

Brief biography of Hossein Baharvand (last update: July 2023).

Hossein Baharvand is a distinguished Professor, founder and director of Royan Institute for Stem Cell Biology and Technology, where he firstly joined in 1995 as research assistant. He received his B.Sc. in Biology from Shiraz University in 1994, and M.Sc. in Developmental Biology from Shahid Beheshti University, Tehran in 1996. He received his Ph.D. in Cell and Developmental Biology from Khwarizmi University (former Tarbiat Moallem University) in 2004. For the first time, he generated the mouse and human embryonic stem cells (2003) and induced pluripotent stem cells (2008) in Iran. This has enabled his team to pursue many avenues of research into translational research and regenerative medicine. He has focused his research interests on improving the translational research and regenerative medicine mainly through the understanding of Stem Cells and Developmental Biology and Biologically inspired Engineering. He has been working on pluripotent stem cell differentiation into cardiomyocytes, neural cells, hepatocytes, and the pluripotency mechanism. He has been making numerous contributions to clinical trials and tissue-specific stem cell transplantation; as well as developing cell manufacturing. He has given numerous tutorials and invited talks in many congresses such as ISSCR (2018). He is the editor of four international books which were published by Springer (2010 and 2012) and John Wiley, USA (2015). He has published more than 470 international and 100 national peer-reviewed papers, as well as seven chapters in international books, twenty one books in Persian, and ten translated English text books into Persian. Eight figures of his peer-reviewed publications were selected as cover pages of international journals. As of July 2023, Google Scholar reports over 25000 citations and h-index 72 to his work. He is currently the editorial board member of eight international journals (e.g., Journal of Biological Chemistry, Stem Cell Reports, and Scientific Reports). He has received 38 international and national awards including 10th (2004), 12th (2006), and 17th (2012) annual Razi research award on medical science hosted by Iran Ministry of Health and Medical Education, 26th and 32th Khwarizmi International Award (2013 and 2019), hosted by Iran Ministry of Science, Research and Technology, 27th annual book of the year of Iran (2010), distinguished scientist in Iranian Biotechnology (2015), Genetics (2016) national award and national science elites award hosted by Iran vice Presidency for science and technology and National Elite Foundation (2016). He is the winner of the Islamic educational, scientific, and cultural organization (ISESCO) prize for research in the field of biology (2010). Moreover, he was introduced as prominent professor in 3rd term of Allameh Tabatabaei's award hosted by Iran vice Presidency for science and technology and National Elite Foundation (2014). He is the winner of the united nations educational, scientific and cultural organization (UNESCO)-Equatorial Guinea international prize (2014) for research in life sciences aimed at improving the quality of human life with his stem cell research and its numerous applications in regenerative medicine. He was also selected as 20 stem cell person of the year 2017 award nominees hosted by THE NICHE site. He is also the winner of the World Academy of Sciences (TWAS) prize in Biology (2020) for his fundamental contribution to the understanding of how pluripotency and differentiation establish and maintain in stem cells and has been featured as Highly Cited Researcher based on the rank in the global top 1% of scientists in ESI, Web of Science (2019, 2020, 2022). Recently, he has been awarded the top science and technology award in the Islamic world, Mustafa Prize (2019), for his efforts to promote translational research using stem cells with the goal to improve human life. He was elected as a Fellow of TWAS for his outstanding contribution to science and its promotion in the developing world (2020). He also awarded national "science medal" from Medical Council of Iran (2020) and Abu Reyhan Biruni research festival on medical sciences hosted by Shahid Beheshti medical sciences university (2021). He was also awarded the honorary fellowship of the Islamic World Academy of Sciences (2022), as a Mustafa Prize laureate and in appreciation of the efforts that he has made to the field of *stem cell biology*. Moreover, he is the winner of 1st term of national training/education elites hosted by Iran Ministry of Science, Research and Technology (2023).

Moreover, as of now two companies are spinned off from the work he initiated and directed at the Royan Institute for Stem Cell Biology and Technology including Cell Tech Pharmed as a cell factory for cell therapy and Royan Stem Cell Technology for banking of cord blood stem cells. Furthermore, he has had several efforts in publicizing stem cell biology in Iran and in this regard he with his team established a lab entitled "Stem Cells for all" and a "mobile adventure lab" by an equipped bus. The aim of these participatory teaching and learning methods is to motivate and empower learners to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future for stem cells and their potentials in regenerative medicine. He has also established "Annual International Summer School" program since 2010. The participants are trained by invited speakers from abroad to increase international and national interactions and training methods in this field.

بیوگرافی (تیر ماه 1403)

حسین بهاروند، استاد ممتاز و موسس پژوهشکده زیست‌شناسی و فناوری سلول‌های بنیادی پژوهشگاه رویان است. در سال 1373 مدرک کارشناسی خود را از دانشگاه شیراز، در سال 1375 مدرک کارشناسی ارشد خود را از دانشگاه شهید بهشتی و مدرک دکترای خود را در رشته زیست‌شناسی تکوینی از دانشگاه خوارزمی (ترتیب معلم سابق) در سال 1383 دریافت کرد. وی در سال 1374 به پژوهشگاه رویان پیوست. او در سال 1382 برای اولین بار سلول‌های بنیادی رویانی (جنینی) انسانی و موشی را در ایران تولید کرد و در سال 1387 به همراه همکارانش موفق به تولید سلول‌های بنیادی پرتوان القایی (iPS) انسانی و موشی شد. این فعالیت‌ها او و همکارانش را قادر ساخت تا شاخه‌های مختلف پزشکی بازساختی را در ایران پایه‌گذاری و پیگیری کنند. زمینه‌های پژوهشی او پیرامون ارتقاء تحقیقات ترجمانی و پزشکی بازساختی از دیدگاه سلول‌های بنیادی، زیست‌شناسی تکوینی و مهندسی با الهام از طبیعت است. وی روی تمایز سلول‌های بنیادی پرتوان به سلول‌های قلبی، عصبی و کبدی تحقیق می‌کند و درباره ساز و کارهای پرتوانی و زیست‌شناسی سلول‌های زایا مطالعه می‌نماید. ایشان در کارآزمایی‌های بالینی متعدد و پیوند سلول‌های بنیادی بافتی مشارکت داشته است و در زمینه توسعه تولید صنعتی سلول فعالیت می‌کند. او به عنوان سخنران مدعو در بسیاری از کنفرانس‌های علمی ملی و بین‌المللی از جمله ISSCR (2018) حضور داشته است. از وی 4 کتاب به زبان انگلیسی توسط انتشارات Springer و John Wiley به ترتیب در سال‌های 1389، 1391 و 1394 چاپ شده است. تاکنون بیش از 470 مقاله بین‌المللی و 100 مقاله داوری شده داخلی به همراه 7 فصل در کتب بین‌المللی از ایشان به چاپ رسیده است. 21 کتاب تألیفی به زبان فارسی و 10 کتاب ترجمه شده از دیگر آثار وی هستند. همچنین 8 تصویر از مقالات شاخص وی بر جلد مجلات بین‌المللی چاپ شده است. با استناد به Google Scholar تا تیر ماه 1402 بیش از 25000 بار به مطالعات ایشان ارجاع شده و دارای 72 h-index است. حسین بهاروند عضو هیئت تحریریه هشت مجله علمی بین‌المللی از جمله Stem Cell Reports، Journal of Biological Chemistry و Scientific Reports است. وی 38 جایزه ملی و بین‌المللی دریافت کرده است. در دهمین، دوازدهمین و هفدهمین جشنواره رازی (سال‌های 1383، 1385 و 1391) موفق به کسب جایزه تحقیقات در زمینه علم پزشکی از وزارت بهداشت، درمان و آموزش پزشکی و در بیست و ششمین سی و دومین جشنواره بین‌المللی خوارزمی (سال 1397 و 1391) موفق به دریافت جایزه تحقیقات در حوزه علوم پایه از وزارت علوم، تحقیقات و فناوری شده است. در سال 1389 در بیست و هفتمین دوره کتاب سال جمهوری اسلامی ایران، کتاب سلول‌های بنیادی به تألیف وی به عنوان کتاب برگزیده شناخته شد. ایشان در سال 1389 موفق به دریافت جایزه محقق برتر جهان اسلام در حوزه فناوری و علوم از سازمان اسلامی آموزشی، فرهنگی و علمی (ISESCO) گردید. در سال 1394 به عنوان چهره تاثیرگذار بیوتکنولوژی کشور و در سال 1395 از سوی انجمن ژنتیک ایران، به عنوان محقق برتر حوزه سلول‌های بنیادی و در همان سال به عنوان یکی از سرآمدان علمی کشور معرفی شد. نامبرده در سال 1393 جایزه علامه طباطبایی را کسب و به عنوان استاد ممتاز معرفی شد. همچنین در سال 1393 جایزه بین‌المللی یونسکو در حوزه علوم زیستی را دریافت کرد. این جایزه به علت تحقیق بر سلول‌های بنیادی و کاربرد آن در پزشکی بازساختی در راستای بهبود کیفیت زندگی انسان‌ها به ایشان اعطا شد. وی در سال ۱۳۹۶ به عنوان یکی از 20 فرد تاثیرگذار سلول‌های بنیادی از سوی سایت the niche در سطح جهانی معرفی شد. در سال ۱۳۹۸ او برنده جایزه بین‌المللی آکادمی جهانی علوم (TWAS) در حوزه زیست‌شناسی برای تولید و نگهداری سلول‌های بنیادی و ارائه مفاهیم جامعی از پرتوانی و تمایز این سلول‌ها گردید. وی در فهرست یک درصد پژوهشگران برتر پر استناد جهان نظام بین‌المللی رتبه بندی (Web of Science) قرار گرفت (1398، 1399 و 1401). همچنین در سال ۱۳۹۸ او موفق به کسب نشان عالی علم و فناوری جهان اسلام، جایزه مصطفی شد. این جایزه به عنوان اثری نوآورانه در تحقیقات ترجمانی سلول‌های بنیادی که زمینه ساز ارتقاء زندگی بشریت است، به ایشان اعطا گردید. در سال 2020، او به عضویت آکادمی علوم جهان (TWAS) درآمد. وی در مرداد ماه ۱۳۹۹ «نشان دانش» از سوی سازمان نظام پزشکی ایران را دریافت نمود. در دی‌ماه 1400 در بیست و دومین جشنواره پژوهشی ابوریحان به عنوان منتخب ملی انتخاب شد. وی در پی اخذ جایزه مصطفی و به پاس تلاش در پیشبرد علم زیست‌شناسی سلول‌های بنیادی، در سال 2022 به عضویت افتخاری آکادمی علوم جهان اسلام (IAS) درآمد. در سال 1402، از سوی وزارت علوم، تحقیقات و فناوری به عنوان یکی از سرآمدان آموزشی کشور در نخستین اجلاس ملی سرآمدان آموزشی، معرفی شد.

تاکنون چندین شرکت از بستر تحقیقاتی پژوهشکده زیست‌شناسی و فناوری سلول‌های بنیادی شکل گرفته و از پژوهشکده جدا شده اند: نظیر سل تک فارمد (کارخانه‌ی تولید سلول برای سلول‌درمانی) و شرکت فناوری بن‌یاخته‌های رویان (ذخیره سازی خون بندناف). او به همراه تیم خود تلاش فراوانی در جهت گسترش علم زیست‌شناسی سلول‌های بنیادی در ایران کرده است که در این راستا، "آزمایشگاه سلول‌های بنیادی برای همه" و "آزمایشگاه سیار سلول بنیادی" که یک اتوبوس با آزمایشگاه مجهز است را راه‌اندازی نموده‌اند. هدف از این روش آموزش و یادگیری مشارکتی، ایجاد انگیزه و توانمندسازی دانش‌آموزان برای دستیابی به علم، مهارت، نگرش و ارزش‌هایی است که برای شکل‌گیری آینده‌ای پایدار برای علم سلول‌های بنیادی ضروری است. او همچنین به همراه تیم خود از سال ۱۳۸۹ "مدرسه تابستانی بین‌المللی رویان" را به صورت سالانه برگزار کرده است که در آن، شرکت‌کنندگان توسط سخنرانان دعوت شده از خارج کشور آموزش می‌بینند تا بدین وسیله امکان تعاملات بین‌المللی و ملی نیز افزایش یابد.

Curriculum Vitae of Hossein Baharvand

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Address: Royan Institute, Banihashem Sq., Banihashem St., Ressalat highway, Tehran, Iran.

Postal Code: 1665659911

P.O. Box: 16635-148

Tel: +98 21 22306485

Fax: +98 21 23562507

Email: Baharvand@Royaninstitute.org or Hossein.Baharvand@gmail.com

Website: <http://royanstemcell.org/hossein-baharvand/>

www.royaninstitute.org

➤ **Personal Information:**

Surname: **BAHARVAND**

First name: **HOSSEIN**

Gender: **Male**

Marital Status: **Married**

Nationality: **Iranian**

Date of birth: **25.02.1972**

Place of birth: **Esfahan**



Employment:

- Director of Royan institute for stem cell biology and technology (Jan 2010-now)
- Professor of Stem Cell and Developmental Biology (March, 2012)
- Academic member of Royan Institute, (1996-now).
- Head of Department of Stem Cells, Royan Institute, 2003-2010
- Head of Department of Developmental Biology, University of Science and culture, 2007-Jan 2018

➤ **Educational background:**

| Degree | Major | Ranking | University | Date | Average |
|--------|--------------------------------|--------------------------|--|---------|---------------|
| B.Sc | Biology | 738 out of about 500,000 | Shiraz Uni. , Shiraz, Iran | 1990-94 | 17.45 from 20 |
| M.Sc | Developmental Biology | 1 out of about 200 | Shahid Beheshti Uni., Tehran, Iran | 1994-96 | 18.56 from 20 |
| Ph.D | Cell and Developmental Biology | 1 out of about 50 | Khwarizmi University (formerly Tarbiat Moallem University), Tehran, Iran | 2001-04 | 19.3 from 20 |

➤ **Interests:**

- 1) Pluripotency
- 2) Differentiation of stem cells into neural cells, cardiomyocytes and hepatocytes
- 3) Genetic manipulation
- 4) Cell therapy and translational regenerative medicine
- 5) Germ cell development

➤ ***Hobbies:***

- 1) Karate (with Black belt grade) Dan 1.
- 2) Climbing mountain
- 3) Historical stories

➤ ***Trainings:***

- 1) Production of transgenic and knockout mice at the laboratory of gene targeting in department of molecular bioscience in John Curtin School of Medical Research, Canberra, Australia, 1 Feb., 2002- 25 June 2002. Head of Lab: Dr Klaus Ingo Matthaei.
- 2) International stem cell workshop in National Center for Excellence in Molecular Biology (CEMB), Punjab University, Lahore, Pakistan, 1-12 Dec. 2003.

➤ ***Research Experiences:***

- 1) Mouse and Human Preimplantation Embryology
- 2) Human and Mouse Embryonic and induced pluripotent Stem Cells: Establishment, Maintenance, and Differentiation (hepatocytes, beta cells, cardiomyocytes, neural cells, and germ cells)

➤ ***Membership of Society:***

- 1) The membership of international society for stem cell research (ISSCR). WWW.ISSCR.Org (2006-now)
- 2) Member of International committee of ISSCR (International society for stem cell research) (2008-2009)
- 3) Member of German Stem Cell Network (2013-2014)

➤ **Teaching experiences:**

| Course | Location (University) | Level | Date | No. presentation |
|--------------------------------------|---|---|-------------|-------------------------|
| Laboratory of Cell Biology | Shiraz Uni. (Shiraz, Iran) | B.Sc. of Biology | 1993-1994 | 4 |
| Laboratory of Animal Embryology | Shiraz Uni. (Shiraz, Iran) | B.Sc. of Biology | 1993-1994 | 4 |
| Animal Embryology | Azad Uni. (Boroojerd, Iran) | B.Sc. of Biology | 1996-1997 | 2 |
| Laboratory of Animal Embryology | Azad Uni. (Boroojerd, Iran) | B.Sc. of Biology | 1996-1997 | 10 |
| Molecular Biology | Azad Uni. (Boroojerd, Iran) | B.Sc. of Biology | 1997 | 1 |
| Human Embryology | Azad Uni. (Boroojerd, Iran) | B.Sc. of Midwifery | 1997 | 1 |
| Human Embryology | Shahid Beheshti Medical of Sciences Uni. (Tehran, Iran) | B.Sc. of Midwifery | 1998-2002 | 3 |
| Advance topics in Embryology | Tarbiat Modarres Uni. Med. Sci. | PhD of Physiology | 2006-2007 | 2 |
| Developmental biology | University of Scince & Culture | MSc of Developmental Biology | 2006-2010 | 6 |
| Comparative Embryology | University of Scince & Culture | MSc of Developmental Biology | 2006-2012 | 6 |
| Reproduction and sex determination | University of Scince & Culture | MSc of Developmental Biology | 2006-2011 | 6 |
| Stem Cell Biology | Tarbiat Modarres Uni. Med. Sci. | PhD of Anatomical Sciences and Physiology | 2007-2008 | 2 |
| Developmental biology | University of Scince & Culture | PhD of Developmental Biology | 2008-now | 6 |
| Animal Histogenesis and regeneration | University of Scince & Culture | PhD of Developmental Biology | 2008-2012 | 4 |
| Animal Metamorphosis Mechanisms | University of Scince & Culture | PhD of Developmental Biology | 2008-2012 | 4 |

➤ **Awards and honours:**

1. The winner of **1st term of National training/education elites** hosted by Iran Ministry of Science, Research and Technology (2023).
2. Awarded the **honorary fellowship of the Islamic World Academy of Sciences** (2022), as a Mustafa Prize laureate and in appreciation of the efforts that he has made to the field of stem cell biology.
3. The National winner of **22nd annual Abu Reyhan Biruni research festival** on medical sciences hosted by Shahid Beheshti medical sciences university (Dec, 2021).
4. Awarded the national “science medal” from **Medical Council of Iran** (2020).
5. Winner of **Mustafa Prize**, the top in the Islamic world, for his efforts to promote translational research using stem cells with the goal to improve human life (Nov, 2019). <http://mustafaprize.org/page/?id=1025>
6. **Highly Cited Researcher** based on the rank in the global top 1% of scientists by citations featured in ESI (Essential Science Indicators), Web of Science (Jul, 2019, 2020, 2022).
7. Winner of **the world academy of sciences (TWAS)** for the advancement of science in developing countries in Biology (2019). <https://twas.org/article/winners-2019-twas-prizes-announced>
8. The Winner of **32th Khwarizmi International Award (KIA)** hosted by Iran Ministry of Science, Research and Technology, (Feb, 2019). 1st rank in basic science with title: **Making Hepatocytes and Cardiomyocytes for Regenerative Medicine**
9. Winner of travel award in 2nd meeting of “**Organoids: Modelling Organ Development and Disease in 3D Culture**” EMBL Heidelberg, Germany, 10 - 13 Sep 2018.
10. He was also selected as **20 stem cell person of the year 2017 award nominees** based on the niche site. <https://ipsccell.com/2017/11/20-stem-cell-person-of-the-year-2017-award-nominees/>
11. The winner of **Iranian Genetics National Award** for distinguished investigator in Stem cells, May, 2016.
12. The winner of **National science elites** hosted by Iran vice Presidency for science and technology and National Elite Foundation (2016).
13. The winner of **International Prof. Yalda Award for Excellence in Medical Sciences**, November 2015, Tehran.

14. The winner of **distinguished Iranain scientist in Biotechnology** as selected by Iranian Biotechnology Society (May 2015), Tehran.
15. The winner of **the United Nations Educational, Scientific and Cultural Organization (UNESCO)-Equatorial Guinea international prize** for research in life sciences due to improving the quality of human life due to improving the quality of human life with his stem cell research, to numerous applications in regenerative medicine (Sep 2014). The award promoted by the Head of State, H.E. Obiang Nguema Mbasogo (Equatorial Guinea), that each year serves to recognize and support the work of scientists and researchers that fight to improve the development and the conditions of human life. The statement from the UNESCO recalls that the objective of these prizes is to *"mobilize science knowledge and policy for sustainable development and fostering capacity-building in science and innovation, the purpose of this Prize is to reward projects and activities of individuals, institutions, other entities or non-governmental organizations for scientific research in the life sciences with a view to improving the quality of human life."*
16. Selected as Prominant Professor in the 3rd term of **Allameh Tabatabaei's Award**, hosted by Iran vice Presidency for Science and Technology, Presidency and National Elite Foundation (2014).
17. The winner as **first rank in 'clinical and non-surgical group' and receiving Dr. Hadavi's Award from Academy of Medical Sciences** (2014). The title of paper was: "Generation of liver disease-specific induced pluripotent stem cells along with efficient differentiation to functional hepatocyte-like cells". By Ghodsizadeh A, Taei A, Totonchi M, Seifinejad A, Gourabi H, Pournasr B, Aghdami N, Malekzadeh R, Almadani N, Salekdeh GH, Baharvand H. in "Stem Cell Rev. 2010;6(4):622-32". The award is named after Dr. *Nour Ad-din Hadavi*, the former Professor of Medicine at University of Tehran. The Academy evaluated published medical papers by Iranian researchers (as corresponding or first author) on clinical and basic sciences. The articles were screened based on their citations and journal impact factors and also their relevance to national and international problems by a team of expert internal and external reviewers.
18. Selection of one of top ten scientists of Iran in Medicine in 2014 by **Academy of Medical Sciences** that has most citations and publications in last 10 years.
19. The Winner of **2nd National award of quality activities** (March, 2013). 1st rank. <http://www.iranfqm.com/>
20. The Winner of **26th Khwarizmi International Award (KIA)** hosted by Iran Ministry of Science, Reseach and Technology, (Feb, 2013). 3rd rank in basic science with title: **Production of Neural Lineage Cells for Translational Research: From Pluripotent Stem Cells to Transplantation in Animal Models.**
21. The Winner of **17th annual Razi research festival on medical sciences** hosted by Iran Ministry of Health and Medical Education (Jan, 2012). 1st rank in New Technologies in Medical Science.

22. The gold medal of **The Islamic Educational, Scientific, and Cultural Organization “ISESCO Science and Technology Prize, 2010”** in the field of **Biology**, at fifth Islamic Conference of Ministers of Higher Education and Scientific Research, 19-21st October, 2010, Kuala Lumpur, Malaysia. WWW.ISESCO.org.ma
23. The winner of **Dr. Hadavi’s Award, February 2010 as young Scientist from Academy of Medical Sciences** for “Proteomic signature of human embryonic stem cells” by Baharvand H, Hajheidari M, Ashtiani SK, Salekdeh GH which published in “Proteomics. 2006;6(12):3544-9”. In order to promote medical research in Iran, the “**Academy of Medical Sciences**” annually chooses the top published Iranian medical research articles to receive “*Dr. Hadavi's Award*”. The award is named after Dr. *Nour Ad-din Hadavi*, the former Professor of Medicine at University of Tehran. The Academy evaluated published medical papers by Iranian researchers (as corresponding or first author) on clinical and basic sciences. The articles were screened based on their citations and journal impact factors and also their relevance to national and international problems by a team of expert internal and external reviewers.
24. The winner of the **27th annual book of the year of the Islamic republic of Iran** (In Medicine part), by the book of Stem Cell Series: (a) Embryonic Stem Cells, (b) Adult Stem Cells, (c) Stem Cells: Differentiation and Applications (d) Tissue engineering and methods in Stem Cell research. (February, 2010).
25. The winner of **16th university student’s year book award** in part of translation (Dec. 2009). Book title was: Gilbert S, Translated by: Abbas Piryaee, Faezeh Faghihi, Fatemeh Siadat, Bahram Mirhabibi, Farzaneh Najafi, Elaheh Afzal, Reza Moghadasali, Feresteh Karamali, under supervision of *Hossein Baharvand*, House of Biology (Tabesh-e Andisheh) Press, 2008.
26. Winner of **international society for stem cell research (ISSCR)** travel award in 5th annual meeting, Cairns, Queensland, Australia, 2007.
27. The Winner of **12th annual Razi research festival on medical sciences** which hosted by Iran Ministry of Health and Medical Education (Dec, 2006) for Stem Cell research.
28. Winner of annual best researches of **University of Science and Culture** (Dec, 2006).
29. Winner of **international society for stem cell research (ISSCR)** travel award in 4th annual meeting, Canada, Ontario, 2006.
30. Selected as Best National Specialist in **8th Shaheed Rajaei Award** (Sept. 2005, Tehran Iran)
31. The first winner of award of the **national best researchers** (introduced by Iranian Academic Center for Education, Culture and Research (Jehad Daneshgahi of Iran) (Dec. 2004).
32. The Winner of young scientists of **10th annual Razi research festival on medical sciences** hosted by Iran Ministry of Health and Medical Education in part of basic sciences (Dec, 2004). The topic was: *Establishment and in Vitro differentiation of a new Embryonic stem cell line from Human Blastocyst*.

33. The winner of 5th annual Royan research award (scientific congress of reproductive biomedicine) for best oral presentation (Tehran, 1-3 Sep, 2004). Title of presentation was: *Baharvand H, Embryonic stem cells: Characteristics, Differentiation and perspectives*
34. The winner of 10th university student's year book award in part of translation (Dec. 2003). Book title was: Alberts B, Bray D, Johnson A, Lewis J, Raff M, Roberts K, Walter P; Essential Cell Biology (*An Introduction in the Molecular Biology of the Cell*), Translated by: *Baharvand H*, Sheikhian A, Mirhabibi B, Pooyan M, Afsharian P, Farzaneh P; House of Biology (Tabesh-e Andisheh) Press, 2003.
35. The winner of annual **Middle East Fertility Society Meeting** for best paper (Beirut, 13 Dec, 2003). Title of paper was: *Baharvand H*, Matthaie K: Establishment of new embryonic stem cell lines from Balb/c and C57BL/6 mouse strains.
36. The first winner of award of the national best researchers (introduced by Iranian Academic Center for education, Culture and Research (Jehad Daneshgahi of Iran)) (Dec. 2003).
37. The Iranian winner of the 2nd Royan International Research Award (Infertility and Reproductive Health, 12-13 Sept. 2001). My project entitled: Improvement of blastocyst development in vitro and overcoming the blastocyst collapse and its effective factor(s) in sequential culture media.
38. The winner of the prize of annual award of the best researchers of Iranian Academic Center for education, Culture and Research (Jehad Daneshgahi of Iran) (2000).

➤ **Editorial Board member**

1. **Stem Cell Reports** (2020-now), USA
2. **Journal of Biological Chemistry** (2015-2020), USA
3. **Scientific Reports (Nature Publishing Group)** (2015-now), UK
4. **Stem Cells and Development** (2010-now), USA
5. **Current Stem Cell, Research, and Therapy** (2006-Now), USA
6. **World Journal of Stem Cells** (2012-now), USA
7. **Cell Journal** (2007-now), IRAN
8. **International Journal of Biomedical Science (IJBS)** (2006-now), USA
9. **International journal of Organ Transplantation Medicine** (2010-now), IRAN
10. **Regenerative Medicine** (2006-2010), UK
11. **Stem Cell Reviews and Reports** (2009-2013), USA
12. **Journal of Iranian Biotechnology** (2008-2010), IRAN

➤ **Executive Activities:**

1. Founder and Director of Royan Institute for Stem Cell Biology and Technology (Jan 2013-now)
2. Scientific secretary of 1st Royan Stem Cell Nano Engineering meeting and Electrospinning Workshop, October 27-28, 2012.
3. Member of Evaluation and planning committee of Applied Cell Sciences of Ministry of health of Iran (Aug 2012-present).
4. Scientific program committee member of 24th International Congress of the Transplantation Society, 15-19 July, 2012, Berlin, Germany.
5. Co-Chair of 3rd Royan International Summer School on Stem Cells and Developmental Biology. 14-19 July, 2012
6. Chair of 3rd Royan Precongress on Stem Cell Biology and Technology (Sep, 2011)
7. Co-Chair of 2nd Royan International Summer School on Stem Cells and Developmental Biology. 17-22 July, 2011
8. Chair of 2nd Royan Precongress on Stem Cell Biology and Technology (Sep, 2010)
9. Chair of 1st Royan International Summer School on Stem Cells and Developmental Biology. 12-15 July, 2010.
10. Member of International committee of ISSCR (International society for stem cell research) (2008-2009)
11. Chair of 1st Royan Precongress on Stem Cell Biology and Technology (Sep 2009)
12. Head of Department of Stem Cells and Developmental Biology (Jan, 2004-2020).
13. Scientific Advisor of Iranian Biological Resource Center (Nov. 2008-2010).
14. Scientific committee member of 9th Congress of Iranian Anatomical Sciences, (May 24-28, 2010)
15. The head of department of Developmental Biology of the University of Science and Culture (2006-2018)
16. Chairman of 8th Royan International Congress, September 5-7, 2007, Tehran, Iran.
17. The honoree member of scientific board committee of Anatomical Sciences department in Faculty of Medicine, Tarbiat Modarres University, Tehran, Iran (2006-2008)

18. The member of Laboratory Interest Group (LIG) Advisory Committee in Middle East Fertility Society (MEFS) (2005-2007)
19. The member of referee committee of 13th Razi Award (2007)
20. The member of scientific committee of 14th Iran infertility congress, February 20-22, 2008. And 15th Iranian Infertility Congress 18-20 February 2009
21. The member of the jury board of the annual award of Kharazmi for the students (Ministry of Education) (1997-2004).
22. The member of scientific committee and the Jury of 7th Iranian Congress of Anatomical Sciences, 10-12 May 2006, Kashan, Iran.
23. The member of scientific committee of 1st Yazd International Student Award in Reproductive Medicine, December 2005, Yazd, Iran.
24. The member of scientific committee of Royan International Award and Royan International Twin Congress (Stem Cells and Reproductive Biology), 2005-now, Tehran, Iran.
25. Director of Research laboratories of Royan Institute (1997-2004).
26. Establishment of Department of Stem Cells in Royan Institute, 2003.
27. Establishment of Stem Cells Laboratories in Royan Institute, Tehran Iran, 2002

➤ **Social Activities:**

1. Involvement in establishment of Royan Charity Association for Health Research
2. Founder of infertility treatment center and Genetic diagnostic center in Abu-Alisina Charity hospital, Organ Transplantation Center, Shiraz
3. Collective recreation such mountain climbing and sports
4. Teaching of Stem Cells and Regenerative Medicine to general population.

He established a program entitled “stem cells for all” including hands-on workshops and international summer school to provide quality basic education for primary, secondary, tertiary-level as well as public people and charities. The aim of these participatory teaching and learning methods is to motivate and empower learners to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future for stem cells and their potentials in regenerative medicine.

➤ **Products:**

Co-supervisor in generation of following recombinant proteins:

- Human basic fibroblast growth factor (bFGF)
- Human Epidermal growth factor (EGF)
- Human Keratinocyte growth factor (KGF)
- Human Insulin-like growth factor-1 (IGF1)
- Human Glial-derived neurotrophic factor (GDNF)
- Human Fibroblast growth factor-4 (FGF4)
- Human Vessel endothelial growth factor (VEGF)
- Human Platelet-derived growth factor (PDGF)
- Human Brain-derived neurotrophic factor (BDNF)
- Human leukemia inhibitory factor (LIF)
- Mouse leukemia inhibitory factor (LIF)
- Human Stem Cell Factor (SCF)
- Human Oncostatin M (OSM)
- Human Fibroblast Growth Factor 4 (FGF4)
- Human Sonic hedgehog (Shh)
- Human Neurotrophin-3 (NT-3)
- Human Interleukin 2 (IL-2)
- Human Interleukin 3 (IL-3)
- Human Interleukin (IL-6)

➤ **Patents:**

| No. | Title of patent | Registration No. | Registration date | National /International |
|------------|--|-------------------------|--------------------------|--------------------------------|
| 1. | Immunoprotection of pancreatic islets by surface modification | 62702934 | 2019 | USA |
| 2. | Method for derivation and long-term establishment of ground state pluripotent embryonic stem cells | US20150037883A1 | 2015 | USA |
| 3. | Xeno-free and a feeder-free self-renewal extracellular matrix for long-term maintenance of undifferentiated human pluripotent stem cells and method of synthesizing the same | US20140220680A1 | 2014 | USA |
| 4. | Preparation of endothelial growth medium | 98751 | 2019 | National |
| 5. | Production of mesenchymal stem cells derived from human embryonic stem cells by inducible overexpression of VEGF | 87330 | 2015 | National |
| 6. | The procedure of mouse pancreatic islet isolation with high efficiency and purity | 84735 | 2015 | National |
| 7. | Green fluorescent puromycin-resistant transgenic mice | 84173 | 2014 | National |
| 8. | Transgenic mice with green fluorescent protein-labeled pancreatic beta cells | 84151 | 2014 | National |
| 9. | Development of a muscle-derived sponge structure for tissue engineering applications | 84145 | 2014 | National |
| 10. | Development of a sponge scaffold from human pericardium membrane | 80008 | 2013 | National |
| 11. | Modeling of spinal cord injury in monkeys using impactor | 75481 | 2012 | National |
| 12. | Cross-linking of collagen scaffolds by UV irradiation for tissue engineering applications | 69124 | 2011 | National |
| 13. | Collagen scaffolds for tissue engineering applications | 69125 | 2011 | National |
| 14. | Isolation of melanocytes from skin biopsies and their transplantation to treat patients with vitiligo | 49629 | 2008 | National |
| 15. | Generation of mouse embryonic stem cells under different culture conditions | 38982 | 2007 | National |
| 16. | Generation of embryonic stem cells from various strains of mice | 38983 | 2007 | National |
| 17. | Establishment and differentiation of embryonic stem cells from human blastocyst | 38984 | 2007 | National |
| 18. | Generation of human embryonic stem cells with diploid and triploid karyotypes | 38985 | 2007 | National |

➤ **Workshop Presentation:**

1. Chairman of 4th human Pluripotent Stem Cells Workshop, May 10-11, 2012, Tehran, Iran
2. Chairman of Real time-RT-PCR Workshop, January 27-29, 2012
3. Chairman of 8th Royan Workshop on Mouse Embryonic Stem Cells, November 2, 2011, Tehran, Iran
4. Chairman of 3rd human Pluripotent Stem Cells Workshop, March 8-9, 2011, Tehran, Iran
5. Chairman of 7th Mouse Embryonic Stem Cells workshop, Nov. 10, 2011, Tehran, Iran
6. Chairman of 6th Mouse Embryonic Stem Cells workshop, 27 Oct, 2011, Tehran, Iran
7. Chairman of 3rd Royan Workshop on: human embryonic Stem Cell, 11-13 March. 2011, Tehran, Iran
8. Chairman of 5th Mouse Embryonic Stem Cells workshop, 19-20, Nov, 2009, Tehran, Iran
9. Chairman of 1st Real time-RT-PCR workshop, 15-17, Dec, 2009, Tehran, Iran
10. Chairman of 2nd Royan International Workshop on: human embryonic Stem Cell, 1-3 Sep. 2007, Tehran, Iran
11. Chairman of 1st Royan International Workshop on: Human Embryonic Stem Cell, 4-6 Dec. 2006, Tehran, Iran
12. Chairman of 4th Mouse Embryonic Stem Cells workshop in the 7th annual Royan research award (Royan International Twin Congress: 7th congress of Reproductive Biomedicine and 2nd Congress on Stem Cell Biology and Technology), 13-15 Sept. 2006, Tehran, Iran
13. Chairman of 1st Royan Workshop on: Limbal Stem Cell Culture *in vitro*, March 11-12, 2006, Dept. of Stem Cells, Royan Institute, Tehran, Iran.
14. Chairman of embryonic stem cell workshop in the 6th annual Royan research award (scientific congress of reproductive biomedicine and Stem Cells), 5-6 Sept. 2005, Tehran, Iran.
15. Chairman of embryonic stem cell workshop in the 5th annual Royan research award (scientific congress of reproductive biomedicine), 30-31 Aug. 2004, Tehran, Iran.
16. Chairman of embryonic stem cell workshop in the 1st National meeting on stem cells and gene therapy, 9th May, 2004, Istanbul, Turkey.
17. Co-chair of international stem cell workshop in National Center for Excellence in Molecular Biology (CEMB), Punjab University, Lahore, Pakistan, 1-12 Dec. 2003.

18. Co-Chair of embryonic stem cell workshop in the 4th Royan international research award's scientific congress, 13-14 Sept. 2003, Tehran, Iran.

➤ **Keynote speaker or oral presentation in national or international meetings:**

| No | TITLE | LOCATION | DATE |
|-----------|--|---|-------------------------------|
| 1. | Generation of Transplantable Midbrain Dopaminergic Progenitors for Treatment of Parkinson's Disease | 5 th international congress of Biotechnology, Tehran | May 2023 |
| 2. | Generation of Transplantable Retinal Pigmented Epithelial Cells for Treatment of Age-Related Macular Degeneration | Stem cells and regenerative medicine, Mashhad | May 2022 |
| 3. | Human Endometrial Organoids | Reproductive medicine, Yazd | April 2021 |
| 4. | Pluripotent stem cell therapy for Parkinson's disease | 8th basic and clinical neuroscience congress | December 18-20, 2020 |
| 5. | Human ES cell-derived Dopaminergic Transplants Function in a Primate Model of Parkinson's Disease | The 10 th meeting of Asian cellular therapy organization, Sapparo, Japan | November 7-9, 2019 |
| 6. | Pluripotent stem cell-derived cardiac progenitors: A platform for synthetic developmental biology of the human heart | 2nd Cologne Conference on Cardiac Regeneration and Cell Therapy, Cologne, Germany | September 26-27, 2019 |
| 7. | Cardiomyocyte BioEngineering for Regenerative Medicine | International molecular medicine symposium, Istanbul, Turkey | 16-18 May, 2019 |
| 8. | ESC and iPSC Differentiated RPE Cells: From Bench to Bedside | 9 th meeting of Iranian reasech association for vision and ophthalmology (IRAVO) | 18-19 April, 2019 |
| 9. | Isolation and Propagation of Functional Germ Cells from Mouse and Human Ovarian Organoids | Organoids: Modelling Organ Development and Disease in 3D Culture EMBL Heidelberg, Germany | 10 - 13 Sep 2018 |
| 10. | Heart regenerative medicine: from cardiomyocyte generation to bioengineering | The first Iranian International Tissue Engineering and Regenerative Medicine Congress (ITERM), Tehran, Iran | 18-20 July, 2018 |
| 11. | TGF- β signaling modulation in naïve pluripotency: two sides of the same coin? | 16th Annual Meeting of International Society for Stem Cell Research (ISSCR), Melbourne, Australia | 20th Jun - 23rd Jun - 2018 |
| 12. | Efficient Oogonial Stem Cell Isolation from Mouse and Human Ovaries: An Organoid-based Approach | 13 th International Royan congress on Stem Cell Biology and Technology, Tehran, Iran | 30 August to 1 September 2017 |

| No | TITLE | LOCATION | DATE |
|-----------|--|---|-------------------------------|
| 13. | Constructing Neural Stem cells | International Brain Research Organization (IBRO) Associate School of Neuroscience to be held in Kerman University of Medical Sciences | 27 August to 1 September 2017 |
| 14. | Generation and Tissue Engineering of Human Stem Cell-Derived Cardiomyocytes | 2 nd Stem cells and regenerative medicine international congress Tehran, Iran | 13-15 July |
| 15. | Stem cells and Regenerative Medicine: our experiences and future directions | 2 nd Stem cells and regenerative medicine congress Mashhad, Iran | 19-21 April, 2017 |
| 16. | Tissues are 3D: Integrated Scalable Differentiation in Spheroid-based 3D Cultures | 3 rd Iranian Tissue engineering and Regenerative Medicine, Tehran, Iran | 18-20 Oct, 2016 |
| 17. | Scalable Production of Hepatocyte-Like Cells by Microparticle-Mediated Delivery of Growth Factors within Human Pluripotent Stem Cell Spheroids | Organoids: Modelling Organ Development and Disease in 3D Culture, EMBL, Heidelberg, Germany | 12-15 Oct, 2016 |
| 18. | A Scalable Engineering of Human Pluripotent Stem Cell Expansion and Differentiation for Clinical Application | Tissue Engineering and Regenerative Medicine-Asia Pasific, Taipei, Tiwan | 2-5 Sep, 2016 |
| 19. | Interconversion of Stem Cells and Germ Cells | 12 th International Royan congress on Stem Cell Biology and Technology, Tehran, Iran | 31Aug and 1-2 Sep 2016 |
| 20. | Reprogramming of cell fate for brain development and regenerative medicine | 2nd International & Fourteenth Iranian Genetics Congress, Tehran, Iran | May, 21-23, 2016 |
| 21. | Making Hepatocytes for Regenerative Medicine | The 1st National Festival and International congress of stem cell and Regenerative Medicine | May,19-21, 2016 |
| 22. | Towards A Neural Cell Fate by Programing and Reprograming | The 12 th congress of Iranian Anatomical Sciences, Tehran, Iran | May, 4-6, 2016 |
| 23. | Making Human Neural Stem Cells: Fundamentals and Therapeutic Implications | The 5th IBRO School, Tehran, Iran | April 30 - May 11, 2016 |
| 24. | Pluripotent Stem Cells: A Powerful Toolkit towards Human-on-Chip | 1 st National congress on Microfluidics and its applications in Medicine and Engineering, Shahid Beheshti University, Tehran, Iran | 5-6, March, 2016 |
| 25. | Human Neural Stem Cells derived from Cellular Programming and Reprogramming: Fundamentals and Implications | Fourth International Basic and Clinical Neuroscience Congress, Razi Convention Center, Tehran, Iran | 23-25, December, 2015 |
| 26. | Designing an Artificial Niche to Direct Stem-Cell Fate | 2 nd Iranian Congress on Tissue engineering and Regenerative Medicine, Tehran, Iran | 7-9, May 2015 |

| No | TITLE | LOCATION | DATE |
|-----------|---|---|----------------------------------|
| 27. | Stem cell technology: our experiences and future directions | International Congress on Blood; Diseases and Clinical Administrations, Yasuj, Iran | 11-14, May 2015 |
| 28. | Stem Cell Therapy in CNS diseases | PhD course, MoMeD, Copenhagen, Denmark | 4-8 May 2015 |
| 29. | How stem cells support cognitive sciences? | Sixth International Conference of Cognitive Science, Tehran, Iran | 27-27 April, 2015 |
| 30. | Hope for a broken heart | TEDx, Tehran University of Medical Science, Tehran, Iran | Feb, 20, 2015 |
| 31. | Stem Cells from Biology to Regenerative Medicine | Department of Physics, Institute for Research in Fundamental Sciences, Tehran, Iran | Jan, 14, 2015 |
| 32. | Biomedical engineering strategies to augment stem cell differentiation | Iranian Conference on Biomedical Engineering, Amir Kabir University of Technology, Tehran, Iran | November 26-28, 2014 |
| 33. | A Robust Integrated Platform for Scalable Production of Human Hepatocyte-like Cells and Cardiomyocytes from Pluripotent Stem Cells in Stirred Suspension Bioreactor | National Research Council, Rome, Italy | November 7, 2014 |
| 34. | Stem cells: Current and Future | Stem cell congress, Yazd, Iran | October 23, 2014 |
| 35. | The Road to Regenerative Heart Therapies: Stem Cell Differentiation and Experimental Trials | 3rd International Congress of Preventive Cardiology, Shiraz, Iran | October 3-5, 2014 |
| 36. | Human Pluripotent Stem Cell-Derived Hepatocyte-Like Cells Ameliorate Disease in the Carbon Tetrachloride-Induced Mouse Liver Injury Model | 5th Mercia Stem Cell Alliance, University of Liverpool, UK | 19 th Sep. 2014 |
| 37. | Cellular Programming and Reprogramming: Routes to Regenerative Neural Cell Therapy | 10 th Stem Cells Biology and Technology meeting, Tehran | September 3-5, 2014 |
| 38. | Cellular Reprogramming and Transdifferentiation: Routes to Regeneration | First International and 3th Iranian Genetics Congress | May 24-26, 2014, Tehran |
| 39. | Stem Cells as Regeneration Kits: So Close, Yet So Far Away | 12th International Congress of Immunology and Allergy of Iran | 29th April -2nd May 2014, Tehran |
| 40. | Translational Neurodevelopmental biology | 3rd <i>International Student Biotechnology</i> Congress , Tehran | 6-8 May 2013 |
| 41. | Translational NeuroDevelopmental Biology: Differentiation and | 16 th Congress of Iranian society of Biology | Sep 2012, Kerman, Iran |

| No | TITLE | LOCATION | DATE |
|-----|--|---|---|
| | Transplantation of Neural Lineage Cells from Pluripotent Stem Cells | | |
| 42. | Constructing Neural Lineage Cells from Pluripotent Stem Cells | Tehran IBRO School of Neuroscience | 12-24, 2012 in Tehran |
| 43. | Pluripotent Stem Cells: Potentials and Perspective | 15th Congress of Iranian Urological Association, Tehran | 10th - 13th May, 2012 |
| 44. | A chemical approach to efficient generating embryonic and germline-derived pluripotent stem cells | Doha, Qatar | Feb 27- March 1, 2012 |
| 45. | Differentiation of human pluripotent stem cells into neural cells | 1st Stem Cell symposium with international participation, Samsun, Turkey | 20Sep-1Oct, 2010 |
| 46. | Feeder-free establishment, expansion, and directed differentiation of human pluripotent stem cells | 3 rd congress of Asia pacific Initiative on Reproduction, Thailand | 8-11 April, 2010 |
| 47. | Pluripotent stem cell research at Royan Institute, | 5 th Int. Stem Cell Biology and Technology Congress, Royan Inst. | Sept 23-25, 2009 |
| 48. | Behavior of Stem cells on Biomaterials | Cell Behavior on Tissue engineering scaffolds | March 2, 2009 Tehran, Iran Polymer and Petro chemistry Institute |
| 49. | Human Embryonic stem cell research at Royan institute | Riken CDB, Kobe, Japan | 8. December, 2008 |
| 50. | Differentiation of Embryonic Stem Cells and Their Potential Applications in Neural Disorders | The 15 th International Congress of Neurology and clinical Electrophysiology of Iran | 27 - 30 May. 2008, Tehran, Iran |
| 51. | Embryonic Stem Cells: From Bench to Bedside | 3 rd National Stem Cells and Gene Therapy congress | Turkey, 29-31 May, 2008. |
| 52. | Embryonic stem cells: differentiation and application | The 1 st International Congress on Health Genomics & Biotechnology | 24-26 Nov. 2007, Tehran, Iran |
| 53. | Recent development and applications in stem cells | Frontiers in Molecular and Cellular Biology in Reproduction and Clinical Implications | 22 October, - 3 November, 2007, Antalya, Turkey |
| 54. | Identification of mouse embryonic stem cell-associated proteins: a comparative proteomic approach. | 2 nd Yazd Int. Students award in Repr. Med. | May, 12, 2007 Yazd, Iran |
| 55. | Introducing to stem cells | 6 th IBRO-Associate School & 1 st Neuroscience Orientation Summer Program | Aug. 26 th - Sept. 21 st 2006 |
| 56. | Establishment, maintenance, and application of human embryonic stem cells | 7 th Iranian Congress of Anatomical Sciences | Iran, 10-12 May 2006 |
| 57. | Derivation, differentiation and applications of embryonic stem cells | 1 st Yazd Int. Students award in Repr. Med. | Iran, 28-29 Dec. 2005 |

| No | TITLE | LOCATION | DATE |
|-----------|--|---|---|
| 58. | Embryonic Stem Cells: establishment, differentiation and development | 6 th Royan International Congress on Reproductive Biomedicine and Stem Cells | Iran, 7-9 Sept. 2005 |
| 59. | Generation of New Human Embryonic Stem Cell Lines with Diploid and Triploid Karyotypes | International Symposium on Stem Cells | Mumbai, India, 18-21 Sept. 2005 |
| 60. | Differentiation of embryonic stem cells into neurons and insulin-secreting cells | 13 th world congress of IVF | Istanbul, Turkey, 26-30 May, 2005 |
| 61. | Embryonic Stem Cells | 10 th annual meeting of Iranian Society of Reproduction and Infertility | 2004 |
| 62. | Embryonic stem cells: Characteristics, Differentiation and perspectives | 5 th annual Royan research award (scientific congress of reproductive biomedicine) | Tehran, 1-3 Sep, 2004 |
| 63. | Embryonic Stem Cells | 10 th annual meeting of Iranian Society of Anatomical Sciences | 2004, May 5-7 |
| 64. | Differentiation of embryonic stem cells into neurons and insulin-secreting cells. | 1 st national meeting on stem cells and gene therapy | 7-8 May 2004, May, 2004, Istanbul, Turkey |

➤ **Published Full Books in English:**

1. **Stem Cell Nanoengineering**

Editor: **Hossein Baharvand** and **Nasser Aghdami**

Publisher: John Wiley and Sons, USA, 2015.

2. **Regenerative Medicine and cell therapy**

Editor: **Hossein Baharvand** and **Nasser Aghdami**

Publisher: Humana Press, Springer, USA, 2012.

3. **Advances in Stem Cell Research**

Editor: **Hossein Baharvand** and **Nasser Aghdami**

Publisher: Humana Press, Springer, USA, 2012.

4. **Trends in Stem Cell Biology and Technology**

Editor: **Hossein Baharvand**

Publisher: Humana Press, Springer, USA, 2009

➤ **Published Chapter Books in English:**

1. Shiva Nemati, Saeed Abbasalizadeh, Hossein Baharvand*. **Scalable Expansion of Human Pluripotent Stem Cell-derived Neural Progenitors in Stirred Suspension Bioreactor under Xeno-free Condition.** Springer book "Bioreactors for Stem Cells Biology: Methods and Protocols Book". 2016, 1502:143-58.
2. Newsha Haghparast, Mohammad Pakzad, Parvaneh Farzaneh, Marzieh Ebrahimi, Vahid Hajihosseini, Mahdi Tondar, ***Hossein Baharvand****. **Stem Cell Banking in Iran.** Springer book "Stem Cell Banking" of Stem Cell Biology and Regenerative Medicine series. By Editors: Ilic, Dusko (Ed.) 2014, 123-141.
3. ***Hossein Baharvand****, Seyedeh-Nafiseh Hassani. **A new chemical approach to efficient generating mouse embryonic stem cells.** Methods Mol Biol. Springer book "Pluripotent Stem Cells: Methods and Protocols". 2013, 997:13-22.
4. ***Hossein Baharvand****, Mehran Rezaei Larijani, Maryam Yousefi. **A Protocol for Expansion of Undifferentiated Human Embryonic and Pluripotent Stem Cells in Suspension.** Methods Mol Biol, 2012; 873:217-26.
5. ***Baharvand H****, Totonchi M, Taei A, Seifinejad A, Aghdami N, Salekdeh GH. **Human-induced pluripotent stem cells: derivation, propagation, and freezing in serum- and feeder layer-free culture conditions.** Methods Mol Biol. 2010;584:425-43.
6. ***Baharvand H****, Zare Mehrjardi N. **Nanotechnology Applications in Stem Cell Biology and Technology.** Reisner D. Bionanotechnology, CRC publisher (2008)
7. ***Baharvand H.*** **Embryonic Stem Cells: Establishment, maintenance, and differentiation,** pp.1-63, In: Embryonic Stem Cell Research ISBN 1-59454-849-8 Editor: Eric V. Grier, 2006

➤ **Chapter Books in Persian**

1. Freshteh Esfandiari, Seyedeh-Nafiseh Hassani, ***Hossein Baharvand.*** **Stem Cells and Reproductive Biology.** In Reproductive Biology. By M.H. Nasr-Esfahani and M Tavallaei, In Press.
2. ***Baharvand H.*** **Embryonic stem cells: characteristics and potentials for treatment.** In: *Treatment of Genetic disease.* Published by: Tehran University of Medical Sciences. 2004, P: 249-280.

➤ **Published Full Books in Persian:**

1. Good Manufacturing Practice

Editors: **Hossein Baharvand, Sara Taleahmad**

Stem cells and Regenerative Medicine series

Publisher: House of Biology press, 2023 (will publish)

2. Extracellular Vesicles

Editors: **Hossein Baharvand, Faezeh Shekari**

Stem cells and Regenerative Medicine series

Publisher: House of Biology press, 2023 (will publish)

3. Applied Bioinformatics

Editors: **Hossein Baharvand, Sara Taleahmad**

Stem cells and Regenerative Medicine series

Publisher: House of Biology press, 2023

4. Biology of Organoids (Volume 3)

Mesoendodermal Derivatives

Editors: **Hossein Baharvand, Ana Meyfur**

Stem cells and Regenerative Medicine series

Publisher: House of Biology press, 2022

5. Biology of Organoids (Volume 2)

Ectodermal Derivatives

Editors: **Hossein Baharvand, Saeideh Aran**

Stem cells and Regenerative Medicine series

Publisher: House of Biology press, 2022

6. Essential Biology of Organoids (Volume 1)

Editors: **Hossein Baharvand, Saeideh Aran**

Stem cells and Regenerative Medicine series

Publisher: House of Biology press, 2022

7. Stem Cell Methods

Editors: **Hossein Baharvand**

Stem cells and Regenerative Medicine series

Publisher: House of Biology press, 2021

8. Cell Therapy (Volume 2)

Editors: **Hossein Baharvand and Ensieh Hajizadeh**

Stem cells and Regenerative Medicine series

Publisher: House of Biology press, 2021

9. Cell Therapy (Volume 1)

Editors: **Hossein Baharvand and Ensieh Hajizadeh**

Stem cells and Regenerative Medicine series
Publisher: House of Biology press, 2021

10. Tissue engineering

Editors: **Hossein Baharvand and Mohammad Kazemi-Ashtiani**
Stem cells and Regenerative Medicine series
Publisher: House of Biology press, 2019

11. Stem Cell Differentiation

Editors: **Hossein Baharvand and Yaser Tahamtani**
Stem cells and Regenerative Medicine series
Publisher: House of Biology press, 2019

12. Tissue-specific Stem Cells

Editors: **Hossein Baharvand and Mohammad-Reza Bagheban-Eslaminejad**
Stem cells and Regenerative Medicine series
Publisher: House of Biology press, 2019

13. Pluripotent Stem Cells

Editors: **Hossein Baharvand and Seyedeh-Nefiseh Hassani**
Stem cells and Regenerative Medicine series
Publisher: House of Biology press, 2019

14. Cellulhaei Bahari

Editors: **Hossein Baharvand**
Publisher: RaheYar press, 2021

15. How to Write a Scientific Paper

Editor: **Hossein Baharvand**
Publisher: House of Biology press, 2013.

16. Embryonic Stem Cells

Editor: **Hossein Baharvand**
Publisher: House of Biology press, 2008.

17. Adult Stem Cells

Editor: **Hossein Baharvand**
Publisher: House of Biology press, 2008

18. Stem Cells: Differentiation and Applications

Editor: **Hossein Baharvand**
Publisher: House of Biology press, 2008

19. Tissue engineering and methods in Stem Cell research

Editor: **Hossein Baharvand**
Publisher: House of Biology press, 2008

20. **Biology**, (for students of high school),
Kazemi Ashtiani S, Farzaneh P, ***Baharvand H***, Javan M;
Tehran, Ministry of Education Press, 1st ed. 2000, Persian. 10th ed., 2011.

21. **A Guidebook of Infertility Treatment for Infertile Couples**,
Hossein Baharvand
Publisher: Tabib Press, Tehran, 1st ed, 1999. **2nd ed. 2003.**

➤ **Published Translated Books to Persian:**

1. **Essential Cell Biology** (2019). Alberts B, Hopkin K, Johnson A, Morgan D, Raff M, Roberts K, Walter P; Translated under supervision of: Hossein Baharvand. Translated by: Mastaninejad Sh, Ghezelayagh Ze, Ghezelayagh Za, Nasiri N, Vahdat S, Parvini N, Hadadi MH, Nateghi R. House of Biology Press, 2023.
2. **Developmental Biology** (Barresi and Gilbert, 2020). Translated under supervision of: **Hossein Baharvand**, *Translated by:* Hadadi M, Haghparast N, Khoshdel N, Farhadi I, Ghezelayagh Za, Ghezelayagh Ze, Mastaninejad Sh. Publisher: House of Biology Press, 2021.
3. **Developmental Biology** (Gilbert, 2010). Translated under supervision of: **Hossein Baharvand**, *Translated by:* Abbas Piryaee, Yasser Tahamtani. Publisher: House of Biology Press, 2013.
4. **So, you want to be a Scientist?** (Philip A. Schwartzkroin, Oxford University Press, USA; 1 edition, 2009). Translated under supervision of: **Hossein Baharvand**, *Translated by:* Newsha Haghparast, Publisher: House of Biology Press, 2013.
5. **English Communication for Scientists** (Jean-luc Doumont, Cambridge, MA: NPG Education. 2010), Translated under supervision of: **Hossein Baharvand**, *Translated by:* Keynoosh Khaloughi, and Masoud Vosough. Publisher: House of Biology Press, 2012.
6. **Stem cells for Dummies** (Lawrence S.B. Goldstein, Meg Schneider, 2010), Translated under supervision of: **Hossein Baharvand**, *Translated by:* Keynoosh Khaloughi, Ebrahim Shahbazi, Mojdeh Sojoodi, Masoud Vosough. Publisher: House of Biology Press, 2011.
7. **Developmental Biology** (Gilbert, 2006), Translated under supervision of: **Hossein Baharvand**, *Translated by:* Abbas Piryaee, Faezeh Faghihi, Fatemeh Siadat, Bahram Mirhabibi, Farzaneh Najafi, Elaheh Afzal, Reza Moghadasali, Freshteh Karamali. Publisher: House of Biology Press, 2008.
8. Alberts B, Bray D, Hopkin, Johnson A, Lewis J, Raff M, Roberts K, Walter P; **Essential Cell Biology (2010)**, Translated under supervision of: **Hossein Baharvand**. *Translated by:* Farzaneh Z, Piltan A, Nassiri N, and Saeed Fardi. House of Biology Press, 2011.
9. Alberts B, Bray D, Johnson A, Lewis J, Raff M, Roberts K, Walter P; **Essential Cell Biology (2004)**, *Translated by:* **Baharvand H**, Sheikhian A, Mirhabibi B, Farzaneh P, Hashemi SM, Ebrahimi M, Zare N, Zarei Moradi Sh. House of Biology (Tabesh-e Andisheh) Press, 2006.
10. Alberts B, Bray D, Johnson A, Lewis J, Raff M, Roberts K, Walter P; **Essential Cell Biology (An Introduction in the Molecular Biology of the Cell)**, (1998). *Translated by:* **Baharvand H**, Sheikhian A, Mirhabibi B, Pooyan M, Afsharian P, Farzaneh P; House of Biology (Tabesh-e Andisheh), 2003.

➤ **PUBLISHED papers in peer-reviewed INTERNATIONAL Journals:**

(*: means correspondence)

1. Mokhtarzadeh Khanghahi A, Rayatpour A, **Baharvand H**, Javan M*. **Neuroglial components of brain lesions may provide new therapeutic strategies for multiple sclerosis.** *Neurol Sci.* 2023 Jul 6. doi: 10.1007/s10072-023-06915-5.
2. Moradi S, Guenther S, Soori S, Sharifi-Zarchi A, Kuenne C, Khoddami V, Tavakol P, Kreutzer S, Braun T*, **Baharvand H***. **Time-resolved Small-RNA Sequencing Identifies MicroRNAs Critical for Formation of Embryonic Stem Cells from the Inner Cell Mass of Mouse Embryos.** *Stem Cell Rev Rep.* 2023 Jul 4. doi: 10.1007/s12015-023-10582-6.
3. Zare M, Mirhoseini SZ, Ghovvati S, Yakhkeshi S, Hesaraki M, Barati M, Sayyahpour FA, **Baharvand H**, Hassani SN*. **The constitutively active pSMAD2/3 relatively improves the proliferation of chicken primordial germ cells.** *Mol Reprod Dev.* 2023 Jun 28.
4. Rezaei Zonooz E, Ghezelayagh Z, Moradmamand A, **Baharvand H**, Tahamtani Y. Protocol-dependent morphological changes in human embryonic stem cell aggregates during differentiation towards early pancreatic fate. *Cells Tissues Organs.* 2022 Nov 14.
5. Zarrabi M, Shahrabaf MA, Nouri M, Shekari F, Hosseini SE, Hashemian SR, Aliannejad R, Jamaati H, Khavandgar N, Alemi H, Madani H, Nazari A, Amini A, Hassani SN, Abbasi F, Jaroooghi N, Fallah N, Taghiyar L, Ganjibakhsh M, Hajizadeh-Saffar E, Vosough M, **Baharvand H**. **Allogenic mesenchymal stromal cells and their extracellular vesicles in COVID-19 induced ARDS: a randomized controlled trial.** *Stem Cell Res Ther.* 2023 Jun 26;14(1):169.
6. Amini A, Shekari F, Assar Kashani S, Eslami N, Nazari A, Tofigh N, Shahpasand K, Akbari Javar H*, **Baharvand H***. Clonal mesenchymal stem cell-derived extracellular vesicles improve mouse model of weight drop-induced traumatic brain injury through reducing cistauosis and apoptosis. *Exp Neurol.* 2023 Jun 9;367:114467.
7. Tayebi B, Molazem M, Babaahmadi M, Ebrahimi E, Hajinasrollah M, Mostafaei F, Makvand Gholipour N, **Baharvand H**, Baghaban Eslaminejad MR, Hassani SN, Hajizadeh-Saffar E. Comparison of Ultrasound-Guided Percutaneous and Open Surgery Approaches in The Animal Model of Tumor Necrosis Factor-Alpha-Induced Disc Degeneration. *Cell J.* 2023 May 28;25(5):338-346.
8. Mansouri-Kivaj N, Nazari A, Esfandiari F, Shekari F, Ghaffari M, Pakzad M, **Baharvand H**. Homogenous subpopulation of human mesenchymal stem cells and their extracellular vesicles restore function of endometrium in an experimental rat model of Asherman syndrome. *Stem Cell Res Ther.* 2023 Apr 3;14(1):61.
9. Eslami N, Bahrehbar K, Esfandiari F, Shekari F, Hassani SN, Nazari A, Pakzad M, **Baharvand H**. Regenerative potential of different extracellular vesicle subpopulations derived from clonal mesenchymal stem cells in a mouse model of chemotherapy-induced premature ovarian failure. *Life Sci.* 2023 May 15;321:121536.

10. Ghorbaninejad M, Asadzadeh-Aghdaei H, ***Baharvand H***, Meyfour A. Intestinal organoids: A versatile platform for modeling gastrointestinal diseases and monitoring epigenetic alterations. *Life Sci.* 2023 Apr 15;319:121506.
11. Baei P, Daemi H, Aramesh F, ***Baharvand H***, Eslaminejad MB. Advances in mechanically robust and biomimetic polysaccharide-based constructs for cartilage tissue engineering. *Carbohydr Polym.* 2023 May 15;308:120650.
12. Li H, Meng X, Sheng H, Feng S, Chen Y, Sheng D, Sai L, Wang Y, Chen M, Wo Y, Feng S, ***Baharvand H***, Gao Y, Li Y, Chen J. NIR-II live imaging study on the degradation pattern of collagen in the mouse model. *Regen Biomater.* 2022 Dec 13;10:rbac102. doi: 10.1093/rb/rbac102. eCollection 2023.
13. Saadati M, Akhavan O, Fazli H, Nemati S, ***Baharvand H***. Controlled Differentiation of Human Neural Progenitor Cells on Molybdenum Disulfide/Graphene Oxide Heterojunction Scaffolds by Photostimulation. *ACS Appl Mater Interfaces.* 2023 Jan 25;15(3):3713-3730.
14. Ghorbaninejad Z, Eghbali A, Ghorbaninejad M, Ayyari M, Zuchowski J, Kowalczyk M, ***Baharvand H***, Shahverdi A, Eftekhari-Yazdi P, Esfandiari F*. **Carob extract induces spermatogenesis in an infertile mouse model via upregulation of Prm1, Plzf, Bcl-6b, Dazl, Ngn3, Stra8, and Smc1b.** *J Ethnopharmacol.* 2023 Jan 30;301:115760.
15. Babaahmadi M, Tayebi B, Gholipour NM, Bendele P, Pheneger J, Kheimeh A, Kamali A, Molazem M, ***Baharvand H***, Eslaminejad MB, Hajizadeh-Saffar E, Hassani SN. Long-term passages of human clonal mesenchymal stromal cells can alleviate the disease in the rat model of collagen-induced arthritis resembling early passages of different heterogeneous cells. *J Tissue Eng Regen Med.* 2022 Dec;16(12):1261-1275.
16. Zakieh Samsonchi[#], Hassan Karimi[#], Zhila Izadi, Payam Baei, Mostafa Najarasl, Mohammad Kazemi Ashtiani, Javad Mohammadi*, Maedeh Moazenchi, Yaser Tahamtani, ***Hossein Baharvand***, Ensiyeh Hajizadeh-Saffar*, Hamed Daemi*. **Transplantation of Islet-Containing Microcapsules Modified with Constitutional Isomers of Sulfated Alginate in Diabetic Mice to Mitigate Fibrosis for Long-term Glycemic Control.** *Chemical Engineering Journal.* 2022, 432(9277):134298. #: Co-first authors.
17. Khani F, Nafian S, Mollamohammadi S, Nemati S, Shokoohian B, Hassani SN, ***Baharvand H***, Soleimanpour-Lichaei HR*, Salekdeh GH*. **Y Chromosome Genes May Play Roles in the Development of Neural Rosettes from Human Embryonic Stem Cells.** *Stem Cell Rev Rep.* 2022 Dec;18(8):3008-3020.
18. Azadbakht M, Sayadmanesh A, Nazer N, Ahmadi A, Hemmati S, Mohammadzade H, Ebrahimi M, ***Baharvand H***, Khalaj B, Aghamaali MR, Basiri M.* **CRISPRi-mediated knock-down of PRDM1/BLIMP1 programs central memory differentiation in *ex vivo*-expanded human T cells.** *Bioimpacts.* 2022;12(4):337-347.

19. Sahraneshin-Samani F, Kazemi-Ashtiani M, Karimi H, Shiravandi A, ***Baharvand H***, Daemi H*. **Regioselective sulfated chitosan produces a biocompatible and antibacterial wound dressing with low inflammatory response.** *Biomater Adv.* 2022 Aug;139:213020.
20. Mostafa Najar-Asl, Hossein Bahadoran*, Mohammad-Hossein Asadi , Mona Saheli , Mohammad-Hassan Asghari , Niloofar Sodeifi , Mohammad Kazemi Ashtiani , Massoud Vosough , Hossein Baharvand , Abbas Piryaeei*. **Transplantation of SDF-1 α -loaded liver extracellular matrix repopulated with autologous cells attenuated liver fibrosis in a rat model.** *EXCLI Journal* 2022;21:704-721.
21. Izadi M, Sadr Hashemi Nejad A, Moazenchi M, Masoumi S, Rabbani A, Kompani F, Hedayati Asl AA, Abbasi Kakroodi F, Jaroughi N, Mohseni Meybodi MA, Setoodeh A, Abbasi F, Hosseini SE, Moeini Nia F, Salman Yazdi R, Navabi R, Hajizadeh-Saffar E*, ***Baharvand H****. **Mesenchymal stem cell transplantation in newly diagnosed type-1 diabetes patients: a phase I/II randomized placebo-controlled clinical trial.** *Stem Cell Res Ther.* 2022 Jun 20;13(1):264.
22. Farideh Moeinvaziri, Ibrahim Zarkesh, Paria Pooyan, Desmond A. Nunez, ***Hossein Baharvand****. **Inner Ear Organoids: Progress and Outlook with a Focus on the Vascularization.** *The FEBS Journal.* 2021 Jul 31. doi: 10.1111/febs.16146. Online ahead of print.
23. Behnoosh Tayebi, Mahnaz Babaahmadi, Mohammad Pakzad, Mostafa Hajinasrollah, Farhad Mostafaei, Shahrbanoo Jahangiri, Amir Kamali, ***Hossein Baharvand***, Mohamadreza Baghaban Eslaminejad*, Seyedeh-Nafiseh Hassani*, Ensiyeh Hajizadeh-Saffar*. **Standard Toxicity Study of Clinical-grade Allogeneic Human Bone Marrow-derived Clonal Mesenchymal Stromal Cells.** *Stem Cell Research & Therapy.* 2022 May 26;13(1):213.
24. Sara Taleahmad, Ali Salari, Azam Samadian, Se Hyun Chae, Daehee Hwang, Bonghee Lee, Delger Bayarsaikhan, Govigerel Bayarsaikhan, Jaesuk Lee, Ji Hwan Park, Seyedeh-Nafiseh Hassani, Hossein Baharvand* and Ghasem ***Hosseini Salekdeh****. **BMP4 Signaling Plays Critical Roles in Self-renewal of R2i Mouse Embryonic Stem Cells.** *Biochemical and Biophysical Research Communications.* 2022, 617(Pt 1):8-15.
25. Maryam Kay, Bahram Mohammad Soltani*, Mohamed Nemir, Parisa Aghagolzadeh Silakhor, Pezzuto I, Chouvardas P, Ruberto F, Movahedi F, Hassan Ansari, ***Hossein Baharvand****, Thierry Pedrazzini*. **The conserved long noncoding RNA CARMA regulates cardiomyocyte differentiation.** *Cardiovasc Res.* 2022, 118(10):2339-2353.
26. Aisan Farhadi, Mehdi Totonchi, Jin-San Zhang, Hossein Baharvand, Ensieh Hajizadeh, Seyed Massood Nabavi, Hossein Pakdaman, Hamed Al-Sinawi, Yaser Tahamtani*, Koorosh Shahpasand*. **P38 Initiates Diabetic Neurodegeneration Through Glutamatergic and GABAergic Neurons.** *European journal of Neuroscience.* 2022;56(1):3755-3778.
27. Fereshteh Esfandiari*, Nahid Mansouri, Maryam Shahhoseini, Heidar Heidari Khoei1, Gelareh Mikaeili1, Hugo Vankelecom, ***Hossein Baharvand****. **Endometriosis Organoids: Prospects and Challenges.** *Reproductive BioMedicine Online.* 2022: 45(1):5-9.

28. Heidar Heidari-Khoei, Fereshteh Esfandiari, Ashraf Moini, Simin Yari, Maryam Saber, Marefat Ghaffari Novin, Abbas Piryaee*, ***Hossein Baharvand****. **Hormone-responsive Human Endometrial Organoid Generation from Cryopreserved Biopsies.** *Experimental Cell Research.* 2022;417(1):113205.
29. Mahdi Hesaraki#, Ugur Bora#, Sara Pahlavan, Najmeh Salehi, Seyed Ahmad Mousavi, Maryam Barekat, Seyed Javad Rasouli, Hossein Baharvand, Gunes Ozhan*, Mehdi Totonchi*. **A Novel Missense Variant in Actin Binding Domain of MYH7 Is Associated with Left Ventricular Noncompaction.** *Front Cardiovasc Med.* 2022; 9: 839862. #: Co-first authors.
30. Sharif Moradi, Aryan Kamal, Hamidreza Aboulkheyr Es, Farnoosh Farhadi, Marzieh Ebrahimi, Hamidreza Chitsaz*, Ali Sharifi-Zarchi*, Hossein Baharvand*. **Pan-cancer analysis of microRNA expression profiles highlights microRNAs enriched in normal body cells as effective suppressors of multiple tumor types: a study based on TCGA database** *PLoS One.* 2022 Apr 27;17(4):e0267291.
31. Ghezelayagh Z, Zabihi M, Zarkesh I, Gonçalves CAC, Larsen M, Hagh-Parast N, Pakzad M, Vosough M, Arjmand B, ***Baharvand H***, Larijani B, Grapin-Botton A, Aghayan HR*, Tahamtani Y*. **Improved Differentiation of hESC-Derived Pancreatic Progenitors by Using Human Fetal Pancreatic Mesenchymal Cells in a Micro-scalable Three-Dimensional Co-culture System.** *Stem Cell Rev Rep.* 2022 Jan;18(1):360-377.
32. Hezavehei M, Mirzaei M, Sharafi M, Wu Y, Gupta V, Fitzhenry M, Kouchesfahani HM, Eftekhari-Yazdi P, ***Baharvand H***, Dalman A, Haynes PA, Shahverdi A, Salekdeh GH*. Proteomics study reveals the molecular mechanisms underlying cryotolerance induced by mild sublethal stress in human sperm. *Cell Tissue Res.* 2022 Jan;387(1):143-157.
33. Heydari Z, Moeinvaziri F, Agarwal T, Pooyan P, Shpichka A, Maiti TK, Timashev P, ***Baharvand H****, Vosough M*. **Organoids: a novel modality in disease modeling.** *Biodes Manuf.* 2021;4(4):689-716.
34. Saberi S, Esmaeili M, Tashakoripour M, Eshagh Hosseini M, ***Baharvand H***, Mohammadi M*. **Infection with a hypervirulent strain of Helicobacter pylori primes gastric cells toward intestinal transdifferentiation.** *Microb Pathog.* 2022 Jan;162:105353.
35. Ibrahim Zarkesh#, Mohamad Kazemi Ashtiani#, Zahra Shiri#, Saeideh Aran, Thomas Braun, Hossein Baharvand. **Synthetic developmental biology: Engineering approaches to guide multicellular organization.** *Stem Cell Reports.* 2022 Apr 12;17(4):715-733. #: Co-first authors.
36. Mohammad Pakzad, Seyedeh Nafiseh Hassani*, Fatemeh Abbasi, Ensiyeh Hajizadeh-Saffar, Leila Taghiyar, Nasrin Fallah, Newsha Haghparast, Azam Samadian, Meysam Ganjibakhsh, Massimo Dominici, Hossein Baharvand*. **A Roadmap for the Production of a GMP-Compatible Cell Bank of Allogeneic Bone Marrow-Derived Clonal Mesenchymal Stromal Cells for Cell Therapy Applications.** *Stem Cell Rev Rep.* 2022 Feb 17:1-17.

37. Massoud Vosough, Sepideh Nikfam, Shukoofeh Torabi, Bahareh Sadri, Hadi Ahmadi Amoli, Ali Basi, Maryam Niknejadi, Nikoo Hossein-khannazer, Seyedeh-Esmat Hosseini, Soura Mardpour, Vajiheh Azimian, Neda Jarughi, Nasser Aghdami, Hamid Reza Amirzehni, Amir Anushiravani, Reza Malekzadeh, ***Hossein Baharvand****, Mehdi Mohamadnejad*. **Mesenchymal Stromal Cell Therapy Improves Refractory Perianal Fistula in Crohn's Disease: Case Series Clinical Interventional Study.** Cell J. 2022 Feb;24(2):62-68.
38. Saghar Pahlavanneshan, Mehrdad Behmanesh*, Yaser Tahamtani, Ensiyeh Hajizadeh-Saffar, Mohsen Basiri, ***Hossein Baharvand****. **Induction of β Cell Replication by Small Molecule-mediated Menin Inhibition and Combined PKC Activation and TGF- β Inhibition as Revealed by a Refined Primary Culture Screening.** Cell Journal. 2021 Nov;23(6):633-639.
39. Farideh Moeinvaziri, Amir Shojaei, Newsha Haghparast, Saeed Yakhkeshi, Shadman Nemati, Seyedeh-Nafiseh Hassani, ***Hossein Baharvand****. **Towards Maturation of Human Otic Hair Cell-like Cells in Pluripotent Stem Cell-derived Organoid Transplants.** Cells and Tissue Research. 2021;386(2):321-333.
40. Zahra Heydari, Ibrahim Zarkesh, Mohammad-Hossein Ghanian, Mahdokht H Aghdaei, Svetlana Kotova, Ensieh Zahmatkesh, Zahra Farzaneh, Abbas Piryaee, Anastasia Shpichka, Roberto Gramignoli, Peter Timashev, Hossein Baharvand *, Massoud Vosough *. **Biofabrication of Size-Controlled Liver Microtissues Incorporated with ECM-Derived Microparticles to Prolong Hepatocyte Function.** Bio-Design and Manufacturing. 2021 Aug 9:1-28.
41. Samira Gholami, Ibrahim Zarkesh, Mohammad-Hossein Ghanian*, Ensiyeh Hajizadeh-Saffar, Fateme Hassan-Aghaei, Mohammad-Masoud Mohebi*, ***Hossein Baharvand****. **Dynamically Capped Hierarchically Porous Microneedles Enable Post-Fabrication Loading and Self-Regulated Transdermal Delivery of Insulin.** Chemical Engineering Journal. 2021 Oct 1;421:127823.
42. Payam Baei, Hamed Daemi*, Farhad Mostafaei, Forough Azam Sayahpour, ***Hossein Baharvand***, Mohamadreza Baghaban Eslaminejad*. **A Tough Polysaccharide-based Cell-Laden Double-Network Hydrogel promotes articular cartilage tissue regeneration in rabbits.** Chemical Engineering Journal. 2021, Aug 15;418:129277.
43. Ashkan Zandi, Saeid Rafizadeh-Tafti, Fatemeh Shojaeian, Mohammadali Khayamian, Fereshteh Abbasvandi, Mohammad Faranoush, Robab Anbiaee, Sahar Najafikhoshnoo, Parisa Hoseinpour, Sepanta Assadi, Pouyan Katebi, Zahra Davari, Shahriar Shalileh, Mohammad Salemizadeh Parizi, Shohreh Vanaei, Mohammadreza Ghaderinia, Hamed Abadijoo, Payam Taheri, ; Mohammad-Reza Esmailinejad, Hassan Sanati, Reza Sadeghian, Yasin Kordelachin, S. M. Sadegh Mousavi-Kiasary, Amir Mamdouh, Seyyed Hossein Miraghaie, ***Hossein Baharvand***, Mohammad Abdolhad*. **Positive Electrostatic Therapy of Metastatic Tumors; Selective Induction of Apoptosis in Cancer Cells by Pure Charges.** Cancer Medicine, 2021 Nov;10(21):7475-7491.
44. Nikasa P, Rabbani B, Hejazi MS, Firouzi A, ***Baharvand H***, Totonchi M, Mahdieh N. A case of autosomal recessive hypercholesterolemia with a novel mutation in the *LDLRAP1* gene. Clin Pediatr Endocrinol. 2021;30(4):201-204.

45. Fatemeh Radmanesh, Hamid Sadeghi Abandansari, Mohammad Hossein Ghanian, Sara Pahlavan, Fahimeh Varzideh, Saeed Yakhkeshi, Mehdi Alikhani, Sharif Moradi, Thomas Braun, ***Hossein Baharvand****. **Hydrogel-mediated delivery of microRNA-92a inhibitor polyplex nanoparticles induces localized angiogenesis.** *Angiogenesis*. 2021 Aug;24(3):657-676.
46. Roghayeh Navabi, Babak Negahdari*, Ensiyeh Hajizadeh-Saffar*, Mostafa Hajinasrollah, Yaser Jenab, Shahram Rabbani, Mohamad Pakzad, Seyedeh-Nafiseh Hassani, Maryam Hezavehei, Mohammad Jafari-Atrabi, Yaser Tahamtani, Hossein Baharvand*. **Co-administration of Mesenchymal Stem (Stromal) Cells and Liraglutide Impairs a Non-Human Primate Model of Inflammatory-Mediated Diabetes through Immunomodulation and β -cell Preservation.** *Life Science*. 2021;276:119374.
47. Niloofer Khoshdel-Rad, Ensieh Zahmatkesh, Farideh Moeinvaziri, Newsha Haghparast, ***Hossein Baharvand***, Nasser Aghdami*, Reza Moghadasali*. **Promoting maturation of human pluripotent stem cell-derived renal micro-tissue by incorporation of endothelial and mesenchymal cells.** *Stem Cells and Development*. 2021 Apr;30(8):428-440.
48. Leila Montazeri*[#], Maryam Mohajeri[#], Rouhollah Fathi, Valeria Polley, Sara Kazemi, Fattaneh Pahlavan, Solmaz Kouhestani, ***Hossein Baharvand***, Firoozeh Ahmadi*, Seyed Javad Mowla. **Two Leading International Congresses in Iran in the era of COVID-19: Royan International Twin Congress and Genetics Congress.** *Bioessays*. 2021;43(6):e2100078. #: Co-first authors.
49. Fereshteh Esfandiari[#], Heidar Heidari Khoei[#], Maryam Saber, Raha Favaedi, Abbas Piryaee, Ashraf Moini, Maryam Shahhoseini, Fariba Ramezanaali, Firouzeh Ghafari, ***Hossein Baharvand****. **Disturbed Progesterone Signaling in an Advanced Preclinical Model of Endometriosis** *Reproductive BioMedicine Online*. 2021.;43(1):139-147. #: Co-first authors.
50. Parisa Nikasa[#], Tine Tricot, Nejat Mahdieh, ***Hossein Baharvand***, Mehdi Totonchi, Mohammad Saeid Hejazi, Catherine M. Verfaillie*. **Patient-Specific iPSC-Derived Hepatocyte-Like Cells as a Model to Study Autosomal Recessive Hypercholesterolemia.** *Stem Cells and Development*. 2021;30(14):714-724. #: Co-first authors.
51. Ensieh Zahmatkesh, Mohammad-Hossein Ghanian, Ibrahim Zarkesh, Zahra Farzaneh, Majid Halvaei, Zahra Heydari, Farideh Moeinvaziri, Amna Othman, Marc Ruoss, Abbas Piryaee, Roberto Gramignoli, Saeed Yakhkeshi Andreas Nussler⁴, Mustapha Najimi*, ***Hossein Baharvand****, Massoud Vosough*. **Tissue-Specific Microparticles Improve Organoid Microenvironment for Efficient Maturation of Pluripotent Stem-Cell-Derived Hepatocytes.** *Cells*. 2021, 21;10(6):1274.
52. Mojgan Barati[#], Maryam Akhondi[#], Narges Sabahi Mousavi, Newsha Haghparast, Asma Ghodsi, ***Hossein Baharvand***, Marzieh Ebrahimi*, Seyedeh-Nafiseh Hassani*. **Pluripotent Stem Cells: Cancer Study, Therapy, and Vaccination.** *Stem Cell Rev Rep*. 2021 Jun 11:1-18. #: Co-first authors.

53. Aliasghar Karimi; Mitra Elmi; Zahra Shiri; ***Hossein Baharvand****. **Therapeutic Potential of Pluripotent Stem Cell-derived Dopaminergic Progenitors in Parkinson's Disease: A Systematic Review Protocol.** *Systematic Reviews*. 2021, 25;10(1):188.
54. Sedigheh Gholami, Zahra Mazidi, Sara Pahlavan, Fariba Moslem, Mahya Hosseini, Adeleh Taei, Mahdi Hesaraki, Maryam Barekat, Nasser Aghdami*, ***Hossein Baharvand****. **A Novel Insight into Endothelial and Cardiac Cells Phenotype in Systemic Sclerosis Using Patient-Derived Induced Pluripotent Stem Cell.** *Cell Journal*, 2021, 23 (3), 273-287.
55. Anna Meyfour, Sara Pahlavan, Mehdi Mirzaei, Jeroen Krijgsveld, ***Hossein Baharvand***, Ghasem Hosseini Salekdeh*. **The Quest of Cell Surface Markers for Stem Cell Therapy.** *Cellular and Molecular Life Sciences*. 2021 Jan;78(2):469-495.
56. Zahra Farzaneh, Saeed Abassalizadeh, Mohammad-Hassan Asghari-Vostikolaee, Mehdi Alikhani, Joaquim M.S. Cabral, ***Hossein Baharvand****. **Dissolved Oxygen Concentration Regulates Human Hepatic Organoid Formation from Pluripotent Stem Cells in a Fully Controlled Bioreactor.** *Biotechnology and Bioengineering*. 2020 Dec;117(12):3739-3756.
57. Leila Montazeri*, Motahareh Sobat, Reza Kowsari-Esfahan, Shahram Rabbani, Hassan Ansari, Maryam Barekat, Saman Firoozi, Sarah Rajabi, Sadaf Vahdat, ***Hossein Baharvand***, Sara Pahlavan* **VEGF Sustained Delivery Augmented Cell Therapy Outcomes of Cardiac Progenitor Cells for Myocardial Infarction.** *Journal of Tissue Engineering and Regenerative Medicine*. 2020 Dec;14(12):1939-1944.
58. Fereshteh Esfandiari, Raha Favaedi, Heidar Heidari-Khoei, Fereshteh Chitsazian, Simin Yari, Abbas Piryaei, Firouzeh Ghafari, ***Hossein Baharvand***, Maryam Shahhoseini*. **An insight into epigenetics of human endometriosis organoids: DNA methylation analysis of HOX genes and their co-factors.** *Fertility and Sterility*. 2021 Jan;115(1):125-137.
59. Parvaneh Mohammadi, Mohammad Ali Nilforoushzadeh, Khalil Kass Youssef, Ali Sharifi-Zarchi, Sharif Moradi, Pardis Khosravani, Raheleh Aghdami, Payam Taheri, Ghasem Hosseini-Salekdeh, ***Hossein Baharvand***, Nasser Aghdami*. **Defining microRNA signatures of hair follicular stem and progenitor cells in healthy and androgenic alopecia patients.** *Journal of Dermatological Science*. 2021 Jan;101(1):49-57.
60. Ali Mousavi[#], Sadaf Vahdat[#], Nafiseh Baheiraei*, Mehdi Razavi, Mohammad Hadi Norahan, ***Hossein Baharvand****. **Multifunctional Conductive Biomaterials as Promising Platforms for Cardiac Tissue Engineering.** *ACS Biomaterials Science & Engineering*. 2021 Jan 11;7(1):55-82. #: Co-first authors.
61. Azimeh Akhlaghpour[#], Adeleh Taei[#], Seyyed Abolghasem Ghadami, Zahra Bahadori, Saeed Yakhkeshi, Sepideh Molamohammadi, Tahereh Kiani, Azam Samadian, Zahra Ghezelayagh, Newsha Haghparat, Keynoosh Khalooghi, Thomas Braun, ***Hossein Baharvand****, Seyyede-Nafiseh Hassani*. **Chicken Interspecies Chimerism Unveils Human Pluripotency.** *Stem Cell Reports*. 2021 Jan 12;16(1):39-55. #: Co-first authors.

62. Seyed-Mohammad Reza Hashemian#, Rasoul Aliannejad3,#, Morteza Zarrabi#, Masoud Soleimani#, Massoud Vosough#, Seyedeh-Esmat Hosseini#, Hamed Hossieni, Saeid Heidari Keshel, Zeinab Naderpour, Ensiyeh Hajizadeh-Saffar, Elham Shajareh, Hamidreza Jamaati, Mina Soufi-Zomorrod, Naghme Khavandgar, Hedyeh Alemi, Aliasghar Karimi, Neda Pak, Negin Hossieni Rouzbahani, Masoumeh Nouri, Majid Sorouri, Ladan Kashani, Hoda Madani, Nasser Aghdami, Mohammad Vasei,*, ***Hossein Baharvand**** **Mesenchymal Stem Cells Derived from Perinatal Tissues for Treatment of Critically Ill COVID-19-Induced ARDS Patients: A Case Series.** Stem Cell Research & Therapy. Stem Cell Res Ther. 2021 Jan 29;12(1):91. #: Co-first authors.
63. Azadeh Mostafavi#, Hamed Daemi#*, Sarah Rajabi*, ***Hossein Baharvand***. **Highly tough and ultrafast self-healable dual physically crosslinked sulfated alginate-based polyurethane elastomers for vascular tissue engineering.** Carbohydrate Polymers. 2021 Apr 1;257:117632. #: Co-first authors.
64. Faezeh Shekari #*, Abdoreza Nazari #, Sara Assar Kashani #, Ensiyeh Hajizadeh-Saffar, Rebecca Lim, ***Hossein Baharvand*** *. **Preclinical investigation of mesenchymal stromal cell-derived extracellular vesicles: A systematic review.** Cytotherapy. 2021 Apr;23(4):277-284. #: Co-first authors.
65. Leila Montazeri*#, Reza Kowsari-Esfahan#, Sara Pahlavan, Motahareh Sobat, Shahram Rabbani, Hassan Ansari, Fahimeh Varzideh, Maryam Barekat, Sarah Rajabi, Fatemeh Navaee, Shahin Bonakdar, Philippe Renaud, Thomas Braun, ***Hossein Baharvand****. **Oxygen-rich Environment Ameliorates Cell Therapy Outcomes of Cardiac Progenitor Cells for Myocardial Infarction.** Journal of Materials Science and Engineering C. 2021 Feb;121:111836. #: Co-first authors.
66. Fattah Sotoodehnejadnematalahi, Reza Moghadasali, Mostafa Hajinasrollah, Ehsan Ehsani, Ensiyeh Hajizadeh-Saffar, Niloofer Sodeifi, Reza F. Saidi, Morteza Zarrabi, Mohammad Farzanehkah, Bahareh Sadeghi, ***Hossein Baharvand***, Nasser Aghdami*. **Immunomodulatory activity of human mesenchymal stem cells prolongs skin graft survival in nonhuman primates.** Cell Journal, 2021 Apr;23(1):1-13.
67. Simin Nafian Dehkordi, Farzaneh Khani, Seyedeh Nafiseh Hassani, ***Hossein Baharvand***, Hamid Reza Soleimanpour-lichaei*, Ghasem Hosseini Salekdeh*. **The Contribution of Y Chromosome Genes to Spontaneous Differentiation of Human Embryonic Stem Cells into Embryoid Bodies In Vitro.** Cell Journal. 2021 Apr;23(1):40-50.
68. Mohammad Ebrahim Asadi Zarch, Alireza Afshar, Farhad Rahmanifar, Mohammad Reza Jafarzadeh Shirazi*, Mandana Baghban, Mohammad Dadpasand, Farzad Mohammad Rezazadeh, Arezoo Khoradmehr, ***Hossein Baharvand***, Amin Tamadon* **Three-dimensional and two-dimensional relationships of gangliogenesis with folliculogenesis in mature mouse ovary: a Golgi–Cox staining approach.** Scientific Reports. 2021 Mar 10;11(1):5547.
69. Mehdi Alikhani#, Razieh Karamzadeh#, Pardis Rahimi, Samane Adib, ***Hossein Baharvand**** Ghasem Hosseini Salekdeh*. **Human Proteome Project and Human Pluripotent**

Stem Cells: Odd Bedfellows or a Perfect Match?. Journal of Proteome Research. 2020. 19(12):4747-4753. #: Co-first authors.

70. Paria Pooyan#, Razieh Karamzadeh#, Mehdi Mirzaei, Anna Meyfour, Ardeshir Amirkhan, Yunqi Wu, Vivek Gupta, **Hossein Baharvand***, Mohammad Javan*, Ghasem Hosseini Salekdeh*. **The Dynamic Proteome of Oligodendrocyte Lineage Differentiation Features Planar Cell Polarity and Macroautophagy Pathways**. GigaScience. 2020. ;9(11):giaa116. #: Co-first authors.

71. Adeleh Taei#, Tahereh Kiani#, Zeinab Taghizadeh#, Sharif Moradi, Azam Samadian, Sepideh Mollamohammadi, Ali Sharifi-Zarchi, Stefan Guenther, Azimeh Akhlaghpour, Behrooz Asgari, Mostafa Najar-Asl, Razieh Karamzadeh, Keynoosh Khalooghi, Thomas Braun, Seyedeh-Nafiseh Hassani*, **Hossein Baharvand***. **Temporal Activation of LRH-1 and RAR- γ in Human Pluripotent Stem Cells Induces a Functional Naïve-Like State**. EMBO reports. 2020, 21(10):e47533. #: co-first author

72. Roya Ramezankhani#, Shukoofeh Torabi#, Neda Minaei, Hoda Madani, Siamak Rezaeiani, Seyedeh Nafiseh Hassani, Adrian P. Gee, Massimo Dominici, Daniela Nascimento Silva, **Hossein Baharvand**, Ensiyeh Hajizadeh-Saffar*. **Two Decades of Global Progress in Authorized Advanced Therapy Medicinal Products: An Emerging Revolution in Therapeutic Strategies**. Cell and Developmental Biology. 2020. 17;8:547653. #: Co-first authors.

73. Alireza Pouya#, Hassan Rassouli#, Mehran Rezaei-Larijani, Ghasem Hosseini Salekdeh*, **Hossein Baharvand***. **SOX2 protein transduction directly converts human fibroblasts into oligodendrocyte-like cells**. Biochemical and Biophysical Research Communications. 2020 Feb 15:S0006-291X(20)30315-6. #: co-first author

74. Mehdi Alikhani#, Fatemehsadat Amjadi#, Mehdi Mirzaei#, Yunqi Wu, Faezeh Shekari, Mahnaz Ashraf, Mehdi Mehdizadeh, Matthew McKay, Sara Taleahmad, Samaneh Aghajanzpour, Vivek Gupta, Hossein Baharvand, Reza Afatoonian*, Ghasem Hosseini Salekdeh*. **Proteome analysis of endometrial tissue from patients with PCOS reveals proteins predicted to impact the disease**. Molecular Biology Reports. 2020 Nov;47(11):8763-8774. #: co-first author.

75. Narges Zare Mehrjardi, Marek Molcanyi, Firuze Fulya Hatay, Marco Timmer, Ebrahim Shahbazi, Justus P. Ackermann, Stefan Herms, Stefanie Heilmann-Heimbach, Thomas F. Wunderlich, Nora Prochnow, Aiden Haghikia, Angelika Lampert, Jürgen Hescheler, Edmund A. M. Neugebauer, **Hossein Baharvand**, Tomo Šarić*. **Acquisition of chromosome 1q duplication in parental and genome edited human induced pluripotent stem cell-derived neural stem cells results in their higher proliferation rate in vitro and in vivo**. Cell Proliferation. 2020 Sep 12:e12892.

76. Leila Afshar#, Hamid Reza Aghayan#, Jila Sadighi#, Babak Arjmand, Seyed Mahmoud Hashemi, Mohsen Basiri, Reza Omani Samani, Mohammad Kazemi Ashtiani, Seyed Ali Azin, Ensiyeh Hajizadeh-Saffar, Ehsan Shamsi Gooshki, Amir Ali Hamidieh, Mohammad Reza Rezania Moallem, Seyed Mohammad Azin, Sadeqh Shariatinasab, Mehdi Soleymani-Goloujeh,

Hossein Baharvand*. **Ethics of Research on Stem Cells and Regenerative Medicine: Ethical Guidelines in the Islamic Republic of Iran.** Stem Cell Research & Therapy. 2020 Sep 14;11(1):396. In Press. #: Co-first authors.

77. Khadijeh Bahrehbar, Mojtaba Rezazadeh Valojerdi*, Fereshteh Esfandiari, Rouhollah Fathi, Seyedeh-Nafiseh Hassani, Hossein Baharvand*. **Human Embryonic Stem cell-derived Mesenchymal Stem Cells Restore Ovarian Function in Mouse Model of Chemotherapy-Induced Premature Ovarian Failure.** World Journal of Stem Cells. 2020 Aug 26;12(8):857-878.

78. Zahra Nazemi, Mohammad Sadegh Nourbakhsh, Sahar Kiani, Hamed Daemi*, Mohammad Kazemi Ashtiani, ***Hossein Baharvand***. **Effect of chemical composition and sulfated modification of alginate in the development of delivery systems based on electrostatic interactions for small molecule drugs.** Material Letters, 2020 Mar 15;263:127235.

79. Parisa Jamalzaei, Mojtaba Rezazadeh Valojerdi*, Leila Montazeri, ***Hossein Baharvand****. **Applicability of Hyaluronic Acid-Alginate Hydrogel and Ovarian Cells for In Vitro Development of Mouse Preantral Follicles.** Cell J, Vol 22, Suppl 1, Autumn 2020. 49-60.

80. Melika Parchehbaf-Kashani, Mohammadmajid Sepantafar, Mahmood Talkhabi, Forough Azam Sayahpour, ***Hossein Baharvand***, Sara Pahlavan*, Sara Rajabi*. **Design and characterization of an electroconductive scaffold for cardiomyocytes based biomedical assays.** Materials Science & Engineering C. 2020 Apr;109:110603.

81. Padideh Karimi, Ali Gheisari, Sylvia J Gasparini, ***Hossein Baharvand***, Faezeh Shekari Leila Satarian,* Marius Ader,* **Crocetin prevents RPE cells from oxidative stress through protection of cellular metabolic function and activation of ERK1/2.** International Journal of Molecular Sciences. 2020 Apr 22;21(8):2949.

82. Mohammad-Hossein Haddadi, Babak Negahdari*, Ensiyeh Hajizadeh-Saffar*, Mohsen Khosravi-Maharlooei, Mohsen Basiri, Hamed Dabiri, Hossein Baharvand*. **Directed Differentiation of Regulatory T cells from Naïve T Cells and Prevention of Their Inflammation-Mediated Plasticity using Small Molecules.** Clinical and Experimental Immunology. 2020 Aug;201(2):205-221.

83. Adeleh Taei[#], Azam Samadian[#], Zahra Ghezel-Ayagh, Sepideh Mollamohammadi, Sharif Moradi, Tahereh Kiani, Ehsan Janzamin, Zahra Farzaneh, Yaser Tahamtani, Seyedeh-Nafiseh Hassani*, ***Hossein Baharvand****. **Suppression of p38-MAPK Endows Endoderm Propensity to Human Embryonic Stem Cells.** Biochemical and Biophysical Research Communications. 2020 Jun 30;527(3):811-817. #: co-first author

84. Fatemeh Mehryab, Shahram Rabbani, Soraya Shahhosseini, Faezeh Shekari, Yousef Fatahi, ***Hossein Baharvand***, Azadeh Haeri*. **Exosomes as a next-generation drug delivery system: An update on drug loading approaches, characterization and challenges towards clinical applications.** Acta Biomaterialia. 2020 Jul 2:S1742-7061(20)30366-4.

85. Heidar Heidari-Khoei[#], Fereshteh Esfandiari[#], Mohammad Amin Hajari, Zeynab Ghorbaninejad, Abbas Piryaee*, ***Hossein Baharvand****. **Organoid Technology in Female Reproductive Biomedicine**. *Reproductive Biology and Endocrinology*. 2020 Jun 18;18(1):64. #: co-first author
86. Fahimeh Hosseini, Bahram M. Soltani*, ***Hossein Baharvand***, Saman Hosseinkhani. **Hsa-miR-3658 downregulates OCT4 gene expression followed by suppressing SW480 cell proliferation and migration**. *Biochemical Journal*. 2020 Jun 26;477(12):2281-2293.
87. Saghar Pahlavanneshan, Mehrdad Behmanesh*, Daniel Oropeza, Kenichiro Furuyama, Yaser Tahamtani, Mohsen Basiri, Pedro L. Herrera, ***Hossein Baharvand****. **Combined Inhibition of Menin-MLL Interaction and TGF- β Signaling Induces Replication of Human Pancreatic Beta Cells**. *European Journal of Cell Biology*. 2020 Jun;99(5):151094.
88. Seyedeh-Zahra Seyedrazizadeh[#], Sara Poosti[#], Abdoreza Nazari, Mehdi Alikhani, Faezeh Shekari, Farzad Pakdel, Koorosh Shahpasand, Leila Satarian*, ***Hossein Baharvand****. **Extracellular Vesicles derived from Human ES-MSCs Protect Retinal Ganglion Cells and Preserve Retinal Function in a Rodent Model of Optic Nerve Injury**. *Stem Cell Research & Therapy*. 2020 May 27;11(1):203.
89. Sara Darakhshan, Ali Bidmeshki Pour*, Reza Kowsari-Esfahan, Massoud Vosough, Leila Montazeri, Mohammad Hossein Ghanian, ***Hossein Baharvand****, Abbas Piryaee*. **Generation of Scalable Hepatic Micro-Tissues as a Platform for Toxicological Studies**. *Tissue Engineering and Regenerative Medicine*. 2020 Aug;17(4):459-475.
90. Abdallah Medlej, Bahram Mohamad Soltani*, Javad Mola, Saeid Hosseini, ***Hossein Baharvand***. **A novel miRNA located in the GATA4 gene regulates the expression of IGF-1R and AKT1/2 genes and controls cell proliferation**. *Journal of Cellular Biochemistry*. 2020, 2020 Jun;121(5-6):3438-3450.
91. Zahra Nazemi, Mohammad Sadegh Nourbakhsh, Sahar Kiani*, Y Heydari, Mohammad Kazemi Ashtiani, Hamed Daemi*, ***Hossein Baharvand***. **Co-delivery of minocycline and paclitaxel from injectable hydrogel for treatment of spinal cord injury**. *Journal of Controlled Release*. 2020 Feb 5;321:145-158.
92. Masoumeh Zarei-Kheirabadi, Alexander R. Vaccaro, Vafa Rahimi-Movaghar, Sahar Kiani*, ***Hossein Baharvand****. **An Overview of Extrinsic and Intrinsic Mechanisms Involved in Astrocyte Development in the Central Nervous System**. *Stem Cells and Development*. 2020 Mar 1;29(5):266-280.
93. Adeleh Taei, Paniz Rasooli, Thomas Braun, Seyedeh-Nafiseh Hassani*, ***Hossein Baharvand****. **Signal regulators of human naïve pluripotency**. *Experimental Cell Research*. 2020 Apr 15;389(2):111924.
94. Saman Firoozi, Sara Pahlavan, Mohammad-Hossein Ghanian, Shahram Rabbani, Maryam Barkat, Abdoreza Nazari, Mohammad Pakzad, Faezeh Shekari, Seyedeh-Nafiseh Hassani, Fariba Moslem, Fatemeh Nobakht Lahrood, Mansoureh Soleymani*, ***Hossein***

Baharvand*. Mesenchymal stem cell-derived extracellular vesicles alone or in conjunction with a SDKP-conjugated self-assembling peptide improve a rat model of myocardial infarction. Biochemical and Biophysical Research Communications. 2020 Apr 16;524(4):903-909.

95. Sadat Dokanehiifard, Bahram M. Soltani, Parisa Ghiasi, **Hossein Baharvand**, Mohammad-Reza Ganjali*, SamanHosseinkhani*. **hsa-miR-766-5p as a new regulator of mitochondrial apoptosis pathway for discriminating of cell death from cardiac differentiation.** Gene, 2020 Apr 30;736:144448.

96. Payam Baei, Mahya Hosseini, **Hossein Baharvand**, Pahlavan S*. **Electrically conductive materials for in vitro cardiac microtissue engineering.** J Biomed Mater Res A. 2020 May;108(5):1203-1213.

97. Fatemeh Nobakht, Mona Saheli, Zahra Farzaneh, Payam Teheri, Mahshad Dorraj, Dr. **Hossein Baharvand**, Massoud Vosough*, Abbas Piryaeei*. **Generation of Transplantable Three-Dimensional Hepatic-Patch to Improve the Functionality of Hepatic Cells in vitro and in vivo.** Stem Cells and Development. 2020;29(5):301-313.

98. Maryam Zare-Gachi#, Hamed Daemi##, Javad Mohammadi*, Payam Baei, Farhad Bazgir, Sahar Hosseini-Salekdeh, **Hossein Baharvand**. **Improving Anti-Hemolytic, Antibacterial and Wound Healing Properties of Alginate Fibrous Wound Dressings by Exchanging Counter-Cation for Infected Full-Thickness Skin Wounds.** Mater Sci Eng C Mater Biol Appl. 2020 Feb;107:110321.

99. Zahra Heydari, Mustapha Najimi, Hamed Mirzaei, Anastasia Shpichka, Marc Ruoss, Zahra Farzaneh, Leila Montazeri, Abbas Piryaeei, Peter Timashev, Roberto Gramignoli, Andreas Nussler, **Hossein Baharvand***, Massoud Vosough*. **Tissue Engineering in Liver Regenerative Medicine: Insights into Novel Translational Technologies.** Cells. 2020 Jan 27;9(2).

100. Saman Firoozi, Sara Pahlavan, Mohammad-Hossein Ghanian, Shahram Rabbani, Shima Tavakol, Maryam Barekat, Saeed Yakhkeshi, Elena Mahmoudi, Mansoureh Soleymani*, Hossein Baharvand*. **A Cell-free SDKP-conjugated Self-Assembling Peptide Hydrogel Sufficient for Improvement of Myocardial Infarction.** Biomolecules, 2020 Jan 30;10(2).

101. Seyyedeh Sahar Hosseini Salekdeh, Hamed Daemi*, Maryam Zare-Gachi, Sarah Rajabi, Farhad Bazgir, Naser Aghdami, Mohammad Sadegh Nourbakhsh, **Hossein Baharvand**. **Assessment of the Efficacy of Tributylammonium Alginate Surface-Modified Polyurethane as an Antibacterial Elastomeric Wound Dressing for both Non-Infected and Infected Full-Thickness Wounds.** ACS Applied Materials & Interfaces. 2020 Jan 22;12(3):3393-3406.

102. Samaneh Poursaeid, Mohammad-Reza Kalbassia*, Seyede-Nafiseh Hassani, **Hossein Baharvand***. **Isolation, Characterization, In Vitro Expansion and Transplantation of Caspian trout (*Salmo trutta*) Type A Spermatogonia.** General and Comparative Endocrinology. 2020 Jan 16;289:113341.

103. Reza Moghadasali*, Soroosh Shekarchian, Mostafa Hajinasrollah, Elham Yousefian, Mostafa Najarasl, ***Hossein Baharvand***, Nasser Aghdami. **Decellularized Kidney Scaffold Mediated Renal Regeneration in a Rhesus Macaque Mulatta Monkey Model**. Journal of Bioengineering Research. 2019 Autumn, 1 (4), 1-18.
104. Zeinab Golgooni, Sara Mirsadeghi, Mahdieh Soleymani Baghshah*, Pedram Ataei, ***Hossein Baharvand***, Sara Pahlavan*, Hamid R. Rabiee. **Deep Learning Based Proarrhythmia Analysis Using Field Potentials Recorded from Human Pluripotent Stem Cells Derived Cardiomyocytes**. Journal of Translational Engineering in Health and Medicine. 2019 Mar 28;7:1-9.
105. Hossein Pourghadamyari, Mohammad Rezaei, A Ipakchi-Azimi, S Eisa-Beygi, Mohsen Basiri, Yaser Tahamtani, ***Hossein Baharvand***. **Establishing a new animal model for muscle regeneration studies**. Mol Biol Res Commun. 2019 Dec;8(4):171-179.
106. Seyedeh-Faezeh Moraveji, Fereshteh Esfandiari, Sara Taleahmad, Saman Nikeghbalian, Forough-Azam Sayahpour, Najmeh-Sadat Masoudi, Abdolhossein Shahverdi, ***Hossein Baharvand****. **Suppression of transforming growth factor-beta signaling enhances spermatogonial proliferation and spermatogenesis recovery following chemotherapy**. Hum Reprod. 2019 Dec 1;34(12):2430-2442.
107. Mohammad-Hossein Haddadi^e, Ensiyeh Hajizadeh-Saffar*, Mohsen Khosravi-Maharlooei, Mohsen Basiri, Babak Negahdari*, ***Hossein Baharvand****. **Autoimmunity as a Target for Chimeric Immune Receptor Therapy: A New Vision to Therapeutic Potential**. Blood Reviews. 2019 Nov 28:100645.
108. Sara Taleahmad, Mehdi Alikhani, Sepideh Molamohammadi, Meysam Yousefi, ***Hossein Baharvand****, Ghasem Hosseini Salekdeh*. **Human Y Chromosome Gene, SRY, Promotes Naïve Human Pluripotent Stem Cells**. Journal of Proteome research, 2019 Dec 6;18(12):4254-4261.
109. Anna Meyfour, Sara Pahlavan, Hassan Ansari, ***Hossein Baharvand****, Ghasem Hosseini Salekdeh*. **Down-regulation of a male-specific H3K4 demethylase, KDM5D, impairs cardiomyocyte differentiation**. Journal of Proteome research, 2019 Dec 6;18(12):4277-4282.
110. Masoumeh Zarei-Kheirabadi, Mahdi Hesaraki, Sahar Kiani*, ***Hossein Baharvand****. **In Vivo Conversion of Rat Astrocytes to Neuronal Cells Through Neural Stem Cells in Injured Spinal Cord with a Single Zinc-Finger Transcription Factor**. Stem Cell Research & Therapy. 2019 Dec 16;10(1):380.
111. Ibrahim Zarkesh, Majid Halvaei, Mohammad-Hossein Ghanian, Fatemeh Bagheri, Frough-azam Sayahpour, Mahmoud Azami, Javad Mohammadi, ***Hossein Baharvand***, Mohamadreza Baghaban-Eslaminejad. **Scalable and Cost-effective Generation of Osteogenic Micro-tissues Through Incorporation of Inorganic Microparticles Within Mesenchymal Stem Cell Spheroids**. Biofabrication. 2019 Dec 19;12(1):015021.

112. Hossein Pourghadamyari*, Mohammad Rezaei, Ali Ipakchi-Azimi, Shahram Eisa-Beygi, Mohsen Basiri, Yaser Tahamtani, ***Hossein Baharvand***. **Establishing a new animal model for muscle regeneration studies**. *Molecular Biology Research Communications* 2019;8(4):171-179
113. Mohammad Kazemi Ashtiani, Mojgan Zandi*, Parvin Shokrollahi, Morteza Ehsani, ***Hossein Baharvand***. **Chitosan surface modified hydrogel as a therapeutic contact lens**. *Polymers for Advanced Technologies*. 2019, 1-8.
114. Sadaf Vahdat, Sara Pahlavan, Elena Mahmoudi, Maryam Barekat, Hassan Ansari, Behnaz Bakhshandeh, Nasser Aghdami, Hossein Baharvand*. **Expansion of Human Pluripotent Stem Cell-derived Early Cardiovascular Progenitor Cells by a Cocktail of Signaling Factors**. *Scientific Reports*. 2019 Nov 5;9(1):16006.
115. Fatemeh Shahriari, Leila Satarian, Sharif Moradi, Ali Sharifi Zarchi, Stefan Günther, Arian Kamal, Mehdi Totonchi, Seyed-Javad Mowla*, Thomas Braun, ***Hossein Baharvand****. **MicroRNA profiling reveals important functions of miR-125b and let-7a during human retinal pigment epithelial cell differentiation**. *Experimental Eye Research*. 2019 Nov 20;190:107883.
116. Soura Mardpour#, Mohammad Hossein Ghanian#, Hamid Sadeghi-abandansari, Saeid Mardpour, Abdoreza Nazari, Faezeh Shekari, ***Hossein Baharvand**** **Hydrogel-mediated sustained systemic delivery of mesenchymal stem cell-derived extracellular vesicles improves hepatic regeneration in chronic liver failure**. *ACS Applied Materials & Interfaces*. 2019 Oct 16;11(41):37421-37433. #: Co-first author
117. Reyhaneh Khoshchehreh, Mehdi Totonchi, Juan Carlos Ramirez, Raul Torres, ***Hossein Baharvand***, Alexandra Aicher*, Marzieh Ebrahimi*, Christopher Heeschen*. **Epigenetic reprogramming of primary pancreatic cancer cells counteracts their in vivo tumorigenicity**. *Oncogene*. 2019 Aug;38(34):6226-6239.
118. Farzaneh Sharifiaghdas#, Farshad Zohrabi# Reza Moghadasali, Soroosh Shekarchian, Neda Jaroughi, Tina Bolurieh, ***Hossein Baharvand***, Nasser Aghdami*. **Autologous Muscle-derived Cell Injection for Treatment of Female Stress Urinary Incontinence: A Single-Arm Clinical Trial with 24-months Follow-Up**. *Urology Journal*. 2019 Oct 21;16(5):482-487. #: Co-first author.
119. Zahra Feizi#, Ensieh Zahmatkesh#, Zahra Farzaneh, Abbas Piryaee, Roberto Gramignoli, Andreas K Nussler, ***Hossein Baharvand****, Massoud Vosough*. **Prenatal Liver Stromal Cells: Favorable Feeder Cells for Long-Term Culture of Hepatic Progenitor Cells**. *Journal of Cellular Biochemistry*. 2019 Oct;120(10):16624-16633. #: Co-first author.
120. Zahra Shiri, Susan Simorgh, Somayeh Naderi, and Hossein Baharvand*. **Optogenetics in the Era of Cerebral Organoids**. *Trends in Biotechnology*. 2019 Dec;37(12):1282-1294.
121. Parisa Jamalzaei, Mojtaba Rezazadeh Valojerdi*, Leila Montazeri, ***Hossein Baharvand****. **Effects of Alginate Concentration and Ovarian Stromal Cells on *In Vitro* Development of**

Mouse Preantral Follicles: A Factorial Study. International Journal of Fertility and Sterility. 2020 Jan;13(4):330-338.

122. Amir Bajouri, Zahra Orouji, Ehsan Taghiabadi, Abdoreza Nazari, Atefeh Shahbazi, Nasrin Fallah, Parvaneh Mohammadi, Mohammad Rezvani, Zahra Jouyandeh, Fatemeh Vaezirad, Zahra Khalajasadi, Mahshid Ghasemi, Aslan Fanni, Sara Haji Hosseinali, Ahad Alizadeh, Hossein Baharvand, Saeed Shafieyan*, Nasser Aghdami*. **Long-term Follow-up of Autologous Fibroblast Transplantation for Facial Contour Deformities; A Non-randomized Phase IIa Clinical Trial.** Cell Journal, 2020, 22 (1):75-84.

123. Parisa Shabani, Zaniar Ghazizadeh, Sattar Gorgani-Firuzjaee, Mohammad Molazem, Sarah Rajabi, Sadaf Vahdat, Yaser Azizi, Mahmood Doosti, Nasser Aghdami1*, Hossein Baharvand*. **Cardioprotective effects of omega-3 fatty acids and ascorbic acid improve regenerative capacity of embryonic stem cell-derived cardiac lineage cells.** BioFactors, 2019, 45(3):427-438.

124. Fatemeh Radmanesh, Hamid Sadeghi Abandansari, Sara Pahlavan, Mehdi Alikhani, Mahdi Karimi, Sarah Rajabi, Bahram Kazemi Demneh*, Hossein Baharvand*. **Optimization of miRNA Delivery by using a Polymeric Conjugate based on Deoxycholic Acid-Modified Polyethylenimine.** International Journal of Pharmaceutics. 2019, 565:391-408.

125. Samaneh Saberi#, Razieh Karamzadeh#, Parisa Moghadam, Morteza Kadivari, Bahareh Eghbal Behbahani, Zahra Heydari, Hossein Baharvand, Farzaneh Aminpour*, Massoud Vosough*. **Research Performance in Stem Cell Science and Regenerative Medicine in Iran: A National Comprehensive Observation.** Archives of Iranian Medicine. 2019;22(6):318-327. #: Co-first author.

126. Maryam Kay, Bahram Mohammad Soltani*, Fahimeh Hosseini Aghdaei, Hassan Ansari, Hossein Baharvand*. **Hsa-miR-335 regulates cardiac mesoderm and progenitor cell differentiation.** Stem Cell Research & Therapy. 2019;10(1):191.

127. Ehsan Ehsani, Soroosh Shekarchian, Hossein Baharvand, Nasser Aghdami*, Reza Moghadasali*. **Improved differentiation of human enriched CD133+ CD24+ renal progenitor cells derived from embryonic stem cell with mouse fetal kidney-derived mesenchymal stem cells co-culture.** Differentiation. 2019;109:1-8.

128. Masoumeh Zarei-Kheirabadi, Mehdi Hesaraki, Amir Shojaei, Sahar Kiani*, Hossein Baharvand*. **Generation of neural stem cells from adult astrocytes by using a single reprogramming factor.** Journal of Cellular Physiology. 2019;234(10):18697-18706.

129. Hassan Rassouli#, Mona Khalaj#, Seyedeh-Nafiseh Hassani, Shiva Nemati, Ghasem Hosseini Salekdeh*, Hossein Baharvand*. **Gene Expression Patterns of Royan Human Embryonic Stem Cells Correlate with Their Propensity and Culture Systems.** Cell Journal, 2019;21(3):290-299. #: Co-first author.

130. Atiyeh Mohammadshirazi, Hoda Sadrosadat, Razieh Jaber, Masoomeh Zareikheirabadi, Sara Mirsadeghi, Zahra Naghdabadi, Mahdieh Ghaneezabadi, Mehdi Fardmanesh, Hossein

Baharvand, Sahar Kiani*. **Combinational Therapy of Lithium and Human Neural Stem Cells in Rat Spinal Cord Contusion Model.** Journal of Cellular Physiology. 2019;234(11):20742-20754.

131. Naserkhaki R, Zamanzadeh S, Baharvand H, Nabavi SM, Pakdaman H, Shahbazi S, Vosough M, Ghaedi G, Barzegar A, Mirtorabi D, Hedayatshodeh J, Ehsani E, Falahati M, Hajipour MJ, Shahpasand K. **Cis pT231-tau Drives Neurodegeneration in Bipolar Disorder.** ACS Chem Neurosci. 2019;10(3):1214-1221.

132. Tohid Rezaei Topraggaleh, Mojtaba Rezazadeh Valojerdi*, Leila Montazeri, ***Hossein Baharvand****. **Testis-derived macroporous 3D scaffold as a platform for the generation of mouse testicular organoids.** Biomaterials Science, 2019; 7(4):1422-1436.

133. Zohreh Mansoori-Moghadam; Mehdi Totonchi; Mahdi Hesaraki; Nasser Aghdami; ***Hossein Baharvand***; Reza Moghadasali*. **Programming of ES cells and reprogramming of fibroblasts into renal lineage-like cells.** Experimental Cell Research, 2019;379(2):225-234.

134. Amir Kamali, Ahmad Oryan*, Samaneh Hosseini, Mohammad Hossein Ghanian, Maryam Alizadeh, Mohamadreza Baghaban Eslaminejad*, ***Hossein Baharvand***. **Cannabidiol-loaded microspheres incorporated into osteoconductive scaffold enhance mesenchymal stem cell recruitment and regeneration of critical-sized bone defects.** Mater Sci Eng C Mater Biol Appl. 2019;101:64-75.

135. Seyedeh-Nafiseh Hassani#, Sharif Moradi#, Sara Taleahmad, Thomas Braun, ***Hossein Baharvand****. **Transition of Inner Cell Mass to Embryonic Stem Cells: Mechanisms, Facts, and Hypotheses.** Cellular and Molecular Life Sciences. 2019 Mar;76(5):873-892. #: Co-first author.

136. Anahita Soltanian, Zahra Ghezelayagh, Zahra Mazidi, Majid Halvaei, Soura Mardpour, Mohammad Kazemi Ashtiani, Ensiyeh Hajizadeh-Saffar, Yaser Tahamtani*, ***Hossein Baharvand****. **Generation of Functional Human Pancreatic Organoids by Transplants of Embryonic Stem Cell Derivatives in a Bioprinted Tissue Trapper.** Journal of Cellular Physiology. 2019 Jun;234(6):9564-9576.

137. Soura Mardpour, Amir-Ali Hamidieh, Sara Taleahmad, Farzaneh Sharifzad, Adeleh Taghikhani, ***Hossein Baharvand****. **Interaction between Mesenchymal Stromal Cell-Derived Extracellular Vesicles and Immune Cells by Distinct Protein Content.** Journal of Cellular Physiology. 2019 Jun;234(6):8249-8258.

138. Mohammad-Ali Khalilifar, Mohammad Ghasemzadeh, Samaneh Hosseini, ***Hossein Baharvand***, Mohamadreza Baghaban Eslami*. **In vitro and in vivo Comparison of Different Types of Rabbit Mesenchymal Stem Cells for Cartilage Repair.** Cell Journal, 2019 Jul;21(2):150-160.

139. Ahmad Oryan, Mohamadreza Baghaban Eslaminejad*, Amir Kamali, Samaneh Hosseini, Forough Azam Sayahpour, Hossein Baharvand. **Synergistic effect of strontium, bioactive glass**

and nano-hydroxyapatite promotes bone regeneration of critical-sized radial bone defects. Journal of biomedical materials research B: applied biomaterials, 2019 Jan;107(1):50-64.

140. Fereshteh Karamali, Mohammad-Hossein Nasr Esfahani*, Mehdi Hajian, Fatemeh Ejeian, Leila Satarian, ***Hossein Baharvand****. **Hepatocyte Growth Factor Promotes the Proliferation of Human Embryonic Stem Cell-derived Retinal Pigment Epithelial Cells.** Journal of Cellular Physiology. 2019 Apr;234(4):4256-4266.

141. Fahimeh Varzideh, Sara Pahlavan, Hassan Ansari, Majid Halvaei, Sawa Kostin, Mohammad-Sadegh Feiz, Hamid Latifi, Nasser Aghdami, Thomas Braun, ***Hossein Baharvand****. **Human Cardiomyocytes Undergo Enhanced Maturation in Embryonic Stem Cell-Derived Organoid Transplants.** Biomaterials. 2019 Feb;192:537-550.

142. Seyedeh-Faezeh Moraveji, Fereshteh Esfandiari*, Mina Sharbatoghli, Sara Taleahmad, Saman Nikeghbalian, Abdolhossein Shahverdi, ***Hossein Baharvand****. **Optimizing Methods for Human Testicular Tissue Cryopreservation and Spermatogonial Stem Cell Isolation.** Journal of Cellular Biochemistry. 2019 Jan;120(1):613-621.

143. Clotilde Théry et al and ***Hossein Baharvand*** and et al. **Minimal information for studies of extracellular vesicles 2018 (MISEV2018): a position statement of the International Society for Extracellular Vesicles and update of the MISEV2014 guidelines.** Journal of Extracellular Vesicles. 2018 Nov 23;7(1):1535750.

144. Samira Gholami, Mohammad-Masoud Mohebi*, Ensiyeh Hajizadeh-Saffar, Mohammad-Hossein Ghanian, Ibrahim Zarkesh, ***Hossein Baharvand****. **Fabrication of microporous inorganic microneedles by centrifugal casting method for transdermal extraction and delivery.** International Journal of Pharmaceutics. 2019 Jan 14;558:299-310.

145. Yazdi A, Mokhtarzadeh Khangahi A, ***Baharvand H***, Javan M*. **Fingolimod Enhances Oligodendrocyte Differentiation of Transplanted Human Induced Pluripotent Stem Cell-Derived Neural Progenitors.** Iran J Pharm Res. 2018 Fall;17(4):1444-1457.

146. Saberi S, Piryaee A, Mirabzadeh E, Esmaeili M, Karimi T, Momtaz S, Abdirad A, Sodeifi N, Mohagheghi MA, ***Baharvand H***, Mohammadi M*. **Immunohistochemical Analysis of LGR5 and TROY Expression in Gastric Carcinogenesis Demonstrates an Inverse Trend.** Iran Biomed J. 2019 Mar;23(2):107-20.

147. Sareh Rajabi-Zeleti#, Sasan Jalili-Firoozinezhad#, Mohammad Kazemi Ashtiani, Gilles Le Carrou, Shahragim Tajbakhsh, ***Hossein Baharvand****. **Effect of chemical immobilization of SDF-1 α into muscle-derived scaffolds on angiogenesis and muscle progenitor recruitment.** J Tissue Eng Regen Med. 2018 Jan;12(1):e438-e450.

148. Farshid Yekani#, Mohammad Fazel-Tabar#, Reza Kowsari-Esfahan#, Philippe Renaud, Hanieh Kavand, Fereshteh Esfandiari, Mahnaz Azarnia, Leila Montazeri*, Hossein Baharvand* **Enhancing Developmental Rate and Quality of Mouse Single Blastomeres into Blastocysts using a Microplatform.** Journal of Cellular Physiology. 2018; 233(12):9070-9076. #: Co-first author.

149. Parisa Ghiasi, Saman Hosseinkhani*, Hassan Ansari, Nasser Aghdami, Saeed Balalaei, Sara Pahlavan, ***Hossein Baharvand****. **Reversible Permeabilization of the Mitochondrial Membrane Promotes Human Cardiomyocyte Differentiation from Embryonic Stem Cells.** *Journal of Cellular Physiology*. 2018;234(1):521-536.
150. Narges Jafari, Pascal Giehr, Mahdi Hesaraki, Roy Baas, Petra de Graaf, H. T. Marc Timmers, Jörn Walter, ***Hossein Baharvand****, Mehdi Totonchi*. **Genomic integrity of ground-state pluripotency.** *Journal of Cellular Physiology*. 2018;119(12):9781-9789.
151. Leila Zare, ***Hossein Baharvand***, Mohammad Javan*. **In vivo conversion of astrocytes to oligodendrocyte lineage cells using chemicals: targeting gliosis for myelin repair.** *Regenerative Medicine*. 2018;13(7):803-819.
152. Mohsen Emadedin[#], Narges Labibzadeh[#], Maede Ghorbani Liastani[#], Aliasghar Karimi, Neda Jaroughi, Tina Bolurieh, Seyyedeh-Esmat Hosseini, ***Hossein Baharvand***, Nasser Aghdami*. **Intra-articular Implantation of Autologous Bone Marrow-Derived Mesenchymal Stromal Cells to Treat Knee Osteoarthritis: A Randomized, Triple-Blind, Placebo-Controlled Phase 1/2 Clinical Trial.** *Cytotherapy*. 2018;20(10):1238-1246. #: Co-first author.
153. Faezeh Shekari, Chia-Li Han, Jaesuk Lee, Mehdi Mirzaei, Vivek Gupta, Paul A. Haynes, Bonghee Lee, ***Hossein Baharvand****, Yu-Ju Chen*, Ghasem Hosseini Salekdeh*. **Surface markers of human embryonic stem cells: a meta analysis of membrane proteomics reports.** *Expert Review of Proteomics*, 2018;15(11):911-922.
154. Mohsen Emadedin[#], Shahedeh Karimi[#], Aliasghar Karimi, Narges Labibzadeh, Maryam Niknejadi, Hossein Baharvand, Nasser Aghdami*. **Autologous Bone Marrow-Derived CD133 Cells with Core Decompression as a Novel Treatment Method for Femoral Head Osteonecrosis: A Pilot Study.** *Cytotherapy*. 2018, pii: S1465-3249(18)30641-8. #: Co-first author
155. Mohmmadmajid Sepantafar, Hossein Mohammadi, Reihan Maheronnaghsh, Lobat tayebi, Hossein Baharvand*. **Single Phased Silicate-containing Calcium Phosphate Bioceramics: Promising Biomaterials for Periodontal Repair.** *Ceramic International*. 2018; 44(10), 11003-11012.
156. Ali Fathi[#], Mehdi Mirzaei[#], Banafsheh Dolatyar, Mehdi Sharifitabar, Mahnaz Bayat, Ebrahim Shahbazi, Jaesuk Lee, Mohammad Javan, Su-Chun Zhang, Vivek Gupta, Bonghee Lee, Paul A. Haynes, Hossein Baharvand*, Ghasem Hosseini Salekdeh*. **Discovery of Novel Cell Surface Markers for Purification of Embryonic Dopamine progenitors for Transplantation in Parkinson's Disease Animal Models.** *Mol Cell Proteomics*. 2018;17(9):1670-1684. #: Co-first author.
157. Farshid Yekani, Mahnaz Azarnia*, Fereshteh Esfandiari, Seydedeh-Nafiseh Hassani, Hossein Baharvand*. **Enhanced Development of Mouse Single Blastomeres into Blastocysts via Simultaneous Inhibition of TGF- β and ERK Pathways in Microdroplet Culture.** *Journal of Cellular Biochemistry*. 2018;119(9):7621-7630.

158. Farnaz Behroozi, Mohammad-Jafar Abdkhodaie*, Hamid Sadeghi Abandansari, Leila Satarian, Mohammad Molazem, Khuloud T. Al-Jamal, Hossein Baharvand*. **Engineering Folate Targeting Diselenide-containing Tri-Block Copolymer as a Redox Responsive Shell-sheddable Micelle for Anti-Tumour Therapy *In Vivo***. *Acta Biomaterialia*. 2018;76:239-256.
159. Sadaf Vahdat, Sara Pahlavan, Nasser Aghdami, Behnaz Bakhshandeh*, Hossein Baharvand*. **Establishment of a Protocol for *In Vitro* Culture of Cardiogenic Mesodermal Cells derived from Human Embryonic Stem Cells**. *Cell Journal*, 2019 Jan;20(4):496-504.
160. Zhila Izadi, Ensiyeh Hajizadeh-Saffar*, Jamshid Hadjati, Mahdi Habibi-Anbouhi, Mohammad Hossein Ghanian, Hamid Sadeghi-Abandansari, Mohammad Kazemi Ashtiani, Zakieh Samsonchi, Mohammad Raoufi, Maedeh Moazenchi, Mahmoud Izadi, Anava sadat Sadr Hashemi Nejad, Haideh Namdari, Yaser Tahamtani, Seyed Nasser Ostad, Hamid Akbari-Javar*, ***Hossein Baharvand****. **Tolerance Induction by Surface Immobilization of Jagged-1 for Immunoprotection of Pancreatic Islets**. *Biomaterials*, 2018; 182:191-201.
161. An Y, Kawaguchi A, Zhao C, Toyoda A, Sharifi-Zarchi A, Mousavi SA, Bagherzadeh R, Inoue T, Ogino H, Fujiyama A, Chitsaz H, ***Baharvand H***, Agata K. **Draft genome of *Dugesia japonica* provides insights into conserved regulatory elements of the brain restriction gene *nou-darake* in planarians**. *Zoological Lett*. 2018 Aug 29;4:24.
162. Akram Mokhtarzadeh Khangahi, Wenbin Deng, ***Hossein Baharvand****, Mohammad Javan*. **In vivo Conversion of Astrocytes into Oligodendrocyte Lineage Cells with Transcription Factor Sox10; Promise for Myelin Repair in Multiple Sclerosis**. *Plos One*. 2018,13(9):e0203785.
163. Maryam Farzaneh, Masoumeh Zare, Seyedeh-Nafiseh Hassani*, ***Hossein Baharvand****. **Effects of Various Culture Conditions on Pluripotent Stem Cell Derivation from Chick Embryos**. *Journal of Cellular Biochemistry*. 2018 Aug;119(8):6325-6336.
164. Mohammad Reza Mokhber Dezfuli*, Sirous Sadeghian Chaleshtori, Azadeh Moradmand, Mohsen Basiri, Hossein Baharvand, Yaser Tahamtani*. **Hydrocortisone Promotes Differentiation of Mouse Embryonic Stem Cell-derived Definitive Endoderm toward Lung Alveolar Epithelial Cells**. *Cell Journal*, 2019;20(4):469-476.
165. Soura Mardpour, Seyedeh-Nafiseh Hassani, Saeid Mardpour, Forough Sayahpour, Massoud Vosough, Jafar Ai, Nasser Aghdami, Amir Ali Hamidieh*, Hossein Baharvand*. **Extracellular Vesicles Derived from Human Embryonic Stem Cell-MSCs Ameliorate Cirrhosis in Thioacetamide-Induced Chronic Liver Injury**. *Journal of Cellular Physiology*. 2017, Dec 21. doi: 10.1002/jcp.26413. [Epub ahead of print].
166. Zahra Orouji[#], Amir Bajouri[#], Mahshid Ghasemi[#], Parvaneh Mohammadi, Atefeh Shahbazi, Nasrin Fallah, Mohammad Rezvani, Ahad Alizadeh, Fatemeh Vaezi, Zahra Khalajasadi, Ehsan Taghiabadi, Sara Dashtbozorgi, Raheleh Aghdami, Seyedeh Esmat Hosseini, ***Hossein Baharvand***, Saeed Shafieyan*, Nasser Aghdami*. **A Single-arm Open-label Clinical Trial of Autologous Epidermal Cell Transplantation for Stable Vitiligo: A 30-month Follow-Up**. *Journal of Dermatological Science*, 2018;89(1):52-59. #: Co-first author.

167. Fatemeharefeh Nami, Mohsen Basiri, Leila Satarian, Cameron Curtiss, ***Hossein Baharvand****, Catherine Verfaillie*. **Strategies for in vivo genome editing in non-dividing cells.** Trends in Biotechnology. 2018 Aug;36(8):770-786.
168. Sara Taleahmad, Seyedeh-Nafiseh Hassani, Ghasem Hosseini Salekdeh*, ***Hossein Baharvand****. **Metabolic Signature of Pluripotent Stem Cells.** Cell Journal, 2018, 20(3):388-395.
169. Fatemeh Abbasi, Mohammad Hossein Ghanian, Hossein Baharvand, Bahman Vahidia, Mohamadreza Baghaban Eslaminejad. **Engineering Mesenchymal Stem Cell Spheroids by Incorporation of Mechanoregulator Microparticles.** Journal of the Mechanical Behavior of Biomedical Materials. 2018; 84:74-87.
170. Hamid Sadeghi Abandansari, Mohammad Hossein Ghanian, Fahimeh Varzideh, Elena Mahmoudi, Sarah Rajabi, Payam Taheri, Mohammad Reza Nabid, ***Hossein Baharvand****. **In situ formation of interpenetrating polymer network using sequential thermal and click crosslinking for enhanced retention of transplanted cells.** Biomaterials. 2018;170:12-25.
171. Samaneh Saberi, Behshad Pournasr, Zahra Farzaneh, Maryam Esmaili, Mahmoud Eshagh Hosseini, Hossein Baharvand*, Marjan Mohammadi*. **A Simple and Cost-efficient Adherent Culture Platform for Human Gastric Primary Cells, as an in vitro Model for Helicobacter pylori Infection.** Helicobacter, 2018:e12489.
172. Farnaz Behroozi, Mohammad-Jafar Abdkhodaie*, Hamid Sadeghi Abandansari, Leila Satarian, Mohammad Kazemi Ashtiani, Mahmoud Reza Jafari*, Hossein Baharvand*. **Smart Liposomal Drug Delivery for Treatment of Oxidative Stress Model in Human Embryonic Stem Cell-derived Retinal Pigment Epithelial Cells.** International Journal of Pharmaceutics. 2018 May 23;548(1):62-72.
173. Bahar Saberzadeh-Ardestani#, Raziieh Karamzadeh#, Mohsen Basiri, Ensiyeh Hajizadeh, Aisan Farhadi, A.M. James Shapiro, Yaser Tahamtani*, ***Hossein Baharvand****. **Type 1 Diabetes Mellitus: Cellular and Molecular Pathophysiology at a Glance.** Cell Journal, 2018; 20(3):294-301. #: Co-first author.
174. Azam Samadian#, Mehdi Hesaraki#, Sepideh Mollamohammadi, Behrouz Asgari, Mehdi Totonchi*, ***Hossein Baharvand****. Temporal Gene Expression and DNA Methylation during Embryonic Stem Cell Derivation. Cell J. 2018 Oct;20(3):361-368. #: Co-first author.
175. Zahra Azhdari Tafti, Mehdi Mahmoodi, Vahid Ezzatizadeh, Mohamad Reza Hajizadeh, ***Hossein Baharvand***, Massoud Vosough*, Abbas Piryaee*. **Conditioned Media Derived from Adipose Tissue Mesenchymal Stromal Cells Improved Hepatocyte Maintenance.** Cell Journal, 2018;20(3):377-387.
176. Mohammad-Hossein Ghanian, Hamid Mirzadeh*, ***Hossein Baharvand****. **In situ forming, cytocompatible, and self-recoverable tough hydrogels based on dual ionic and click cross-linked alginate.** Biomacromolecules. 2018. 19(5):1646-1662.

177. Atieh Makhloogh#, Soroosh Shekarchian#, Reza Moghadasali, Behzad Einollahi, Mona Dastgheib, Ghasem Janbabaee, Seyedeh Esmat Hosseini, Nasrin Falah, Fateme Abbasi, Hossein Baharvand, Nasser Aghdami*. **Bone marrow-mesenchymal stromal cells infusion in CKD patients: a safety study with 18 months follow-up.** *Cytotherapy*, 2018, 20(5):660-669. #: Co-first author.
178. Mehrnaz Namiri, Mohammad Kazemi Ashtiani, Saeed Abbasalizadeh, Zahra Mazidi, Elena Mahmoudi, Saman Nikeghbalian, Nasser Aghdami*, *Hossein Baharvand**. **Improving the Biological Function of Decellularized Heart Valves through Integration of Protein Tethering and Three-Dimensional Cell Seeding in a Bioreactor.** *Tissue Engineering and Regenerative Medicine*. 2018;12(4):e1865-e1879.
179. Soraya Shadmanfar#, Narges Labibzadeh#, Mohsen Emadedin, Neda Jaroughi, Vajiheh Azimian, Soura Mardpour, Fatemeh Abbasi Kakroodi, Tina Bolurieh, Seyyedeh Esmat Hosseini, Mohammad Chehrizi, Maryam Niknejadi, *Hossein Baharvand*, Farhad Gharibdoost*, Nasser Aghdami*. **Intra-articular Knee Implantation of Autologous Bone Marrow-Derived Mesenchymal Stem Cells in Rheumatoid Arthritis Patients with Knee Involvement: Results of a Randomized, Triple-Blind, Placebo-Controlled Phase I/II Clinical Trial.** *Cytotherapy*, 2018;20(4):499-506. #: Co-first author.
180. Saeed Yakhkeshi, Shaban Rahimi*, Mohsen Sharafi, Seyedeh-Nafiseh Hassani, Sara Taleahmad, Abdolhossein Shahverdi, *Hossein Baharvand**. **In Vitro Improvement of Quail Primordial Germ Cell Expansion through Activation of TGF-beta Signaling Pathway.** *Journal of Cellular Biochemistry*. 2018;119(6):4309-4319.
181. Mona Saheli, Mohammadmajid Sepantafar, Behshad Pournasr, Zahra Farzaneh, Massoud Vosough, Abbas Piryaeei*, *Hossein Baharvand**. **Three-Dimensional Liver-derived Extracellular Matrix Hydrogel Promotes Liver Organoids Function.** *Journal of Cellular Biochemistry*. 2018;119(6):4320-4333.
182. Mohammed Hossein Naseri, Hoda Madani, Hossein Ahmadi, Maryam Moshkanifarahani, Davood Kazemi-Saleh, Hossein Hosseinejad, Saeed Hosseini, Sepideh Hekmat, Zargham Ahmadi, Majid Deghani, Alireza Saadat, Souri Mardpour, Seyedeh-Esmat Hosseini, Maryam Esmailzadeh, Hakimeh Sadeghian, Gholamreza Bahoush, Ali Bassi, Ahmad Amin, Roghayeh Fazeli, Yaser Sharafi, Leila Arab, Mansour Movahhed, Saeid Davaran, Narges Ramezanzadeh, Azam Kouhkan, Ali Hazaveyi, Mehrnaz Namiri, Fahimeh Kashfi, Ali Akhlaghi, Fattah Sotoodehnejadnematalahi, Ahmad Vosough Taqi Dizaj, Hamid Gourabi, Naema Syedi, *Hossein Baharvand*, Nasser Aghdami*. **COMPARE CPM-RMI Trial: Intramyocardial Transplantation of Autologous Bone Marrow-derived CD133+ Cells and MNCs during CABG in Patients with Recent MI: A Phase II/III, Multicenter, Placebo-Controlled, Randomized, Double-Blind Clinical Trial.** *Cell Journal*, 2018, 20 (2), 267-277.
183. Sara Pahlavan, Marziyeh Shalchi Tousi, Mahdi Ayyari, Abolfazl Alirezalu, Hassan Ansari, Tomo Saric, *Hossein Baharvand**. **Effects of Hawthorn (*Crataegus pentagyna*) Leaf Extract on Electrophysiological Properties of Cardiomyocytes Derived from Human**

Cardiac Arrhythmia-Specific Induced Pluripotent Stem Cells. FASEB Journal, 2018 Mar;32(3):1440-1451.

184. Fereshteh Karamali, Mohammad-Hossein Nasr Esfahani*, Sara Taleahmad, Leila Satarian, ***Hossein Baharvand****. **Stem Cells from Apical Papilla Promote Differentiation of Human Pluripotent Stem Cells towards Retinal Cells.** Differentiation, 2018 Mar 2;101:8-15.

185. Zaniar Ghazizadeh#*, Faranak Fattahi#, Mehdi Mirzaei, Delger Bayersaikhan, Jaesuk Lee, Sehyun Chae, Kyunghee Byun, Mehdi Sharifi Tabar, Sara Tale Ahmad, Shahab Mirshahvaladi, Parisa Shabani, Hananeh Fonoudi, Paul A. Haynes, ***Hossein Baharvand***, Nasser Aghdami, Todd Evans, Bonghee Lee*, Ghasem Hosseini Salekdeh*. **Prospective isolation of ISL1+ cardiac progenitors from human ESCs for myocardial infarction therapy.** Stem Cell Reports, 2018 Mar 13;10(3):848-859. #: Co-first author.

186. Hamidreza Aboulkheyr, Leila Montazeri, Amir Reza Aref, Massoud Vosough, ***Hossein Baharvand****. **Personalized Cancer Medicine: An Organoid Approach.** Trends in Biotechnology. 2018 Apr;36(4):358-371.

187. Helia Namazi, Elham Mohit, Iman Namazi, Sarah Rajabi, Azam Samadian, Ensiyeh Hajizadeh-Saffar, Nasser Aghdami*, ***Hossein Baharvand****. **Exosomes Secreted by Hypoxic Cardiosphere-derived Cells Enhance Tube Formation and Increase Pro-angiogenic miRNA.** Journal of Cellular Biochemistry. 2018 May;119(5):4150-4160.

188. Maryam Peymani, Motahare-Sadat Hashemi, Ali Ghoochani, Abbas Kiani-Esfahani, Alireza Pouya, Kamran Ghaedi*, Mohammad Hossein Nasr-Esfahani*, ***Hossein Baharvand****. **Ameliorating Effect of Pioglitazone on LPS Induced Inflammation of Human Oligodendrocyte Progenitor Cells.** Cellular and Molecular Neurobiology, 2018;38(2):517-527.

189. Zahra Farzaneh, Mostafa Najarasl, Saeed Abbasalizadeh, Massoud Vosough, Hossein Baharvand*. **Developing a Cost-Effective and Scalable Production of Human Hepatic Competent Endoderm from Size-Controlled Pluripotent Stem Cell Aggregates.** Stem Cells and Development, 2018 Feb 15;27(4):262-274.

190. Somayeh Karimzadeh, Saman Hosseinkhani*, Ali Fathi, Farangis Ataei, Hossein Baharvand*. **Insufficient Apaf-1 expression in early stages of neural differentiation of human embryonic stem cells might protect them from apoptosis.** European Journal of Cell Biology. 2018;97(2):126-135.

191. Maryam Ghasemi-Kasman, Amir Shojaei, AA Moghadamnia, ***Hossein Baharvand***, Mohammad Javan*. **miR-302/367-induced neurons reduce behavioral impairment in an experimental model of Alzheimer's disease.** Mol Cell Neurosci. 2018;86:50-57.

192. Sarah Rajabi, Sara Pahlavan, Mohammad Kazemi Ashtiani, Hassan Ansari, Saeed Abbasalizadeh, Forough Azam Sayahpour, Fahimeh Varzideh, Sawa Kostin, Nasser Aghdami, Thomas Braun, ***Hossein Baharvand****. **Human embryonic stem cell-derived cardiovascular progenitor cells efficiently colonize in bFGF-tethered natural matrix to construct contracting humanized rat hearts.** Biomaterials, 2018;154:99-112.

193. Sharif Moradi, Thomas Braun*, Hossein Baharvand*. **miR-302b-5p promotes self-renewal properties in LIF-withdrawn embryonic stem cells**. Cell Journal, 2018;20(1):61-72.
194. Zeinab Heidariyan, Mohammad Hossein Ghanian, Mohsen Ashjari, Zahra Farzaneh, Mostafa Najarasl, Mehran Rezaei Larijani, Abbas Piryaee, Massoud Vosough, Hossein Baharvand*. **Efficient and Cost-effective Generation of Hepatocyte-like Cells Through Microparticle-mediated Delivery of Growth Factors in a 3D Culture of Human Pluripotent Stem Cells**. Biomaterials. 2018;159:174-188.
195. Mohammad Kazemi Ashtiani, Mojgan Zandi*, Parvin Shokrollahi, Morteza Ehsani, Hossein Baharvand. **Surface Modification of Poly(2-hydroxyethylmethacrylate) Hydrogel for Contact Lens Application**. Polymers for Advanced Technologies. 2018, 1-7.
196. Ali Sharifi-Zarchi#, Daniela Gerovska#, Kenjiro Adachi , Mehdi Totonchi , Hamid Pezeshk, Ryan J. Taft , Hans R. Schöler, Hamidreza Chitsaz, Mehdi Sadeghi, Hossein Baharvand*, Marcos J. Araúzo-Bravo*. **DNA methylation regulates discrimination of enhancers from promoters through a H3K4me1-H3K4me3 seesaw mechanism**. BMC Genomics, 2017;18(1):964. doi: 10.1186/s12864-017-4353-7.
197. Sharif Moradi, Ali Sharifi-Zarchi, Amirhossein Ahmadi, Sepideh Mollamohammadi, Alexander Stubenvoll, Stefan Günther, Ghasem Hosseini Salekdeh, Sassan Asgari, Thomas Braun*, Hossein Baharvand*. **Small RNA Sequencing Reveals *Dlk1-Dio3* Locus-Embedded MicroRNAs as Major Drivers of Ground State Pluripotency**. Stem Cell Reports. 2017, ;9(6):2081-2096.
198. Maryam Ghasemi-Kasman, Hossein Baharvand, Mohammad Javan*. **Enhanced neurogenesis in degenerated hippocampi following pretreatment with miR-302/367 expressing lentiviral vector in mice** Biomedicine & Pharmacotherapy, 2017;96:1222-1229.
199. A.M. Ghafari, S. Rajabi, M. Najji, M.H. Ghanian, H. Baharvand*. **Mechanical reinforcement of urinary bladder matrix by electrospun polycaprolactone nanofibers**. Scientia Iranica. Scientia Iranica, Transactions F: Nanotechnology 24 (2017) 3476-3480.
200. Ebrahim Shahbazi, Fahimeh Mirakhori, Vahid Ezzatizadeh, Hossein Baharvand*. **Reprogramming of Somatic Cells to Induced Neural Stem Cells**. Methods. 2017 Sep 20. pii: S1046-2023(17)30119-6.
201. Hilary Ireland#, Max H.P. Gay#, Helen Baldomero, Barbara De Angelis, Hossein Baharvand, Mark W. Lowdell, Jakob Passweg, Ivan Martin. **The survey on cellular and tissue-engineered therapies in Europe and neighboring Eurasian countries in 2014 and 2015**. Cytotherapy. 2018;20(1):1-20. #: co-first author
202. Anna Meyfour, Paria Pooyan, Sara Pahlavan, Mostafa Rezaei-Tavirani, Hamid Gourabi, Hossein Baharvand*, Ghasem Hosseini Salekdeh*. **Chromosome-Centric Human Proteome Project Allies with Developmental Biology: a Case Study of the Role of Y chromosome Genes in Organ Development**. Journal of Proteome Research. 2017;16(12):4259-4272.

203. Anna Meyfour, Hassan Ansari, Sara Pahlavan, Shahab Mirshahvaladi, Mostafa Rezaei-Tavirani, Gourabi H, ***Hossein Baharvand****, Ghasem Hosseini Salekdeh*. **Y chromosome missing protein, TBL1Y, may play an important role in cardiac differentiation.** Journal of Proteome Research. 2017;16(12):4391-4402.
204. Oryan A, Kamali A, Moshiri A, ***Baharvand H***, Daemi H. **Chemical crosslinking of biopolymeric scaffolds: Current knowledge and future directions of crosslinked engineered bone scaffolds.** Int J Biol Macromol. 2018;107(Pt A):678-688.
205. Shirin Kashfi, Kamran Ghaedi, ***Hossein Baharvand***, Mohammad Hossein Nasr-Esfahani*, Mohammad Javan*. **A₁ Adenosine Receptor Activation Modulates Central Nervous System Development and Repair.** Molecular Neurobiology. 2017;54(10):8128-8139.
206. Sasan Jalili-Firoozinezhad, Mohamad Hasan Mohamadzadeh Moghadam, Mohammad Hossein Ghanian, Mohammad Kazemi Ashtiani, Hossein Alimadadi, ***Hossein Baharvand,**** Ivan Martin* and Arnaud Scherbericha. **Polycaprolactone-templated reduced-graphene oxide liquid crystal nanofibers towards biomedical applications.** Royal Society of Chemistry Advances. 2017; 7, 39628–39634.
207. Maryam Farzaneh, Seyedeh-Nafiseh Hassani*, Paul Mozdziak, Hossein Baharvand*. **Avian Embryos and Related Cell Lines: A Convenient Platform for Recombinant Proteins and Vaccine Production.** Biotechnology Journal. 2017;12(5). doi: 10.1002/biot.201600598.
208. Maryam Ghasemi-Kasman, Leila Zare, ***Hossein Baharvand***, Mohammad Javan*. **In Vivo Conversion of Astrocytes to Myelinating Cells by miR-302/367 and Valproate to Enhance Myelin Repair.** Journal of Tissue Engineering and Regenerative Medicine. 2017 Jan 27. doi: 10.1002/term.2276.
209. Esfandiari F, Ashtiani MK, Sharifi-Tabar M, Saber M, Daemi H, Ghanian MH, Shahverdi A, ***Baharvand H****. **Microparticle-Mediated Delivery of BMP4 for Generation of Meiosis-Competent Germ Cells from Embryonic Stem Cells.** Macromol Biosci. 2017;17(3). doi: 10.1002/mabi.201600284.
210. Mohammadmajid Sepantafar, Reihan Maheronnaghsh, Hossein Mohammadi, Fatemeh Radmanesh, Mohammad Mahdi Hasani-sadrabadi, Marzieh Ebrahimi, ***Hossein Baharvand****. **Engineered Hydrogels in Cancer Therapy and Diagnosis.** Trends in Biotechnology. 2017;35(11):1074-1087.
211. Sara Taleahmad, Mehdi Mirzaei, Azam Samadian, Seyedeh-Nafiseh Hassani, Paul Haynes, Ghasem Salekdeh*, ***Hossein Baharvand****. **Low Focal Adhesion Signaling Promotes Ground State Pluripotency of Mouse Embryonic Stem Cells.** Journal of Proteome Research. 2017;16(10):3585-3595.
212. Zahra Safaeinejad, Mohammad Nabiuni*, Maryam Peymani, Kamran Ghaedi*, Mohammad Hossein Nasr-Esfahani, Hossein Baharvand*. **Resveratrol promotes human embryonic stem cells self-renewal by targeting SIRT1-ERK signaling pathway.** European Journal of Cell Biology. 2017;96(7):665-672.

213. Mehdi Totonchi[#], Seyedeh-Nafiseh Hassani[#], Ali Sharifi-Zarchi[#], Natalia Tapia, Kenjiro Adachi, Julia Arand, Boris Greber, Davood Sabour, Marcos J. Araújo-Bravo, Jörn Walter, Mohammad Pakzad, Hamid Gourabi, Hans R. Schöler, Hossein Baharvand*. **Blockage of the Epithelial-to-Mesenchymal Transition Is Required for Embryonic Stem Cell Derivation.** Stem Cell Reports. 2017, 2017;9(4):1275-1290.
214. Shirin Kashfi, Maryam Peymani, Kamran Ghaedi, Hossein Baharvand, Mohammad Hossein Nasr-Esfahani*, Mohammad Javan*. **Purinergic Receptors expression and potential association with Human Embryonic Stem Cell-derived Oligodendrocyte Progenitor Cells Development.** Cell Journal. 2017;19(3):386-402.
215. Mahmood Talkhabi*, Elmira Rezaei Zonooz, Hossein Baharvand*. **Boosters and Barriers for Direct Cardiac Reprogramming.** Life Sciences. 2017;178:70-86.
216. Faezeh Shekari, Hossein Nezari, Mehran Rezaei Larijani, Han CL, Hossein Baharvand*; Yu-Ju Chen*; Ghasem Hosseini Salekdeh*. **Proteome analysis of human embryonic stem cells organelles.** J Proteomics. 2017;162:108-118.
217. Mahshid Malakootian, Fatemeh Mirzadeh Azada, Parisa Naelia, Mohammad Pakzad, Youssef Fouani, Elham Taheri Bajgan, Hossein Baharvand, Seyed Javad Mowla*. **Introducing novel spliced variants of OCT4, OCT4C and OCT4C1, with distinct expression patterns and functions in pluripotent and tumor cell line.** European Journal of Cell Biology. 2017;96(4):347-355.
218. Atieh Makhloogh,[#] Soroosh Shekarchian,[#] Reza Moghadasali, Behzad Einollahi, Seyedeh Esmat Hosseini, Neda Jaroughi, Tina Bolurieh, Hossein Baharvand, Nasser Aghdami*. **Safety and Tolerability of Autologous Bone Marrow Mesenchymal Stromal Cells in ADPKD Patients.** Stem Cell Research & Therapy. 2017;8(1):116. #: co-first author
219. Ibrahim Zarkesh, Mohammad Hossein Ghanian, Mahmoud Azami, Fatemeh Bagheri, Hossein Baharvand, Javad Mohammadia*, Mohamadreza Baghaban Eslaminejad*. **Facile synthesis of biphasic calcium phosphate microspheres with engineered surface topography for controlled delivery of drugs and proteins.** Colloids and Surfaces B: Biointerfaces. 2017;157:223-232.
220. Faezeh Shekari; Hossein Nezari; Yu-Ju Chen; Hossein Baharvand*; Ghasem Hosseini Salekdeh*. **Data for Whole and Mitochondrial Proteome of Human Embryonic Stem Cells.** Data in Brief. 2017;13:371-376.
221. Ali Fathi*, Shahram Eisa-Beygi, Hossein Baharvand*. **Signaling Molecules Governing Pluripotency and Early Lineage Commitments in Human Pluripotent Stem Cells.** Cell Journal. 2017;19(2):194-203.
222. Saeed Abbasalizadeh, Mohammad Pakzad, Joaquim M.S. Cabral, Hossein Baharvand*. **Allogeneic Cell Therapy Manufacturing: Process Development Technologies and Facility Design Options.** Expert Opinion on Biological Therapy. 2017 Jul 20:1-19.

223. Sara Mirsadeghi, Ebrahim Shahbazi, Katayoun Hemmesi, Shiva Nemati, ***Hossein Baharvand***, Javad Mirnajafi-Zadeh*, Sahar Kiani*. **Membrane Ion Channels Development during Neural Differentiation from Human Embryonic Stem Cells.** Biochemical and Biophysical Research Communications. 2017;491(1):166-172.
224. Leila Satarian, Ramin Nourinia, Sare Safi, Mozghan Rezaei Kanavi, Neda Jarughi, Narsis Daftarian, Leila Arab, Nasser Aghdami, Hamid Ahmadi*, Hossein Baharvand*. **Safety of Bone Marrow-Mesenchymal Stem Cells after Intravitreal Injection in Patients with Advanced Retinitis Pigmentosa.** Journal of Ophthalmic and Vision Research. 2017;12(1):58-64.
225. Dezfouli MR*, Chaleshtori SS, Dehghan MM, Tavanaeimanesh H, ***Baharvand H***, Tahamtani Y. **The therapeutic potential of differentiated lung cells from embryonic stem cells in lung diseases.** Curr Stem Cell Res Ther. 2017;12(1):80-84.
226. Majid Lotfinia, Mehdi Kadivar1*, Abbas Piryaee, Behshad Pournasr, Soroush Sardari, Niloofer Sodeifi, Forugh-Azam Sayahpour, Hossein Baharvand*. **Effect of Secreted Molecules of Human Embryonic Stem Cell-Derived Mesenchymal Stem Cells on Acute Hepatic Failure Model.** Stem Cells and Development. 2016;25(24):1898-1908.
227. Parvaneh Mohammadi, Khalil Kass Youssef, Saeed Abbasalizadeh, ***Hossein Baharvand***, Nasser Aghdami* **Human Hair Reconstruction: Close but Yet So Far.** Stem Cells and Development. 2016;25(23):1767-1779.
228. Mohsen Basiri, Mehrdad Behmanesh*, Yaser Tahamtani, Keynoosh Khalooghi, Azadeh Moradmand, ***Hossein Baharvand****. **The Convenience of Single Homology Arm Donor DNA and CRISPR/Cas9-Nickase for Targeted Insertion of Long DNA Fragment.** Cell Journal. 2017, 18(4), 532-539.
229. Kianoush Dormiani, Hamid Mir Mohammad Sadeghi, Hojjat Sadeghi-Aliabadi, Kamran Ghaedi*, Mahboobeh Forouzanfar, ***Hossein Baharvand***, Mohammad Nasr-Esfahani*. **Rational development of a 2A-linked polycistronic plasmid with a CpG-free bacterial backbone as a potential tool for safe direct reprogramming.** Cell Journal, Cell Journal. 2017, 18(4), 565-581.
230. Pourgholaminejad A, Aghdami N, ***Baharvand H***, Moazzeni SM*. **Is TGFβ as an anti-inflammatory cytokine required for differentiation of inflammatory TH17 cells?** J Immunotoxicol. 2016, Oct 18:1-9.
231. Mohammad Kazemi Ashtiani, Mojgan Zandi*, Jalal Barzin, Yaser Tahamtani, Mohammad Hossein Ghanian, Azadeh Moradmand, Morteza Ehsani, Hossein Nezari, Mehran Rezaei Larijani, Hossein Baharvand*. **Substrate-mediated commitment of human embryonic stem cells for hepatic differentiation.** J Biomed Mater Res A. 2016; 104(11):2861-72.
232. Khadijeh Karbalaie, Sadeq Vallian*, Mohammad Hossein Nasr-Esfahani, Liana Lachinani, Somayeh Tanhaei, ***Hossein Baharvand***. **Analysis of Promyelocytic Leukemia in Human Embryonic Carcinoma Stem Cells During Retinoic Acid-Induced Neural Differentiation.** Iranian Journal of Biotechnology, 2016, 14 (3), 109-116.

233. Jodeiri Farshbaf M, Forouzanfar M, Ghaedi K*, Kiani-Esfahani A, Peymani M, Shoaraye Nejati A, Izadi T, Karbalaie K, Noorbakhshnia M, Rahgozar S, ***Baharvand H***, Nasr-Esfahani MH*. **Nurr1 and PPAR γ protect PC12 cells against MPP+ toxicity: involvement of selective genes, anti-inflammatory, ROS generation, and antimitochondrial impairment.** Mol Cell Biochem. 2016; 420(1-2):29-42.
234. Hananeh Fonoudi[#], Hassan Ansari[#], Saeed Abbasalizadeh, Gillian M. Blue, Nasser Aghdami, David S. Winlaw, Richard P. Harvey, Alexis Bosman*, ***Hossein Baharvand****. **Large-scale production of cardiomyocytes from human pluripotent stem cells using a highly reproducible small molecule-based differentiation protocol.** Jove-Journal of Visualized Experiments. 2016, J Vis Exp. 2016 Jul 25;(113). doi: 10.3791/54276. #: co-first author.
235. Favaedi R, Shahhoseini M*, Pakzad M, Mollamohammadi S, Baharvand H. **Comparative epigenetic evaluation of human embryonic stem and induced pluripotent cells.** Int J Dev Biol. 2016;60(4-5-6):103-110.
236. Sharifiaghdas F*, Tajalli F, Taheri M, Naji M, Moghadasali R, Aghdami N*, ***Baharvand H***, Azimian V, Jaroughi N. **Effect of autologous muscle-derived cells in the treatment of urinary incontinence in female patients with intrinsic sphincter deficiency and epispadias: A prospective study.** Int J Urol. 2016;23(7):581-6.
237. Arash Pourgholaminejad, Nasser Aghdami*, ***Hossein Baharvand***, Seyed Mohammad Moazzeni*. **Is TGF β as an anti-inflammatory cytokine required for differentiation of inflammatory TH17 cells?** Journal of Immunotoxicology, 2016, 85:51-60.
238. Leila Montazeri, Shahin Bonakdar, Mojtaba Taghipour, Philippe Renaud*, ***Hossein Baharvand****. **Modification of PDMS to Fabricate PLGA Microparticles by a Double Emulsion Method in a Single Microfluidic Device.** Lab on a Chip. 2016, 16(14):2596-600.
239. Behnam Molavi, Mohammad Reza Zafarghandi, Ehsan Aminizadeh, Seyyedeh-Esmat Hosseini, Hamid Mirzayi, Leila Arab, ***Hossein Baharvand***, Nasser Aghdami*. **Safety and Efficacy of Repeated Bone Marrow Mononuclear Cell Therapy in Patients with Critical Limb Ischemia in a Pilot Randomized Controlled Trial.** Archives of Iranian Medicine. Arch Iran Med. 2016;19(6):388-96.
240. Arash Pourgholaminejad, Nasser Aghdami*, ***Hossein Baharvand***, Seyed Mohammad Moazzeni*. **The effect of pro-inflammatory cytokines on immunophenotype, differentiation capacity and immunomodulatory functions of human mesenchymal stem cells.** Cytokine, 2016;85: 51–60.
241. Mohammadmajid Sepantafar, Reihan Maheronnaghsh, Hossein Mohammadi, Sareh Rajabi-Zeleti, Nassim Annabi, Nasser Aghdami*, ***Hossein Baharvand****. **Stem cells and Injectable Hydrogels: Synergistic Therapeutics in Myocardial Repair.** Biotechnology Advances. 2016;34(4):362-79.
242. Sasan Jalili-Firoozinezhad[#], Sareh Rajabi-Zeleti¹[#], Anna Marsano, Nasser Aghdami¹*, ***Hossein Baharvand***¹*. **Influence of Decellularized Pericardium Matrix on the Behavior of**

Cardiac Progenitors. Journal of Applied Polymer Science. 2016, 133 (14), 43255. #: co-first author.

243. Neda Yahoo, Behshad Pournasr, Jalal Rostamzadeh, Mohammad Saeed Hakhamaneshi, Asghar Ebadifar, Fardin Fathi*, ***Hossein Baharvand****. **Forced Expression of *Hnf1b/Foxa3* Promotes Hepatic Fate of Embryonic Stem Cells.** Biochemical and Biophysical Research Communications. 2016; 474(1):199-205.

244. Kobra Zakikhan, Behshad Pournasr, Marjan Nassiri-Asl, ***Hossein Baharvand****. **Enhanced Direct Conversion of Fibroblasts into Hepatocyte-Like Cells by *Kdm2b*.** Biochemical and Biophysical Research Communications. 2016; 474(1):97-103.

245. Saharosadat Sajadian; Tripura Chaturvedula, Fazel Sahraneshin Samani; Marc Ruoss; Steven Dooley, ***Hossein Baharvand***, Andreas K Nussler*. **Vitamin C enhances epigenetic modifications induced by 5-Azacytidine and cell cycle arrest in the hepatocellular carcinoma Cell lines Huh7 and HLE.** Clinical Epigenetics. 2016; 8:46.

246. Ebrahim Shahbazi, Sharif Moradi, Shiva Nemati, Leila Satarian, Mohsen Basiri, Hamid Gourabi, Narges Zare Mehrjardi, Patrick Günther, Angelika Lampert, Kristian Händler, Fulya Hatay, Diana Schmidt, Marek Molcanyi, Jürgen Hescheler, Joachim L. Schultze, Tomo Šarić*, ***Hossein Baharvand****. **Conversion of Human Fibroblasts to Stably Self-Renewing Neural Stem Cells with a Single Zinc-Finger Transcription Factor.** Stem Cell Reports (Cell Press). 2016,;6(4):539-551.

247. Payam Baei, Sasan Jalili-Firoozinezhad, Sareh Rajabi-Zeleti, Mohammad Tafazzoli-Shadpour, ***Hossein Baharvand****, Nasser Aghdami*. **Electrically Conductive Gold Nanoparticle-Chitosan Thermosensitive Hydrogels for Cardiac Tissue Engineering.** Materials Science and Engineering C-Materials for Biological Applications. 2016;63:131-41.

248. Motahere-Sadat Hashemi, Abbas Kiani Esfahani, Maryam Peymani, Alirezashoaraye Nejati, Kamran Ghaedi*, Mohammad Hossein Nasr-Esfahani *, ***Hossein Baharvand***. **Zinc finger protein 521 overexpression increased transcript levels of *Fndc5* in mouse embryonic stem cells.** Journal of Biosciences, 2016;41(1):69-76.

249. Leila Montazeri, Shahriar Hojjati-Emami*, Shahin Bonakdar, Yaser Tahamtani, Ensiyeh Hajizadeh-Saffar, Marjan Noori-Keshkar, Mostafa Najar-Asl, Mohammad Kazemi Ashtiani, ***Hossein Baharvand****. **Improvement of Islet Engrafts by Enhanced Angiogenesis and Microparticle-Mediated Oxygenation.** Biomaterials. 2016; 89:157-165.

250. Mehrnaz Namiri, Mohammad Kazemi Ashtiani, Omid Mashinchian, Mohammad Mahdi Hasani-Sadrabadi, Morteza Mahmoudi, Nasser Aghdami, ***Hossein Baharvand****. **Engineering Natural Heart Valve: Possibilities and Challenges.** Journal of Tissue Engineering and Regenerative Medicine. 2016 Jan 22. doi: 10.1002/term.2127. [Epub ahead of print]

251. Yasaman Kalantar-Motamedi, Maryam Peymani, ***Hossein Baharvand***, Mohammad Hossein Nasr-Esfahani*, Andreas Bender*. **Systematic selection of small molecules to**

promote differentiation of embryonic stem cells and experimental validation for generating cardiomyocytes. Cell Death Discovery (Nature Publishing Group). 2016, 2, 16007.

252. Hamed Daemi, Sareh Rajabi-Zeleti, Haritz Sardon, Mehdi Barikani*, Ali Khademhosseini, ***Hossein Baharvand****. **A Robust Super-Tough Biodegradable Elastomer Engineered by Supramolecular Ionic Interactions.** Biomaterials. 2016;84:54-63. (Featured article by Material Today at <http://www.materialstoday.com/biomaterials/news/seaweed-makes-supertough-biomaterial/>)

253. Massoud Vosough#, Shirin Moossavi#, Soura Mardpour, Shahram Akhlaghpour, Vajiheh Azimian, Neda Jarughi, Seyedeh-Esmat Hosseini, Mandana Ashrafi, Sepideh Nikfam, Nasser Aghdami, Reza Malekzadeh, Mehdi Mohamadnejad*, Hossein Baharvand*. **Repeated Intraportal Injection of Mesenchymal Stem Cells in Combination with Pioglitazone in Patients with Compensated Cirrhosis: A clinical report of two cases.** Archives of Iranian Medicine. 2016;19(2):131-6. #: co-first author.

254. Mehdi Mohamadnejad#, Massoud Vosough#, Shirin Moossavi#, Sepideh Nikfam, Soura Mardpour, Shahram Akhlaghpour, Mandana Ashrafi, Vajiheh Azimian, Neda Jarughi, Seyedeh-Esmat Hosseini, Fatemeh Moeininia, Mohamad Bagheri, Maryam Sharafkhan, Nasser Aghdami, Reza Malekzadeh*, ***Hossein Baharvand****. **Intraportal Infusion of Bone Marrow Mononuclear or CD133+ Cells in Patients with Decompensated Cirrhosis: A Double-Blind Randomized Controlled Trial.** Stem Cells Translational Medicine. 2016;5:87-94. #: co-first author. (Featured article by the journal) as indicated in: http://www.icontact-archive.com/uY4CWN-9Ks0g5A-_hPQMXL2OF3Ane8x?w=4

255. Hossein Azizi, Sabine Conrad, Ursula Hinz, Behrouz Asgari, Daniel Nunes, Heike Peterziel, Akbar Hajizadeh Moghaddam, ***Hossein Baharvand****, Thomas Skutella*. **Pluripotency of Spermatogonial Stem Cells in mice is age-dependent.** Stem Cells International. 2016;8:216312.

256. Mahmood Talkhabi, Nasser Aghdami*, ***Hossein Baharvand****. **Human Cardiomyocyte Generation from Pluripotent Stem Cells: A State-of-Art.** Life Sciences. 2015, 2015 (15)30114-4.

257. Sara Taleahmad, Mehdi Mirzaei, Lindsay Parker, Seyedeh-Nafiseh Hassani, Sepideh Mollamohammadi, Ali Sharifi-Zarchi, Paul Haynes, ***Hossein Baharvand****, Ghasem Salekdeh*. **Proteome Analysis of Ground State Pluripotency.** Scientific Reports (Nature Publishing Group). 2015; 5:17985.

258. Hananeh Fonoudi#, Hassan Ansari#, Saeed Abbasalizadeh, Mehran Rezaei Larijani, Sahar Kiani, Shiva Hashemizadeh, Ali Sharifi Zarchi, Alexis Bosman, Gillian M. Blue, Sara Pahlavan, Matthew Perry, Yishay Orr, Yaroslav Mayorchak, Jamie Vandenberg, Mahmoud Talkhabi, David S. Winlaw, Richard P. Harvey, Nasser Aghdami, ***Hossein Baharvand****. **A Universal and Robust Integrated Platform for the Scalable Production of Human Cardiomyocytes from Pluripotent Stem Cells.** Stem Cells Translational Medicine. 2015;4(12):1482-1494.. #: co-first author. (Top downloaded paper)

259. Azadeh Yazdi, ***Hossein Baharvand***, Mohammad Javan*. **Enhanced remyelination following lysolecithin-induced demyelination in mice under treatment with fingolimod (FTY720)**. *Neuroscience*. 2015;311:34-44.
260. Fereshteh Esfandiari, Omid Mashinchian, Mohammad Kazemi Ashtiani, Mohammad Hossein Ghanian, Katsuhiko Hayashi, Amir Ata Saei, Morteza Mahmoudi, ***Hossein Baharvand****. **Possibilities and Challenges in Germ Cell Research: An Engineering Insight**. *Trends in Biotechnology*. 2015;33(12):735-46. (Cell Press)
261. Behshad Pournasr, Mohammad Hassan Asghari-Vostikolaee, ***Hossein Baharvand****. **Transcription Factor-mediated Reprogramming of Fibroblasts to Hepatocyte-like Cells**. *European Journal of Cell Biology*, 2015;94(12):603-10.
262. Marjan Taheri#, Ahmad Salamian#, Kamran Ghaedi*, Maryam Peymani, Tayebbeh Izadi, Alireza Shoaraye Nejati, Atefeh Atefi, Marzieh Nematollahi, Fatemeh Ahmadi Gahrizjani, Maryam Esmaeili, Abbas Kiani Esfahani, Shiva Irani, ***Hossein Baharvand***, Mohammad Hossein Nasr-Esfahani*. **A ground state of PPAR γ activity and expression is required for appropriate neural differentiation of hESCs**. *Pharmacological Reports*. 2015;67(6):1103-14.
#: co-first author
263. Nasim Sadat Kajabadi, Ali Ghoochani, Maryam Peymani, Kamran Ghaedi*, Abbas Kiani-Esfahani, Motahareh-Sadat Hashemi, Mohammad Hossein Nasr-Esfahani*, ***Hossein Baharvand****. **The Synergistic Enhancement of Cloning Efficiency in Individualized Human Pluripotent Stem Cells by Peroxisome Proliferative-Activated Receptor- γ (PPAR γ) Activation and Rho-associated Kinase (ROCK) Inhibition**. *Journal of Biological Chemistry*. 2015;290(43):26303-13.
264. Sasan Jalili-Firoozinezhad, Sareh Rajabi-Zeleti, Parvaneh Mohammadi, Emanuele Gaudiello, Shahin Bonakdar, Mehran Solati-Hashjin, Anna Marsano, Nasser Aghdami, Arnaud Scherberich, ***Hossein Baharvand****, Ivan Martin*. **Facile Fabrication of Egg White Macroporous Sponges for Tissue Regeneration**. *Advanced Healthcare Materials*. 2015;4(15):2281-90.
265. Reza Moghadasali, Mostafa Hajinasrollah, Hassan Argani, Seyed Mahdi Nassiri, Mostafa Najarasl, Niloofar Sodeifi, ***Hossein Baharvand***, Nasser Aghdami*. **Autologous Transplantation of Mesenchymal Stromal Cells Tends to Prevent Progress of Interstitial Fibrosis in a Rhesus Macaca mulatta Monkey Model of Chronic Kidney Disease**. *Cytotherapy*. 2015;17(11):1495-505.
266. Baheiraei N, Yeganeh H, Ai J, Gharibi R, Ebrahimi-Barough S, Azami M, Vahdat S, ***Baharvand H****. **Preparation of a porous conductive scaffold from aniline pentamer-modified polyurethane/PCL blend for cardiac tissue engineering**. *Journal of Biomedical Materials Research Part A*. 2015;103(10):3179-87.
267. Mohammad Hossein Ghanian, Zahra Farzaneh, Jalal Barzin*, Mojgan Zandi, Mohammad Kazemi-Ashtiani, Mehdi Alikhani, Morteza Ehsani, ***Hossein Baharvand****. **Nanotopographical**

Control of Human Embryonic Stem Cell Differentiation into Definitive Endoderm. Journal of Biomedical Materials Research Part A. 2015;103(11):3539-53.

268. Kianoush Dormiani, Hamid Mir Mohammad Sadeghi, Hojjat Sadeghi-Aliabadi, Kamran Ghaedi, Mahboobeh Forouzanfar, **Hossein Baharvand***, and Mohammad Hossein Nasr-Esfahani*. **Long-term and efficient expression of human β -globin gene in a hematopoietic cell line using a new site-specific integrating non-viral system.** Gene Therapy, 2015;22(8):663-74.

269. Mohsen Khosravi-Maharlooei[#], Ensiyeh Hajizadeh-Saffar[#], Yaser Tahamtani, Mohsen Basiri, Leila Montazeri, Keynoosh Khalooghi, Mohammad Kazemi Ashtiani, Ali Farrokhi, Nasser Aghdami, Anavasadat Sadr Hashemi Nejad, Mohammad-Bagher Larijani, Nico De Leu, Harry Heimberg, Xunrong Luo, Hossein Baharvand*. **Islet Transplantation for Type 1 Diabetes: So Close and Yet So Far away.** 2015; European Journal of Endocrinology. 2015;173(5):R165-83. #: co-first author. **(This paper has been selected to feature in the journal's educational resource – Journal Based Learning (JBL)).**

270. Mehdi Sharifi Tabar, Mahdi Hesaraki, Fereshteh Esfandiari, Fazel Sahraneshin Samani, Haghghat Vakilian, **Hossein Baharvand***. **Evaluating electroporation and lipofectamine approaches for transient and stable transgene expressions in human fibroblasts and embryonic stem cells.** Cell Journal. 2015 Fall;17(3):438-50.

271. Haghghat Vakilian, Mehdi Mirzaei, Mehdi Sharifi-Tabar, Paria Pooyan, Lida Habibi Rezaee, Lindsay Parker, Paul Haynes, Hamid Gourabi, **Hossein Baharvand**, Ghasem Salekdeh*. **DDX3Y, a Male Specific Region of Y Chromosome Gene, may modulate neuronal differentiation.** Journal of Proteome Research. 2015; 14(9):3474-83.

272. Diba Ahmadi Rastegar; Mehdi Sharifi Tabar; Mehdi Alikhani; Pouria Parsamatin; Fazel Sahraneshin Samani; Marjan Sabbaghian; Mohammad Ali Sedighi Gilani; Ali Mohammad Ahadi; Anahita Mohseni Meybodi; Abbas Piryaee; Naser Ansari-Pour; Hamid Gourabi; Hossein Baharvand; Ghasem Salekdeh*. **Isoform Level Gene Expression Profile of Human Y Chromosome Azoospermia Factor Genes and their X Paralogues in the Testicular Tissue of Non-obstructive Azoospermia Patients.** Journal of Proteome Research. 2015;14(9):3595-605.

273. Zohreh Jangravi; Mehdi Sharifi Tabar; Mehdi Mirzaei; Pouria Parsamatin; Haghghat Vakilian; Mehdi Alikhani; Mohammad Shabani; Paul Haynes; Ann Goodchild; Hamid Gourabi; **Hossein Baharvand**; Ghasem Salekdeh*. **Two splice variants of Y Chromosome-located Lysine-specific Demethylase 5D Have Distinct Function in Prostate Cancer Cell Line (DU-145).** Journal of Proteome Research. 2015;14(9):3492-502.

274. Fahimeh Mirakhori, Bahman Zeynali, Hassan Rassouli, Ebrahim Shahbazi, Shiva Hashemizadeh, Sahar Kiani, Ghasem Hosseini Salekdeh, **Hossein Baharvand***. **Induction of Neural Progenitor-like Cells from Human Fibroblasts via a Genetic Material-free Approach.** PLoS One. 2015; 2015 Aug 12;10(8):e0135479.

275. Sahar Olsadat Sajadian, Sabrina Ehnert, Haghghat Vakilian, Eirini Koutsouraki, Georg Damm, Daniel Seehofer, Wolfgang Thasler, Steven Dooley, ***Hosein Baharvand***, Bence Sipos, Andreas K Nussler*. **Induction of active demethylation and 5hmC formation by 5-Azacytidine is TET2 dependent and suggests new treatment strategies against Hepatocellular Carcinoma.** *Clinical Epigenetics*. 2015, 2015;7(1):98.
276. Alireza Mohammadi[#], Farnoosh Attari[#], Vahab Babapour, Seyedeh-Nafiseh Hassani, Najmehsadat Masoudi, Abdolhossein Shahverdi, ***Hossein Baharvand****. **Generation of Rat Embryonic Germ Cells via Inhibition of TGFβ and MEK Pathways.** *Cell Journal*, Summer;17(2):288-95. #: co-first author.
277. Mahmood Talkhabi, Sara Pahlavan, Nasser Aghdami*, ***Hossein Baharvand****, **Ascorbic Acid Promotes the Direct Conversion of Mouse Fibroblasts into Beating Cardiomyocytes.** *Biochemical and Biophysical Research Communications*. 2015; 463(4):699-705.
278. Fazel Sahraneshin Samani, Marzieh Ebrahimi*, Reyhaneh Khoshchereh, Tahereh Zandieh, Mohammad Reza Baghban Eslami Nedjad, Nasser Aghdami, ***Hossein Baharvand***. **The effect of rat Pancreatic Mesenchymal Cells on differentiation of human cord blood CD133+ into Insulin-Producing Cells in vitro.** *Cell Journal*. 2015, Summer;17(2):211-20.
279. Sadaf Vahdat, Seyed Ahmad Mousavi, Gholamreza Omrani, Maziar Gholampour, Fattah Sotoodehnejadnematalahi, Zaniar Ghazizadeh, Javad Gharechahi, ***Hossein Baharvand****, Ghasem Hosseini Salekdeh*, Nasser Aghdami¹*. **Cellular and molecular characterization of human cardiac stem cells reveals key features essentials for their function and safety.** *Stem Cells and Development*. 2015;24(12):1390-404.
280. Mohsen Emadedin[#], Maede Ghorbani Liastani[#], Roghayeh Fazeli, Fatemeh Mohseni, Reza Moghadasali, Soura Mardpour, Seyyedeh Esmat Hosseini, Maryam Niknejadi, Fatemeh Moeinia, Aslan Aghahosseini Fanni, Reza Baghban Eslaminejhad, Ahmad Vosough Dizaji, Narges Labibzadeh, Ali Mirazimi Bafghi, ***Hossein Baharvand***, Nasser Aghdami*. **Long-Term Follow-up of Intra-articular Injection of Autologous Mesenchymal Stem Cells in Patients with Knee, Ankle, or Hip Osteoarthritis.** *Archives of Iranian Medicine*. 2015, 18(6):336-44. #: co-first author.
281. Faezeh Ghazvini Zadegan, Kamran Ghaedi, Seyed Mehdi Kalantar, Maryam Peymani, Motahare-Sadat Hashemi, ***Hossein Baharvand***, Mohammad Hossein Nasr-Esfahani. Cardiac differentiation of mouse embryonic stem cells is influenced by a PPAR γ/PGC-1α-FNDC5 pathway during the stage of cardiac precursor cell formation. *European Journal of Cell Biology*. 2015, 94: 257–266.
282. Ali Sharifi-Zarchi, Mehdi Totonchi, Keynoush Khaloughi, Razieh Karamzadeh, Hossein Baharvand, Marcos J Araújo-Bravo, Ruzbeh Tusserkani, Hamid Pezeshk, Hamidreza Chitsaz and Mehdi Sadeghi. **Increased Robustness of Early Embryogenesis through Collective Decision-Making by Key Transcription Factors.** *BMC Systems Biology*. 2015, 9:23.

283. Ghasemi-Kasman M, Maryam Hajikaram, Hossein Baharvand, Mohammad Javan. **MicroRNA-Mediated In Vitro and In Vivo Direct Conversion of Astrocytes to Neuroblasts.** PLoS One. 2015; 10(6):e0127878.
284. Parisa Shabani, Zaniar Ghazizadeh, Sara Pahlevan, Shiva Hashemizadeh, Hossein Baharvand, Nasser Aghdami*, Mahmood Doosti*. **Exogenous treatment with eicosapentaenoic acid supports maturation of cardiomyocytes derived from embryonic stem cells.** Biochemical and Biophysical Research Communications. 2015; 461(2):281-6.
285. Fahimeh Mirakhori, Bahman Zeynali, Hassan Rassouli, Ghasem Hosseini Salekdeh, Hossein Baharvand*. **Direct Conversion of Human Fibroblasts into Dopaminergic Neural Progenitor-like cells using TAT-mediated Protein Transduction of Recombinant Factors.** Biochemical and Biophysical Research Communications. 2015;459:655-661.
286. SamanehSadat Hosseini Farahabadi, Kamran Ghaedi*, Faezeh Ghazvini Zadegan, Khadijeh Karbalaie, Farzaneh Rabiee, Marzieh Nematollahi, Hossein Baharvand, Mohammad-Hossein Nasr-Esfahani*. **ERK1/2 is a key regulator of Fndc5 and PGC1a expression during neural differentiation of mESCs.** Neuroscience. 2015, 297: 252–261.
287. Hajizadeh-Saffar E, Tahamtani Y, Aghdami N, Azadmanesh K, Habibi-Anbouhi M, Heremans Y, De Leu N, Heimberg H, Ravassard P, Shokrgozar M.A*, Baharvand H*. **Inducible VEGF Expression by Human Embryonic Stem Cell-Derived Mesenchymal Stromal Cells Reduces the Minimal Islet Mass Required to Reverse Diabetes.** Scientific Reports (Nature Publishing Group). 2015, 5:9322.
288. Ziaei A, Ardakani MR, Hashemi MS, Peymani M, Ghaedi K*, Baharvand H*, Nasr-Esfahani MH*. **Acute course of deferoxamine promoted neuronal differentiation of neural progenitor cells through suppression of Wnt/ β -catenin pathway: A novel efficient protocol for neuronal differentiation.** Neurosci Lett. 2015;590:138-144.
289. Khadijeh Karbalaie, Somayyeh Tanhaei, Farzaneh Rabiee, Abbas Kiani-Esfahani, Najmeh Sadat Masoudi, Mohammad Hossein Nasr-Esfahani*, Hossein Baharvand*. **Stem Cells from Human Exfoliated Deciduous Tooth Exhibit Stromal-Derived Inducing Activity and Lead to Generation of Neural Crest Cells from Human Embryonic Stem Cells.** Cell Journal, Spring 2015, 17(1), 37-48.
290. Fahimeh Mirakhori, Bahman Zeynali, Sahar Kiani, Hossein Baharvand*. **Brief Azacytidine Step Allows the Conversion of Suspension Human Fibroblasts into Neural Progenitor-like Cells.** Cell Journal, Spring 2015, 17(1), 153-158.
291. Mahboobeh Forouzanfar, Farzaneh Rabiee, Kamran Ghaedi, Siamak Beheshti, Somayeh Tanhaei, Alireza Shoaraye Nejati, Mohammad Jodeiri, Hossein Baharvand, Mohammad Hossein Nasr-Esfahani. **Fndc5 overexpression facilitated neural differentiation of mouse embryonic stem cells.** Cell Biology International. 2015 Jan 9. doi: 10.1002/cbin.10427. [Epub ahead of print]

292. Fatemeh Ganji, Saeid Abroun*, Marzieh Ebrahimi, Nasser Aghdami, ***Hossein Baharvand***. **Differentiation Potential of O Bombay Human-induced Pluripotent Stem Cells and Human Embryonic Stem Cells into Fetal Erythroid-like Cells.** Cell Journal, 2015, 16(4): 426-439.
293. Ali Fathi, Hassan Rasouli, Meghdad Yeganeh, Ghassem Hosseini Salekdeh*, Hossein Baharvand*. **Efficient Differentiation of Human Embryonic Stem Cells towards Dopaminergic Neuronal Cells via TAT-mediated Protein Transduction of Recombinant LMX1A Factor.** Molecular Biotechnology, 2015;57(2):184-94.
294. Ahmadi Ghahrizjani F, Ghaedi K*, Salamian A, Tanhaei S, Shoaraye Nejati A, Salehi H, Nabiuni M, ***Baharvand H***, Nasr-Esfahani MH*. **Enhanced expression of FNDC5 in human embryonic stem cell-derived neural cells along with relevant embryonic neural tissues.** Genes. 2015;557(2):123-129.
295. Alireza Zali[#], Leila Arab[#], Farzad Ashrafi, Soura Mardpour, Maryam Niknejhadi, Amir Abbas Hedayati-Asl, Aliasghar Halimi-Asl, Davood Ommi, Seyyedeh-Esmat Hosseini, ***Hossein Baharvand***, Nasser Aghdami*. **Intrathecal Injection of CD133-Positive Enriched Bone Marrow Progenitor Cells in Children with Cerebral Palsy: Feasibility and Safety.** Cytotherapy. 2015;17(2):232-41. #: co-first author.
296. Mohammad-Hossein Beigi, Laleh Ghasemi-Mobarakeh, Molamma P. Prabhakaran, Khadijeh Karbalaie, Hamid Azadeh, Seeram Ramakrishna, ***Hossein Baharvand***, Mohammad-Hossein Nasr-Esfahani*. **In vivo integration of poly(ϵ -caprolactone)/gelatin nanofibrous nerve guide seeded with teeth derived stem cells for peripheral nerve regeneration.** J Biomed Mater Res Part A. 2014;102(12):4554-67.
297. Farzaneh Rabiee, Kamran Ghaedi, ***Hossein Baharvand***, Mohammad Hossein Nasr-Esfahani*. **Induced expression of Fndc5 significantly increased cardiomyocyte differentiation rate of mouse embryonic stem cells.** Genes, 2014;551(2):127-37.
298. Maryam Parvini, Leila Satarian, Kazem Parivar, Mohammad Javan, Mahdi Tondar, Sajjad Ahmad, ***Hossein Baharvand****. **Human Pluripotent Stem Cell-Derived Retinal Pigmented Epithelium in Retinal Treatment: From Bench to Bedside.** Molecular Neurobiology. 2014, 50(2):597-612.
299. Zahra Farzaneh, Mohammad Pakzad, Massoud Vosough, Behshad Pournasr, ***Hossein Baharvand****. **Differentiation of Human Embryonic Stem Cells to Hepatocyte-Like Cells on a New Developed Xeno-Free Extracellular Matrix.** Histochemistry and Cell Biology. 2014;142(2):217-226.
300. Shiva Nemati, Reza Jabbari, Mostafa Hajinasrollah, Nargess Zare-Mehrjerdi, Hossein Azizi, Katayoun Hemmesi, Zahra Azhdari, Ardeshir Talebi, Soroush Mohitmafi, Ahmad Vosough Dizaj, Giuve Sharifi, ***Hossein Baharvand***, Sahar Kiani*, Omidvar Rezaee*. **Transplantation of Adult Monkey Neural Stem Cells into Contusion Spinal Cord Injury Model in Rhesus Macaques Monkey.** Cell Journal, 2014;16(2):117-130.

301. Tahere Seifi, Kamran Ghaedi*, Sommayeh Tanhaei, Fereshteh Karamali, Abbas KianiEsfahani, ***Hossein Baharvand***, Mohammad-Hossein Nasr Esfahani*. **Identification, cloning and functional analysis of the TATA-less mouse FNDC5 promoter during neural differentiation.** Cellular and Molecular Neurobiology. 2014. 34(5):715-25.
302. Shiva Akbari-Birgani, Saman Hosseinkhani*, Sepideh Mollamohammadi, ***Hossein Baharvand****. **Delay in Apoptosome Formation Attenuates Apoptosis in Cardiac Differentiation of Mouse Embryonic Stem Cells.** Journal of Biological Chemistry. 2014, 289(24):16905-16913.
303. Seyedeh-Nafiseh Hassani[#], Mohammad Pakzad[#], Behroz Asgari, Adeleh Taei, ***Hossein Baharvand****. **Suppression of Transforming Growth Factor β Signaling Promotes Ground State Pluripotency from Single Blastomeres.** Human Reproduction. 2014.;29(8):1739-48.
304. Faezeh Shekari, ***Hossein Baharvand****, Ghasem Hosseini Salekdeh*. **Organelle proteomics of embryonic stem cells.** Advances in Protein Chemistry and Structural Biology. 2014; 95: 215-230.
305. Farnoosh Attari, Hourii Sepehri, Hassan Ansari, Seyedeh-Nafiseh Hassani, Fereshteh Esfandiari, Behrouz Asgari, Abdolhossein Shahverdi, ***Hossein Baharvand****. **Efficient Induction of Pluripotency in Primordial Germ Cells by Dual Inhibition of TGF β and ERK Signaling Pathways.** Stem Cells and Development. 2014;23: 1050-1061.
306. Arefeh Ghodsizadeh, Hossein Hosseinkhani, Abbas Piryaeei, Behshad Pournasr, Mostafa Najarasl, Yosuke Hiraoka, Hossein Baharvand*. **Galactosylated Collagen Matrix Enhanced In Vitro Maturation of Human Embryonic Stem Cell-derived Hepatocyte-like Cells.** Biotechnology Letters. 2014;36(5):1095-1106.
307. Reza Moghadasali, Mahnaz Azarnia, Mostafa Hajinasrola, Hassan Arghani, Seyed Mahdi Nassiri, Mohammad Molazem, Ahmad Vosough, Soroush Mohitmafi, Mostafa Najarasl, Zahra Ajdari, Reza Salman Yazdi, Mohsen Bagheri, Hossein Ghanaati, Behrooz Rafieei, Yousof Gheisari, Hossein Baharvand*, Nasser Aghdami*. **Intra-renal Arterial Injection of Autologous Bone Marrow Mesenchymal Stem Cells Ameliorates Cisplatin-induced Acute Kidney Injury in a Rhesus *Macaque mulatta* Monkey Model.** Cytotherapy. 2014;16:734-749.
308. Fahimeh Mirakhori, Bahman Zeynali, Ghasem Hosseini Salekdeh, ***Hossein Baharvand****. **Induced Neural Lineage Cells as Repair Kits: Close, But Yet So Far Away.** Journal of Cellular Physiology. 2014, 229(6):728-42.
309. Fatemeh Ejeian, ***Hossein Baharvand****, Mohammad Hossein Nasr-Esfahani*. **Hedgehog Signaling is Dispensable in the Proliferation of Stem Cells from Human Exfoliated Deciduous Teeth.** Cell Biology International, 2014;38(4):480-7.
310. Ali Fathi, Maryam Hatami, Haghghat Vakilian, C. Li Han, Y.-J. Chen, Hossein Baharvand*, Ghasem Hosseini Salekdeh*. **Quantitative Proteomics Analysis Highlights the Role of RNA Processing in Human Embryonic Stem Cell Differentiation to Neural Cells.** Journal of Proteomics. Proteomics. 2014;101:1-16.

311. Hamid Kalantari, Nasrin Motamed, Anahita Mohseni Meybodi, Ali Jabbari Arfaie, ***Hossein Baharvand***, Hamid Gourabi*. **The response of mouse embryonic stem cells to low doses of γ -radiation: evidence for an adaptive response.** Mutation Research, 2014, 761, 44-47.
312. Fahimeh Khayyatan, Shiva Nemati, Sahar Kiani, Shahriar Hojjati Emami, ***Hossein Baharvand****. **Behaviour of human induced pluripotent stem cell-derived neural progenitors on collagen varied in freezing temperature and laminin concentration.** Cell Journal, 2014;16(1):53-62.
313. Yaser Tahamtani, Mahnaz Azarnia, Ali Farrokhi, Azadeh Moradmamand, Shahab Mirshahvaladi, Nasser Aghdami, ***Hossein Baharvand****. **Stauprimide priming of human embryonic stem cells toward definitive endoderm.** Cell Journal, 2014;16(1):63-72.
314. Javad Gharechahi, Mohammad Pakzad, Shahab Mirshahvaladi, Mehdi Sharifitabar, Hossein Baharvand*, Ghasem Hosseini Salekdeh*. **The effect of Rho-associated Kinase Inhibition on the Proteome Pattern of Dissociated Human Embryonic Stem Cells.** Molecular BioSystems, 2014; 10(3):640-52.
315. Seyedeh-Nafiseh Hassani, Mehdi Totonchi, Hamid Gourabi, Hans R. Schöler, ***Hossein Baharvand****. **Signaling Roadmap Modulating Naïve and Primed Pluripotency.** Stem Cells and Development. 2014; 23(3):193-208.
316. Sharif Moradi, Sassan Asgari, ***Hossein Baharvand****. **Harmonies played by microRNAs in cell fate reprogramming.** Stem Cells, 2014; 32(1):3-15.
317. Seyedeh-Nafiseh Hassani, Mehdi Totonchi, Ali Sharifi-Zarchi, Sepideh Mollamohammadi, Mohammad Pakzad, Sharif Moradi, Azam Samadian, Najmehsadat Masoudi, Shahab Mirshahvaladi, Ali Farrokhi, Boris Greber, Marcos J. Araúzo-Bravo, Davood Sabour, Mehdi Sadeghi, Ghasem Hosseini Salekdeh, Hamid Gourabi, Hans R. Schöler, ***Hossein Baharvand****. **Inhibition of TGF β Signaling Promotes Ground State Pluripotency.** Stem Cell Reviews and Reports. 2014;10(1):16-30.
318. Sareh Rajabi-Zeleti, Sasan Jalili Firoozinezhad, Mahnaz Azarnia, Fahimeh Khayyatan, Sadaf Vahdat, Saman Nikeghbalian, ***Hossein Baharvand****, Nasser Aghdami*. **The Behavior of Cardiac Progenitor Cells on Macroporous Pericardium-derived Scaffolds.** Biomaterials, 2014; 35: 970-982.
319. Saeed Abbasalizadeh, Hossein Baharvand* **Technological Progress and Challenges towards cGMP Manufacturing of Human Pluripotent Stem Cells Based Therapeutic Products for Allogeneic and Autologous Cell Therapies.** Biotechnology Advances. 2013; 31: 1600-1623.
320. Mozhdeh Sojoodi, Ali Farrokhi, Azadeh Moradmamand, ***Hossein Baharvand****. **Enhanced Maintenance of Rat Islets of Langerhans on Laminin-coated Electrospun Nanofibrillar Matrix in Vitro.** Cell Biology International. 2013; 37(4), 370-379.

321. Maryam Miryounesi, Abbas Piryaee, Behshad Pournasr, Nasser Aghdami, ***Hossein Baharvand****. **Repeated vs Single Transplantation of Mesenchymal Stem Cells in the Carbon Tetrachloride-induced Liver Injury Mouse Model.** Cell Biology International. 2013; 37 (4), 340-347.
322. Mohammad Pakzad, Mohammad Kazemi Ashtiani, Seyed-Latif Mousavi-Gargari, ***Hossein Baharvand****. **Development of a Simple, Repeatable, and Cost-effective Extracellular Matrix for Long-Term Xeno-free and Feeder-free Self-Renewal of Human Pluripotent Stem Cells.** Histochemistry and Cell Biology. 2013; 140: 635-48.
323. Abolhassan Shahzadeh Fazeli, Davood Nasrabadi, Alireza Pouya, Seyed Shahaboodin Mirshavaladi, Mohammad Hossein Sanati, ***Hossein Baharvand****, Ghasem Hosseini Salekdeh*. **Proteome Analysis of Post-transplantation Recovery Mechanisms of an EAE Model of Multiple Sclerosis Treated with Embryonic Stem Cell-derived Neural Precursors.** Journal of Proteomics. 2013, 6; 94:437-450.
324. Shiva Khezri, Mohammad Javan*, Mahdi Goudarzvand, ***Hossein Baharvand,*** Saeed Semnanian. **Dibutyryl-cyclic-AMP inhibits the progression of experimental autoimmune encephalomyelitis and potentiates recruitment of endogenous neural stem cells.** Journal of Molecular Neuroscience. 2013; 51: 298-306.
325. Mohsen Moslem, Mojtaba Rezazadeh Valojerdi*, Behshad Pournasr, Ahad Mohammadnejad, ***Hossein Baharvand****. **Therapeutic Potential of Human-induced Pluripotent Stem Cell-derived Mesenchymal Stem Cells in Mice with Lethal Fulminant Hepatic Failure.** Cell Transplantation. 2013;22:1785-99.
326. Massoud Vosough, Eskandar Omidinia, Mahdi Kadivar, Mohammad-Ali Shokrgozar, Behshad Pournasr, Nasser Aghdami, ***Hossein Baharvand****. **Generation of Functional Hepatocyte-like Cells from Human Pluripotent Stem Cells in a Scalable Suspension Culture.** Stem Cells and Development, 2013; 22: 2693-705.
327. Adeleh Taei, Seyedeh-Nafiseh Hassani, Poopak Eftekhari Yazdi, Mojtaba Rezazadeh Valojerdi, Mohsen Nokhbatolfoghahai, Najmeh-Sadat Masoudi, Mohammad Pakzad, Hamid Gourabi, ***Hossein Baharvand****. **Enhanced generation of human embryonic stem cells from single blastomeres of fair and poor-quality cleavage embryos via inhibition of glycogen synthase kinase β and Rho-associated kinase signaling.** Human Reproduction. 2013; 28: 2661-71.
328. Masood Bazrgar, Hamid Gourabi, Mojtaba Rezazadeh Valojerdi, Poopak Eftekhari Yazdi, ***Hossein Baharvand.*** **Self-correction of chromosomal abnormalities in human preimplantation embryos and embryonic stem cells.** Stem Cells and Development. 2013; 22(17):2449-56.
329. Leila Satarian, Mohammad Javan*, Sahar Kiani, Maryam Hajikarm, Javad Mirnajafi-Zadeh, ***Hossein Baharvand****. **Engrafted human induced pluripotent stem cell-derived anterior specified neural progenitors protect the rat crushed optic nerve.** PLoS One. 2013;8(8):e71855.

330. Hassan Rassouli, Shiva Nemati, Siamak Rezaeiani, Ali Sayadmanesh, Mohammad Reza Garaati, Ghasem Hosseini Salekdeh, ***Hossein Baharvand****, Hamid Gourabi*. **Cloning, Expression, and Functional Characterization of In-house Prepared Human Leukemia Inhibitory Factor.** Cell Journal, 2013; 15(2):190-7.
331. Franak Fattahi, Samira Asgari, Ali Seifinejad, Mehdi Totonchi, Adeleh Taei, Behshad Pournasr, Nasser Aghdami, Ghasem Hosseini Salekdeh*, ***Hossein Baharvand****. **Disease Corrected Hepatocyte-Like Cells from Familial Hypercholesterolaemia induced Pluripotent Stem Cells.** Molecular Biotechnology. 2013;54(3):863-73.
332. Yasser Tahamtani, Mahnaz Azarnia, Ali Farrokhi, Ali Sharifi-Zarchi, Nasser Aghdami, ***Hossein Baharvand****. **Treatment of Human Embryonic Stem Cells with Different Combinations of Priming and Inducing Factors towards Definitive Endoderm.** Stem Cells and Development. 2013;22(9):1419-32.
333. Maryam Peymani, Ali Ghoochani, Kamran Ghaedi*, Fereshteh Karamali, Khadijeh Karbalaee, Abbas Kiani, Farzaneh Rabiee, Abolghasem Esmaeili, Mehrdad Hashemi, Mohammad Hossein Nasr-Esfahani*, ***Hossein Baharvand****. **Dual Effects of peroxisome proliferator-activated receptor γ on Embryonic Stem Cell Self-Renewal in Presence and Absence of leukemia inhibitory factor.** EUR J CELL BIOL. 2013,;92(4-5):160-8.
334. Maryam Shahhoseini*[#], Zeinab Taghizadeh[#], Maryam Hatami, ***Hossein Baharvand.*** **Retinoic acid dependent demethylation of the clustered HOX genes during neural differentiation of human embryonic stem cells.** Biochemistry and Cell Biology, 2013;91(2):116-122. #: co-first author.
335. Malak Shakeri, Hamid Kohram, Abdolhossein Shahverdi, Ahmad Zare Shahneh, Faranak Tavakolifar, Mehdi Pirouz, Hossein Moradi Shahrehabak, Morteza Koruji, ***Hossein Baharvand****. **Behavior of Mouse Spermatogonial Stem-like Cells on an Electrospun Nanofibrillar Matrix.** Journal of Assisted Reproduction and Genetics. 2013; 30(3): 325-332.
336. Hananeh Fonoudi, Meghdad Yeganeh, Faranak Fatahi, Zaniar Ghazizadeh, Hassan Rassouli, Mehdi Alikhani, Bahareh Adhamimojarad, ***Hossein Baharvand****, Ghasem Hosseini Salekdeh*, Nasser Aghdami*. **ISL1 Protein Transduction Promotes Cardiomyocyte Differentiation from Human Embryonic Stem Cells.** PLoS One. 2013;8(1):e55577.
337. Parisa Mohamadynejad, Kamran Ghaedi*, Yousef Shafeghati, Ahmad Salamian, Somayeh Tanhaie, Fereshteh Karamali, Farzaneh Rabiee, Kazem Parivar, Hossein Baharvand, Mohammad Hossein Nasr-Esfahani*. **Identification of a Novel Missense Mutation of *PEX7* Gene in an Iranian Patient with Rhizomelic Chondrodysplasia Punctata Type 1.** Gene, 2013;518(2):461-6.
338. Zohreh Jangravi, Mehdi Alikhani, Babak Arefnejad, Mehdi Sharifi Tabar, Sara Taleahmad, Marzieh Karamzadeh, M. Jadaliha, Seyed Ahmad Mousavi, Diba Ahmadi Rastegar, Pourya Parsamatian, Haghghat Vakilian, Shahab Mirshahvaladi, Marjan Sabbaghian, Anahita Mohseni Meybodi, Mirzaei M, Maryam Shahhoseini, Marzieh Ebrahimi, Abbas Piryaee, Ali Akbar Moosavi-Movahedi, Haynes PA, Goodchild AK, Mohammad Hossein Nasr-Esfahani,

Esmaeil Jabbari, ***Hossein Baharvand***, Mohammad Ali Sedighi Gilani, Hamid Gourabi, Ghasem Hosseini Salekdeh¹*. **A Fresh Look at the Male-specific Region of the Human Y Chromosome.** J Proteome Res. 2013;12:6-22.

339. Motahare-Sadat Hashemi, Kamran Ghaedi*, Ahmad Salamian, Khadijeh Karbalaie, Mojtaba Emadi, Somayeh Tanhaei, Mohammad Hossein Nasr-Esfahani*, ***Hossein Baharvand****. **Peroxisomal Protein Knockdown Significantly Decreased Neural Differentiation Rate of Mouse Embryonic Stem Cells.** Neuroscience. 2013;231:296-304.

340. Ahmad Salamian, Parisa Mohamadinejad, Kamran Ghaedi *, Alireza Shoaraye Nejati, Yousef Shafeghati, Mehdi Borhani-Ahnak, Marzieh Nematollahi, Khadijeh Karbalaie, Fatemeh Hadipour, ***Hossein Baharvand***, Mohammad Hossein Nasr-Esfahani*. **C86Y: as a Destructive Homozygous Mutation Deteriorating Pex7p Function Causing Rhizomelic Chondrodysplasia Punctata Type I.** Annals of Clinical and Laboratory Science. 2013 Winter;43(1):76-80.

341. Leila Dehghani, Mahbobeh Farokhpour, Khadije Karbalaie, Marzie Nematollahi, Somayeh Tanhaei, Nasim Hayati-Rodbari, Abbas Kiani-Esfahani, Juergen Hescheler, Mohammad Hossein Nasr-Esfahani*, ***Hossein Baharvand****. **The Influence of Dexamethasone Administration on the Protection Against Doxorubicin-induced Cardiotoxicity in Purified Embryonic Stem Cell-derived Cardiomyocytes.** Tissue and Cell, 2013;45:101-106.

342. Tahereh Miremadi*, Ghassem Hosseini Salekdeh, Nasser Aghdami, Mohsen Gharanfoli, Mohammad Vasei, Azam Kouhkan, ***Hossein Baharvand****. **Stem Cell Research and Therapy in the Islamic Republic of Iran: Pioneering in the Islamic World.** Stem Cells and Development. 2013;22:51-57.

343. Hassan Rassouli, Mohammad Sharif Tabe Bordbar, Mehran Rezaei Larijani, Mohammad Pakzad, ***Hossein Baharvand****, Ghasem Hosseini Salekdeh*. **Cloning, Expression, and Functional Characterization of in House Prepared Human Basic Fibroblast Growth Factor.** Cell Journal, 2013, 14 (4), 282-291.

344. Reza Moghadasali, Henricus A.M. Mutsaers, Mahnaz Azarnia, Naser Aghdami, ***Hossein Baharvand***, Ruurd Torensma, Martijn J. Wilmer and Rosalinde Masereeuw. **Mesenchymal stem cell-conditioned medium accelerates regeneration of human renal proximal tubule epithelial cells after gentamicin toxicity.** Experimental and Toxicologic Pathology, 2013;65(5):595-600.

345. Samira Asgari[#], Mohsen Moslem[#], Kamran Bagheri-Lankarani, Behshad Pournasr, Maryam Miryounesi, ***Hossein Baharvand****. **Differentiation and Transplantation of Human Induced Pluripotent Stem Cell-derived Hepatocyte-like Cells.** #: first athours. Stem cells reviews and Reports. 2013; 9(4):493-504.

346. Tahere Seifi, Kamran Ghaedi*, Ahmad Salamian, Sommayeh Tanhaei, Forouzan Safari, Zohreh Hojati, Manuchehr Tavassoli, ***Hossein Baharvand***, Mohammad-Hosseini Nasr Esfahani*. **Amplification of GC-rich Putative Mouse *PeP* Promoter using Betaine and DMSO in**

Ammonium Sulfate Polymerase Chain Reaction Buffer. Avicenna Journal of Medical Biotechnology. 2012 ;4(4):206-209.

347. Rokhsareh Meamar, Fereshte Karamali, Seyed Ali Mousavi, Hossein Baharvand, Mohammad Hossein Nasr-Esfahani. **Could MDMA Promote Stemness Characteristics in Mouse Embryonic Stem Cells via mGlu5 Metabotropic Glutamate Receptors?.** Cell Journal, 2012, 185-192.

348. Khoshchehreh R, Ebrahimi M*, EslamiNejad MB, Aghdami N, Samani F, Baharvand H. **Rat Pancreatic Stromal Cells (PSC) affect Differentiation of Human Mesenchymal Stem Cells (hMSC) into Insulin-Producing Cells (IPCs) In vitro.** Journal of Cell Science and Therapy. 2012, 3(5): 1-8.

349. Manizhe Azhdari, Mohamadreza Baghaban-Eslaminejad, Hossein Baharvand*, Nasser Aghdami*. **Therapeutic Potential of Human-induced Pluripotent Stem Cell-derived Endothelial Cells in Bleomycin-induced Scleroderma Mouse Model.** Stem Cell Research. 2012;10 :288-300.

350. Abtahi SR, Sadraei H, Nematollahi M, Karbalaie K, Karamali F, Salamian A, Baharvand H, Nasr-Esfahani MH*. **Functional expression of potassium channels in cardiomyocytes derived from embryonic stem cells.** Research in Pharmaceutical Sciences. 2012; 7(1): 1-11.

351. Liana Lachinani, Kamran Ghaedi*, Somayeh Tanhaei, Ahmad Salamian, Fereshteh Karamali, Abbas Kiani-Esfahani, Farzaneh Rabiee, Parichehreh Yaghmaei, Hossein Baharvand, Mohammad Hossein Nasr-Esfahani*. **Characterization and Functional Assessment of Mouse PPAR γ 1 Promoter.** Avicenna Journal of Medical Biotechnology. 2012; 4(4): 160-169.

352. Tahere Seifi, Kamran Ghaedi*, Ahmad Salamian, Sommayeh Tanhaei, Forouzan Safari, Zohreh Hojati, Manuchehr Tavassoli, Hossein Baharvand, Mohammad-Hossein Nasr-Esfahani*. **Amplification of GC-rich Putative Mouse PeP Promoter using Betaine and DMSO in Ammonium Sulfate Polymerase Chain Reaction Buffer.** Avicenna Journal of Medical Biotechnology. 2012; 4(4): 206-209.

353. Mehdi Mohamadnejad, Mandana Ashrafi, Kamran Alimoghaddam, Masoud Vosough, Vajiheh Azimian, Nasser Aghdami, Mohammad Bagheri, Leila Abdollahzadeh, Soura Mardpour, Maryam Bashtar, Shahram Akhlaghpour, Ardeshir Ghavamzadeh, Hossein Baharvand, Reza Malekzadeh*. **Surveillance for Hepatocellular Carcinoma after Autologous Stem Cell Transplantation in Cirrhosis.** Middle East Journal of Digestive Diseases. 4(3) 2012, 145-149.

354. Maram Yousefi, Vahid Hajihoseini, Woojin Jung, KiYoung Lee, Batol Hosseinpour, Hassan Rasouli, Bonghee Lee, Hossein Baharvand, Ghasem Hosseini Salekdeh*. **Embryonic Stem Cell Interactomics: The Beginning of a Long Road to Biological Function.** Stem Cell Reveiws and Reports. 2012, 8:1138-54.

355. Fereshteh Esfandiari, Ali Fathi, Hamid Gourabi, Sahar Kiani, Shiva Nemati, Hossein Baharvand*. **Glycogen Synthase Kinase-3 Inhibition Promotes Proliferation and Neuronal**

Differentiation of Human Induced Pluripotent Stem Cell-derived Neural Progenitors. Stem Cells and Development, 2012, 21:3233-43.

356. Saeed Abbasalizadeh[#], Mehran Rezaei Larijani[#], Azam Samadian, ***Hossein Baharvand***^{*}. **Bioprocess Development for Mass Production of Size-controlled Human Pluripotent Stem Cell Aggregates in Stirred Suspension Bioreactor.** Tissue Engineering, Part C, 2012, 18:831-51. #: first authors.

357. Seyedeh-Faezeh Moraveji[#], Farnoosh Attari[#], Abdolhossein Shahverdi, Hourii Sepehri, Ali Farrokhi, Seyedeh-Nafiseh Hassani, Hannaneh Fonoudi, Nasser Aghdami, ***Hossein Baharvand***^{*}. **Inhibition of Glycogen Synthase Kinase-3 Promotes Efficient Derivation of Pluripotent Stem Cells from Neonatal Mouse Testis.** Human Reproduction, 2012, 27(8):2312-24. #: first authors.

358. Samane Dehghan, Seyyed Javad Mirnajafizadeh, ***Hossein Baharvand***, Fereshteh Pourabdolhossein, Mohammad Javan^{*}. **Basic Fibroblast Growth Factor Potentiates Myelin Repair Following Induction of Experimental Demyelination in Adult Mouse Optic Chiasm and Nerves.** Journal of Molecular Neuroscience. 2012. 48(1):77-85.

359. Yousof Gheisari, ***Hossein Baharvand***, Karim Nayernia, Mohammad Vasei^{*}. **Stem Cell and Tissue Engineering Research in the Islamic Republic of Iran.** Stem cells reviews and Reports. 2012, 8(3):629-39.

360. Azadeh Zahabi, Ebrahim Shahbazi, Hamid Ahmadi, Seyedeh-Nafiseh Hassani, Mehdi Totonchi, Adeleh Taei, Najmehsadat Masoudi, Marzieh Ebrahimi, Nasser Aghdami, Ali Seifinejad, Faramarz Mehrnejad, Narsis Daftarian, Ghasem Hosseini Salekdeh, ***Hossein Baharvand***^{*}. **A New Efficient Protocol for Directed Differentiation of Retinal Pigmented Epithelial Cells from Normal and Retinal Disease induced Pluripotent Stem Cells.** Stem Cells and Development, 2012, 21(12):2262-72.

361. Ali Niapour, Fereshteh Karamali, Shiva Nemati, Zahra Taghipour, Mohammad Mardani, Mohammad Hossein Nasr-Esfahani^{*}, ***Hossein Baharvand***^{*}. **Co-transplantation of Human Embryonic Stem Cell-derived Neural Progenitors along with Schwann Cells in a rat spinal cord contusion injury model elicits a distinct Neurogenesis and functional recovery.** Cell Transplantation, 2012;21:827-43.

362. Mahdyie Jadaliha, Hyoung-Joo Lee, Mohammad Pakzad, Ali Fathi, Seul-Ki Jeong, Sang-Yun Cho, ***Hossein Baharvand***, Young-Ki Paik^{*}, Ghasem Hosseini Salekdeh^{*}. **Quantitative Proteomic Analysis of Human Embryonic Stem Cells differentiation by 8-plex iTRAQ Labeling.** PLOS One. 2012;7(6):e38532.

363. Mojtaba Zamani Faradonbeh, Javad Gharechahi, Sepideh Mollamohammadi, Mohammad Pakzad, Adeleh Taei, Hassan Rassouli, ***Hossein Baharvand***^{*}, Ghasem Hosseini Salekdeh^{*}. **An orthogonal comparison of the proteome of human embryonic stem cells with that of human induced pluripotent stem cells of different genetic background.** Molecular BioSystems. 2012;8(6):1833-40.

364. Elahe Masaeli, Mohammad Morshed*, Parsa Rasekhian, Saeed Karbasi*, Khadije Karbalaie, Fereshte Karamali, Darush Abedi, Shahnaz Razavi, Abbas Jafarian-Dehkordi, Mohammad Hossein Nasr-Esfahani*, Hossein Baharvand. **Does the Tissue Engineering Architecture of Poly (3-hydroxybutyrate) Scaffold affect cell-material interactions?.** Journal of Biomedical Material Research, Part A. 2012, 100(7):1907-18.
365. Hosseini SM, Hajian M, Forouzanfar M, Moulavi F, Abedi P, Asgari V, Tanhaei S, Abbasi H, Jafarpour F, Ostadhosseini S, Karamali F, Karbaliiae K, **Baharvand H**, Nasr-Esfahani MH*. **Enucleated ovine oocyte supports human somatic cells reprogramming back to the embryonic stage.** Cell Reprogram. 2012, 14(2):155-63.
366. Nasiri Z, Hosseini SM, Hajian M, Abedi P, Bahadorani M, **Baharvand H***, Nasr-Esfahani MH*. **Effects of different feeder layers on short-term culture of prepubertal bovine testicular germ cells In-vitro.** Theriogenology. 2012, 77(8):1519-28.
367. Zahra Taghipour, Khadijeh Karbalaie, Abbas Kiani, Ali Niapour, Hamid Bahramian, Mohammad Hossein Nasr-Esfahani*, **Hossein Baharvand***. **Transplantation of Undifferentiated and Induced Human Exfoliated Deciduous Teeth-derived Stem Cells Promote Functional Recovery of Rat Spinal Cord Contusion Injury Model.** Stem Cells and Development, 2012;21(10):1794-802.
368. Faranak Tavakolifar, Abdolhossein Shahverdi*, Mehdi Pirouz, Malak Shakeri, Morteza Koruji, **Hossein Baharvand***. **Comparison of Neonatal- and Adult-derived Sertoli Cells in Support of Expansion of Mouse Spermatogonial Stem Cells *in vitro*.** International Journal of Fertility and Sterility, 5(4), Jan-Mar 2012, P:217-224.
369. Seyedeh-Nafiseh Hassani, Mehdi Totonchi, Ali Farrokhi, Adeleh Taei, Mehran Rezaei Larijani, Hamid Gourabi, **Hossein Baharvand***. **Simultaneous Suppression of TGF- β and ERK Signaling Contributes to the Highly Efficient and Reproducible Generation of Mouse Embryonic Stem Cells from Previously Considered Refractory and Non-permissive Strains.** Stem cells reviews and Reports. 2012;8(2):472-81.
370. Hossein Ahmadi, Maryam Moshkani Farahani, Azam Kouhkan, Kasra Moazzami, Roghayeh Fazeli, Hakimeh Sadeghian, Mehrnaz Namiri, Manouchehr Madani-Civi, **Hossein Baharvand**, Nasser Aghdami*. **Long-term Assessment after Local Autologous Transplantation of CD133+ Enriched Bone Marrow Cells in Patients with Myocardial Infarction: Five Year Follow-up.** Arch Iran Med. 2012;15(1):32-35.
371. Bahadorani M, Hosseini SM, Abedi P, Hajian M, Hosseini SE, Vahdati A, **Baharvand H***, Nasr-Esfahani MH*. **Short-term in-vitro culture of goat enriched spermatogonial stem cells using different serum concentrations.** J Assist Reprod Genet. 2012; 29:39–46.
372. Noushin Amirpour, Fereshteh Karamali, Farzaneh Rabiee, Leila Rezaei, Ebrahim Esfandiari, Shahnaz Razavi, Alireza Dehghani, Hassan Razmju, Mohammad Hossein Nasr-Esfahani*, **Hossein Baharvand***. **Differentiation of Human Embryonic Stem Cell-Derived Retinal Progenitors into Retinal Cells by Sonic Hedgehog and/or Retinal Pigmented**

Epithelium and Transplantation into the Subretinal Space of Sodium Iodate-Injected Rabbits. *Stem Cells and Development*, 2012 ;21(1):42-53.

373. Massoud Vosough[#], Mohsen Moslem[#], Behshad Pournasr[#], ***Hossein Baharvand****. **Cell-based Therapeutics for Liver Disorders.** *British Medical Bulletin*, 2011; 100:157-72. #: first athours.

374. Bahadorani M1, Hosseini SM2, Abedi P2, Hajian M2, Afrough M2, Azhdari Tafti Z3, Azizi H3, Hosseini SE1, Vahdati A1, Baharvand H3 and Nasr-Esfahani MH*. **Comparative Immunohistochemical Analysis of VASA, PLZF and THY1 in Goats and Sheep Suggests that these Markers are also Conserved in these Species.** *J Cytol Histol* 2011, 2:6.

375. The International Stem Cell Initiative, Amps K, Andrews PW, Anyfantis G, Armstrong L, Avery S, ***Baharvand H***, Baker J, Baker D, Munoz MB, Beil S, Benvenisty N, Ben-Yosef D, Biancotti JC, Bosman A, Brena RM, Brison D, Caisander G, Camarasa MV, Chen J, Chiao E, Choi YM, Choo AB, Collins D, Colman A, Crook JM, Daley GQ, Dalton A, De Sousa PA, Denning C, Downie J, Dvorak P, Montgomery KD, Feki A, Ford A, Fox V, Fraga AM, Frumkin T, Ge L, Gokhale PJ, Golan-Lev T, Gourabi H, Gropp M, Guangxiu L, Hampl A, Harron K, Healy L, Herath W, Holm F, Hovatta O, Hyllner J, Inamdar MS, Irwanto AK, Ishii T, Jaconi M, Jin Y, Kimber S, Kiselev S, Knowles BB, Kopper O, Kukharensko V, Kuliev A, Lagarkova MA, Laird PW, Lako M, Laslett AL, Lavon N, Lee DR, Lee JE, Li C, Lim LS, Ludwig TE, Ma Y, Maltby E, Mateizel I, Mayshar Y, Mileikovsky M, Minger SL, Miyazaki T, Moon SY, Moore H, Mummery C, Nagy A, Nakatsuji N, Narwani K, Oh SK, Oh SK, Olson C, Otonkoski T, Pan F, Park IH, Pells S, Pera MF, Pereira LV, Qi O, Raj GS, Reubinoff B, Robins A, Robson P, Rossant J, Salekdeh GH, Schulz TC, Sermon K, Mohamed JS, Shen H, Sherrer E, Sidhu K, Sivarajah S, Skottman H, Spits C, Stacey GN, Strehl R, Strelchenko N, Suemori H, Sun B, Suuronen R, Takahashi K, Tuuri T, Venu P, Verlinsky Y, Oostwaard DW, Weisenberger DJ, Wu Y, Yamanaka S, Young L, Zhou Q. . **Screening a large, ethnically diverse population of human embryonic stem cells identifies a chromosome 20 minimal amplicon that confers a growth advantage.** *Nat Biotechnol*. 2011;29(12):1132-1144.

376. Nargess Zare Mehrjardi, Mohammad Taghi Khorasani, Hamid Mirzadeh, Katayoon Hemmesi, Hossein Azizi, Behrouz Sadatnia, Maryam Hatami, Sahar Kiani, Jalal Barzin, ***Hossein Baharvand****. **Enhanced neural cell differentiation from mouse embryonic stem cells on poly (D, L-lactic acid) scaffolds.** *International Journal of Artificial Organs*, 2011 ;34(10):1012-1023.

377. Ebrahim Shahbazi, Sahar Kiani, Hamid Gourabi*, ***Hossein Baharvand****. **The promotion of Neuronal Differentiation and Function from Human Embryonic Stem Cells on Electrospun Nanofibers.** *Tissue Engineering, Part A*, 2011, 17(23-24):3021-31.

378. Ali Ghoochani, Khadijeh Shabani, Maryam Peymani, Kamran Ghaedi*, Fereshteh Karamali, Khadijeh Karbalaei, Somayeh Tanhaie, Ahmad Salamian, Abolghasem Esmaeili, Sadegh Valian-Borujeni, Mehrdad Hashemi, Mohammad Hossein Nasr-Esfahani, ***Hossein Baharvand****. **The Influence of Peroxisome Proliferator-activated Receptor γ During Differentiation of Mouse Embryonic Stem Cells to Neural Cells.** *Differentiation*, 2012, 83(1):60-7.

379. Hossein Salehi, Khadijeh Karbalaie, Ahmad Salamian, Abbas kiani, Shahnaz Razavi, Mohammad Hossein Nasr-Esfahani*, ***Hossein Baharvand****. **Differentiation of Human ES Cell-Derived Neural Progenitors to Neuronal cells with regional specific identity by Co-culturing of Notochord and Somite.** Stem Cell Research, 2012, 8(1):120-33.
380. Alireza Pouya, Leila Sattarian, Sahar Kiani, Mohammad Javan, ***Hossein Baharvand****. **Efficient Differentiation of Human Induced Pluripotent Stem Cells into Oligodendrocyte Progenitors and Transplantation in a Rat Model of Optic Chiasma Demyelination.** Plos One, 2011, 6(11), e27925.
381. Behshad Pournasr[#], Keynoush Khaloughi[#], Ghasem Hosseini Salekdeh, Mehdi Totonchi, Ebrahim Shahbazi, ***Hossein Baharvand****. **The Alchemy of Biology: Generating Desired Cell Types from Abundant and Accessible Cells.** #: first athours. Stem Cells, 2011, 29(12):1933-41.
382. Ali Fathi, Maryam Hatami, Vahid Hajhosseini, Faranak Fattahi, Sahar Kiani, ***Hossein Baharvand****, Ghasem Hosseini Salekdeh*. **Comprehensive gene expression analysis of human embryonic stem cells during differentiation into neural cells.** Plos One. 2011, 6(7):e22856.
383. Faezeh Shekari, Adele Taei, Pei-Wen Wang, Tai-Long Pan, ***Hossein Baharvand***, Ghasem Hosseini Salekdeh*. **Identification of cytoplasmic and membrane-associated complexes in human embryonic stem cells using blue native PAGE.** Mol Biosyst. 2011 ;7(9):2688-2701.
384. Ali Rahjouei, Sahar Kiani, Narges Zare Mehrjardi, Merdad Hashemi, ***Hossein Baharvand****. **Interactions of Human Embryonic Stem Cell-derived Neural Progenitors with an Electrospun Nanofibrillar Surface *in vitro*.** Int J Artif Organs. 2011; 34(7):559-570.
385. Behshad Pournasr, Mehdi Mohamadnejad, Mohammad Bagheri, Naser Aghdami, Mansoureh Shahsavani, Reza Malekzadeh*, ***Hossein Baharvand****. **In-vitro Differentiation of Human Bone Marrow Mesenchymal Stem Cells into Hepatocyte-like Cells.** Arch Iran Med. 2011, 14(4):244-9.
386. Sarah Ranjbarvaziri, Sahar Kiani, Aliasghar Akhlaghi, Ahmad Vosough, ***Hossein Baharvand****, Nasser Aghdami*. **Characterization of Quantum Dot Labeling Using Positive Charged Peptides in Human Hematopoetic and Mesenchymal Stem Cells.** Biomaterials. 2011, 32(22):5195-205.
387. ***Baharvand H****, Malekzadeh R. **Application of stem cells in Gastroenterology and Hepatology, 6th January 2011; In Memory of Dr. Saeid Kazemi Ashtiani, A Great Scientist Who Passed Away Too Soon But Left A Legacy.** Arch Iran Med. 2011;14(3):225-36.
388. Maryam Rezaei, Khadijeh Karbalaie, Somayeh Tanhaie, Hossein Madani, Mohammad Hossein Nasr-Esfahani, ***Hossein Baharvand****. **Bone morphogenetic protein-4 influences neural differentiation of induced mouse mesenchymal stem cells.** Cell Journal (Yakhteh), 2011, 12 (4), 51-6.

389. Maryam Ostadsharif, Kamran Ghaedi*, Mohammad Hossein Nasr-Esfahani, Marzieh Mojbafean, Somayeh Tanhaie, Khadijeh Karbalaii, ***Hossein Baharvand****. **The expression of peroxisomal protein transcripts increased by retinoic acid and neural differentiation.** Differentiation, 2011;81(2):127-32.
390. Nojehdehian H, Moztaarzadeh F, ***Baharvand H***, Mehrjerdi NZ, Nazarian H, Tahriri M. **Effect of poly-L-lysine coating on retinoic acid-loaded PLGA microspheres in the differentiation of carcinoma stem cells into neural cells.** Int J Artif Organs. 2010 ;33(10):721-30.
391. Elahe Afzal, Marzieh Ebrahimi*, S. Mahmoud Arab Najafi, Arezoo Daryadel, ***Hossein Baharvand***. **Potential Role of Heat Shock Proteins in Neural Differentiation of Murine Embryonal Carcinoma Stem Cells (P19).** Cell Biology International, 2011 ;35(7):713-20.
392. Bita Ebrahimi, Mojtaba Rezazadeh Valojerdi*, Poopak Eftekhari-Yazdi, ***Hossein Baharvand***. **Ultrastructural Changes of Sheep Cumulus-Oocyte Complexes following Different Methods of Vitrification.** Zygote, 2011 17:1-13.
393. Laleh Ghasemi-Mobarakeh, Molamma P Prabhakaran*, Mohammad Morshed, Mohammad Hossein Nasr- Esfahani, ***Hossein Baharvand***, Sahar Kiani, El-Refaie Kenawy, Seeram Ramakrishna*. **Application of conductive polymers, scaffolds and electrical stimulation for nerve tissue engineering.** Journal of Tissue Engineering and Regenerative Medicine. 2011;5(4):e17-35.
394. Hossein Salehi, Khadijeh Karbalaie, Shahnaz Razavi, Mohsen Sagha, Mohammad Hossein Nasr-Esfahani*, ***Hossein Baharvand****. **Neuronal induction and Patterning by co-culture of Adherent Human Embryonic Stem Cells with Chicken Notochords and Somites.** International Journal of Developmental Biology. 2011, 55(3):321-6.
395. Mehdikhani Karimabad H , Shabestari M, ***Baharvand H***, Vosough A, Gourabi H, Shahverdi A, Shamsian AA, Abdolhoseini S, Moazzami K, Moradi M , Emami F, Bidkhorri HR, Hamedanchi A, Talebi S, Farrokhi F, Jabbari-Azad F, Fadavi M, Garivani U, Mahmoodi J, Aghdami N* . **Lack of Beneficial Effects of Granulocyte Colony-Stimulating Factor in Patients with Subacute Myocardial Infarction Undergoing Late Revascularization: A Double-Blind, Randomized, Placebo-Controlled Clinical Trial.** Acta Cardiologica, 2011; 66(2):219-24.
396. Nosrat Nourbakhsh *, Mitra Solaimani, Zahra Taghipour, Khadijeh Karbalaie, Seid-Behrouz Mousavi, Ardeshir Talebi, Fatemeh Nadali, Somayeh Tanhaei, Gholam-Abbas Kiyani, Marziyeh Nematollahi, Farzaneh Rabiei, Mohammad Mardani, Hamid Bahramiyan, Mahmood Torabinejad, Mohammad Hossein Nasr-Esfahani, ***Hossein Baharvand**** . **Induced In-Vitro Differentiation of Neural-like Cells from Human Exfoliated Deciduous Teeth-derived Stem Cells.** International Journal of Developmental Biology. 2011;55(2):189-95.
397. Ali Seifinejad, ***Hossein Baharvand****. **Human Cardiomyocytes with long-QT syndrome in Dish.** Arch Iran Med. 2010 Nov;13(6):573-5.

398. Shahhoseini M, Favaedi R, ***Baharvand H***, Sharma V, Stunnenberg HG. **Evidence for a dynamic role of the linker histone variant H1x during retinoic acid-induced differentiation of NT2 cells.** FEBS Lett. 2010; 584(22):4661-4.
399. Arefeh Ghodsizadeh, Adeleh Taei, Mehdi Totonchi, Ali Seifinejad, Hamid Gourabi, Behshad Pournasr, Nasser Aghdami, Reza Malekzadeh, Navid Almadani, Ghasem Hosseini Salekdeh, ***Hossein Baharvand****. **Generation of Liver Disease-Specific Induced Pluripotent Stem Cells along with Efficient Differentiation to Functional Hepatocyte-Like Cells.** Stem cells reviews and Reports. 2010 6(4):622-32.
400. Marzeih Ebrahimi*, Parvaneh Mohammadi, Arezoo Daryade, ***Hossein Baharvand.*** **Assessment of heat shock protein (HSP60, HSP72, HSP90, and HSC70) expression in cultured limbal stem cells following air lifting.** Molecular Vision. 2010, 16:1680-1688.
401. Saman Nikeghbalian[#], Behshad Pournasr[#], Nasser Aghdami, Alireza Rasekhi, Bitia Geramizadeh, Seyed Mohammad Kazem Hosseini-Asl, Mani Ramzi, Farzad Kakaei, Mehrnaz Namiri, Reza Malekzadeh, Seyed Ali Malek-Hosseini, ***Hossein Baharvand****. **Autologous Transplantation of Bone Marrow-derived Mononuclear and CD133⁺ cells in Patients with Decompensated Cirrhosis.** Arch Iran Med. 2011 Jan;14(1):12-7.
402. Zahra Farzaneh, Behshad Pournasr, Nasser Aghdami, Marzeih Ebrahimi, ***Hossein Baharvand****. **Enhanced functions of Human Embryonic Stem Cell-derived Hepatocyte-like Cells on Three-dimensional Nanofibrillar Surfaces.** Stem Cell Rev. 2010; 6(4):601-610.
403. Shiva Nemati, Maryam Hatami, Sahar Kiani, Katayoun Hemmesi, Hamid Gourabi, Najmehsadat Masoudi, Sara Alaei, ***Hossein Baharvand****. **Long-term Self-Renewable Feeder-Free Human Induced Pluripotent Stem Cell-derived Neural Progenitors.** Stem Cells Dev. 2011; 20(3):503-14.
404. Mehrnaz Namiri, ***Hossein Baharvand***, Nasser Aghdami. **Methods for Isolation of Bone Marrow Stem Cells: Comparative Analysis.** Cell Journal(Yakhteh), Winter 2011, 12(4), 439-446.
405. Abbas Piryaeei, Mojtaba Rezazadeh Valojerdi*, Mansoureh Shahsavani, ***Hossein Baharvand****. **Differentiation of Bone Marrow-derived Mesenchymal Stem Cells into Hepatocyte-like Cells on Nanofibers and Their Transplantation into Carbon Tetrachloride-Induced Liver Fibrosis Model.** Stem Cell Rev. 2011 Mar;7(1):103-118.
406. Maryam Ostadsharif, Kamran Ghaedi, Mohammad Hossein Nasr-Esfahani, Somayeh Tanhaie, Khadijeh Karbalaii, ***Hossein Baharvand.*** **Sorting analysis of mouse peroxisomal protein by *in vitro* studies.** Iranian Journal of Biotechnology, 2010, 8(3) 186-192.
407. Samira Asgari, Behshad Pournasr, Ghasem Hosseini Salekdeh, Arefeh Ghodsizadeh, Michael Ott, ***Hossein Baharvand****. **Induced Pluripotent Stem Cells: A New Era for Hepatology.** Journal of Hepatology, 2010, 53(4):738-51.

408. Rokhsareh Meamar, Fereshteh Karamali, Hamid Mirmohamad Sadeghi, Mahmood Etebari, Mohammad Hossein Nasr-Esfahani*, ***Hossein Baharvand****, **Toxicity of Ecstasy (MDMA) Towards Embryonic Stem Cell-derived Cardiac and Neural Cells.** Toxicology In vitro. 2010, 24:1133-8.
409. Vahideh Rabani, Mansoureh Shahsavani, Marzieh Gharavi, Zahra Azhdari, ***Hossein Baharvand****, **Mesenchymal Stem Cell Infusion Therapy in Carbon Tetrachloride-Induced Liver Fibrosis Model Affect Matrix Methatoproteinase Expression.** Cell Biology International, 2010, 34:601-605.
410. Bita Ebrahimi, Mojtaba Rezazadeh Valojerdi*, Poopak Eftekhari-Yazdi, ***Hossein Baharvand***. **In Vitro Maturation, Apoptotic Gene Expression and Incidence of Oocyte Chromosomal Abnormalities Following Cryotop Vitrification of Sheep Cumulus-Oocyte Complexes.** Assisted reproduction and Genetics, 2010, 27:239-246.
411. Ali Niapour, Fereshteh Karamali, Khadijeh Karbalaie, Abbas Kiani, Mohammad Mardani, Mohammad Hossein Nasr-Esfahani*, ***Hossein Baharvand****, **A Novel Method to Obtain Highly Enriched Cultures of Adult Rat Schwann Cells.** Biotechnology letters. 2010, 32:781-6.
412. Abolhassan shahzadeh Fazeli, Davood Nasrabadi, Mohammad Hossein Sanati *, Alireza Pouya, Saleh M Ibrahim, ***Hossein Baharvand***. Ghasem Hosseini Salekdeh*. **Proteome analysis of brain in murine experimental autoimmune encephalomyelitis.** Proteomics, 2010, 10(15):2822-32.
413. Laleh Khodadadi, Saeed Shafieyan, Masoud Sotoudeh, Ahmad Vosough Disaji, Abdohossein Shahverdi, Nasser Aghdami*, ***Hossein Baharvand****, **Intraepidermal Injection of Dissociated Epidermal Cell Suspension Improves Vitiligo.** Archives of Dermatological Research, 2010, 302(8):593-9.
414. Abdolhossein Shahverdi*, Mansoureh Movahedin*, Mojtaba Rezazadeh Valojerdi, ***Hossein Baharvand***. **Assessment of Embryos Derived from *in vitro* Fertilization of Oocytes Reconstructed by Meiosis-II Chromosome Transplantation from Aged Mice to Ooplasm of Young Mice.** International Journal of Fertility and Sterility, 2010, 3 (4), 165-170.
415. Ali Seifinejad, Mohammadsharif Tabebordbar, Hossein Baharvand, Laurie A Boyer, Ghasem Hosseini Salekdeh. **Progress and promise towards safe induced pluripotent stem cells for therapy.** Stem Cell Reviews and Reports. 2010, 6:297-306.
416. ***Hossein Baharvand****, Ghasem Hosseini Salekdeh, Adeleh Taei, Sepideh Mollamohammadi. **An Efficient and Easy-to-Use Cryopreservation Protocol for Human ES and iPS Cells.** Nature Protocols. 2010, 5(3):588-94.
417. R. Malekzadeh*, M. Mohamadnejad, K. Alimoghaddam, M. Bagheri, ***H. Baharvand***, A. Ghavamzadeh. **Cell-Based Regenerative Therapy as an Alternative to Liver Transplantation for End-Stage Liver Disease: Experience from Iran.** International Journal of Organ Transplantation Medicine, 2010, 1 (1) 15-21.

418. Davood Nasrabadi, Mehran Rezaei Larijani, Ali Fathi, Hamid Gourabi, Ahmad Vosough Dizaj, **Hossein Baharvand***, Ghasem Hosseini Salekdeh*. **Nuclear proteome analysis of monkey embryonic stem cells during differentiation.** Stem Cell Reviews and Reports. 2010, 6:50-61.
419. MohammadReza Zafarghandi, Hassan Ravari, Nasser Aghdami, Mehrnaz Namiri, Kasra Moazzami, Ehsan Taghiabadi, Abdorreza Fazel, Behshad Pournasr, Ali Farrokhi, RamezanAli Sharifian, Javad Salimi, Majid Moini, **Hossein Baharvand***. **Safety and Efficacy of Granulocyte Colony Stimulating Factor Administration Following Autologous Intramuscular Implantation of Bone Marrow-Mononuclear Cells: A Randomized Controlled Trial in Patients with Advanced Lower Limb Ischemia.** Cytotherapy. 2010 12(6):783-91.
420. Adeleh Taei, Hamid Gourabi, Ali Seifinejad, Mehdi Totonchi, Ebrahim Shahbazi, Mojtaba Rezazadeh Valojerdi, Poopak Eftekhari, Leila Karimian, **Hossein Baharvand***. **Derivation of New Human Embryonic Stem Cell Lines from Preimplantation Genetic Screening and Diagnosis-Analyzed Embryos.** In Vitro Cellular and Developmental Biology. 2010, 46(3-4):395-402.
421. Mehdi Mohamadnejad, Behshad Pournasr, Mohammad Bagheri, Naser Aghdami, Mansoureh Shamsavani, Leila Abdollahzadeh, Ehsan Taghiabadi, Hossein Azizi, Iraj Heidari, Shahram Akhlaghpour, Sebastiano Calandra, Reza Malekzadeh*, **Hossein Baharvand***. **Transplantation of Allogenic Bone Marrow MSC-Derived Hepatocyte-Like Cells in Homozygous Familial Hypercholesterolemia.** Cytotherapy. 2010, 12:566-568.
422. Maryam Shahhoseini*, Adeleh Taei, Narges Zare Mehrjardi, Ghasem Hosseini Salekdeh, **Hossein Baharvand***. **Epigenetic analysis of human embryonic carcinoma cells during retinoic acid-induced neural differentiation.** Biochemistry and Cell Biology. 2010, 88: 527-538.
423. Mohammad Pakzad, Mehdi Totonchi, Adeleh Taei, Ali Seifinejad, SeidehNafiseh Hassani, **Hossein Baharvand***. **Presence of a ROCK inhibitor in Extracellular Matrix Supports More Undifferentiated Growth of Feeder-Free Human Embryonic and Induced Pluripotent Stem Cells upon Passaging.** Stem Cell Reviews and Reports. 2010 ;6(1):96-107.
424. Ali Seifinejad, Adeleh Taei, Mehdi Totonchi, Hamed Vazirinasab, Seideh-Nafiseh Hassani, Nasser Aghdami, Ebrahim Shahbazi, Ghasem Hosseini Salekdeh*, **Hossein Baharvand***. **Generation of Human Induced Pluripotent Stem Cells from a Bombay Individual: Moving Towards “Universal-Donor” Red Blood Cells.** Biochemical and Biophysical Research Communications. 2010 ;391:329-34.
425. Hossein Azizi, Narges-Zare Mehrjardi, Ebrahim Shahbazi, Katayoun Hemmesi, Mirza Khalil Bahmani, **Hossein Baharvand***. **Dehydroepiandrosterone Stimulates Neurogenesis in Mouse Embryonic Carcinoma and Human Embryonic Stem Cell-Derived Neural Progenitors and Induces Dopaminergic Neurons.** Stem Cells Dev. 2010 Jun;19(6):809-18.

426. Alireza Baradaran-Rafii, Marzieh Ebrahimi, Mozhgan Rezaei Kanavi, Ehsan Taghiabadi, Nasser Aghdami, Medi Eslani, Pejman Bakhtiari, Bahram Einollahi, , MohammadAli Javadi, ***Hossein Baharvand****. **Midterm outcomes of Autologous Cultivated Limbal Stem Cell Transplantation with or without penetrating keratoplasty.** *Cornea*, 2010, 29:502-509.
427. Ebrahimi B, Rezazadeh Valojerdi* M, Eftekhari-Yazdi P, Farrokhi A, ***Baharvand H.*** **In Vitro Maturation and Gene Expression of Sheep Cumulus-Oocyte Complexes following Vitrification by Conventional, Cryotop and Solid Surface Methods.** *Reproductive BioMedicine Online*, 2010, 20, 26– 34.
428. Farzaneh Sharifiaghdas, Reza Moghadasali, ***Hossein Baharvand***, Seyed Mohammadmehdi Hosseini-Moghaddam, Nastran Mahmoudnejad. **Special characteristics of culturing mature human bladder smooth muscle cells on human amniotic membrane as a suitable matrix.** *Urol J.* 2009 ;6(4):283-8.
429. Ali Fathi, Mohamad Pakzad, Adele Taei, Thore C. Brink, Leila Pirhaji, Guifré Ruiz, Mohammadsharif Tabebordbar, Hamid Gourabi, James Adjaye, ***Hossein Baharvand****, Ghasem Hosseini Salekdeh*. **Comparative Proteome and Transcriptome Analyses of Embryonic Stem Cells during Embryoid Body-based Differentiation.** *Proteomics*, 2009, Nov;9(21):4859-70.
430. H. Sadraei* S.R. Abtahi, M. Nematollahi, K. Karbalaie, F. Karamali, ***H. Baharvand***, M.H. Nasr-Esfahani. **Assessment of potassium current in Royan B1 stem cell derived cardiomyocytes by patch-clamp technique.** *Res Pharm Sci.* 2009 Jul-Dec; 4(2): 85–97.
431. Mahboubeh Farokhpour, Khadijeh Karbalaie, Somayeh Tanhaei, Marzeyeh Nematollahi, Mahmoud Etebari, Hamid Mirmohammad Sadeghi, Mohammad Hossein Nasr-Esfahani*, ***Hossein Baharvand****. **Embryonic Stem Cell-derived Cardiomyocytes as Model System to Study Cardioprotective effects of Dexamethasone in Doxorubicin Cardiotoxicity.** *Toxicol In Vitro.* 2009 Oct;23(7):1422-8.
432. Sagha M, Karbalaie K, Tanhaee S, Esfandiari E, Salehi H, Sadeghi-Aliabadi H, Razavi S, Nasr-Esfahani MH*, ***Baharvand H****. **Neural induction in mouse embryonic stem cells by co-culturing with chicken somites.** *Stem cells and Development*, 2009 Nov;18(9):1351-60.
433. Mollamohammadi S, Taei A, Pakzad M, Totonchi M, Seifinejad A, Masoudi N, ***Baharvand H****. **A Simple and Efficient Cryopreservation Method for Feeder-free Dissociated Human Induced Pluripotent Stem Cells and Human Embryonic Stem Cells.** *Hum Reprod.* 2009;24(10):2468-76.
434. Totonchi M, Taei A, Seifinejad A, Tabebordbar MSH, Rassouli H, Aghdami N, Gourabi H, Hosseini Salekdeh GH, ***Baharvand H****. **Feeder- and Serum-Free Establishment and Expansion of Human Induced Pluripotent Stem Cells.** *International Journal of Developmental Biology.* 2010;54:877-86.

435. Hatami M, Zare Mehrjerdi N, Kiani S, Azizi H, Hemmesi K, **Baharvand* H.** **Human embryonic stem cell-derived neural precursor transplants in collagen scaffolds promote recovery in injured rat spinal cord.** *Cytotherapy*. 2009;11(5):618-30.
436. Ahmadiankia N, Ebrahimi M, Hosseini A, **Baharvand H***. **The effects of different extracellular matrices and co-cultures on human limbal stem cell expansion in vitro.** *Cell Biology International* 2009 ;33(9):978-87.
437. Moghadam F, Alaiei H, Karbalaie Kh, Tanhaei S, Nasr Esfahani MH*, **Baharvand H***. **Transplantation of Primed or Unprimed Mouse Embryonic Stem Cell-derived Neural Precursor cells Improves Cognitive Function in Alzheimerian Rats.** *Differentiation*. 2009;78(2-3):59-68.
438. Nojehdehian H, Moztaarzadeh F, **Baharvand H**, Nazarian H, Tahriri M. **Preparation and surface characterization of poly-L-lysine-coated PLGA microsphere scaffolds containing retinoic acid for nerve tissue engineering: In vitro study.** *Colloids Surf B Biointerfaces*. 2009;73(1):23-9.
439. Ghasemi-Mobarakeh L, Morshed M, Karbalaie Kh, Fesharaki M, Nematollahi M, Nasr-Esfahani*MH, **Baharvand* H.** **The thickness of electrospun poly (ϵ -caprolactone) nanofibrous scaffolds influences cell proliferation** *International Journal of Artificial Organs*. 2009 Mar;32(3):150-158.
440. Eslaminejad MB, Rouhi L, Arabnajafi M, **Baharvand H.** **Rat marrow-derived mesenchymal stem cells developed in a medium supplemented with the autologous versus bovine serum.** *Cell Biology International* 2009, May; 33(5): 607-16
441. Bagher Nasrabadi D, Rezaei M, Pirhaji L, Gourabi H, Shahverdi A, **Baharvand H***, **Hosseini Salekdeh Gh***. **Proteomic analysis of monkey embryonic stem cell during differentiation.** *J Proteome Research*. 2009; 8: 1527–1539.
442. Anjomshoa M, Karbalaie Kh, Mardani M, Razavi Sh, Tanhaei S, Nasr-Esfahani MH*, **Baharvand H***. **Generation of motor neurons by co-culture of retinoic acid-pretreated embryonic stem cells with chicken notochords.** *Stem Cells and Development*. 2009;18(2):259-67.
443. Shiri EH, Zare Mehrjardi N, Tavallaei M, Kazemi Ashtiani S, **Baharvand H***. **Neurogenic and mitotic effects of dehydroepiandrosterone on neural-competent marrow mesenchymal stem cells.** *International Journal of Developmental Biology*. 2009;53(4):579-84.
444. Rohani L, Karbalaie Kh, Vahdati A, Hatami M, Nasr-Esfahani* MH, **Baharvand H***. **Embryonic stem cell sphere: A controlled method for production of mouse embryonic stem cell aggregates for differentiation.** *International Journal of Artificial Organs*. 2008;31(3):258-65.

445. Kermani Sh, Karbalaie Kh, Madani Sh, Jahangirnejad AA, Nasr-Esfahani MH*, **Baharvand H***. **Effect of lead on proliferation and neural differentiation of mouse bone marrow-mesenchymal stem cells.** *Toxicology in Vitro*, 2008, 22(4):995-1001.
446. **Baharvand H***, Fathi A, Gourabi H, Mollamohammadi S, Salekdeh GH*. **Identification of mouse embryonic stem cell-associated proteins: a comparative proteomic approach.** *Journal of Proteome Research*, 2008;7:412-23.
447. **Baharvand H***, Hashemi SM, Shahsavani M. **Differentiation of human embryonic stem cells into functional hepatocyte-like cells in a serum-free adherent culture condition.** *Differentiation*, 2008;76(5):465-77.
448. Jafary H, Larijani B, Farrokhi A, Pirouz M, Mollamohammadi S, **Baharvand H***. **Differential effect of activin on mouse embryonic stem cell differentiation into insulin-secreting cells under nestin-positive selection and spontaneous differentiation protocols.** *Cell Biology International* 2008, 32(2):278-86.
449. Mohammad Reza Darabi, Mohamad Hossein Nasr-Esfahani, **Hossein Baharvand**, Mohmmad Mardani, Hojatolah Karimi-Jashni. **Fusion and development of 2-cell bovine embryos to tetraploid blastocyst with different voltages and durations.** *Iranian Journal of Reproductive Medicine*. 2008 6 (4), 181-186.
450. Ahmadiankia N, Ebrahimi M, Hosseini A, **Baharvand H***. **The effect of extra cellullkar matrices and co-culture system on cultured limbal stem cells,** *Yakhteh Medical J*, 2008, 10 (1): 47-56.
451. Mohammadnejad M, Alimoghaddam K, Mohyeddin Bonab M, Bagheri M, Bashtar M, Ghanaati H, **Baharvand H**, Ghavamzadeh A, Malekzadeh R*. **Phase 1 trial of autologous bone marrow mesenchymal stem cell transplantation in patients with decompensated liver cirrhosis.** *Arch Iran Med*. 2007;10(4):459-66.
452. Nojdedhian H, Moztarzadeh F, Zare Mehrjerdi N, **Baharvand H.*** **Differentiation of mouse stem cells into neural cells on PLGA microspheres scaffold,** *Iranian J. of Pharmaceutical Sciences*, Autumn 2007, 3 (4), 209-216
453. **Baharvand H***, Heidari M, Ebrahimi M, Valadbeigi T, Hosseini Salekdeh GH*. **Proteomic analysis of epithelium-denuded human amniotic membrane as a limbal stem cell niche,** *Molecular Vision*, 2007; 13:1711-1721.
454. Mohamadnejad M, Namiri M, Bagheri M, Hashemi SM, Ghanaati H, Zare Mehrjardi N, Kazemi Ashtiani S, Malekzadeh R, **Baharvand H***. **Phase 1 Human Trial of Autologous Bone Marrow-Hematopoietic Stem Cell Transplantation in Patients with Decompensated Cirrhosis.** *World J Gastroenterol* 2007 June 28; 13(24): 3359-3363.
455. Sharifiaghdas F, Hamzehiesfahani N, Moghadasali R, Ghaemimanesh F, Baharvand H. **Human amniotic membrane as a suitable matrix for growth of mouse urothelial cells in**

comparison with human peritoneal and omentum membranes. Urol J. 2007 Spring;4(2):71-8.

456. ***Baharvand H****, Fathi A, van Hoof D, Salekdeh GH. **Concise review: Trends in Stem Cell Proteomics.** Stem Cells, 2007;25;1888-1903.

457. ***Baharvand H****, Zare Mehrjardi N, Hatami M, Kiani S, Rao M, Haghghi MM. **Neural differentiation from human embryonic stem cells in a defined adherent culture condition.** Int. J. Dev. Biol. 2007; 51: 371-378.

458. Ahmadi H, ***Baharvand H****, Kazemi Ashtiani S, Soleimani M, Sadeghian H, Madjd Ardekani J, Zare Mehrjardi N, Kouhkan A, Namiri M, Madani-Civi M, Fattahi F, Vosough Dizaji A., Shahverdi A. **Safety analysis and improved cardiac function following local autologous transplantation of CD133⁺ enriched bone marrow cells after myocardial infarction.** Current Neurovascular Research, 2007, 4,153-160.

459. ***Baharvand H****, Ebrahimi M, Javadi. **Comparison of characteristics of cultured limbal cells on denuded amniotic membrane and fresh conjunctival, limbal, and corneal tissues.** Development, Growth and Differentiation, 2007, 49(3):241-51.

460. Khezri SH, Rezazadeh Valojerdi M*, Sepehri H, ***Baharvand H.*** **Effect of Basic Fibroblast Growth Factor (FGF) on Cardiomyocyte Differentiation from Mouse Embryonic Stem Cells.** Saudi Med J. 2007; 28: 181-6.

461. ***Baharvand H****, Piryaee A, Rohani R, Taeae A, Heidari MH, Hosseini A. **Ultrastructural comparison of developing mouse embryonic stem cell- and in vivo-derived cardiomyocytes,** Cell Biology International, 2006, 30, 800-807

462. ***Baharvand H****, Hajheidari M, Zonouzi R, Kazemi Ashtiani S, Hosseinkhani S, Hosseini Salekdeh G*. **Comparative proteomic analysis of mouse embryonic stem cells and neonatal-derived cardiomyocytes,** Biochemical and Biophysical Research Communications, 2006, 349, 1041-1049

463. ***Baharvand H****, Hashemi S.M.M, Kazemi Ashtiani S. **Differentiation of human embryonic stem cells into hepatocytes in 2D and 3D culture systems in vitro.** International J. of Developmental Biology, 2006; 50:645-52.

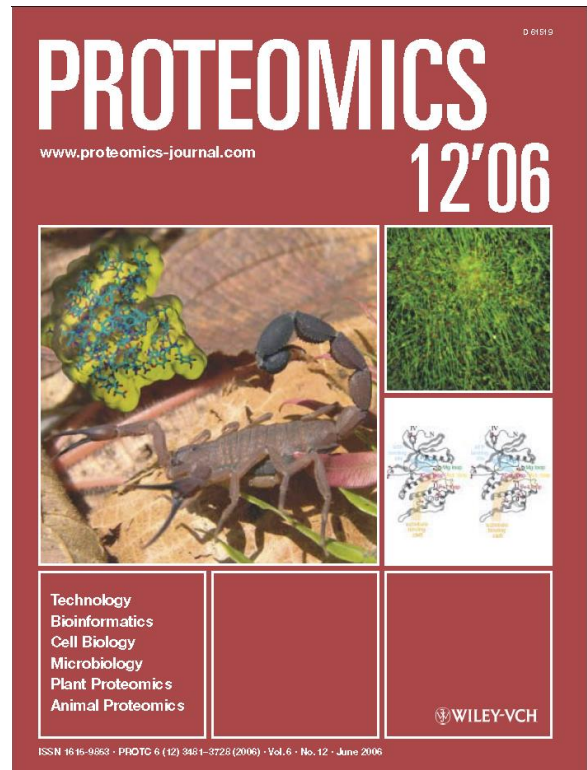
464. Zonouzi R, Kazemi Ashtiani S, Hosseinkhani S, ***Baharvand H****. **Kinetic properties of extracted lactate dehydrogenase and creatine kinase from mouse embryonic stem cell- and neonatal-derived cardiomyocytes.** J. of Biochemistry and Molecular Biology, 2006, 39, 426-431.

465. ***Baharvand H****, Hashemi S.M.M, Kazemi Ashtiani S. **Expression of endoderm and hepatic specific genes after *in vitro* differentiation of human embryonic stem cell.** Iranian Biomedical Journal, 2006, 10, 117-124.

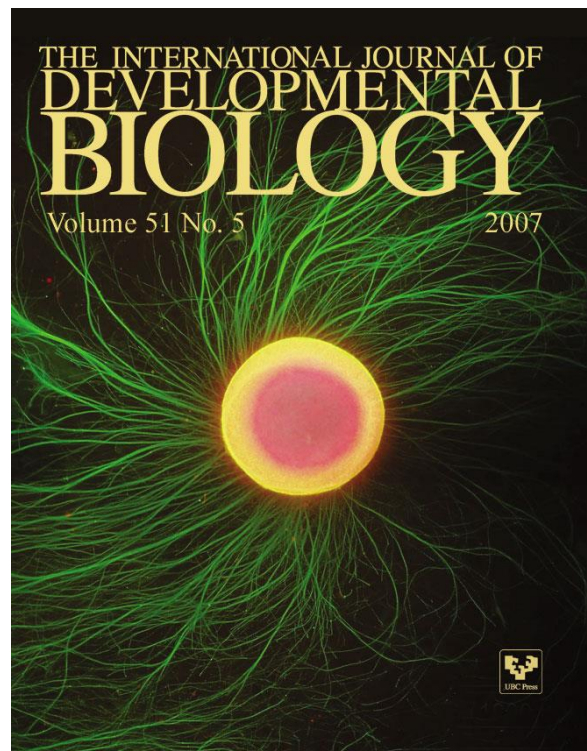
466. ***Baharvand H****, Jafari H, Kazemi Ashtiani S, Massumi M. **Generation of insulin-secreting cells from human embryonic stem cells.** *Development, Growth and Differentiation*, 2006, 48, 323-332.
467. ***Baharvand H****, Hajheidari M, Kazemi Ashtiani S, Hosseini Salekdeh GH*. **Proteomic Signature of Human Embryonic Stem Cells.** *Proteomics*, 2006, 6, 3544-3549.
468. ***Baharvand H****, Roche E, Soria B. **Sources of Beta-Cells for Cell Therapy in Diabetes.** *Immunology, Endocrine & Metabolic Agents in Medicinal Chemistry*, 2006, 6, 219-231. *(Review Article)*
469. ***Baharvand H****, Kazemi Ashtiani S, Tae A, Massumi M, Valojerdi MR, Eftekhari Yazdi P, Zarei Moradi Sh, Farrokhi A. **Generation of New Human Embryonic Stem Cell Lines with Diploid and Triploid Karyotypes.** *Development, Growth and Differentiation*, 2006, 48, 117-128.
470. ***Baharvand H****. **Potential of Embryonic Stem Cells for Differentiation into Neurons and Insulin-Secreting Cells.** ISBN: F526R9075, 2005 by MEDIMOND S.r.l. P: 579-585 (Proceeding of 13th World Congress on In Vitro Fertilization Assisted Reproduction & Genetics. ISI in current content life sciences.)
471. ***Baharvand H**** Azarnia M, Parivar K, Kazemi Ashtiani S. **The effect of extracellular matrix on embryonic stem cell- derived cardiomyocytes.** *Journal of Molecular and Cellular Cardiology*, 2005, 38, 495-503. *(Selected as one of the Top25 articles within the journal: Journal of Molecular and Cellular Cardiology, on Science Direct, February 2006)*
472. ***Baharvand H****, Kazemi Ashtiani S, Valojerdi MR, Shahverdi A, Tae A, Sabour D. **Establishment and in Vitro differentiation of a new Embryonic stem cell line from Human Blastocyst.** *Differentiation*. 2004, 72, 224-229.
473. ***Baharvand H****, Power JM, Ozsarac N, Matthaei KI: **Differentiation of embryonic stem cells into functional neurons in vitro.** *Neuroscience Research Communications*. 2004, 35: 130-138.
474. ***Baharvand H****, Matthaei K: **Culture Condition Difference for Establishment of New Embryonic Stem Cell lines From the C57BL/6 and BALB/c Mouse Strains.** *In Vitro Cellular and Developmental Biology-Animal*. 2004, 40: 76-81. *Featured as Journal Highlight (<http://www.sivb.org/journalhighlights38-4.asp>)*
475. ***Baharvand H****: **Differentiation of embryonic stem cells into neurons and insulin-secreting cells.** Proceeding of 1st national meeting on stem cells and gene therapy, 7-8 May, 2004, Turkey, 41-50, (published in proceeding book of the congress).
476. ***Baharvand H****, Matthaei K: **The ultrastructure of mouse embryonic stem cells.** *Reproductive Biomedicine online*, 2003, 7, 330-335.

➤ **Cover page of International Journals related to publications:**

Neural induction of human embryonic stem cells by treatment with retinoic acid and basic fibroblast growth factor for three weeks and stained for anti- beta-Tubulin III (green). Red color represents nuclei counterstained with propidium iodide. (Baharvand et al., 2006).



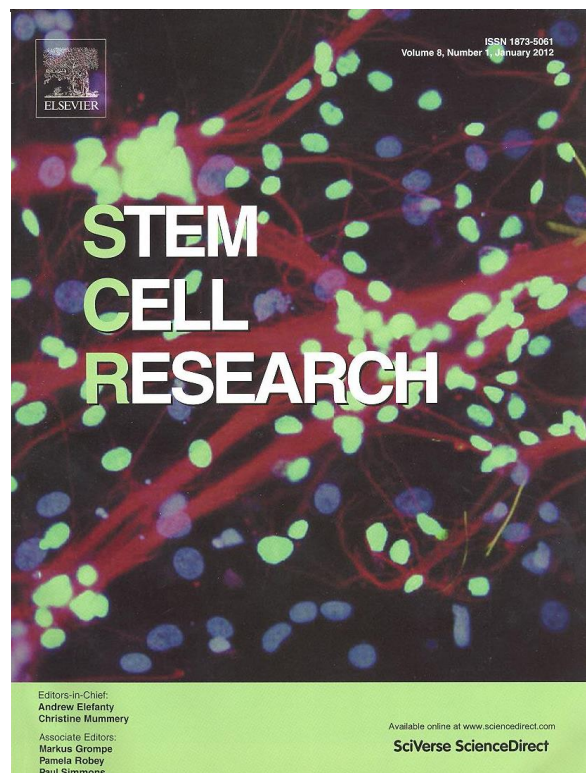
Fluorescence-microscopic view of a cluster of neuronal cells derived from human embryonic stem cells. Outgrowing processes are labeled by beta-Tubulin III (green) and aggregate of Nuclei by propidium iodide (red). The length of some processes reached up to 5 mm in vitro. (Baharvand et al., 2007).



Phase contrast micrograph of differentiated neuronal cells from human embryonic stem cells on a nanofibrillar surface. (Shahbazi et al., 2011)



Immunofluorescence micrograph of differentiated neurons by co-culture of human embryonic stem cell-derived neural progenitors with chicken somites showed dorsalization. PAX7/TUJ1/DAPI, (Salehi et al., 2012)

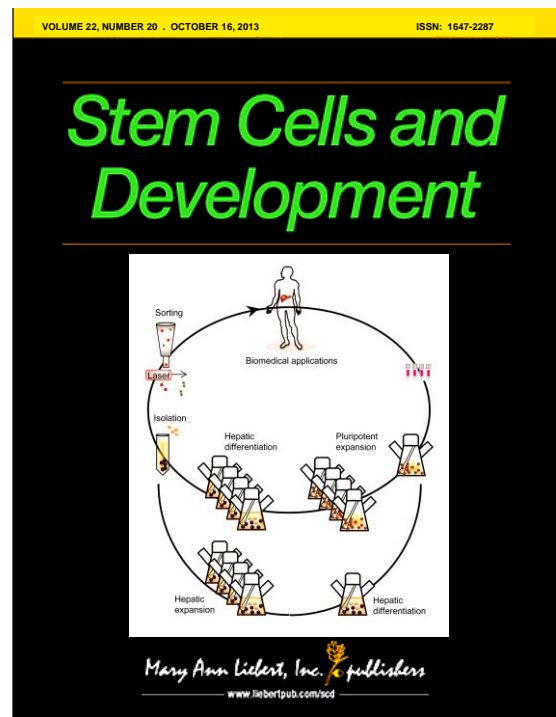


Screening ethnically diverse human embryonic stem cells (four lines from Iran)

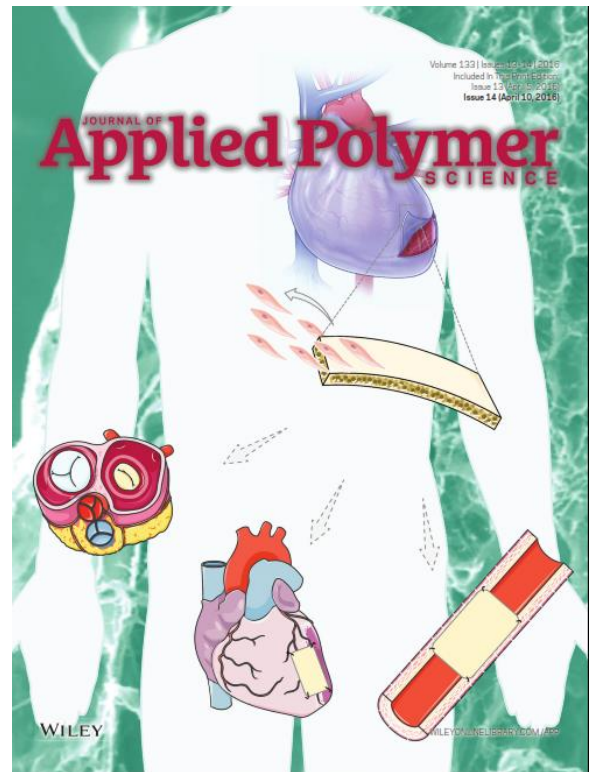
White box: Royan H5) (Amps K, et al, Baharvand H, et al, 2011)



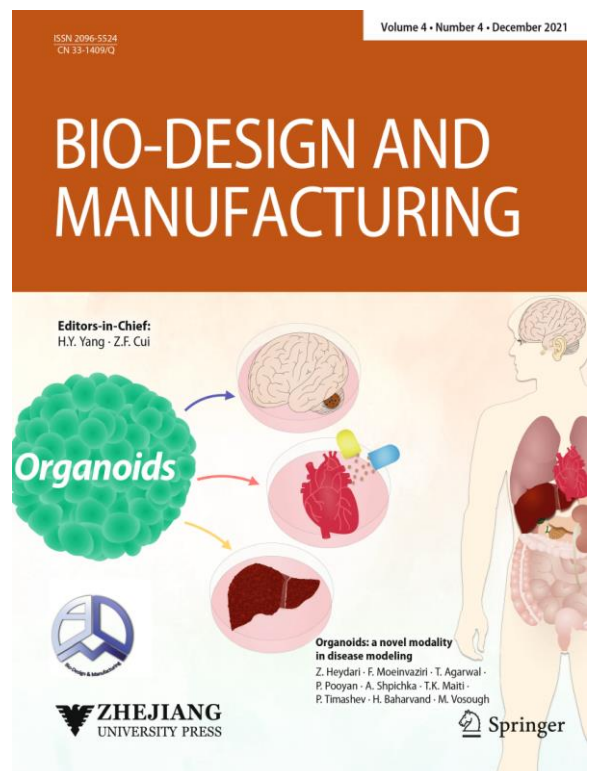
The methodology to scale up pluripotent-derived cell populations for clinical application. (Vosough et al., 2013)



Applications of decellularized pericardium membrane in cardiovascular engineering.
(Sasan Jalili-Firoozinezhad et al., 2016)



Organoids: a novel modality in disease modeling.
Zahra Heydari et al., 2021



➤ **PUBLISHED papers in peer-reviewed NATIONAL Journals:**

(*: means correspondence)

1. Reyhaneh Khoshchereh, Mehdi Totonchi , Hossein Baharvand , Marzieh Ebrahimi*. **Investigation the Ability to Produce Induced Pluripotent Cells from Human Pancreatic Cancer Xenografts.** Journal of Arak University of Medical Sciences 2019; 22(3), 45-58.
2. Ahmadraji M, Shiravi A, Hassani SN, *Baharvand H**. **Exploring the Effect of Epigenetic Modifications on Planarian Regeneration Process using Small Molecules Treatment.** Journal of Cell & Tissue, Winter 2016; 6(4): 471-480.
3. Mollamohammadi S, Shiravi AH, Hassani SN, Baharvand H*. **Production Improvement of Derived Haploid Mouse Embryonic Stem Cells from Parthenogenetic Mouse Blastocysts by Simultaneous Suppression of TGF-B and ERK Signaling Pathways.** Cell & Tissue Journal, Autumn 2015; 6(3): 421-430.
4. Mohsen Basiri, Mehrdad Behmanesh*, Yasser Tahamtani, Azadeh Moradmand, *Hossein Baharvand**. **The Effect of Small Molecule Mediated Epigenetic Modulations on Gene Overexpression with Lentiviral System in Embryonic Stem Cells.** Cell & Tissue Journal, Autumn 2015; 6(3): 431-441.
5. Sharif Moradi, *Hossein Baharvand**. **Induced pluripotent stem cells, from generation to application.** Tehran University Medical Journal, November 2014; 72, (8): 497-507.
6. Khoshchereh R, Ebrahimi M*, Baghban EslamiNejad M, Aghdami N, *Baharvand H.* **In-vitro Potential of Human Bone Marrow and Umbilical Cord Vein Mesenchymal Stem Cells to Differentiate into Insulin Producing Cells.** Iranian Journal of Endocrinology and Metabolism, 2011, 13 (4), 397-84.
7. Shiva Khezri, Mohammad Javan*, *Hossein Baharvand,* Saeed Semnianian. **Reaction of subventricular zone stem cells to the induction of experimental autoimmune encephalomyelitis in mouse.** Physiology and Pharmacology, 2011, 15 (2), 229-240.
8. Moslem M, Rezazadeh Valojerdi M, *Baharvand H**. **Generation and characterization of human induced pluripotent stem cells-derived mesenchymal progenitors.** Journal of Iranian Anatomical Sciences. 2011, 8(31), 129-138.
9. Fahimeh Khayyatan, Shahriar Hojjati Emami, Narges Zare Mehrjerdi, *Hossein Baharvand**. **A Simple and Efficient Method to Improve Mechanical Properties of Collagen Scaffolds by UV Irradiation.** Iranian Journal Polymer Science and Technology. 2010, 23 (5), 371-378.
10. Saeed Abbasalizadeh, Mehran Rezaei Larijani, *Hossein Baharvand**. **Large-scale expansion of human embryonic and induced pluripotent stem cells for cell therapy**

applications. Journal of Iranian Anatomical Sciences. Vol 8, Autumn 2010 & Winter 2011, 216-234.

11. Malihe Nazari Jahantigh, Kamran Ghaedi, Mohamad Hosein Nasr Esfahani*, Somayeh Tanhaei, Farzaneh Rabiee, Khadijeh Karbalaei, Maryam Ostadsharif, Marzieh Nematollahi, Shahnaz Razavi, Mehran Miroliaei, **Hossein Baharvand**. **Construction of expression vectors carrying mouse peroxisomal protein gene (PEP) with GST and FLAG labels.** Journal of University of Esfahan, In press.

12. Morteza Koruji*, Hossein Azizi, Abdolhossein Shahverdi, **Hossein Baharvand**. **Mouse and Human Spermatogonial Stem Cells.** Yakhteh Medical journal, 2010, 12(2), Summer 2010, 147-158.

13. Marziyeh Mojbafan, Kamran Ghaedi*, Shahnaz Razavi, Fereshteh Karamali, Khadijeh Karbalaii, Somayeh Tanhaie, Farzaneh Rabiee, Mohammad Hossein Nasr Esfahani, **Hossein Baharvand**. **Creation of a Stable P19 Cell Line Producing PTS2-EGFP.** Journal of Isfahan Medical School. October 2010, 28 (110), 495-502.

14. Parvaneh Mohammadi, Marzieh Ebrahimi*, **Hossein Baharvand**. **Corneal Differentiation Following HSC70 and HSP72 Expression in Air-Exposed Limbal Stem Cells Cultured on Denuded Amniotic Membrane.** Yakhteh Medical journal, 2010, 12(2), Summer 2010, 173-182.

15. Bita Ebrahimi, Mojtaba Rezazadeh Valojerdi*, Poopak Eftekhari-Yazdi, **Hossein Baharvand**. **Ultrastructural changes of sheep oocytes follow vitrification by different methods and in vitro maturation.** Journal of Iranian Anatomical Sciences. 2010 Spring, 8(30), 1-12.

16. Faranak Tavakolifar, Abdolhossein Shahverdi, Mehdi Pirouz, Malak Shakeri, Morteza Koruji, **Hossein Baharvand***. **The effect of laminin and gelatin extracellular matrix on short-term cultivation of neonate mouse spermatogonial stem cells.** Journal of Iranian Anatomical Sciences. 2010 Spring, 8(30), 37-48.

17. Abbas Piryayei, Mojtaba Rezazadeh Valojerdi*, Mansoureh Shahsavani, **Hossein Baharvand***. **The Role of Ultraweb Nano-Fibrillar Substrates in the Differentiation of In Vitro Mouse Bone Marrow Mesenchymal Stem Cell-Derived Hepatocyte-Like Cells.** Yakhteh Medical journal, 2010, 12(2), Summer 2010,: 275-286.

18. Piryaei A, Rezazadeh Valojerdi M, Baharvand H. **Therapeutic potential of mouse bone marrow mesenchymal stem cells in carbon tetrachloride (CCL4)-induced liver fibrosis.** Journal of Iranian Anatomical Sciences. 2010 Winter 6(28 & 29), P:99-113.

19. Behshad Pournasr, Zahra Farzaneh, Mansoureh Shahsanvani, **Hossein Baharvand***. **Liver Development and in vitro differentiation of embryonic stem cells to hepatocyte. 2009.** Yakhteh Medical journal, 2010, 11 (4) 348-373.

20. Nemati Sh, Zare Mehrjardi N, ***Baharvand H****. **Differentiation of human bone marrow mesenchymal stem cells to neural-like cells in vitro**, Tehran University Medical Journal, 2009, 67 (8), 527-534.
21. Vahideh Rabani, ***Hossein Baharvand****. **Animal models of liver cirrhosis and fibrosis**. Journal of Iranian Anatomical Sciences. Vol. 7, Autumn 2009 & Winter 2010, 163-184.
22. Sorayya Ghasemi, Kamran Ghaedi, Mohammad Hossein Nasr Esfahani, Somayye Tanhaei, Farzaneh Rabeei, Khadijeh Karbalaii, ***Hossein Baharvand***, Abolghasem Esmaeili. **Intranuclear Localization of EGFP-mouse PPAR γ 1 in Bovine Fibroblast Cells**. Yakhteh Medical J, (English), Vol 12, No 1, Spring 2010, 97-104.
23. Abolhassan Shahzadeh Fazeli, Mohammad Hossein Sanati*, Davood Nasrabadi, Alireza Pouya, ***Hossein Baharvand***, Ghasem Hosseini Salekdeh *. **Central Nervous System Proteomics in Animal Model of Multiple Sclerosis Revealed Down-Regulation of Mitochondrial Proteins**. Yakhteh Medical Journal, Vol 11, No 2, Summer 2009, Pages: 236-243.
24. Maryam Ostadsharif, Kamran Ghaedi*, Mohammad Hossein Nasr Esfahani*, Somayeh Tanhaie, Khadijeh Karbalaii, Kazem Parivar, ***Hossein Baharvand***. **Cytosolic Localization of Mouse Peroxisomal Protein/ Δ SKI Fused with Enhanced Green Fluorescent Protein into Chinese Hamster Ovary-K1 and P19 Cells**. Yakhteh Medical journal. Vol 11, No 2, Summer 2009. 154-159.
25. Somayeh Tanhaie, Kamran Ghaedi*, Khadijeh Karbalaii, Shanaz Razavi, Maryam Ostadsharif, Maliheh Nazari-Jahantigh, Farzaneh Rabeei, Marziyeh Nematollahi, ***Hossein Baharvand***, Mohammad Hossein Nasr Esfahani*. **Mouse Peroxisomal Protein cDNA Cloning and Characterization of its Intracellular Localization**. Yakhteh Medical Journal, Vol 11, No 2, Summer 2009, Pages: 196-203.
26. Vahideh Rabani, ***Hossein Baharvand****. **Matrix metalloproteinase's role in producing and curing of liver fibrosis**. Yakhteh Medical Journal, Vol 11, No 2, Summer 2009, Pages: 106-121. (in Persian with English abstract).
27. Azizi H, Zare-Mehrjerdi N, Kazemi-Ashtiani S, Bahmani MK, ***Baharvand H***. **DHEA accompanied with retinoic acid enhances differentiation of P19 embryonal stem cells into neuronal cells**. Yakhteh Medical journal, Vol 11, No 2, Summer 2009, Pages: 228-235.
28. Sagha M, Esfandiari E, Karbalaie Kh, Tanhaee S, Nematollahi S, Rabiee F, Karamali F, Razavi S, Nasr-Esfahani MH*, Baharvand H*. **The effect of chick embryonic somites on neural rosette formation in mouse embryonic stem cells**. Journal of Iranian Anatomical Sciences. 2009 Winter Spring, 6(25 & 26), P:509-523.
29. Pirouz M, Valadbeigy T, shahverdi A, Baharvand H. **In vitro production of germ cells from stem cells: Hypes and Hopes** Journal of Iranian Anatomical Sciences. 2009 Winter Spring, 6(25 & 26), P:591-626.

30. Nourbakhsh N, Talebi A, Mousavi SB, Nadeali F, Torabinejad M, Karbalaeei Kh, Nasr-Esfahani MH, ***Baharvand H.*** **Isolation of mesenchymal stem cells from dental pulp of efoliated human deciduous teeth.** *Yakhteh Medical journal* 2008, 10(2), 101-108.
31. Sorayya Ghasemi, Kamran Ghaedi*, Mohammad Hossein Nasr Esfahani, Abolghasem Esmaeili, Somayeh Tanhaei, Farzaneh Rabeei, Khadijeh Karbalaii, ***Hossein Baharvand.*** **Cloning of mouse PPAR γ 1 cDNA in pEGFP-C1 expression vector.** *Research Journal of University of Isfahan (Science)*, 2008, 35(6), 181-194.
32. Malihe Nazari Jahantigh, Kamran Ghaedi*, Somayeh Tanhaei, Farzaneh Rabiee, Mohamad Hossein Nasr Isfahani, ***Hossein Baharvand,*** Khadijeh Karbalaeei, Mehran Miroliaei. **Construction of eukaryotic expression vectors encoding PEP-cDNA with FLAG and GST tags.** *Research Journal of University of Isfahan (Science)*, 2008, 35(6), 75-88.
33. Pournasr Khakbaz B, ***Baharvand H.*** **Human mesenchymal stem cells: Biological characteristics, clinical applications, and isolation methods.** *Journal of Iranian Anatomical Sciences.* 2007 summer, 5(19), 157-206.
34. Ghodratnama R, Karbalaeei Kh, Ghaedi K, ***Baharvand H,*** Nasr Esfahani MH. **Optimization of PTS2-EJFP expression in CHO and vero cells,** *Yakhteh Medical Journal,* Vol 9, No 3, Autumn 2007, Pages: 170-175
35. Moghadasali R, Zeynali B, Soleimani M, Hatami M, ***Baharvand H*.*** **The effect of astrocyte-conditioned medium, retinoic acid and basic fibroblast growth factor on neural differentiation of mouse embryonic stem cells.** *Yakhteh Medical Journal,* Vol 9, No 3, Autumn 2007, Pages: 176-183
36. Cheetsazan H, Gourabi H, Jabbari-Arefae A, ***Baharvand H.*** **A simple method for isolation of neoblasts from Planaria.** *Yakhteh Medical journal,* Vol 11, No 2, Summer 2009, Pages: 134-141.
37. Najafi F, Zare Mehrjardi N, Hatami M, ***Baharvand H*.*** **Differentiation of Mouse Embryonic Stem Cells into Dorsal Interneurons of the spinal cord using BMP4 and Activin A.** *Yakhteh Medical J, (English),* 2009, 11 (3), 277-284
38. Kermani Sh, Karbalaeei Kh, Madani H, Jahangirnejad AA, Eslaminejad MR, Nasr Esfahani MH*, ***Baharvand H.*** **Mesenchymal stem cells as a model for environmental contaminations.** *Journal of Arak University of Medical Sciences,* 2008, Autumn, 11(3), 117-175.
39. Faghihi F, Soleimani Mehrjardi M, Zare Mehrjardi N, ***Baharvand H*.*** **Effect of staurosporine on neural differentiation of CD133⁺human umbilical cord blood-derived hematopoietic stem cells.** *Yakhteh Medical J,* 2008, 10 (1): 33-40.
40. Khodadadi L, Shafieyan S, Aghdami N*, ***Baharvand H*.*** **Cell therapy in burn repair.** *Yakhteh Medical journal,* 2008, 10(3), 169-178.

41. Laleh Ghasemi-Mobarakeh, Mohammad.Morshed*, Khadijeh Karbalaie, Mehrafarin Fesharaki, Mohammad Hossein Nasr-Esfahani*, ***Hossein Baharvand***. **Electrospun Poly(ϵ -caprolactone) nanofiber Mat as extracellular matrix**. *Yakhteh Medical journal*, 2008, 10(3), 179-184.
42. Saeed Kazemi Ashtiani, Mohammad Hossein Nasr-Esfahani*, Sayyed Morteza Hosseini, FaribaMoulavi, Mahdi Hajian, Mohsen Frouzanfar, Parvaneh Abedi, Maryam Meamar, Mojtaba Rezazadeh Volojerdi, Hamid Gourabi, Abdolhossein Shahverdi, ***Hossein Baharvand***, Ahmad Vosough Dizaj, Hossein Imani, Poopak Eftekhari-Yazdi, Mahdi Vojgani, Mahdi Safahani, Ramin Radpour, Iman Salahshouri. 2008. **Royana: Successful expertise in cloning the sheep**. *Yakhteh Medical journal*, 10(3), 193-200.
43. Ebrahimi M, Taghi Abadi E, ***Baharvand H***. **Clinical application of limbal stem cells in patients with limbal stem cell deficiency**. *Bina J Ophthalmol* 2008; 13 (2): 227-243.
44. Farrokhpour M, Karbalaie Kh, Etebari M, Mirmohammad Sadeghi H, Nasr Esfahani MH*, ***Baharvand H****. **Evaluation of dexametasone in prevention of reduced heart beats induced by doxorubicin in mouse embryonic stem cells derived cardiomyocytes**, *Physiology and Pharmacology J*. Fall 2008, 12(3), 238-244.
45. Anjomshoa M, Karbalaie Kh, Razavi Sh, Mardani M, Nasr Esfahani MH*, ***Baharvand H****. **Effect of notochord on neural differentiation from mouse embryonic stem cells**. *Physiology and Pharmacology J*. 2008 Spring, 12(1).
46. Farrokhi A, ***Baharvand H****, Elahi E, Pirouz M, Jafari H. **The effect of extra cellular matrix on differentiation of mouse embryonic stem cells into insulin-producing cells**, *Yakhteh Medical journal,(Farsi)*, Winter 2009, 10(4), 250-259.
47. Sagha M, Esfandiari E, Razavi S, Karbalaee K, Nasr Esfahani MH*, ***Baharvand H****. **Neuronal induction of embryonic stem cells following co-culture with chick embryo somites**. *Journal of Iranian Anatomical Sciences*. 2008 winter & Spring, 5(21,22), 231-243
48. Kermani Sh, Karbalaie Kh, Madani H, Jahangirnejad AA, Baghban Eslaminejad MR, Nasr Esfahani MH*, ***Baharvand H***. **Mesenchymal stem cells as a model for environmental contaminations**. *Journal of Arak University of Medical Sciences*, 2008, Autumn, 11(3), 117-175
49. Azizi H, Zare Mehrjardi N, Kazemi Ashtiani S, Bahmani MK, ***Baharvand H****. **Dehydroepiandroesteron increased proliferation neural progenitor cells derived from p19 embryonal carcinoma stem cells**, *Physiology and Pharmacology J*. 2008, 12(3), 180-187.
50. Baghban Eslaminejad MR, Rouhi L, Arab Najafi SM. ***Baharvand H***. **Culture of rat mesenchymal stem cells: using peripheral blood-derived plasma as a culture medium supplement**, *Blood Journal*, Spring 2008, Vol. 5: No. 1, 25-37.
51. Totonchi M, Shahosseini M, Momenimoghadam M, ***Baharvand H****. **Epigenetics of stem cells**. *Yakhteh medical journal*, 2007, 9 (1) 51-66. (review, In Persian)

52. Pirouz M, Valadbeigy T, Abdolhossein Shahverdi, ***Baharvand H.*** **Differentiation of stem cells to gametes.** Journal of Iranian Anatomical Sciences. Volume 4, Winter 2007, Number 4.
53. Pirouz M, ***Baharvand H.***, Mohabbatkar H, Mohsenzadeh S, Nokhbeh M, Jafari H, Farrokhi A, Khodadadi L, Pakzad M. **Simultaneous effect of extra cellular matrix and pancreas dynamic co-culture on differentiation of insulin producing cells from mouse embryonic stem cells,** Journal of Iranian Anatomical Sciences. Volume 4, Winter 2007, Number 4
54. Ebrahimi M., Taghi Abadi E., ***Baharvand H.,*** **Limbal Stem Cell In review,** J. of Ophthalmic and Vision Research, 2009, 4(1), 40-58. (English)
55. ***Baharvand H.***, Pakzad M, Taei A, Mollamohammadi S, Rezaei M. **Step by step method of establishment and culture and maintenance of mouse and human stem cells,** Journal of Iranian Anatomical Sciences. 5(21 & 22), winter & spring 2008, 309-343.
56. Eimani H, Tahaei LS, Parivar K, Rezazadeh M, Kazemi S, Shahverdi A, Eftekhari P, ***Baharvand H.*** **The effect of granulose cells co-culture and retinoic acid on maturation and development of immature mouse oocytes in vitro.** Journal of Iranian Anatomical Sciences. 5(19), 2007, 137-146.
57. Baghban Eslaminejad MR, Rouhi L, Arab Najafi SM. ***Baharvand H.*** **Culture and expansion of rat mesenchymal stem cells: using the serum prepared from rat's peripheral blood,** Journal of Iranian anatomical Sciences. 4(17), 2007, 331-344.
58. Homayouni Moghadam F, Alaie H, Karbalaie Kh, Tanhaei S, Nasr Esfahani MH, ***Baharvand H.*** **Cholinergic Differentiation of neural precursor cells derived from mouse embryonic stem cells increased by Shh, LIF and RA,** Physiology and Pharmacology J. Volume 11, Number 3 (12-2007)
59. Ebrahimi M, ***Baharvand H****, Piriaei A, Massumi M. **Comparison of ultrastructure and gene expression of cultured limbal stem cells and fresh conjunctival, limbal and corneal tissues.** J. of Iranian Anatomical Sciences, Vol. 4, No. 2, Summer 2007, 131-146 [Persian]
60. Kodadadi L, ***Baharvand H****. **Immunogenicity of stem cells.** Yakhteh Medical J, (Farsi) Vol. 8, No. 4, Winter, 2007, 276-303.
61. Moghaddasali R, ***Baharvand H****, Zeynali B, Soleimani M. **The role of fibroblast growth factor-2 and retinoic acid in differentiation of mouse embryonic stem cells into neural cells.** Physiology and Pharmacology J. Vol. 10, No. 2, Summer 2006, 125-133.
62. ***Baharvand H****. **Generation, maintenance, and characterization of human embryonic stem cells,** J. of Iranian Anatomical Sciences, Vol. 4, No. 1, Spring 2007 (Farsi), 37-80

63. **Baharvand H***, Hatami M, Massumi M. **Induction of human embryonic stem cells into neuronal differentiation by increasing cyclic adenosine mono phosphate.** Physiology and Pharmacology J. Vol. 10, No. 1, Spring 2006, 11-19.
64. Khodadadi L, Jafari H, Farrokhi A, Pirouz M, **Baharvand H***. **From Pancreatic Development to Diabetes Treatment,** Yakhteh Medical J, (Farsi) Vol. 8, No. 2, Summer 2006, 124-152
65. **Baharvand H***, Jafari H, Massumi M, Mollamohammadi S. **Differentiation of human embryonic stem cells into insulin-secreting cells.** J. of Shahid Sadoughi University of Medical Sciences and Health Services, Vol. 14, No. 1, Spring 2006, 47-58
66. Zonouzi R, Kazemi Ashtiani S, Hosseinkhani S, **Baharvand H***. **Kinetic properties of extracted creatine kinase from mouse embryonic stem cell-and neonatal-derived cardiomyocytes.** Kowsar Medical J. Vol. 11, (1) Spring 2006, 51-57
67. **Baharvand H***, Soleimani M, Gourabi H. **The effect of low level laser irradiations on human embryonic stem cells.** Yakhteh Medical J, (English) Vol. 7, No. 2, Summer 2005, 62-67.
68. Javadi MA*, Einollahi B, Baradaran Rafeiei AR, **Baharvand H**, Ebrahimi M, Rafati N, Rezaei Kanavi M. **Early results of autologous cultivated limbal stem cell transplantation in total limbal stem cell deficiency,** Bina J Ophthalmol, Vol. 11, No. 3, Spring 2006, 275-288
69. **Baharvand H***, Rohani R, Piriaei A, Tae A. **Comparison of ultrastructure of development of mouse in vivo- and embryonic stem cell-derived cardiomyocytes.** J. of Shahid Sadoughi University of Medical Sciences and Health Services, Vol. 13, No. 5, Winter 2006, 31-40
70. Eimani H, Hassani F, Haeri Rohani SA, Nasr Esfahani MH, Dalman A, Rezazadeh Valojerdi M, Kazemi Ashtiani S, Shahverdi AH, **Baharvand H**, Eftekhari Yazdi P, Omani Samani R. **Effect of beta-mercaptoethanol with and without BSO (DL-Buthionine Sulfoximine) on resumption of meiosis, in vitro maturation and embryo development of immature mouse oocytes.** Yakhteh Medical J, (English) Vol. 7, No. 4, Winter 2006, P: 236-241.
71. Aboutorabi R, Nasr Esfahani MH, **Baharvand H**. **Effect of human sperm MTT viability test on outcome of introcytoplasmic sperm injection.** Yakhteh Medical J, (English) Vol. 7, No. 4, Winter 2006, 254-257.
72. Moghaddasali R, Zeynali B, Soleimani M, **Baharvand H***. **The effect of astrocyte-conditioned medium (ACM) and retinoic acid on neural differentiation of mouse embryonic stem cells.** J. of Iranian Anatomical Sciences, Vol. 3, No. 3, Autumn 2005, 191-202.
73. Zonouzi R, Kazemi Ashtiani S, Hosseinkhani S, **Baharvand H***. **Kinetic properties of extracted lactate dehydrogenase from mouse embryonic stem cell-derived cardiomyocytes and mouse neonatal cardiomyocytes: A comparative study.** Yakhteh Medical Journal, Vol. 7, No. 3, Autumn 2005, 146-151.

74. Khezri SH, Rezazadeh Valojerdi M*, Sepehri H, **Baharvand H.** **The effect of basic fibroblast growth factor on differentiation of mouse embryonic stem cells into cardiomyocytes.** Yakhteh Medical Journal, Vol. 7, No. 3, Autumn 2005, 172-177.
75. **Baharvand H***, Kazemi Ashtiani S. **Embryonic stem cells: concepts and potentials.** Yakhteh Medical Journal, Vol. 7, No. 3, Autumn 2005, 178-193.
76. Eimani H, Dalman A, Sepehri H, Kazemi Ashtiani S, Hassani F, Rezazadeh M, **Baharvand H,** Shahverdi A, Omani Samani R. **Effect of DEHP (Di-2-ethyl hexyl-phthalate) on mouse oocytes and development of resulting embryos.** Yakhteh Medical J, (English) Vol. 7, No. 2, Summer 2005, 56-61.
77. **Baharvand H***, Ebrahimi M, Javadi, Ainollahi, Masoumi M, Mollamohammadi S. **Culture of human limbal stem cells in vitro.** Journal of Iranian Ophthalmologists (Bina), Vol. 10, No. 4, Summer 2005, 419-429
78. Eimani H*, Dalman A, Sepehri H, Kazemi Ashtiani S, Hasani F, Rezazadeh Valojerdi M, **Baharvand H.** **Effect of β -mercaptoethanol on resumption of meiosis, in vitro maturation and development of immature mouse oocyte treated with DEHP (Di-(2-ethylhexy) phthalae).** J. of Iranian Anatomical Sciences, Vol. 3, No. 2, Summer 2005, 109-116.
79. Soleimani* M, Atashi A, **Baharvand H,** Massumi M. **Differentiation of mouse embryonic stem cells into hematopoietic cells.** J. of Iranian Anatomical Sciences, Vol. 3, No. 1, Spring 2005, 11-18.
80. **Baharvand H,** Jafari H, Massumi M, Larijani MB, Akrami SM, Mollamohammadi S. **Differentiation of stem cell into insulin-secreting cell.** Journal of Iranian Anatomical sciences. Vol. 2, No. 4, Winter 2005, 23-31 (Persian with English abstract).
81. Darabi M, **Baharvand H,** Nasr-Esfahani MH. **The effect of voltage and duration of electrical stimulus on fusion and cleavage of electrofused two-cell bovine embryos.** Yakhteh (The Cell) Medical J. Vol. 6, No. 24, Winter 2005, 226-231. (Persian, with English abstract)
82. **Baharvand H,** Azarnia M, Parivar K, Ashtiani SK. **Chronotropic characteristics of spontaneously beating cardiomyocytes differentiated from mouse embryonic stem cells.** Kowsar Medical Journal. Winter 2004, 9(4), 261-271 (Persian with English abstract).
83. **Baharvand H,** Taei A, Massumi M, Jafari H, Mollamohammadi S, Hatami M, Zarei Moradi Sh. **Effect of mouse strain on establishment of embryonic stem cell lines.** J. of Iranian Anatomical Sciences, Vol. 2, No. 3, Autumn 2004, 21-31. (Persian, with English abstract)
84. Nasr-Esfahani MH., Behdadi pour Z, **Baharvand H,** Eimani H, Ghanei M, Darabi MR, Hajipour MR. **The effect of vitrification and slow freezing on development of bovine cumulus oocyte complex.** Journal of Medicinal Basic Sciences, 7(3), 2004, Autumn, 138-144. (Persian with English abstract)

85. Soleimani M*, Kaviani S, ***Baharvand H***, Atashi A. **Differentiation of mesenchymal stem cells from cord blood to osteoblastic cells**, Journal of Medicinal Basic Sciences, 7(3), 2004, Autumn, 33-39. (Persian with English abstract)
86. ***Baharvand H***, Sabour D, Taeae A, Matthaei KI. **Production of chimeric mouse blastocysts by aggregation of tetraploid embryos and embryonic stem cells expressing H2A.Z-EGFP**. Yakhteh (The Cell) Medical J. Vol. 6, No. 23, Autumn 2004, 118-123. (Persian, with English abstract)
87. ***Baharvand H***, Azarnia M, Parivar K, Ashtiani SK. **The effect of extracellular matrix on chronotropic characteristics of embryonic stem cell- derived cardiomyocytes**. Yakhteh (The Cell) Medical J. Vol. 6, No. 23, Autumn 2004, 152-159. (Persian, with English abstract).
88. ***Baharvand H***, Azarnia M, Parivar K, Ashtiani SK. **The effect of extracellular matrix on ultrastructure of embryonic stem cell- derived cardiomyocytes**. Journal of Iranian Anatomical sciences, Summer 2004, 2(2), 1-11. (Persian with English abstract).
89. Darabi M, Nasr-Esfahani MH, ***Baharvand H***, Eimani h, Mardani M. **The effect of different voltages and durations on developmental rate of electrofused two cell bovine tetraploid embryos**. Journal of Iranian Anatomical sciences, Summer 2004, 2(2), 57-65. (Persian with English abstract).
90. ***Baharvand H***, Hatami H, Zare N. **The effect of retinoic acid on human embryonic stem cells with and without rosette morphology**. Yakhteh (The Cell) Medical J. 2004, Summer, 22; 103-109. (Persian, with English abstract).
91. Khezri Sh, Valojerdi MR, Sepehri, ***Baharvand H***. **The evaluation of chronotropic properties of mouse embryonic stem cell-derived cardiomyocytes after fibroblast growth factor treatment**. Journal of Iranian Anatomical sciences, Spring 2004, Vol 2, No. 1, 11-17. (Persian with English abstract).
92. Eimani H, Hasani F, Rohani SAH, Nasr Esfahani MH, Dalman A, Rezazadeh M, Ashtiani SK, Shahverdi A, ***Baharvand H***. **The effect of beta-mercaptoethanol on initiation of meiosis, maturation and development of mouse immature oocytes in vitro**. Journal of Iranian Anatomical sciences, 2004, Spring 1: 37-46. (Persian with English abstract).
93. Eimani H, Rezazadeh M, Nasr Esfahani MH, ***Baharvand H***, Kazemi S, Shahverdi A. **The effect of electrical direct pulse on mouse oocyte maturation and development of the embryos**. Yakhteh (The Cell) Medical J. 2004, Spring, 19, 21-26., (Persian, with English abstract).
94. Jashni HK, Nasr Esfahani MH, Eimani H, ***Baharvand H***, Mardani M: **The Effect of vitrification on number and survival of inner cell mass of in-vitro produced bovine blastocysts**. Journal of Mazandaran university of medical sciences, 2004, 14(42), 1-10.

95. Farhadi M, Kazemi S, Sadughi M, Frootan Sh, Afsharian P, ***Baharvand H***. **Seperation of X- and Y-bearing mouse spermatozoae by puresperm gradient method.** Kowsar Medical Journal. Spring 2004, 9(1), 39-44. (Persian with English abstract).
96. ***Baharvand H***, Matthaehi K: **Establishment of a new murine embryonic stem cell lines from C57BL/6 strain.** Kowsar Medical J, 2003, Winter, 267-274. (Persian, with English abstract)
97. ***Baharvand H***, Matthaehi K: **Differentiation of mouse embryonic stem cells into functional neurons.** Yakhteh (The Cell) Medical J. 2003, Autumn, 19, 155-163., (Persian, with English abstract).
98. Darabi M, Nasr-Esfahani MH, Eimani H, ***Baharvand H***: **Electrical activation of post-intracytoplasmic severly amourphous-sperm injection improve fertilization and embryo development.** Yakhteh (The Cell) Medical J. 2003, Autumn, 19, 171-175. (Persian, with English abstract).
99. ***Baharvand H***, Matthaehi K: **Establishment of a new murine embryonic stem cell lines from Balb/c strain.** Fertility and Infertility, 2003, Spring, 96-105. (Persian, with English abstract).
100. Ghanei M, Movahedin M, Rezazadeh M, ***Baharvand H***; **The effect of vero cell co-culture on the development of vitrified 8-cell mouse embryo.** Yakhteh (The Cell) Medical J., 2003; 5(17): 1-63. (Persian, with English abstract).
101. Ezzatabady pour M, Hosseini A, Nematollahi SN, Haydari MH, ***Baharvand H***, Rayegan P; **Ultrastructural study of mouse early blastocyst after vitrification.** Kowsar Medical J.2003, 8, 85-97. (Persian, with English abstract).
102. Darabi MR, Karimi H, Sadeghi H, Nasr-Esfahani MH, Eimani H, Mardani M, ***Baharvand H***, Shirazi A; **Effect of serum on in vitro maturatin of immature bovine oocytes and effect of Heparin and semen from different bulls on embryo cleavage rate.** Kowsar Medical J. 2003, 8, 119-125. (Persian, with English abstract).
103. Movaghar B, Movahedin M, Rezazadeh M, ***Baharvand H***. **The effect of simultaneous co-culture and sequential media on the development of vitrified one-cell mouse embryo.** Modarres Journal of Medical Sciences. 2002, 5(1), 115-122. (Persian, with English abstract).
104. ***Baharvand H***, Rezazadeh Valojerdi M; **Factore(s) involved in Blastocyst Collapse in Sequential Culture Media** Kowsar Medical J. 2002,7(2),119-128, (Persian, with English abstract)
105. Ezzatabady Pour M, Hosseini A, ***Baharvand H***, Nematollahi NM, Heidary MH; **Developmental Potential of Mouse Morula, Early and Late Blastocyst after Vitrification.** Yakhteh (The Cell) Medical J. 2002; 4(1), 223-232. (Persian, with English abstract)

106. ***Baharvand H***, Rezazadeh Valojerdi M; **Overcomming to Blastocyst Collapse and Improvement of Blastocyst Development in sequential Culture Media.** *Yakhteh (The Cell) Medical J.* 2002; 3(2), 209-218. (Persian, with English abstract)
107. ***Baharvand H***, Rezazadeh M; **Comparison of “in house” prepared R1 and R2 and commercially equivalents G1.2 and G2.2 sequential culture media on mouse in vitro development.** *Hakim Research J.* 2001, 4(3), 181-192. (Persian, with English abstract)
108. ***Baharvand H***, Rezazadeh Valojerdi M, Heidari MH, Ashtiani SK, Shahverdi H; **Effect of co-culture of ampullary epithelial cells of hamster oviduct on mouse embryo development, cleavage and ultrastructure.** *J Shahid Sadoughi University of Medical Siences and Health Services*, 2000, 8(3), 73-87.
109. ***Baharvand H***, Rezazadeh M; **Effects of sequential media containing different concentrations of glucose and phosphate on development of one-cell mouse embryo.** *Kowsar Medical J.* 2000, 5: 1-9, (Persian, with English abstract)
110. ***Baharvand H***, Rezazadeh M; **The comparison of six different media macromolecule-supplements on the in vitro development and cleavage rate of one-cell mouse embryos.** *Yakhteh (Cell) Medical J.*, 2000; 3: 17-24. (Persian, with English abstract)
111. ***Baharvand H***, Rezazadeh M; **Effects of glucose and phosphate on development of one- cell NMRI mouse embryos in M16, CZB and T6 media.** *J Physiology and Pharmacology.*1999; 3: 45-57. (Persian,with English abstract)
112. ***Baharvand H***, Rezazadeh M, Hosseini A; **The effect of co-culture of epithelial cell, isolated from ampullary and isthmus regions of human oviduct, on two- cell mouse embryo.** *Yakhteh (The Cell) Medical J.*, 1999; 2: 9-14. (Persian, with English abstract)
113. ***Baharvand H***, Rezazadeh M, Altarihi MT; **Comparison of mouse embryo development by co-culturing with ampullary and isthmic epithelial cell of hamster oviduct and the effect of injected gonadotropins.** *Yakhteh (The Cell) Medical J.* 1999; 1: 7-13. (Persian, with English abstract)

Referees:

1. Prof. Thomas Braun, MD PhD

Director
Max-Planck-Institute for
Heart and Lung Research
Ludwigstr. 43
D-61231 Bad Nauheim
phone: 49-6032-705-1101
Fax: 49-6032-705-1104
E-Mail: thomas.braun@mpi-bn.mpg.de

2. Richard Harvey

Deputy Director and Head,
Developmental and Stem Cell Biology Division,
Victor Chang Cardiac Research Institute,
Lowy Packer Building | 405 Liverpool St,
Darlinghurst NSW 2010 Australia, P: (02) 9295 8620
F: (02) 9295 8601
E-Mail: r.harvey@victorchang.edu.au

3. Adrian Gee

Professor of Pediatrics & Medicine
Director
GMP Facilities
Center for Cell & Gene Therapy
Baylor College of Medicine
Houston, Texas
E-mail: apgee@texaschildrens.org