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پست الکترونیکی

گروه بیوتکنولوژی دارویی

دانشکده داروسازی

دانشگاه علوم پزشکی شهید بهشتی

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سوابق تحصیلی

- دکترای تخصصی: انسیتوپاستور ایران، بیوتکنولوژی دارویی، آذرماه ۱۳۹۱
بررسی اثر بیان فرمهای بالغ و بریده شده‌ی پروتئین هسته‌ی ویروس هپاتیت C بر بیان ژنهای ISG20, IRF-1 و ISG56 در رده‌ی سلولی HUH-7 در حضور و عدم حضور اینترفرون آلفا
اساتید راهنما: دکتر محمدحسین قهرمانی، دکتر فرزین روحوند

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طراحی و سنتز مشتقات جدید رفکوکسیب به عنوان مهار کننده های اختصاصی سیکلواکسیژناز II
اساتید راهنما: دکتر افشین زرقی، دکتر سید عباس طباطبائی

جوایز

- رتبه اول آزمون ورودی دستیاری

- دانشجوی نمونه دانشکده داروسازی

سوابق آموزشی

دانشگاه علوم پزشکی شهید بهشتی

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دروس دوره عمومی

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زیست شناسی سلولی مولکولی

مهندسی ژنتیک

نانوتکنولوژی و بیومواد

روشهای زیست فناوری

مهندسی ژنتیک و فرمانتاسیون

پایان نامه ها

پایان نامه های مقطع دکترای تخصصی با سمت استاد راهنما / مشاور

- Ahmadzadeh, M. "Expression of a fusion protein containing scFv against HER2 linked to IP-10 and *in vitro* evaluation of its biological activity", 2015 Submitted (مشاور)
- Gorji, G. "*Rab5a* gene silencing effect on metastasis of human hepatocellular carcinoma cell line via exosome secretion", 2016 Submitted (راهنما)
- Behravan, A. "Metabolic engineering of *Escherichia coli* based on systems biology for the evaluation of its effect on anti EpCAM scFv expression", 2016 Submitted (راهنما)
- Darbssizadeh, B. "Preparation of coaxially electrospun PEO/PCL nanofibers for local delivery of Doxorubicin" 2016 Submitted (مشاور)
- Kardani, K. "Design and immunological assay of long peptides-based vaccines inducing T-cells against conserved regions of HIV-1 in BALB/c mice model", 2018 Submitted (راهنما)
- Sharif, E. "Construction of recombinant OMV carrying neoepitopes of CT-26 cell line and its evaluation in murine colon carcinoma model", 2018 Submitted (مشاور)

- Ebrahimi, V. “Reconstruction of the *E. coli* K-12 RV04 context-specific metabolic network model and effect of strain engineering based on the reconstructed model predictions on acetate accumulation”, 2020 Submitted (راهنما)

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- Karimi, Z. “Selection of stable reference genes for quantitative evaluation of gene expression in nanosilver treated MCF-7 cells using the GeNorm and NormFinder algorithm”, 2014 Submitted (supervisor)
- Pourani, Z. “Reference gene evaluation for nanosilver cytotoxicity analysis using quantitative real-time PCR in HepG₂ cell line”, 2014 Submitted (supervisor)
- Mohammadi, A. “Expression and purification of single chain variable fragment of antibody against EpEX in *Escherichia coli*”, 2016 Submitted (supervisor)
- Gholizad, F. “Construction of recombinant *Pichia pastoris* expressing single-chain antibody fragment against EpEX”, 2017 Submitted (supervisor)
- Tabrizi, N. “Identification of stable exomiRs as endogenous reference genes in two breast cancer cell lines using the GeNorm and NormFinder algorithms”, 2018 Submitted (supervisor)
- Basafa, M. “Effect of *arcA* and *pka* genes knockout on the expression of anti- EpEX monoclonal antibody fragment”, 2018 Submitted (supervisor)
- Javadian, F. “Comparison of anti-EpEX Scfv solubility between three *Escherichia coli* expression hosts”, 2019 Submitted (supervisor)
- Aghamollaei, P. “Effect of temperature and inducer concentration on the expression of anti-EpEX Single Chain Fragment Variable in *Escherichia coli* SHuffle strain”, 2019 Submitted (supervisor)
- Mowla, M. “Investigating the possibility of increasing the electroporation efficiency in nucleic acid delivery to Huh-7 cells by a chemical penetration enhancer” 2019 Submitted (supervisor)
- Mansourian, M. “Cloning and expression of extracellular domain of Myelin Oligodendrocyte Glycoprotein (MOG) in *Escherichia coli*”, 2020 Submitted (supervisor)
- Seddighi, Z. “Effect of genetic manipulation of *Escherichia coli* on acetate overflow”, 2020 Submitted (supervisor)
- Keshavarz, M. “Optimization of induction conditions for expression of single-chain fragment variable antibody against HER2 receptor in endotoxin-free *Escherichia coli* strain” 2020 Submitted (advisor)
- Mobasheri, T. “Evaluating the effect of ethanol stress on the expression of scFv against HER2 protein in *Escherichia coli*” 2020 Submitted (advisor)

- Soltani nasab, S. "Evaluating the efficacy of purification process using immobilized metal affinity chromatography (IMAC) on the separation of host cell protein (HCP) from the recombinant anti-HER2 scFv in *Escherichia coli* 2020 Submitted (advisor)
- Esmian, M. "Evaluating the efficacy of organic solvent-based solubilization process in recovery of soluble anti-HER2 scFv from inclusion body" 2020 Submitted (advisor)
- Radmard, M. "Expression of a fusion protein comprising of thioredoxin and extracellular domain of Myelin Oligodendrocyte Glycoprotein in *Escherichia coli*", 2021 Submitted (supervisor)
- Fesharaki, A. "Synthesis of citrate gold nanoparticles coated by chitosan polymer containing triptorelin acetate and in vitro evaluation of its anticancer effect on breast cancer cell line" 2021 Submitted (advisor)
- Construction of hyaluronic acid coated gold nanoparticles containing triptorelin acetate and in vitro evaluation of its anticancer effect on breast cancer cell line" 2021 Submitted (advisor)

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- Rasooli, F. "Expression of the epithelial cell adhesion molecule extracellular domain as a thioredoxin fusion protein in *Escherichia coli*", 2015 Submitted (supervisor)
- Najafi, R. "Expression of single chain variable fragment against epithelial cell adhesion molecule extracellular domain in *Escherichia coli*", 2015 Submitted (supervisor)
- Zamani, M. "Expression of the epithelial cell adhesion molecule extracellular domain in *Pichia pastoris*", 2015 Submitted (supervisor)

آثار علمی منتشر شده

کتابها

- **Hashemi, A.**, Jahanbakhsh, F., Bokharaee, F., Salehi, M., Sadeghi, F., Shandiz, A. Hepatitis C. (دو فصل از کتاب)
- Gorji, G., **Hashemi, A.** The Emerging Role of Exosomes as Cancer Theranostics. (یک فصل از کتاب)
- Ebrahimi, V, **Hashemi, A.** Precise Sequence-Specific Antimicrobials Based on CRISPR: Toward Prevailing Over Bacterial Antibiotic Resistance. (یک فصل از کتاب)

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پروژه‌های تحقیقاتی

- بررسی تأثیر اوره بر کارایی الکتروپوراسیون در انتقال اسید نوکلئیک به رده سلولی HEK-293
- بهینه‌سازی شرایط کشت بیان SCFV مشتق شده از آنتی‌بادی منوکلونال انسانی شده‌ی ۴-D5MOC B در محیط کشت حداقل با استفاده از رویکرد آماری
- توسعه مدل شبکه مصنوعی عصبی به منظور بهینه‌سازی تولید ANTI-EPEX SCFV
- مهندسی اشریشیاکلی با رویکرد مبتنی بر مدل شبکه متابولیکی به منظور بهبود تولید قطعه آنتی‌بادی تک زنجیره‌ای
- مقایسه پروتئینهای VIF و VPU در انتقال سازه‌های پلی‌اپی‌توپی حاوی NEF، GP160 و P24 با استفاده از پپتیدهای نفوذکننده سلولی مختلف
- پروتئین B1: یک پروتئین نفوذکننده سلولی نوین برای انتقال برون تن و درون تن سازه‌های نوکلئیک اسیدی چند اپی‌توپی HIV-1
- طراحی و بررسی ایمنی-زایی ساختارهای پپتیدی حامل اپی-توپ‌های غالب ایمنی پروتئین‌های NEF، VIF، VPU، GP160، و P24 در مدل موشی BALB/C
- بررسی نقش ژن RAB5A در مسیر ترشحی آگزوزوم به روش بیوانفورماتیکی و معتبرسازی نتایج به روش آزمایشگاهی
- بررسی تأثیر خاموشی ژنهای ARCA و PKA بر میزان بیان قطعه تک زنجیره‌ای آنتی‌بادی علیه بخش خارج سلولی EPCAM
- بهینه‌سازی محلولیت قطعه تک زنجیره‌ای آنتی‌بادی نو ترکیب علیه بخش خارج سلولی مولکول چسبندگی سلول‌های اپیتلیال در دو سویه اشریشیاکلی با استفاده از روش سطح-پاسخ
- مقایسه محلولیت آنتی‌بادی منوکلونال تک زنجیره‌ای علیه بخش خارج سلولی مولکول EPCAM در سه میزبان اشریشیاکلی
- بررسی برون تن اثرات آنتی‌اکسیدانی و سمیت سلولی عصاره سلولی دو سویه پروبیوتیکی لاکتوباسیلوس بر رده سلولی HT-29
- بهینه‌سازی بیان ANTI-EPEX-SCFV در میزبان بیانی SHUFFLE

- توسعه محیط کشت شیمیایی حداقل برای بهینه سازی تولید ANTI-EPEX SCFV در اشریشیا کلی با رویکرد زیست شناسی سامانه‌ای
- شناسایی MIRNA مرجع پایدار در اگزوزوم‌های استخراج شده از رده‌های سلولی سرطان کبد
- معتبرسازی اگزومیرهای مرجع به منظور بکارگیری در آنالیزهای RT-QPCR در دو رده سلولی سرطان پستان
- بیان و تخلیص SCFV علیه EPEX در میزبان بیانی اشریشیا کلی
- ساخت حامل بیانی نو ترکیب مولد SCFV علیه EPEX و ایجاد سویه‌ی ترانسفورم شده‌ی پیکیا پاستوریس با این سازه
- همسانه سازی و بیان قطعه‌ی تک زنجیره‌ای ناحیه‌ی متغیر آنتی‌بادی علیه بخش خارج سلولی مولکول چسبان سلول اپیتلیال در میزبان اشریشیا کلی
- بیان بخش خارج سلولی مولکول چسبان سلول اپی‌تلیال در پیکیا پاستوریس و تخلیص پروتئین نو ترکیب
- ساخت حامل بیانی نو ترکیب حاوی ژن مولد بخش خارج سلولی مولکول چسبندگی سلول‌های اپیتلیال و ایجاد سویه‌های ترانسفورم شده‌ی پیکیا پاستوریس با این سازه
- بیان بخش خارج سلولی مولکول چسبان سلول اپیتلیال در اشریشیا کلی
- ساخت حامل بیانی نو ترکیب حاوی ژن مولد بخش خارج سلولی مولکول چسبان سلول اپیتلیال
- انتخاب ژنهای مرجع باثبات در رده‌ی سلولی سرطان کبد در مطالعات سمیت سلولی با نانوذرات نقره
- بررسی تأثیر نانوذرات نقره بر بیان ژنهای مرجع انتخابی در رده‌ی سلولی سرطان پستان

شرکت در کارگاه‌ها

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موضوعات مورد علاقه تحقیق

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- Recombinant protein expression in prokaryotic and eukaryotic host cells
 - Therapeutic recombinant monoclonal antibodies: preparation and engineering
 - Metabolic engineering
 - Systems biology

- Engineering exosomes as biological nanoplatfoms for drug delivery
- Gene expression analysis using Real Time PCR
- Targeted gene delivery to cancer cells
- Bioinformatics