohammadi, Walead Ebrahimizadeh, Leila Safaee Ardakani, Hamed Zare. *Molecular Biotechnology*. October 2013, Volume 55, Issue 2, pp 159-167

2) [Isolation and characterization of protective anti-LPS nanobody against V.cholerae O1 recognizing Inaba and Ogawa serotypes.](#)

Walead Ebrahimizadeh, Seyedlatif Mousavi Gargari, Masoumeh Rajabibazl, Leila Safaee Ardekani, Hamed Zare, **Hamid Bakherad**. *Applied Microbiology and Biotechnology*. May 2013, Volume 97, Issue 10, pp 4457-4466

3) [Production and immunogenic characterization of recombinant prostate specific membrane antigen \(rPSMA\) as potential target in prostate cancer therapy.](#)

Zare Hamed, Mousavi Latif, Rajabi Bazl Masoumeh, **Bakherad Hamid**, Ebrahimi Zade Walead, Safaee Leila. *Clinical Biochemistry*, Volume 44, Issue 13, Supplement, September 2011, Pages S191-S192.

4) [A novel nanobody against urease activity of *Helicobacter pylori*.](#)

Leila Safaee Ardekani, Seyed Latif Mousavi Gargari, Iraj Rasooli, Masoumeh Rajabi Bazl, Mohammad Mohammadi, Walead Ebrahimizadeh, **Hamid Bakherad**, Hamed Zare. *International Journal of Infectious Diseases*. Volume 17, Issue 9, September 2013, Pages e723–e728

5) [Production of nanobody against prostate-specific membrane antigen recognizing LnCap](#)

[cells](#). Hamed Zare, Masoumeh Rajabibazl, Iraj Rasooli, Walead Ebrahimizadeh, Seyed Latif Mousavi Gargari, **Hamid Bakherad**, Leila Safaiee Ardakani. *Int J Biol Markers*. DOI: 10.5301/jbm.5000063

6) [Cloning, molecular characterization and expression of a DNA-ligase from a new bacteriophage: Phax1.](#)

Neda Setayesh, Saleheh Sabouri-Shahrbabak, **Hamid Bakherad**, Zargham Sepehrizadeh. *World J Microbiol Biotechnol*. December 2013, Volume 29, Issue 12, pp 2227-2231

7) [Camelid-derived heavy chain nanobody against Clostridium botulinum neurotoxin E in *Pichia pastoris*.](#)

Roghayyeh Baghban, Seyed Latif Mousavi Gargari, Masoumeh Rajabibazl, Shahram Nazarian, **Hamid Bakherad**. *Biotechnology and Applied Biochemistry*. Jan 2017, Volume 64, Issue 1, Pages 117-125.

8) Identification and in vitro Characterization of novel Nanobodies against human granulocyte colony-stimulating factor receptor to provide inhibition of GCSF function. **Hamid Bakherad**, Seyed Latif Mousavi Gargari, Zargham Sepehrizadeh, Hossein Aghamollaei, Ramezan Ali Taheri, Maryam Torshabi, Mojtaba Tabatabaei Yazdi, Neda Setayesh. *biomedicine & pharmacotherapy*. . Jun 2017, Volume 93, Pages 245-254.

9) Isolation and characterization of a novel nanobody for detection of GRP78 expressing cancer cells. Hossein Aghamollaei, Mostafa Ghanei, Mohammad Javad Rasaei, Ali Mohammad Latifi, **Hamid Bakherad**, Mahdi Fasihi-Ramandi, Ramezan Ali Taheri, Seyed Latif Mousavi Gargari. *Biotechnology and Applied Biochemistry*
